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NUCLEAR REGULATORY COMMISSION

10 CFR Part 110

RIN 3150–AJ33

[NRC–2014–0007]

Export Controls and Physical Security Standards

AGENCY: Nuclear Regulatory Commission.

ACTION: Final rule.

SUMMARY: The U.S. Nuclear Regulatory Commission (NRC) is amending its regulations pertaining to the export and import of nuclear materials and equipment. This rulemaking is necessary to conform the export controls of the United States to the international export control guidelines of the Nuclear Suppliers Group (NSG), of which the United States is a member, and to incorporate by reference the current version of the International Atomic Energy Agency's (IAEA) document, ''Nuclear Security Recommendations on Physical Protection of Nuclear Material and Nuclear Facilities (INFCIRC/225/Revision 5), January 2011.'' Also, this final rule makes certain editorial revisions, and corrects typographical errors.

DATES: The final rule is effective August 11, 2014, except that the changes to § 110.44(a) and (b)(1) and appendix M to 10 CFR part 110 are effective December 31, 2014. The incorporation by reference of the material in this document is approved as of December 31, 2014.

ADDRESSES: Please refer to Docket ID NRC–2014–0007 when contacting the NRC about the availability of information for this final rule. You can access publicly-available information related to this final rule by any of the following methods:

- Federal Rulemaking Web site: Go to *http://www.regulations.gov* and search for Docket ID NRC–2014–0007. Address questions about NRC dockets to Carol Gallagher; telephone: 301–287–3422; email: *Carol.Gallagher@nrc.gov.* For technical questions, contact the individual listed in the **FOR FURTHER INFORMATION CONTACT** section of this final rule.
- NRC's Agencywide Documents Access and Management System (ADAMS): You may obtain publicly available documents online in the ADAMS Public Documents collection at *http://www.nrc.gov/reading-rm/adams.html.* To begin the search, select ''ADAMS Public Documents'' and then select ''Begin Web-based ADAMS Search.'' For problems with ADAMS, please contact the NRC's Public Document Room (PDR) reference staff at 1–800–397–4209, 301–415–4737, or by email to *pdr.resource@nrc.gov.* The ADAMS accession number for each document referenced in this document (if that document is available in ADAMS) is provided the first time that a document is referenced.
- NRC's PDR: You may examine and purchase copies of public documents at the NRC's PDR, Room O1–F21, One White Flint North, 11555 Rockville Pike, Rockville, Maryland 20852.

FOR FURTHER INFORMATION CONTACT: Brooke G. Smith, Office of International Programs, U.S. Nuclear Regulatory Commission, Washington, DC 20555–0001, telephone: 301–415–2347, email: *Brooke.Smith@nrc.gov.*

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I. Background

The NSG is a group of like-minded States that seeks to contribute to the nonproliferation of nuclear weapons through the implementation of guidelines for nuclear exports and nuclear-related exports. As a participating government in the NSG, the United States has committed to controlling for export items on the NSG control lists. Participating governments are charged with implementing the changes adopted to the list as soon as possible after approval.

This final rule conforms the NRC's export and import regulations in 10 CFR part 110, ''Export and Import of Nuclear Equipment and Material,'' and appendices A, B, C, D, E, F, G, H, I, J, K, N, and O, which contain illustrative lists of items under the NRC's export licensing authority, to current nuclear nonproliferation policies of the Executive Branch. These revisions are necessary to implement changes made to the NSG Guidelines, ''Guidelines for Nuclear Transfers (INFCIRC/254/Revision 12/Part 1), June 2013,'' as adopted by the governments participating in the NSG at the June 2012 and 2013 Plenary Meetings. In addition, this rule amends § 110.30, ''Members of the Nuclear Suppliers Group,'' to add Mexico and Serbia as member countries of the NSG that are eligible to receive radioactive materials under certain general licenses for export. The NSG Guidelines can be found at: *www.nuclearsuppliersgroup.org.*

In January 2011, the IAEA published the document titled, ''Nuclear Security Recommendations on Physical Protection of Nuclear Material and Nuclear Facilities (INFCIRC/225/Revision 5).'' This rule also amends § 110.44 and appendix M to 10 CFR part 110 to incorporate by reference the update and recommendations contained in Revision 5 of this IAEA document.

The NRC staff has determined that these changes are consistent with current U.S. policy, and will pose no unreasonable risk to the public health and safety or to the common defense and security of the United States.

Because this rule involves a foreign affairs function of the United States, the notice and comment provisions of the Administrative Procedure Act do not apply (5 U.S.C. 553(a)(1)). In addition, solicitation of public comments would delay the U.S. conformance with its international obligations, and would be contrary to the public interest (5 U.S.C. 553(b)). The final rule is effective August 11, 2014, except that the changes to § 110.44(a) and (b)(1) and appendix M to 10 CFR part 110 are effective December 31, 2014.

II. Section by Section Analysis

Section 110.2 Definitions

Paragraph (2)(ii) of the definition of ''Utilization facility'' is amended to make conforming changes consistent with the changes to appendix A to 10 CFR part 110.

Section 110.26 General License for the Export of Nuclear Reactor Components

This rule amends § 110.26 to make conforming changes to paragraph (a) consistent with the changes to appendix A to 10 CFR part 110.

Section 110.30 Members of the Nuclear Suppliers Group

This rule amends § 110.30 to update the list of NSG members by adding Mexico and Serbia.

Section 110.42 Export Licensing Criteria

This rule amends § 110.42 to make conforming changes to Footnote 1 consistent with the changes to appendix A to 10 CFR part 110.

Section 110.44 Physical Security Standards

Paragraphs (a) and (b)(1) of § 110.44 are amended to incorporate by reference the most recent revision to INFCIRC/225/Revision 5, ''The Physical Protection of Nuclear Material and Nuclear Facilities.'' The effective date for these changes is delayed until December 31, 2014, to provide adequate time for countries to meet the recommendations in Revision 5. ''The Physical Protection of Nuclear Material and Nuclear Facilities,'' INFCIRC/225/Revision 4 (corrected), July 1999, will continue to be used as the physical protection standard in recipient countries until the effective date for INFCIRC/225/Revision 5, as incorporated by reference in 10 CFR part 110.

Appendices A, B, C, D, E, F, G, H, I, J, K, N and O to Part 110

These appendices are amended to reflect the updated guidelines of the NSG consistent with the IAEA document, ''Guidelines for Nuclear Transfers, (INFCIRC/254/Revision 12/Part 1).'' The appendices in 10 CFR part 110 are illustrative only and are not meant to be inclusive lists of facilities and equipment under the NRC's export licensing jurisdiction.

Appendix M to Part 110—Categorization of Nuclear Material

Appendix M is amended to update the Categorization of Nuclear Material table to be consistent with IAEA publication, INFCIRC/225/Revision 5. The changes to appendix M of 10 CFR part 110 are effective December 31, 2014.

III. Regulatory Flexibility Certification

As required by the Regulatory Flexibility Act of 1980 (5 U.S.C. 605(b)), the Commission certifies that this final rule will not have a significant economic impact on a substantial number of small entities. This rule affects only companies exporting nuclear equipment and material to and from the United States and they do not fall within the scope of the definition of ''small entities'' set forth in the Regulatory Flexibility Act (5 U.S.C. 601(3)), or the Size Standards established by the NRC (10 CFR 2.810).

IV. Regulatory Analysis

This rulemaking is necessary to reflect the nuclear nonproliferation policy of the Executive Branch including U.S. Government commitments to controlling export items on the NSG control lists and the IAEA publication, INFCIRC/225/Revision 5. This final rule is expected to have no changes in the information collection burden or cost to the public.

V. Backfit Analysis and Issue Finality

The NRC has determined that a backfit analysis is not required for this rule because these amendments do not include any provisions that would impose backfits as defined in 10 CFR Chapter I.

VI. Plain Writing

The Plain Writing Act of 2010 (Pub. L. 111–274) requires Federal agencies to write documents in a clear, concise, and well-organized manner. The NRC has written this document to be consistent with the Plain Writing Act as well as the Presidential Memorandum, ''Plain Language in Government Writing,'' published June 10, 1998 (63 FR 31883).

VII. Environmental Impact: Categorical Exclusion

The NRC has determined that this final rule is the type of action described in categorical exclusion 10 CFR 51.22(c)(1). Therefore, neither an environmental impact statement nor an environmental assessment has been prepared for the rule.

VIII. Paperwork Reduction Act Statement

This final rule does not contain new or amended information collection requirements subject to the Paperwork Reduction Act of 1995 (44 U.S.C. 3501 et seq.). Existing requirements were approved by the Office of Management and Budget (OMB) under approval number 3150–0036.

Public Protection Notification

The NRC may not conduct or sponsor, and a person is not required to respond to, a request for information or an information collection requirement unless the requesting document displays a currently valid OMB control number.

IX. Congressional Review Act

Under the Congressional Review Act of 1996, the NRC has determined that this action is not a major rule and has verified this determination with the Office of Information and Regulatory Affairs of OMB.

X. Voluntary Consensus Standards

The National Technology Transfer and Advancement Act of 1995 (Pub. L. 104–113) requires that Federal Agencies use technical standards that are developed or adopted by voluntary consensus standards bodies unless using such a standard is inconsistent with applicable law or otherwise impractical. This final rule does not constitute the establishment of a standard for which the use of a voluntary consensus standard would be applicable.

List of Subjects in 10 CFR Part 110

Administrative practice and procedure, Classified information, Criminal penalties, Export, Import, Incorporation by reference, Intergovernmental relations, Nuclear materials, Nuclear power plants and reactors, Reporting and recordkeeping requirements, Scientific equipment.

For the reasons set out in the preamble and under the authority of the Atomic Energy Act of 1954, as amended, the Energy Reorganization Act of 1974, as amended, and 5 U.S.C. 552 and 553, the NRC is adopting the following amendments to 10 CFR part 110.

PART 110—EXPORT AND IMPORT OF NUCLEAR EQUIPMENT AND MATERIAL

■ 1. The authority citation for part 110 continues to read as follows:

Authority: Atomic Energy Act secs. 51, 53, 54, 57, 63, 64, 65, 81, 82, 103, 104, 109, 111, 126, 127, 128, 129, 161, 181, 182, 183, 187, 189, 223, 234 (42 U.S.C. 2071, 2073, 2074, 2077, 2092–2095, 2111, 2112, 2133, 2134, 2139, 2139a, 2141, 2154–2158, 2201, 2231–2233, 2237, 2239, 2273, 2282); Energy Reorganization Act sec. 201 (42 U.S.C. 5841; Solar, Wind, Waste, and Geothermal Power Act of 1990 sec. 5 (42 U.S.C.2243); Government Paperwork Elimination Act sec.

1704, 112 Stat. 2750 (44 U.S.C. 3504 note); Energy Policy Act of 2005, 119 Stat. 594.

Sections 110.1(b)(2) and 110.1(b)(3) also issued under 22 U.S.C. 2403. Section 110.11 also issued under Atomic Energy Act secs. 54(c), 57(d), 122 (42 U.S.C. 2074, 2152). Section 110.50(b)(3) also issued under Atomic Energy Act sec. 123 (42 U.S.C. 2153). Section 110.51 also issued under Atomic Energy Act sec. 184 (42 U.S.C. 2234). Section 110.52 also issued under Atomic Energy Act sec. 186, (42 U.S.C. 2236). Sections 110.80–110.113 also issued under 5 U.S.C. 552, 554. Sections 110.130–110.135 also issued under 5 U.S.C. 553. Sections 110.2 and 110.42(a)(9) also issued under Intelligence Authorization Act sec. 903 (42 U.S.C. 2151 *et seq.*).

■ 2. In § 110.2, revise paragraph (2)(ii) of the definition of ''Utilization facility'' to read as follows:

§ 110.2 Definitions.

* * * * *

Utilization facility means:

* * * * *

(2) * * *

(ii) Reactor primary coolant pump or circulator;

* * * * *

■ 3. In § 110.26, revise the introductory text of paragraph (a) to read as follows:

§ 110.26 General license for the export of nuclear reactor components.

(a) A general license is issued to any person to export to a destination listed in paragraph (b) of this section any nuclear reactor component of U.S. origin described in paragraphs (5) through (11) of appendix A to this part if—

* * * * *

§ 110.30 [Amended]

■ 4. Amend § 110.30 by adding the words ''Mexico'' and ''Serbia'' in alphabetical order.

■ 5. In § 110.42, revise footnote 1 to read as follows:

§ 110.42 Export licensing criteria.

* * * * *

[1] Export of nuclear reactors, reactor pressure vessels, reactor primary coolant pumps and circulators, ''on-line'' reactor fuel charging and discharging machines, and complete reactor control rod systems, as specified in paragraphs (1) through (4) of appendix A to this part, are subject to the export licensing criteria in § 110.42(a). Exports of nuclear reactor components, as specified in paragraphs (5) through (11) of appendix A to this part, when exported separately from the items described in paragraphs (1) through (4) of appendix A to this part, are subject to the export licensing criteria in § 110.42(b).

■ 6. In § 110.44, revise paragraphs (a) and (b)(1) to read as follows:

§ 110.44 Physical security standards.

(a) Physical security measures in recipient countries must provide protection at least comparable to the recommendations in the current version of IAEA publication, ''Nuclear Security Recommendations on Physical Protection of Nuclear Material and Nuclear Facilities'' (INFCIRC/225/Revision 5), January 2011, which is incorporated by reference in this part. This incorporation by reference was approved by the Director of the Office of the Federal Register in accordance with 5 U.S.C. 552(a) and 1 CFR part 51. Notice of any changes made to the material incorporated by reference will be published in the **Federal Register**. Copies of INFCIRC/225/Revision 5 may be obtained from the Marketing and Sales Unit, Publishing Section, IAEA, Vienna International Centre, P.O. Box 100, 1400 Vienna Austria; Fax: 43 1 2600 29302; telephone: 43 1 2600 22417; email: *sales.publications@iaea.org*; Web site: *http://www.iaea.org/books.* You may inspect a copy at the NRC Library, 11545 Rockville Pike, Rockville, Maryland 20852–2738, telephone: 301–415–4737 or 1–800–397–4209, between 8:30 a.m. and 4:15 p.m.; or at the National Archives and Records Administration (NARA). For information on the availability of this material at NARA, call 202–741–6030, or go to: *http://www.archives.gov/federal-register/cfr/ibr-locations.html.*

(b) * * *

(1) Receipt by the appropriate U.S. Executive Branch Agency of written assurances from the relevant recipient country government that physical security measures providing protection at least comparable to the recommendations set forth in INFCIRC/225/Revision 5.

* * * * *

■ 7. Revise appendix A to part 110 to read as follows:

Appendix A to Part 110—Illustrative List of Nuclear Reactor Equipment Under NRC Export Licensing Authority

Note: A nuclear reactor basically includes the items within or attached directly to the reactor vessel, the equipment which controls the level of power in the core, and the components which normally contain or come in direct contact with or control the primary coolant of the reactor core.

(1) Reactor pressure vessels, i.e., metal vessels, as complete units or major shop-fabricated parts, especially designed or prepared to contain the core of a nuclear reactor and capable of withstanding the operating pressure of the primary coolant.

(2) On-line (e.g., CANDU) reactor fuel charging and discharging machines, i.e., manipulative equipment especially designed for inserting or removing fuel in an operating nuclear reactor.

(3) Complete reactor control rod system, i.e., rods especially designed or prepared for the control of the reaction rate in a nuclear reactor, including the neutron absorbing part and the support or suspension structures therefor.

(4) Reactor primary coolant pumps or circulators, i.e., pumps or circulators especially designed or prepared for circulating the primary coolant in a nuclear reactor.

(5) Reactor pressure tubes, i.e., tubes especially designed or prepared to contain both fuel elements and the primary coolant in a nuclear reactor.

(6) Zirconium tubes, i.e., zirconium metal and alloys in the form of tubes or assemblies of tubes especially designed or prepared for use as fuel cladding in a nuclear reactor.

(7) Reactor internals, e.g., core support structures, control and rod guide tubes, fuel channels, calandria tubes, thermal shields, baffles, core grid plates, and diffuser plates especially designed or prepared for use in a nuclear reactor.

(8) Reactor control rod drive mechanisms, including detection and measuring equipment to determine neutron flux levels within the core of a nuclear reactor.

(9) Heat exchangers, e.g., steam generators especially designed or prepared for the primary, or intermediate, coolant circuit of a nuclear reactor or heat exchangers especially designed or prepared for use in the primary coolant circuit of a nuclear reactor.

(10) External thermal shields especially designed or prepared for use in a nuclear reactor for reduction of heat loss and also for containment vessel protection.

(11) Any other components especially designed or prepared for use in a nuclear reactor or in any of the components described in this appendix.

■ 8. Revise appendix B to part 110 to read as follows:

Appendix B to Part 110—Illustrative List of Gas Centrifuge Enrichment Plant Components Under NRC's Export Licensing Authority

1. *Assemblies and components especially designed or prepared for use in gas centrifuges.*

Note: The gas centrifuge normally consists of a thin-walled cylinder(s) of between 75 mm and 650 mm diameter contained in a vacuum environment and spun at high peripheral speed (of the order of 300 m/per second and more) with the central axis vertical. In order to achieve high speed, the materials of construction for the rotating rotor assembly, and hence its individual components, have to be manufactured to very close tolerances in order to minimize the unbalance. In contrast to other centrifuges, the gas centrifuge for uranium enrichment is characterized by having within the rotor chamber a rotating disc-shaped baffle(s) and a stationary tube arrangement for feeding and

extracting uranium hexafluoride (UF_6) gas and featuring at least three separate channels of which two are connected to scoops extending from the rotor axis towards the periphery of the rotor chamber. Also contained within the vacuum environment are a number of critical items which do not rotate and which, although they are especially designed, are not difficult to fabricate nor are they fabricated out of unique materials. A centrifuge facility, however, requires a large number of these components so that quantities can provide an important indication of end use.

1.1 Rotating Components

(a) Complete Rotor Assemblies: Thin-walled cylinders, or a number of interconnected thin-walled cylinders, manufactured from one of the high strength-to-density ratio materials described in the footnote to this section.

If interconnected, the cylinders are joined together by flexible bellows or rings as described in § 1.1(c) of this appendix. The rotor is fitted with an internal baffle(s) and end caps, as described in § 1.1(d) and (e) of this appendix, if in final form. However, the complete assembly may be delivered only partly assembled.

(b) Rotor Tubes: Especially designed or prepared thin-walled cylinders with thickness of 12 mm or less, a diameter of between 75 mm and 650 mm, and manufactured from one of the high strength-to-density ratio materials described in the footnote to this section.

(c) Rings or Bellows: Components especially designed or prepared to give localized support to the rotor tube or to join together a number of rotor tubes. The bellows in a short cylinder of wall thickness 3 mm or less, a diameter of between 75 mm and 650 mm, having a convolute, and manufactured from one of the high strength-to-density ratio materials described in the footnote to this section.

(d) Baffles: Disc shaped components of between 75 mm and 650 mm diameter especially designed or prepared to be mounted inside the centrifuge rotor tube, in order to isolate the take-off chamber from the main separation chamber and, in some cases, to assist the UF_6 gas circulation within the main separation chamber of the rotor tube, and manufactured from one of the high strength-to-density ratio materials described in the footnote to this section.

(e) Top Caps/Bottom Caps: Disc shaped components of between 75 mm and 650 mm diameter especially designed or prepared to fit to the ends of the rotor tube, and so contain the UF_6 within the rotor tube, and in some cases to support, retain or contain as an integrated part, an element of the upper bearing (top cap) or to carry the rotating elements of the motor and lower bearing (bottom cap), and manufactured from one of the high strength-to-density ratio materials described in the footnote to this section.

Footnote

The materials used for centrifuge rotating components include the following:

(a) Maraging steel capable of an ultimate tensile strength of 1.95 GPa or more.

(b) Aluminum alloys capable of an ultimate tensile strength of 0.46 GPa or more.

(c) Filamentary materials suitable for use in composite structures and having a specific modulus of 3.18×10^6 m or greater and a specific ultimate tensile strength of 7.62×10^4 m or greater.

(''Specific Modulus'' is the Young's modulus in N/m^2 divided by the specific weight in N/m^3 when measured at a temperature of 23 ± 20 °C and a relative humidity of 50 ± 5 percent. ''Specific tensile strength'' is the ultimate tensile strength in N/m^2 divided by the specific weight in N/m^3 when measured at a temperature of 23 ± 20 °C and a relative humidity of 50 ± 5 percent.)

1.2 Static Components

(a) Magnetic Suspension Bearings: 1. Especially designed or prepared bearing assemblies consisting of an annular magnet suspended within a housing containing a damping medium. The housing will be manufactured from a UF_6 resistant material (see footnote to § 2 of this appendix). The magnet couples with a pole piece or a second magnet fitted to the top cap described in § 1.1(e) of this appendix. The magnet may be ring-shaped with a relation between outer and inner diameter smaller or equal to 1.6:1. The magnet may be in a form having an initial permeability of 0.15 Henry/meter or more, or a remanence of 98.5 percent or more, or an energy product of greater than 80,000 joules/m^3. In addition to the usual material properties, it is a prerequisite that the deviation of the magnetic axes from the geometrical axes is limited to very small tolerances (lower than 0.1 mm) or that homogeneity of the material of the magnet is specially called for.

2. Active magnetic bearings especially designed or prepared for use with gas centrifuges. These bearings usually have the following characteristics:

(i) Designed to keep centred a rotor spinning at 600 Hz or more; and

(ii) Associated to a reliable electrical power supply and/or to an uninterruptible power supply (UPS) unit in order to function for more than 1 hour.

(b) Bearings/Dampers: Especially designed or prepared bearings comprising a pivot/cup assembly mounted on a damper. The pivot is normally a hardened steel shaft polished into a hemisphere at one end with a means of attachment to the bottom cap described in § 1.1(e) of this appendix at the other. The shaft may, however, have a hydrodynamic bearing attached. The cup is pellet-shaped with hemispherical indentation in one surface. These components are often supplied separately to the damper.

(c) Molecular Pumps: Especially designed or prepared cylinders having internally machined or extruded helical grooves and internally machined bores. Typical dimensions are as follows: 75 mm to 650 mm internal diameter, 10 mm or more wall thickness, with a length equal to or greater than the diameter. The grooves are typically rectangular in cross-section and 2 mm or more in depth.

(d) Motor Stators: Especially designed or prepared ring shaped stators for high speed multi-phase alternating current (AC) hysteresis (or reluctance) motors for synchronous operation within a vacuum at a frequency of 600 Hz or greater and a power of 40 volts amps or greater. The stators may consist of multi-phase windings on a laminated low loss iron core comprised of thin layers typically 2.0 mm thick or less.

(e) Centrifuge housing/recipients: Components especially designed or prepared to contain the rotor tube assembly of a gas centrifuge. The housing consists of a rigid cylinder of wall thickness up to 30 mm with precision machined ends to locate the bearings and with one or more flanges for mounting. The machined ends are parallel to each other and perpendicular to the cylinder's longitudinal axis to within 0.05 degrees or less. The housing may also be a honeycomb type structure to accommodate several rotor tubes.

(f) Scoops: Especially designed or prepared tubes for the extraction of UF_6 gas from within the rotor tube by a Pitot tube action (that is, with an aperture facing into the circumferential gas flow within the rotor tube, for example by bending the end of a radially disposed tube) and capable of being fixed to the central gas extraction system.

2. *Especially designed or prepared auxiliary systems, equipment, and components for gas centrifuge enrichment plants.*

Note: The auxiliary systems, equipment, and components for a gas centrifuge enrichment plant are the systems of the plant needed to feed UF_6 to the centrifuges to link the individual centrifuges to each other to form cascades (or stages) to allow for progressively higher enrichments and to extract the product and tails of UF_6 from the centrifuges, together with the equipment required to drive the centrifuges or to control the plant.

Normally UF_6 is evaporated from the solid using heated autoclaves and is distributed in gaseous form to the centrifuges by way of cascade header pipework. The ''product'' and ''tails'' of UF_6 gaseous streams flowing from the centrifuges are also passed by way of cascade header pipework to cold traps (operating at about 203 K (− 70 °C)) where they are condensed prior to onward transfer into suitable containers for transportation or storage. Because an enrichment plant consists of many thousands of centrifuges arranged in cascades, there are many kilometers of cascade header pipework incorporating thousands of welds with a substantial amount of repetition of layout. The equipment, component and piping systems are fabricated to very high vacuum and cleanliness standards.

Some of the items listed below either come into direct contact with the UF_6 process gas or directly control the centrifuges and the passage of the gas from centrifuge to centrifuge and cascade to cascade. Materials resistant to corrosion by UF_6 include copper, copper alloys, stainless steel, aluminum, aluminum oxide, aluminum alloys, nickel or alloys containing 60 percent or more nickel, and fluorinated hydrocarbon polymers.

(a) Feed Systems/Product and Tails Withdrawal Systems: Especially designed or prepared process systems or equipment for enrichment plants made of or protected by materials resistant to corrosion by UF_6 including:

1. Feed autoclaves, ovens, or systems used for passing UF_6 to the enrichment process.

2. Desublimers, cold traps, or pumps used to remove UF_6 from the enrichment process for subsequent transfer upon heating.

3. Solidification or liquefaction stations used to remove UF_6 from the enrichment process by compressing and converting UF_6 to a liquid or solid form.

4. ''Product'' and ''tails'' stations used for transferring UF_6 into containers.

(b) Machine Header Piping Systems: Especially designed or prepared piping systems and header systems for handling UF_6 within the centrifuge cascades.

This piping network is normally of the ''triple'' header system with each centrifuge connected to each of the headers. There is therefore a substantial amount of repetition in its form. It is wholly made of or protected by UF_6 resistant materials (see Note to this section) and is fabricated to very high vacuum and cleanliness standards.

(c) Special shut-off and control valves:

1. Shut-off valves especially designed or prepared to act on the feed, ''product'' or ''tails'' UF_6 gaseous streams of an individual gas centrifuge.

2. Bellows-sealed valves, manual or automated, shut-off or control, made of or protected by materials resistant to corrosion by UF_6, with an inside diameter of 10 to 160 mm, especially designed or prepared for use in main or auxiliary systems of gas centrifuge enrichment plants.

Typical especially designed or prepared valves include bellow-sealed valves, fast acting closure-types, fast acting valves, and others.

(d) UF_6 Mass Spectrometers/Ion Sources: Especially designed or prepared mass spectrometers capable of taking on-line samples from UF_6 gas streams and having all of the following:

1. Capable of measuring ions of 320 atomic mass units or greater and having a resolution of better than 1 part in 320.

2. Ion sources constructed of or protected by nickel, nickel-copper alloys with a nickel content of 60 percent or more by weight, or nickel-chrome alloys.

3. Electron bombardment ionization sources.

4. Having a collector system suitable for isotope analysis.

(e) Frequency Changers: Frequency changers (also known as converters or inverters) especially designed or prepared to supply motor stators as defined under § 1.2(d) of this appendix, or parts, components, and subassemblies of such frequency changers having all of the following characteristics:

1. A multiphase output of 600 Hz or greater; and

2. High stability (with frequency control better than 0.2 percent).

(f) Any other components especially designed or prepared for use in a gas centrifuge enrichment plant or in any of the components described in this appendix.

■ 9. Revise appendix C to part 110 to read as follows:

Appendix C to Part 110—Illustrative List of Gaseous Diffusion Enrichment Plant Assemblies and Components Under NRC Export Licensing Authority

Note: In the gaseous diffusion method of uranium isotope separation, the main technological assembly is a special porous gaseous diffusion barrier, heat exchanger for cooling the gas (which is heated by the process of compression), seal valves and control valves, and pipelines. Inasmuch as gaseous diffusion technology uses uranium hexafluoride (UF_6), all equipment, pipeline and instrumentation surfaces (that come in contact with the gas) must be made of materials that remain stable in contact with UF_6. A gaseous diffusion facility requires a number of these assemblies, so that quantities can provide an important indication of end use.

The auxiliary systems, equipment, and components for gaseous diffusion enrichment plants are the systems of plant needed to feed UF_6 to the gaseous diffusion assembly to link the individual assemblies to each other to form cascades (or stages) to allow for progressively higher enrichments and to extract the ''product'' and ''tails'' UF_6 from the diffusion cascades. Because of the high inertial properties of diffusion cascades, any interruption in their operation, and especially their shut-down, leads to serious consequences. Therefore, a strict and constant maintenance of vacuum in all technological systems, automatic protection for accidents, and precise automated regulation of the gas flow is of importance in a gaseous diffusion plant. All this leads to a need to equip the plant with a large number of special measuring, regulating, and controlling systems.

Normally UF_6 is evaporated from cylinders placed within autoclaves and is distributed in gaseous form to the entry point by way of cascade header pipework. The ''product'' and ''tails'' UF_6 gaseous streams flowing from exit points are passed by way of cascade header pipework to either cold traps or to compression stations where the UF_6 gas is liquified prior to onward transfer into suitable containers for transportation or storage. Because a gaseous diffusion enrichment plant consists of a large number of gaseous diffusion assemblies arranged in cascades, there are many kilometers of cascade header pipework, incorporating thousands of welds with substantial amounts of repetition of layout. The equipment, components, and piping systems are fabricated to very high vacuum and cleanliness standards.

The items listed below either come into direct contact with the UF_6 process gas or directly control the flow within the cascade. All surfaces which come into contact with the process gas are wholly made of, or lined with, UF_6-resistant materials. For the purposes of this appendix, the materials resistant to corrosion by UF_6 include copper, copper alloys, stainless steel, aluminum, aluminum oxide, aluminum alloys, nickel or alloys containing 60 percent or more nickel and fluorinated hydrocarbon polymers.

1. Assemblies and components especially designed or prepared for use in gaseous diffusion enrichment.

1.1 Gaseous Diffusion Barriers and Barrier Materials

(a) Especially designed or prepared thin, porous filters, with a pore size of 10–100 nm, a thickness of 5 mm or less, and for tubular forms, a diameter of 25 mm or less, made of metallic, polymer or ceramic materials resistant to corrosion by UF_6 (See Note in § 2 of this appendix).

(b) Especially prepared compounds or powders for the manufacture of such filters. Such compounds and powders include nickel or alloys containing 60 percent or more nickel, aluminum oxide, or UF_6-resistant fully fluorinated hydrocarbon polymers having a purity of 99.9 percent by weight or more, a particle size less than 10 μm, and a high degree of particle size uniformity, which are especially prepared for the manufacture of gaseous diffusion barriers.

1.2 Diffuser Housings

Especially designed or prepared hermetically sealed vessels for containing the gaseous diffusion barrier, made of or protected by UF_6-resistant materials (See Note in § 2 of this appendix).

1.3 Compressors and Gas Blowers

Especially designed or prepared compressors or gas blowers with a suction volume capacity of 1 m^3 per minute or more of UF_6, and with a discharge pressure of up to 500 kPa, designed for long-term operation in the UF_6 environment, as well as separate assemblies of such compressors and gas blowers. These compressors and gas blowers have a pressure ratio of 10:1 or less and are made of, or protected by, materials resistant to UF_6 (See Note in § 2 of this appendix).

1.4 Rotary Shaft Seals

Especially designed or prepared vacuum seals, with seal feed and seal exhaust connections, for sealing the shaft connecting the compressor or the gas blower rotor with the driver motor so as to ensure a reliable seal against in-leaking of air into the inner chamber of the compressor or gas blower which is filled with UF_6. Such seals are normally designed for a buffer gas in-leakage rate of less than 1000 cm^3 per minute.

1.5 Heat Exchangers for Cooling UF_6

Especially designed or prepared heat exchangers made of or protected by UF_6 resistant materials (see Note to § 2 of this appendix) and intended for a leakage pressure change rate of less than 10 Pa per hour under a pressure difference of 100 kPa.

2. Auxiliary systems, equipment, and components especially designed or prepared for use in gaseous diffusion enrichment.

Note: The items listed below either come into direct contact with the UF_6 process gas or directly control the flow within the cascade. Materials resistant to corrosion by UF_6 include copper, copper alloys, stainless steel, aluminum, aluminum oxide, aluminum alloys, nickel or alloys containing 60 percent or more nickel, and fluorinated hydrocarbon polymers.

2.1 Feed Systems/Product and Tails Withdrawal Systems

Especially designed or prepared process systems or equipment for enrichment plants

made of, or protected by, materials resistant to corrosion by UF_6, including:

(1) Feed autoclaves, ovens, or systems used for passing UF_6 to the enrichment process;

(2) Desublimers, cold traps, or pumps used to remove UF_6 from the enrichment process for subsequent transfer upon heating;

(3) Solidification or liquefaction stations used to remove UF_6 from the enrichment process by compressing and converting UF_6 to a liquid or solid form;

(4) ''Product'' or ''tails'' stations used for transferring UF_6 into containers.

2.2 Header Piping Systems

Especially designed or prepared piping systems and header systems for handling UF_6 within the gaseous diffusion cascades. This piping network is normally of the ''double'' header system with each cell connected to each of the headers.

2.3 Vacuum Systems

(a) Especially designed or prepared vacuum manifolds, vacuum headers and vacuum pumps having a suction capacity of 5 m^3 per minute or more.

(b) Vacuum pumps especially designed for service in UF_6-bearing atmospheres made of, or protected by, materials resistant to corrosion by UF_6 (See Note to this section). These pumps may be either rotary or positive displacement, may have fluorocarbon seals, and may have special working fluids present.

2.4 Special Shut-Off and Control Valves

Especially designed or prepared bellows-sealed valves, manual or automated, shut-off or control valves, made of, or protected by, materials resistant to corrosion by UF_6, for installation in main and auxiliary systems of gaseous diffusion enrichment plants.

2.5 UF_6 Mass Spectrometers/Ion Sources

Especially designed or prepared mass spectrometers capable of taking on-line samples from UF_6 gas streams and having all of the following:

(a) Capable of measuring ions of 320 atomic mass units or greater and having a resolution of better than 1 part in 320;

(b) ion sources constructed of or protected by nickel, nickel-copper alloys with a nickel content of 60 percent or more by weight, or nickel-chrome alloys;

(c) electron bombardment ionization sources; and

(d) having a collector system suitable for isotopic analysis.

3. Any other components especially designed or prepared for use in a gaseous diffusion enrichment plant or in any of the components described in this appendix.

■ 10. Revise appendix D to part 110 to read as follows:

Appendix D to Part 110—Illustrative List of Aerodynamic Enrichment Plant Equipment and Components Under NRC Export Licensing Authority

Note: In aerodynamic enrichment processes, a mixture of gaseous UF_6 and light gas (hydrogen or helium) is compressed and then passed through separating elements wherein isotopic separation is accomplished by the generation of high centrifugal forces over a curved-wall geometry. Two processes of this type have been successfully developed: The separation nozzle process and the vortex tube process. For both processes, the main components of a separation stage included cylindrical vessels housing the special separation elements (nozzles or vortex tubes), gas compressors, and heat exchangers to remove the heat of compression. An aerodynamic plant requires a number of these stages, so that quantities can provide an important indication of end use. Because aerodynamic processes use UF_6, all equipment, pipeline and instrumentation surfaces (that come in contact with the gas) must be made of, or protected by, materials that remain stable in contact with UF_6. All surfaces which come into contact with the process gas are made of, or protected by, UF_6-resistant materials; including copper, copper alloys, stainless steel, aluminum, aluminum oxide, aluminum alloys, nickel or alloys containing 60 percent or more nickel by weight, and fluorinated hydrocarbon polymers.

The following items either come into direct contact with the UF_6 process gas or directly control the flow within the cascade:

(1) Separation nozzles and assemblies.

Especially designed or prepared separation nozzles and assemblies thereof. The separation nozzles consist of slit-shaped, curved channels having a radius of curvature less than 1 mm, resistant to corrosion by UF_6 and having a knife-edge within the nozzle that separates the gas flowing through the nozzle into two fractions.

(2) Vortex tubes and assemblies.

Especially designed or prepared vortex tubes and assemblies thereof. The vortex tubes are cylindrical or tapered, made of, or protected by, materials resistant to corrosion by UF_6, and with one or more tangential inlets. The tubes may be equipped with nozzle-type appendages at either or both ends.

The feed gas enters the vortex tube tangentially at one end or through swirl vanes or at numerous tangential positions along the periphery of the tube.

(3) Compressors and gas blowers.

Especially designed or prepared compressors or gas blowers made of, or protected by, materials resistant to corrosion by the UF_6/carrier gas (hydrogen or helium) mixture.

(4) Rotary shaft seals.

Especially designed or prepared rotary shaft seals, with seal feed and seal exhaust connections, for sealing the shaft connecting the compressor rotor or the gas blower rotor with the driver motor to ensure a reliable seal against out-leakage of process gas or in-leakage of air or seal gas into the inner chamber of the compressor or gas blower which is filled with a UF_6/carrier gas mixture.

(5) Heat exchangers for gas cooling.

Especially designed or prepared heat exchangers, made of, or protected by, materials resistant to corrosion by UF_6.

(6) Separation element housings.

Especially designed or prepared separation element housings, made of, or protected by, materials resistant to corrosion by UF_6, for containing vortex tubes or separation nozzles.

(7) Feed systems/product and tails withdrawal systems.

Especially designed or prepared process systems or equipment for enrichment plants made of, or protected by, materials resistant to corrosion by UF_6, including:

(i) Feed autoclaves, ovens, or systems used for passing UF_6 to the enrichment process;

(ii) Desublimers (or cold traps) used to remove UF_6 from the enrichment process for subsequent transfer upon heating;

(iii) Solidification or liquefaction stations used to remove UF_6 from the enrichment process by compressing and converting UF_6 to a liquid or solid form; and

(iv) ''Product'' or ''tails'' stations used for transferring UF_6 into containers.

(8) Header piping systems.

Especially designed or prepared header piping systems, made of or protected by materials resistant to corrosion by UF_6, for handling UF_6 within the aerodynamic cascades. The piping network is normally of the ''double'' header design with each stage or group of stages connected to each of the headers.

(9) Vacuum systems and pumps.

(i) Especially designed or prepared vacuum systems consisting of vacuum manifolds, vacuum headers and vacuum pumps, and designed for service in UF_6-bearing atmospheres.

(ii) Especially designed or prepared vacuum pumps for service in UF_6-bearing atmospheres and made of, or protected by, materials resistant to corrosion by UF_6. These pumps may use fluorocarbon seals and special working fluids.

(10) Special shut-off and control valves.

Especially designed or prepared bellows-sealed valves, manual or automated, shut-off or control valves made of, or protected by, materials resistant to corrosion by UF_6 with a diameter of 40 mm or greater for installation in main and auxiliary systems of aerodynamic enrichment plants.

(11) UF_6 mass spectrometers/ion sources.

Especially designed or prepared mass spectrometers capable of taking on-line samples from UF_6 gas streams and having all of the following:

(i) Capable of measuring ions of 320 atomic mass units or greater and having a resolution of better than 1 part in 320;

(ii) Ion sources constructed of or protected by nickel, nickel-copper alloys with a nickel content of 60 percent or more by weight, or nickel-chrome alloys;

(iii) Electron bombardment ionization sources; and

(iv) Collector system suitable for isotopic analysis.

(12) UF_6/carrier gas separation systems.

Especially designed or prepared process systems for separating UF_6 from carrier gas (hydrogen or helium).

These systems are designed to reduce the UF_6 content in the carrier gas to 1 ppm or less and may incorporate equipment such as:

(i) Cryogenic heat exchangers and cryoseparators capable of temperatures of 153 K (–120 °C) or less;

(ii) Cryogenic refrigeration units capable of temperatures of 153 K (–120 °C) or less;

(iii) Separation nozzle or vortex tube units for the separation of UF_6 from carrier gas; or

(iv) UF6 cold traps capable of freezing out UF_6.

(13) Any other components especially designed or prepared for use in an aerodynamic enrichment plant or in any of the components described in this appendix.

■ 11. Revise appendix E to part 110 to read as follows:

Appendix E to Part 110—Illustrative List of Chemical Exchange or Ion Exchange Enrichment Plant Equipment and Components Under NRC Export Licensing Authority

Note: The slight difference in mass between the isotopes of uranium causes small changes in chemical reaction equilibria that can be used as a basis for separation of the isotopes. Two processes have been successfully developed: Liquid-liquid chemical exchange and solid-liquid ion exchange.

A. In the liquid-liquid chemical exchange process, immiscible liquid phases (aqueous and organic) are countercurrently contacted to give the cascading effect of thousands of separation stages. The aqueous phase consists of uranium chloride in hydrochloric acid solution; the organic phase consists of an extractant containing uranium chloride in an organic solvent. The contactors employed in the separation cascade can be liquid-liquid exchange columns (such as pulsed columns with sieve plates) or liquid centrifugal contactors. Chemical conversions (oxidation and reduction) are required at both ends of the separation cascade in order to provide for the reflux requirements at each end. A major design concern is to avoid contamination of the process streams with certain metal ions. Plastic, plastic-lined (including use of fluorocarbon polymers) and/or glass-lined columns and piping are therefore used.

(1) Liquid-liquid exchange columns.

Countercurrent liquid-liquid exchange columns having mechanical power input especially designed or prepared for uranium enrichment using the chemical exchange process. For corrosion resistance to concentrated hydrochloric acid solutions, these columns and their internals are normally made of, or protected by, suitable plastic materials (such as fluorinated hydrocarbon polymers) or glass. The stage residence time of the columns is normally designed to be 30 seconds or less.

(2) Liquid-liquid centrifugal contactors.

Especially designed or prepared for uranium enrichment using the chemical exchange process. These contactors use rotation to achieve dispersion of the organic and aqueous streams and then centrifugal force to separate the phases. For corrosion resistance to concentrated hydrochloric acid solutions, the contactors are normally made of, or protected by, suitable plastic materials (such as fluorinated hydrocarbon polymers) or glass. The stage residence time of the centrifugal contactors is designed to be short (30 seconds or less).

(3) Uranium reduction systems and equipment.

(i) Especially designed or prepared electrochemical reduction cells to reduce uranium from one valence state to another for uranium enrichment using the chemical exchange process. The cell materials in contact with process solutions must be corrosion resistant to concentrated hydrochloric acid solutions.

The cell cathodic compartment must be designed to prevent re-oxidation of uranium to its higher valence state. To keep the uranium in the cathodic compartment, the cell may have an impervious diaphragm membrane constructed of special cation exchange material. The cathode consists of a suitable solid conductor such as graphite.

These systems consist of solvent extraction equipment for stripping the U^{+4} from the organic stream into an aqueous solution, evaporation and/or other equipment to accomplish solution pH adjustment and control, and pumps or other transfer devices for feeding to the electrochemical reduction cells. A major design concern is to avoid contamination of the aqueous stream with certain metal ions. For those parts in contact with the process stream, the system is constructed of equipment made of, or protected by, materials such as glass, fluorocarbon polymers, polyphenyl sulfate, polyether sulfone, and resin-impregnated graphite.

(ii) Especially designed or prepared systems at the product end of the cascade for taking the U^{+4} out of the organic stream, adjusting the acid concentration, and feeding to the electrochemical reduction cells.

These systems consist of solvent extraction equipment for stripping the U^{+4} from the organic stream into an aqueous solution, evaporation and/or other equipment to accomplish solution pH adjustment and control, and pumps or other transfer devices for feeding to the electrochemical reduction cells. A major design concern is to avoid contamination of the aqueous stream with certain metal ions. For those parts in contact with the process stream, the system is constructed of equipment made of, or protected by, materials such as glass, fluorocarbon polymers, polyphenyl sulfate, polyether sulfone, and resin-impregnated graphite.

(4) Feed preparation systems.

Especially designed or prepared systems for producing high-purity uranium chloride feed solutions for chemical exchange uranium isotope separation plants.

These systems consist of dissolution, solvent extraction and/or ion exchange equipment for purification and electrolytic cells for reducing the uranium U^{+6} or U^{+4} to U^{+3}. These systems produce uranium chloride solutions having only a few parts per million of metallic impurities such as chromium, iron, vanadium, molybdenum, and other bivalent or higher multi-valent cations. Materials of construction for portions of the system processing high-purity U^{+3} include glass, fluorinated hydrocarbon polymers, polyphenyl sulfate or polyether sulfone plastic-lined and resin-impregnated graphite.

(5) Uranium oxidation systems.

Especially designed or prepared systems for oxidation of U^{+3} to U^{+4} for return to the uranium isotope separation cascade in the chemical exchange enrichment process.

These systems may incorporate equipment such as:

(i) Equipment for contacting chlorine and oxygen with the aqueous effluent from the isotope separation equipment and extracting the resultant U^{+4} into the stripped organic stream returning from the product end of the cascade; and

(ii) Equipment that separates water from hydrochloric acid so that the water and the concentrated hydrochloric acid may be reintroduced to the process at the proper locations.

B. In the solid-liquid ion-exchange process, enrichment is accomplished by uranium adsorption/desorption on a special, fast-acting, ion-exchange resin or adsorbent. A solution of uranium in hydrochloric acid and other chemical agents is passed through cylindrical enrichment columns containing packed beds of the adsorbent. For a continuous process, a reflux system is necessary to release the uranium from the adsorbent back in the liquid flow so that ''product'' and ''tails'' can be collected. This is accomplished with the use of suitable reduction/oxidation chemical agents that are fully regenerated in separate external circuits and that may be partially regenerated within the isotopic separation columns themselves. The presence of hot concentrated hydrochloric acid solutions in the process requires that the equipment be made of, or protected by, special corrosion-resistant materials.

(1) Fast reacting ion exchange resins/adsorbents.

Especially designed or prepared for uranium enrichment using the ion exchange process, including porous macroreticular resins, and/or pellicular structures in which the active chemical exchange groups are limited to a coating on the surface of an inactive porous support structure, and other composite structures in any suitable form including particles or fibers. These ion exchange resins/adsorbents have diameters of 0.2 mm or less and must be chemically resistant to concentrated hydrochloric acid solutions as well as physically strong enough so as not to degrade in the exchange columns. The resins/adsorbents are especially designed to achieve very fast uranium isotope exchange kinetics (exchange rate half-time of less than 10 seconds) and are capable of operating at a temperature in the range of 373 K (100 °C) to 473 K (200 °C).

(2) Ion exchange columns.

Cylindrical columns greater than 1000 mm in diameter for containing and supporting packed beds of ion exchange resin/adsorbent, especially designed or prepared for uranium enrichment using the ion exchange process. These columns are made of, or protected by, materials (such as titanium or fluorocarbon plastics) resistant to corrosion by concentrated hydrochloric acid solutions and are capable of operating at a temperature in the range of 373 K (100 °C) to 473 K (200 °C) and pressures above 0.7 MPa.

(3) Ion exchange reflux systems.

(i) Especially designed or prepared chemical or electrochemical reduction systems for regeneration of the chemical reducing agent(s) used in ion exchange uranium enrichment cascades.

The ion exchange enrichment process may use, for example, trivalent titanium (Ti^{+3}) as a reducing cation in which case the reduction system would regenerate Ti^{+3} by reducing Ti^{+4}.

(ii) Especially designed or prepared chemical or electrochemical oxidation systems for regeneration of the chemical oxidizing agent(s) used in ion exchange uranium enrichment cascades.

The ion exchange enrichment process may use, for example, trivalent iron (Fe^{+3}) as an oxidant in which case the oxidation system would regenerate Fe^{+3} by oxidizing Fe^{+2}.

C. Any other components especially designed or prepared for use in a chemical exchange or ion exchange enrichment plant or in any of the components described in this appendix.

■ 12. Revise appendix F to part 110 to read as follows:

Appendix F to Part 110—Illustrative List of Laser-Based Enrichment Plant Equipment and Components Under NRC Export Licensing Authority

Note: Present systems for enrichment processes using lasers fall into two categories: The process medium is atomic uranium vapor and the process medium is the vapor of a uranium compound, sometimes mixed with another gas or gases. Common nomenclature for these processes include: First category-atomic vapor laser isotope separation; and second category-molecular laser isotope separation including chemical reaction by isotope selective laser activation. The systems, equipment, and components for laser enrichment plants include: (a) Devices to feed uranium-metal vapor for selective photo-ionization or devices to feed the vapor of a uranium compound (for selective photo-dissociation or selective excitation/activation); (b) devices to collect enriched and depleted uranium metal as ''product'' and ''tails'' in the first category, and devices to collect enriched and depleted uranium compounds as ''product'' and ''tails'' in the second category; (c) process laser systems to selectively excite the uranium-235 species; and (d) feed preparation and product conversion equipment. The complexity of the spectroscopy of uranium atoms and compounds may require incorporation of a number of available laser and laser optics technologies.

All surfaces that come into direct contact with the uranium or UF_6 are wholly made of, or protected by, corrosion-resistant materials. For laser-based enrichment items, the materials resistant to corrosion by the vapor or liquid of uranium metal or uranium alloys include yttria-coated graphite and tantalum; and the materials resistant to corrosion by UF_6 include copper, copper alloys, stainless steel, aluminum, aluminum oxide, aluminum alloys, nickel or alloys containing 60 percent or more nickel by weight, and fluorinated hydrocarbon polymers. Many of the following items come into direct contact with uranium metal vapor or liquid or with process gas consisting of UF_6 or a mixture of UF_6 and other gases:

(1) Uranium vaporization systems (atomic vapor based methods).

Especially designed or prepared uranium metal vaporization systems for use in laser enrichment.

These systems may contain electron beam guns and are designed to achieve a delivered power (1 kW or greater) on the target sufficient to generate uranium metal vapour at a rate required for the laser enrichment function.

(2) Liquid or vapor uranium metal handling systems and components (atomic vapor based methods).

Especially designed or prepared systems for handling molten uranium, molten uranium alloys, or uranium metal vapor.

The liquid uranium metal handling systems may consist of crucibles and cooling equipment for the crucibles. The crucibles and other system parts that come into contact with molten uranium, molten uranium alloys, or uranium metal vapor are made of, or protected by, materials of suitable corrosion and heat resistance, such as tantalum, yttria-coated graphite, graphite coated with other rare earth oxides, or mixtures thereof.

(3) Uranium metal ''product'' and ''tails'' collector assemblies (atomic vapor based methods).

Especially designed or prepared ''product'' and ''tails'' collector assemblies for uranium metal in liquid or solid form.

Components for these assemblies are made of or protected by materials resistant to the heat and corrosion of uranium metal vapor or liquid, such as yttria-coated graphite or tantalum, and may include pipes, valves, fittings, ''gutters,'' feed-throughs, heat exchangers and collector plates for magnetic, electrostatic, or other separation methods.

(4) Separator module housings (atomic vapor based methods).

Especially designed or prepared cylindrical or rectangular vessels for containing the uranium metal vapor source, the electron beam gun, and the ''product'' and ''tails'' collectors. These housings have multiplicity of ports for electrical and water feed-throughs, laser beam windows, vacuum pump connections, and instrumentation diagnostics and monitoring with opening and closure provisions to allow refurbishment of internal components.

(5) Supersonic expansion nozzles (molecular based methods).

Especially designed or prepared supersonic expansion nozzles for cooling mixtures of UF_6 and carrier gas to 150 K (−123 °C) or less which are corrosion resistant to UF_6.

(6) ''Product'' or ''tails'' collectors (molecular based methods).

Especially designed or prepared components or devices for collecting uranium product material or uranium tails material following illumination with laser light.

In one example of molecular laser isotope separation, the product collectors serve to collect enriched uranium pentafluoride (UF_5) solid material. The product collectors may consist of filter, impact, or cyclone-type collectors, or combinations thereof, and must be corrosion resistant to the UF_5/UF_6 environment.

(7) UF_6/carrier gas compressors (molecular based methods).

Especially designed or prepared compressors for UF_6/carrier gas mixtures, designed for long term operation in a UF_6 environment. Components of these compressors that come into contact with process gas are made of, or protected by, materials resistant to UF_6 corrosion.

(8) Rotary shaft seals (molecular based methods).

Especially designed or prepared rotary shaft seals, with seal feed and seal exhaust connections, for sealing the shaft connecting the compressor rotor with the driver motor to ensure a reliable seal against out-leakage of process gas or in-leakage of air or seal gas into the inner chamber of the compressor which is filled with a UF_6/carrier gas mixture.

(9) Fluorination systems (molecular based methods).

Especially designed or prepared systems for fluorinating UF_5 (solid) to UF_6 (gas).

These systems are designed to fluorinate the collected UF_5 powder to UF_6 for subsequent collection in product containers or for transfer as feed for additional enrichment. In one approach, the fluorination reaction may be accomplished within the isotope separation system to react and recover directly off the ''product'' collectors. In another approach, the UF_5 powder may be removed/transferred from the ''product'' collectors into a suitable reaction vessel (e.g., fluidized-bed reactor, screw reactor or flame tower) for fluorination. In both approaches, equipment is used for storage and transfer of fluorine (or other suitable fluorinating agents) and for collection and transfer of UF_6.

(10) UF_6 mass spectrometers/ion sources (molecular based methods).

Especially designed or prepared mass spectrometers capable of taking on-line samples from UF_6 gas streams and having all of the following characteristics:

(i) Capable of measuring ions of 320 atomic mass units or greater and having a resolution of better than 1 part in 320;

(ii) Ion sources constructed of or protected by nickel, nickel-copper alloys with a nickel content of 60 percent or more by weight, or nickel-chrome alloys;

(iii) Electron bombardment ionization sources; and

(iv) Collector system suitable for isotopic analysis.

(11) Feed systems/product and tails withdrawal systems (molecular based methods).

Especially designed or prepared process systems or equipment for enrichment plants made of or protected by materials resistant to corrosion by UF_6, including:

(i) Feed autoclaves, ovens, or systems used for passing UF_6 to the enrichment process;

(ii) Desublimers (or cold traps) used to remove UF_6 from the enrichment process for subsequent transfer upon heating;

(iii) Solidification or liquefaction stations used to remove UF_6 from the enrichment process by compressing and converting UF_6 to a liquid or solid; and

(iv) ''Product'' or ''tails'' stations used to transfer UF_6 into containers.

(12) UF_6/carrier gas separation systems (molecular based methods).

Especially designed or prepared process systems for separating UF_6 from carrier gas.

These systems may incorporate equipment such as:

(i) Cryogenic heat exchangers or cryoseparators capable of temperatures of 153 K (−120 °C) or less;

(ii) Cryogenic refrigeration units capable of temperatures of 153 K (−120 °C) or less; or

(iii) UF_6 cold traps capable of freezing out UF_6.

(13) Lasers or Laser systems.

Especially designed or prepared for the separation of uranium isotopes.

The laser system typically contains both optical and electronic components for the management of the laser beam (or beams) and the transmission to the isotope separation chamber. The laser system for atomic vapor based methods usually consists of tunable dye lasers pumped by another type of laser (e.g., copper vapor lasers or certain solid-state lasers). The laser system for molecular based methods may consist of CO_2 lasers or excimer lasers and a multi-pass optical cell. Lasers or laser systems for both methods require spectrum frequency stabilization for operation over extended periods of time.

(14) Any other components especially designed or prepared for use in a laser-based enrichment plant or in any of the components described in this appendix.

■ 13. Revise appendix G to part 110 to read as follows:

Appendix G to Part 110—Illustrative List of Plasma Separation Enrichment Plant Equipment and Components Under NRC Export Licensing Authority

Note: In the plasma separation process, a plasma of uranium ions passes through an electric field tuned to the ^{235}U ion resonance frequency so that they preferentially absorb energy and increase the diameter of their corkscrew-like orbits. Ions with a large-diameter path are trapped to produce a product enriched in ^{235}U. The plasma, made by ionizing uranium vapor, is contained in a vacuum chamber with a high-strength magnetic field produced by a superconducting magnet. The main technological systems of the process include the uranium plasma generation system, the separator module with superconducting magnet, and metal removal systems for the collection of ''product'' and ''tails.''

(1) Microwave power sources and antennae.

Especially designed or prepared microwave power sources and antennae for producing or accelerating ions having the following characteristics: Greater than 30 GHz frequency and greater than 50 kW mean power output for ion production.

(2) Ion excitation coils.

Especially designed or prepared radio frequency ion excitation coils for frequencies of more than 100 kHz and capable of handling more than 40 kW mean power.

(3) Uranium plasma generation systems.

Especially designed or prepared systems for the generation of uranium plasma for use in plasma separation plants.

(4) Uranium metal ''product'' and ''tails'' collector assemblies.

Especially designed or prepared ''product'' and ''tails'' collector assemblies for uranium metal in solid form. These collector assemblies are made of, or protected by, materials resistant to the heat and corrosion of uranium metal vapor, such as yttria-coated graphite or tantalum.

(5) Separator module housings.

Especially designed or prepared cylindrical vessels for use in plasma separation enrichment plants for containing the uranium plasma source, radio-frequency drive coil, and the ''product'' and ''tails'' collectors.

These housings have a multiplicity of ports for electrical feed-throughs, diffusion pump connections, and instrumentation diagnostics and monitoring. They have provisions for opening and closure to allow for refurbishment of internal components and are constructed of a suitable non-magnetic material such as stainless steel.

(6) Any other components especially designed or prepared for use in a plasma separation enrichment plant or in any of the components described in this appendix.

■ 14. In appendix H to part 110, add a new paragraph (4) to read as follows:

Appendix H to Part 110—Illustrative List of Electromagnetic Enrichment Plant Equipment and Components Under NRC Export Licensing Authority

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(4) Any other components especially designed or prepared for use in an electromagnetic enrichment plant or in any of the components described in this appendix.

■ 15. Revise appendix I to part 110 to read as follows:

Appendix I to Part 110—Illustrative List of Reprocessing Plant Components Under NRC Export Licensing Authority

Note: Reprocessing irradiated nuclear fuel separates plutonium and uranium from intensely radioactive fission products and other transuranic elements. Different technical processes can accomplish this separation. However, over the years Purex has become the most commonly used and accepted process. Purex involves the dissolution of irradiated nuclear fuel in nitric acid, followed by separation of the uranium, plutonium, and fission products by solvent extraction using a mixture of tributyl phosphate in an organic diluent.

Purex facilities have process functions similar to each other, including: Irradiated fuel element chopping, fuel dissolution, solvent extraction, and process liquor storage. There may also be equipment for thermal denitration of uranium nitrate, conversion of plutonium nitrate to oxide metal, and treatment of fission product waste liquor to a form suitable for long term storage or disposal. However, the specific type and configuration of the equipment performing these functions may differ between Purex facilities for several reasons, including the type and quantity of irradiated nuclear fuel to be reprocessed and the intended disposition of the recovered materials, and the safety and maintenance philosophy incorporated into the design of the facility. A plant for the reprocessing of irradiated fuel elements includes the equipment and components which normally come in direct contact with and directly control the irradiated fuel and the major nuclear material and fission product processing streams.

(1) Irradiated fuel element chopping machines.

Remotely operated equipment especially designed or prepared for use in a reprocessing plant and intended to cut, chop, or shear irradiated nuclear fuel assemblies, bundles, or rods. This equipment breaches the cladding of the fuel to expose the irradiated nuclear material to dissolution. Especially designed metal cutting shears are the most commonly employed, although advanced equipment, such as lasers, may be used.

(2) Dissolvers.

Critically safe tanks (e.g. small diameter, annular, or slab tanks) especially designed or prepared for use in a reprocessing plant, intended for dissolution of irradiated nuclear fuel and which are capable of withstanding hot, highly corrosive liquid, and which can be remotely loaded and maintained.

Dissolvers normally receive the chopped-up spent fuel. In these critically safe vessels, the irradiated nuclear material is dissolved in nitric acid and the remaining hulls removed from the process stream.

(3) Solvent extractors and solvent extraction equipment.

Especially designed or prepared solvent extractors such as packed or pulse columns, mixer settlers, or centrifugal contactors for use in a plant for the reprocessing of irradiated fuel. Solvent extractors must be resistant to the corrosive effect of nitric acid. Solvent extractors are normally fabricated to extremely high standards (including special welding and inspection and quality assurance and quality control techniques) out of low carbon stainless steels, titanium, zirconium, or other high quality materials.

Solvent extractors both receive the solution of irradiated fuel from the dissolvers and the organic solution which separates the uranium, plutonium, and fission products. Solvent extraction equipment is normally designed to meet strict operating parameters, such as long operating lifetimes with no maintenance requirements or adaptability to easy replacement, simplicity of operation and control, and flexibility for variations in process conditions.

(4) Chemical holding or storage vessels.

Especially designed or prepared holding or storage vessels for use in a plant for the reprocessing of irradiated fuel. The holding or storage vessels must be resistant to the corrosive effect of nitric acid. The holding or storage vessels are normally fabricated of materials such as low carbon stainless steels, titanium or zirconium, or other high quality materials. Holding or storage vessels may be designed for remote operation and maintenance and may have the following features for control of nuclear criticality:

(i) Walls or internal structures with a boron equivalent of at least 2 percent, or

(ii) A maximum diameter of 175 mm (7 in) for cylindrical vessels, or

(iii) A maximum width of 75 mm (3 in) for either a slab or annular vessel.

(5) Neutron measurement systems for process control.

Neutron measurement systems especially designed or prepared for integration and use with automated process control systems in a plant for the reprocessing of irradiated fuel elements. These systems involve the capability of active and passive neutron measurement and discrimination in order to determine the fissile material quantity and composition. The complete system is composed of a neutron generator, a neutron detector, amplifiers, and signal processing electronics.

The scope of this entry does not include neutron detection and measurement instruments that are designed for nuclear material accountancy and safeguarding or any other application not related to integration and use with automated process control systems in a plant for the reprocessing of irradiated fuel elements.

(6) Plutonium nitrate to plutonium oxide conversion systems. Complete systems especially designed or prepared for the conversion of plutonium nitrate to plutonium oxide, in particular adapted so as to avoid criticality and radiation effects and to minimize toxicity hazards.

(7) Plutonium metal production systems. Complete systems especially designed or prepared for the production of plutonium metal, in particular adapted so as to avoid criticality and radiation effects and to minimize toxicity hazards.

(8) Process control instrumentation specially designed or prepared for monitoring or controlling the processing of material in a reprocessing plant.

(9) Any other components especially designed or prepared for use in a reprocessing plant or in any of the components described in this appendix.

■ 16. In appendix J to part 110, add a new paragraph (c) to read as follows:

Appendix J to Part 110—Illustrative List of Uranium Conversion Plant Equipment and Plutonium Conversion Plant Equipment Under NRC Export Licensing Authority

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(c) Any other components especially designed or prepared for use in a uranium conversion plant or plutonium conversion plant or in any of the components described in this appendix.

■ 17. Revise appendix K to part 110 to read as follows:

Appendix K to Part 110—Illustrative List of Equipment and Components Under NRC Export Licensing Authority for Use in a Plant for the Production of Heavy Water, Deuterium and Deuterium Compounds

Note: Heavy water can be produced by a variety of processes. However, two processes have proven to be commercially viable: The water-hydrogen sulphide exchange process (GS process) and the ammonia-hydrogen exchange process.

A. The GS process is based upon the exchange of hydrogen and deuterium between water and hydrogen sulphide within a series of towers which are operated with the top section cold and the bottom section hot. Water flows down the towers while the hydrogen sulphide gas circulates from the bottom to the top of the towers. A series of perforated trays are used to promote mixing between the gas and the water. Deuterium migrates to the water at low temperatures and to the hydrogen sulphide at high temperatures. Gas or water, enriched in deuterium, is removed from the first stage towers at the junction of the hot and cold sections and the process is repeated in subsequent stage towers. The product of the last stage, water enriched up to 30 percent in deuterium, is sent to a distillation unit to produce reactor grade heavy water; i.e., 99.75 percent deuterium oxide.

B. The ammonia-hydrogen exchange process can extract deuterium from synthesis gas through contact with liquid ammonia in the presence of a catalyst. The synthesis gas is fed into exchange towers and then to an ammonia converter. Inside the towers the gas flows from the bottom to the top while the liquid ammonia flows from the top to the bottom. The deuterium is stripped from the hydrogen in the synthesis gas and concentrated in the ammonia. The ammonia then flows into an ammonia cracker at the bottom of the tower while the gas flows into an ammonia converter at the top. Further enrichment takes place in subsequent stages and reactor-grade heavy water is produced through final distillation. The synthesis gas feed can be provided by an ammonia plant that can be constructed in association with a heavy water ammonia-hydrogen exchange plant. The ammonia-hydrogen exchange process can also use ordinary water as a feed source of deuterium.

C.1. Much of the key equipment for heavy water production plants using either the GS process or the ammonia-hydrogen exchange process are common to several segments of the chemical and petroleum industries; particularly in small plants using the GS process. However, few items are available ''off-the-shelf.'' Both processes require the handling of large quantities of flammable, corrosive, and toxic fluids at elevated pressures. Therefore, in establishing the design and operating standards for plants and equipment using these processes, careful attention to materials selection and specifications is required to ensure long service life with high safety and reliability factors. The choice is primarily a function of economics and need. Most equipment, therefore, is prepared to customer requirements.

In both processes, equipment which individually is not especially designed or prepared for heavy water production can be assembled into especially designed or prepared systems for producing heavy water. Examples of such systems are the catalyst production system used in the ammonia-hydrogen exchange process and the water distillation systems used for the final concentration of heavy water to reactor-grade in either process.

C.2. Equipment especially designed or prepared for the production of heavy water utilizing either the water-hydrogen sulphide exchange process or the ammonia-hydrogen exchange process:

(i) Water-hydrogen Sulphide Exchange Towers.

Exchange towers with diameters of 1.5 m or greater and capable of operating at pressures greater than or equal to 2 MPa (300 psi) especially designed or prepared for heavy water production utilizing the water-hydrogen sulphide exchange process.

(ii) Blowers and Compressors.

Single stage, low head (i.e., 0.2 MPa or 30 psi) centrifugal blowers or compressors for hydrogen-sulphide gas circulation (i.e., gas containing more than 70 percent H2S). The blowers or compressors have a throughput capacity greater than or equal to 56 m^3/second (120,000 standard cubic feet per minute) while operating at pressures greater than or equal to 1.8 MPa (260 psi) suction and have seals designed for wet H2S service.

(iii) Ammonia-Hydrogen Exchange Towers.

Ammonia-hydrogen exchange towers greater than or equal to 35 m (114.3 ft) in height with diameters of 1.5 m (4.9 ft) to 2.5 m (8.2 ft) capable of operating at pressures greater than 15 MPa (2225 psi). The towers have at least one flanged, axial opening of the same diameter as the cylindrical part through which the tower internals can be inserted or withdrawn.

(iv) Tower Internals and Stage Pumps Used in the Ammonia-hydrogen Exchange Process.

Tower internals include especially designed stage contactors which promote intimate gas/liquid contact. Stage pumps include especially designed submersible pumps for circulation of liquid ammonia within a contacting stage internal to the stage towers.

(v) Ammonia Crackers Utilizing the Ammonia-hydrogen Exchange Process.

Ammonia crackers with operating pressures greater than or equal to 3 MPa (450 psi) especially designed or prepared for heavy water production utilizing the ammonia-hydrogen exchange process.

(vi) Ammonia Synthesis Converters or Synthesis Units.

Ammonia synthesis converters or synthesis units especially designed or prepared for heavy water production utilizing the ammonia-hydrogen exchange process.

These converters or units take synthesis gas (nitrogen and hydrogen) from an ammonia/hydrogen high-pressure exchange column (or columns), and the synthesized ammonia is returned to the exchange column (or columns).

(vii) Infrared Absorption Analyzers.

Infrared absorption analyzers capable of ''on-line'' hydrogen/deuterium ratio analysis where deuterium concentrations are equal to or greater than 90 percent.

(viii) Catalytic Burners Used in the Ammonia-hydrogen Exchange Process.

Catalytic burners for the conversion of enriched deuterium gas into heavy water especially designed or prepared for heavy water production utilizing the ammonia-hydrogen exchange process.

(ix) Complete Heavy Water Upgrade Systems or Columns.

Complete heavy water upgrade systems or columns especially designed or prepared for

the upgrade of heavy water to reactor-grade deuterium concentration. These systems, which usually employ water distillation to separate heavy water from light water, are especially designed or prepared to produce reactor-grade heavy water (i.e., typically 99.75 percent deuterium oxide) from heavy water feedstock of lesser concentration.

D. Any other components especially designed or prepared for use in a plant for the production of heavy water, deuterium, and deuterium compounds or in any of the components described in this appendix.

■ 18. Revise appendix M to part 110 to read as follows:

Appendix M to Part 110—Categorization of Nuclear Material

CATEGORIZATION OF NUCLEAR MATERIAL

[From IAEA INFCIRC/225/Revision 5]

Material	Form	Category I	Category II	Category III [3]
1. Plutonium [1]	Unirradiated [2]	2 kg or more	Less than 2 kg but more than 500 g.	500 g or less but more than 15 g.
2. Uranium-235 (^{235}U).	Unirradiated [2]:			
	—Uranium enriched to 20 percent ^{235}U or more.	5 kg or more	Less than 5 kg but more than 1 kg.	1 kg or less but more than 15 g.
	—Uranium enriched to 10 percent ^{235}U but less than 20 percent ^{235}U.		10 kg or more	Less than 10 kg but more than 1 kg.
	—Uranium enriched above natural, but less than 10 percent ^{235}U.			10 kg or more.
3. Uranium-233 (^{233}U).	Unirradiated [2]	2 kg or more	Less than 2 kg but more than 500 g.	500 g or less but more than 15 g.
4. Irradiated Fuel (The categorization of irradiated fuel in the table is based on international transport considerations. The State may assign a different category for domestic use, storage and transport taking all relevant factors into account).			Depleted or natural uranium, thorium or low enriched fuel (less than 10 percent fissile content) [4] [5]	

[1] All plutonium except that with isotopic concentration exceeding 80 percent in plutonium-238.

[2] Material not irradiated in a reactor or material irradiated in a reactor but with a radiation level equal to or less than 1 Gy/h (100 rad/h) at 1 m unshielded.

[3] Quantities not falling in Category III and natural uranium, depleted uranium and thorium should be protected at least in accordance with prudent management practice.

[4] Although this level of protection is recommended, it would be open to States, upon evaluation of the specific circumstances, to assign a different category of physical protection.

[5] Other fuel which by virtue of its original fissile material content is classified as Category I or II before irradiation may be reduced one category level while the radiation level from the fuel exceeds 1 Gy/h (100 rad/h) at one meter unshielded.

■ 19. In appendix N to part 110, add a new paragraph c. to read as follows:

Appendix N to Part 110—Illustrative List of Lithium Isotope Separation Facilities, Plants and Equipment Under NRC's Export Licensing Authority

* * * * *

c. Any other components especially designed or prepared for use in a reprocessing plant or in any of the components described in this appendix.

■ 20. Revise appendix O to part 110 to read as follows:

Appendix O to Part 110—Illustrative List of Fuel Element Fabrication Plant Equipment and Components Under NRC's Export Licensing Authority

Note: Nuclear fuel elements are manufactured from source or special nuclear material. For oxide fuels, the most common type of fuel equipment for pressing pellets, sintering, grinding and grading will be present. Mixed oxide fuels are handled in glove boxes (or equivalent containment) until they are sealed in the cladding. In all cases, the fuel is hermetically sealed inside a suitable cladding which is designed to be the primary envelope encasing the fuel so as to provide suitable performance and safety during reactor operation. Also, in all cases, precise control of processes, procedures and equipment to extremely high standards is necessary in order to ensure predictable and safe fuel performance.

(a) Items that are considered especially designed or prepared for the fabrication of fuel elements include equipment that:

(1) Normally comes in direct contact with, or directly processes or controls, the production flow of nuclear material;

(2) Seals the nuclear material within the cladding;

(3) Checks the integrity of the cladding or the seal;

(4) Checks the finished treatment of the sealed fuel; or

(5) Is used for assembling reactor fuel elements.

(b) This equipment or systems of equipment may include, for example:

(1) Fully automatic pellet inspection stations especially designed or prepared for checking final dimensions and surface defects of fuel pellets;

(2) Automatic welding machines especially designed or prepared for welding end caps onto the fuel pins (or rods);

(3) Automatic test and inspection stations especially designed or prepared for checking the integrity of completed fuel pins (or rods). This item typically includes equipment for:

(i) X-ray examination of pin (or rod) end cap welds;

(ii) Helium leak detection from pressurized pins (or rods); and

(iii) Gamma-ray scanning of the pins (or rods) to check for correct loading of the fuel pellets inside.

(4) Systems especially designed or prepared to manufacture nuclear fuel cladding.

(c) Any other components especially designed or prepared for use in a fuel element fabrication plant or in any of the components described in this appendix.

Dated at Rockville, Maryland, this 18th day of June, 2014.

For the Nuclear Regulatory Commission.

Mark A. Satorius,

Executive Director for Operations.

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DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. FAA–2014–0341; Directorate Identifier 2014–NM–102–AD; Amendment 39–17874; AD 2014–12–13]

RIN 2120–AA64

Airworthiness Directives; the Boeing Company Airplanes

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Final rule; request for comments.

SUMMARY: We are superseding Airworthiness Directive (AD) 2014–03–06 for all the Boeing Company Model 737–100, –200, –200C, –300, –400, and –500 series airplanes. AD 2014–03–06 required repetitive inspections for cracking of the aft support fitting for the main landing gear (MLG) beam, and the rear spar upper chord and rear spar web in the area of rear spar station (RSS) 224.14; and repair if necessary. This AD clarifies two paragraph references. This AD was prompted by a determination that two paragraph references were in error. We are issuing this AD to detect and correct cracking of the aft support fitting for the main landing gear (MLG) beam, and the rear spar upper chord and rear spar web in the area of rear spar station (RSS) 224.14, which could grow and result in a fuel leak and possible fire.

DATES: This AD is effective July 25, 2014.

The Director of the Federal Register approved the incorporation by reference of a certain publication listed in this AD as of April 9, 2014 (79 FR 12368, March 5, 2014).

We must receive any comments on this AD by August 25, 2014.

ADDRESSES: You may send comments, using the procedures found in 14 CFR 11.43 and 11.45, by any of the following methods:

- Federal eRulemaking Portal: Go to *http://www.regulations.gov.* Follow the instructions for submitting comments.
- Fax: 202–493–2251.
- Mail: U.S. Department of Transportation, Docket Operations, M–30, West Building Ground Floor, Room W12–140, 1200 New Jersey Avenue SE., Washington, DC 20590.
- Hand Delivery: U.S. Department of Transportation, Docket Operations, M–30, West Building Ground Floor, Room W12–140, 1200 New Jersey Avenue SE., Washington, DC 20590, between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays.

For service information identified in this AD, contact Boeing Commercial Airplanes, Attention: Data & Services Management, P.O. Box 3707, MC 2H–65, Seattle, WA 98124–2207; telephone 206–544–5000, extension 1; fax 206–766–5680; Internet *https://www.myboeingfleet.com.* You may view this referenced service information at the FAA, Transport Airplane Directorate, 1601 Lind Avenue SW., Renton, WA. For information on the availability of this material at the FAA, call 425–227–1221.

Examining the AD Docket

You may examine the AD docket on the Internet at *http://www.regulations.gov* by searching for and locating Docket No. FAA–2014–0341; or in person at the Docket Management Facility between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The AD docket contains this AD, the regulatory evaluation, any comments received, and other information. The street address for the Docket Office (phone: 800–647–5527) is in the **ADDRESSES** section. Comments will be available in the AD docket shortly after receipt.

FOR FURTHER INFORMATION CONTACT: Nancy Marsh, Aerospace Engineer, Airframe Branch, ANM–120S, FAA, Seattle Aircraft Certification Office (ACO), 1601 Lind Avenue SW., Renton, WA 98057–3356; phone: 425–917–6440; fax: 425–917–6590; email: *nancy.marsh@faa.gov.*

SUPPLEMENTARY INFORMATION:

Discussion

On January 18, 2014, we issued AD 2014–03–06, Amendment 39–17743 (79 FR 12368, March 5, 2014), for all the Boeing Company Model 737–100, –200, –200C, –300, –400, and –500 series airplanes. AD 2014–03–06 required repetitive inspections for cracking of the aft support fitting for the main landing gear (MLG) beam, and the rear spar upper chord and rear spar web in the area of rear spar station (RSS) 224.14; and repair if necessary. AD 2014–03–06 resulted from reports of cracks found in the aft support fitting, the rear spar upper chord, and the rear spar web. We issued AD 2014–03–06 to detect and correct cracking of the aft support fitting for the main landing gear (MLG) beam, and the rear spar upper chord and rear spar web in the area of rear spar station (RSS) 224.14, which could grow and result in a fuel leak and possible fire.

Actions Since AD 2014–03–06 Was Issued

Since we issued AD 2014–03–06, Amendment 39–17743 (79 FR 12368, March 5, 2014), two incorrect paragraph references were found. The references to paragraphs (g) and (g)(1) in paragraph (h)(2) of AD 2014–03–06 are incorrect. The correct reference should be to the introductory text of paragraph (h) and paragraph (h)(1) of AD 2014–03–06. Paragraph (h)(2) of AD 2014–03–06 is the corrective action for the inspections required by the introductory text of paragraph (h) and paragraph (h)(1) of this AD. In order to mandate the corrective actions for the inspections required by the introductory text of paragraph (h) and paragraph (h)(1) of this AD, we have revised the references in paragraph (h)(2) of this AD.

FAA's Determination

We are issuing this AD because we evaluated all the relevant information and determined the unsafe condition described previously is likely to exist or develop in other products of these same type designs.

AD Requirements

This AD requires repetitive inspections for cracking of the aft support fitting for the MLG beam, and the rear spar upper chord and rear spar web in the area of RSS 224.14; and repair if necessary. This AD corrects these paragraph references.

FAA's Justification and Determination of the Effective Date

AD 2014–03–06, Amendment 39–17743 (79 FR 12368, March 5, 2014), clearly indicated that inspections, and repairs if necessary, are required. Since this new AD merely corrects incorrect paragraph references, notice and opportunity for public comment before issuing this AD are unnecessary.

Comments Invited

This AD is a final rule that involves requirements affecting flight safety, and we did not provide you with notice and an opportunity to provide your comments before it becomes effective. However, we invite you to send any written data, views, or arguments about this AD. Send your comments to an address listed under the **ADDRESSES** section. Include the docket number FAA–2014–0341 and directorate identifier 2014–NM–102–AD at the beginning of your comments. We specifically invite comments on the overall regulatory, economic, environmental, and energy aspects of this AD. We will consider all comments received by the closing date and may amend this AD because of those comments.

We will post all comments we receive, without change, to *http://www.regulations.gov*, including any personal information you provide. We will also post a report summarizing each substantive verbal contact we receive about this AD.

Costs of Compliance

We estimate that this AD affects 353 airplanes of U.S. registry.

We estimate the following costs to comply with this AD:

ESTIMATED COSTS

Action	Labor cost	Parts cost	Cost per product	Cost on U.S. operators
Inspection [Retained actions from AD 2014–03–06, Amendment 39-17743 (79 FR 12368, March 5, 2014)].	Up to 86 work-hours × $85 per hour = $7,310 per inspection cycle.	$0	Up to $7,310 per inspection cycle.	Up to $2,580,430 per inspection cycle.

We have received no definitive data that would enable us to provide cost estimates for the on-condition actions specified in this AD.

Authority for This Rulemaking

Title 49 of the United States Code specifies the FAA's authority to issue rules on aviation safety. Subtitle I, Section 106, describes the authority of the FAA Administrator. Subtitle VII, Aviation Programs, describes in more detail the scope of the Agency's authority.

We are issuing this rulemaking under the authority described in Subtitle VII, Part A, Subpart III, Section 44701, ''General requirements.'' Under that section, Congress charges the FAA with promoting safe flight of civil aircraft in air commerce by prescribing regulations for practices, methods, and procedures the Administrator finds necessary for safety in air commerce. This regulation is within the scope of that authority because it addresses an unsafe condition that is likely to exist or develop on products identified in this rulemaking action.

Regulatory Findings

This AD will not have federalism implications under Executive Order 13132. This AD will not have a substantial direct effect on the States, on the relationship between the national government and the States, or on the distribution of power and responsibilities among the various levels of government.

For the reasons discussed above, I certify that this AD:

(1) Is not a ''significant regulatory action'' under Executive Order 12866,

(2) Is not a ''significant rule'' under DOT Regulatory Policies and Procedures (44 FR 11034, February 26, 1979),

(3) Will not affect intrastate aviation in Alaska, and

(4) Will not have a significant economic impact, positive or negative, on a substantial number of small entities under the criteria of the Regulatory Flexibility Act.

List of Subjects in 14 CFR Part 39

Air transportation, Aircraft, Aviation safety, Incorporation by reference, Safety.

Adoption of the Amendment

Accordingly, under the authority delegated to me by the Administrator, the FAA amends part 39 of the Federal Aviation Regulations (14 CFR part 39) as follows:

PART 39—AIRWORTHINESS DIRECTIVES

■ 1. The authority citation for part 39 continues to read as follows:

Authority: 49 U.S.C. 106(g), 40113, 44701.

§ 39.13 [Amended]

■ 2. The FAA amends § 39.13 by removing Airworthiness Directive (AD) 2014–03–06, Amendment 39–17743 (79 FR 12368, March 5, 2014), and adding the following new AD:

2014–12–13 The Boeing Company: Amendment 39–17874; Docket No. FAA–2014–0341; Directorate Identifier 2014–NM–102–AD.

(a) Effective Date

This AD is effective July 25, 2014.

(b) Affected ADs

This AD replaces AD 2014–03–06, Amendment 39–17743 (79 FR 12368, March 5, 2014).

(c) Applicability

(1) This AD applies to all The Boeing Company Model 737–100, –200, –200C, –300, –400, and –500 series airplanes, certificated in any category.

(2) Installation of Supplemental Type Certificate (STC) ST01219SE (*http://rgl.faa.gov/Regulatory_and_Guidance_Library/rgstc.nsf/0/2C6E3DBDDD36F91C862576A4005D64E2?OpenDocument&Highlight=st01219se*) does not affect the ability to accomplish the actions required by this AD. Therefore, for airplanes on which STC ST01219SE is installed, a ''change in product'' alternative method of compliance (AMOC) approval request is not necessary to comply with the requirements of 14 CFR 39.17.

(d) Subject

Air Transport Association (ATA) of America Code 57, Wings.

(e) Unsafe Condition

This AD was prompted by reports of cracks found in the aft support fitting, the rear spar upper chord, and the rear spar web. We are issuing this AD to detect and correct cracking of the aft support fitting for the main landing gear (MLG) beam, and the rear spar upper chord and rear spar web in the area of rear spar station (RSS) 224.14, which could grow and result in a fuel leak and possible fire.

(f) Compliance

Comply with this AD within the compliance times specified, unless already done.

(g) Retained Inspections: Group 1 Airplanes

This paragraph restates the actions required by paragraph (g) of AD 2014–03–06, Amendment 39–17743 (79 FR 12368, March 5, 2014) with no changes. For airplanes identified in Group 1 of Boeing Special Attention Service Bulletin 737–57–1318, dated May 15, 2013: At the applicable time specified in paragraph 1.E., ''Compliance,'' of Boeing Special Attention Service Bulletin 737–57–1318, dated May 15, 2013, except as required by paragraph (i) of this AD, do inspections and applicable corrective actions using a method approved in accordance with the procedures specified in paragraph (j) of this AD.

(h) Retained Inspections: Groups 2–7 Airplanes

This paragraph restates the actions required by the introductory text of paragraph (h) of AD 2014–03–06, Amendment 39–17743 (79 FR 12368, March 5, 2014) with no changes. For airplanes identified in Groups 2 through 7 of Boeing Special Attention Service Bulletin 737–57–1318, dated May 15, 2013: At the applicable time specified in paragraph 1.E., ''Compliance,'' of Boeing Special Attention Service Bulletin 737–57–1318, dated May 15, 2013, except as required by paragraph (i) of this AD, do high frequency eddy current inspections to detect cracking of the aft support fitting for the MLG beam, and the rear spar upper chord and rear spar web in the area of rear spar station 224.14, as applicable, in accordance with Option 1, 2, or 3 of the Accomplishment Instructions of Boeing Special Attention Service Bulletin 737–57–1318, dated May 15, 2013.

(1) This paragraph restates the actions required by paragraph (h)(1) of AD 2014–03–06, Amendment 39–17743 (79 FR 12368, March 5, 2014) with no changes. If no crack is found, repeat the inspection thereafter at the time specified in paragraph 1.E., ''Compliance,'' of Boeing Special Attention Service Bulletin 737–57–1318, dated May 15, 2013, as applicable. Accomplishment of the inspection of the 12 fastener holes (locations 1–12) in accordance with Option 2, Action 3; or Option 3, Action 3; as specified in note (b) of tables 2 through 5 of paragraph 1.E., ''Compliance,'' of Boeing Special Attention Service Bulletin 737–57–1318, dated May 15, 2013; terminates only the corresponding inspections that include note (b) in the ''Repeat Interval'' column of the applicable table.

(2) This paragraph restates the actions required by paragraph (h)(2) of AD 2014–03–06, Amendment 39–17743 (79 FR 12368, March 5, 2014), with revised paragraph references to the introductory text of paragraph (h) and to paragraph (h)(1) of this AD to mandate corrective actions. If any crack is found during any inspection required by the introductory text of paragraph (h) or by paragraph (h)(1) of this AD, repair before further flight using a method approved in accordance with the procedures specified in paragraph (j) of this AD.

(i) Retained Exception to Service Information Specifications

This paragraph restates the actions required by paragraph (i) of AD 2014–03–06, Amendment 39–17743 (79 FR 12368, March 5, 2014), with no changes. Where Boeing Special Attention Service Bulletin 737–57–1318, dated May 15, 2013, specifies a compliance time ''after the original issue date of this service bulletin,'' this AD requires compliance within the specified compliance time after April 9, 2014 (the effective date of AD 2014–03–06).

(j) Alternative Methods of Compliance (AMOCs)

(1) The Manager, Seattle Aircraft Certification Office (ACO), FAA, has the authority to approve AMOCs for this AD, if requested using the procedures found in 14 CFR 39.19. In accordance with 14 CFR 39.19, send your request to your principal inspector or local Flight Standards District Office, as appropriate. If sending information directly to the manager of the ACO, send it to the attention of the person identified in paragraph (k) of this AD. Information may be emailed to: *9-ANM-Seattle-ACO-AMOC-Requests@faa.gov*.

(2) Before using any approved AMOC, notify your appropriate principal inspector, or lacking a principal inspector, the manager of the local flight standards district office/certificate holding district office.

(3) An AMOC that provides an acceptable level of safety may be used for any repair required by this AD if it is approved by the Boeing Commercial Airplanes Organization Designation Authorization (ODA), which has been authorized by the Manager, Seattle ACO, to make those findings. For a repair method to be approved, the repair must meet the certification basis of the airplane, and the approval must specifically refer to this AD.

(4) AMOCs approved for AD 2014–03–06, Amendment 39–17743 (79 FR 12368, March 5, 2014), are approved as AMOCs for the corresponding provisions of this AD.

(k) Related Information

For more information about this AD, contact Nancy Marsh, Aerospace Engineer, Airframe Branch, ANM–120S, FAA, Seattle Aircraft Certification Office (ACO), 1601 Lind Avenue SW., Renton, WA 98057–3356; phone: 425–917–6440; fax: 425–917–6590; email: *nancy.marsh@faa.gov*.

(l) Material Incorporated by Reference

(1) The Director of the Federal Register approved the incorporation by reference (IBR) of the service information listed in this paragraph under 5 U.S.C. 552(a) and 1 CFR part 51.

(2) You must use this service information as applicable to do the actions required by this AD, unless the AD specifies otherwise.

(3) The following service information was approved for IBR on April 9, 2014 (79 FR 12368, March 5, 2014).

(i) Boeing Special Attention Service Bulletin 737–57–1318, dated May 15, 2013.

(ii) Reserved.

(4) For service information identified in this AD, contact Boeing Commercial Airplanes, Attention: Data & Services Management, P.O. Box 3707, MC 2H–65, Seattle, WA 98124–2207; telephone 206–544–5000, extension 1; fax 206–766–5680; Internet *https://www.myboeingfleet.com*.

(5) You may view this service information at FAA, Transport Airplane Directorate, 1601 Lind Avenue SW., Renton, WA. For information on the availability of this material at the FAA, call 425–227–1221.

(6) You may view this service information that is incorporated by reference at the National Archives and Records Administration (NARA). For information on the availability of this material at NARA, call 202–741–6030, or go to: *http://www.archives.gov/federal-register/cfr/ibr-locations.html*.

Issued in Renton, Washington on June 6, 2014.

Jeffrey E. Duven,

Manager, Transport Airplane Directorate, Aircraft Certification Service.

[FR Doc. 2014–14475 Filed 7–9–14; 8:45 am]

BILLING CODE 4910–13–P

DEPARTMENT OF HEALTH AND HUMAN SERVICES

Food and Drug Administration

21 CFR Part 1150

[Docket No. FDA–2012–N–0920]

RIN 0910–AG81

Tobacco Products, User Fees, Requirements for the Submission of Data Needed To Calculate User Fees for Domestic Manufacturers and Importers of Tobacco Products

AGENCY: Food and Drug Administration, HHS.

ACTION: Final rule.

SUMMARY: The Food and Drug Administration (FDA or we) is issuing a final rule that requires domestic tobacco product manufacturers and importers to submit information needed to calculate the amount of user fees assessed under the Federal Food, Drug, and Cosmetic Act (the FD&C Act). The United States Department of Agriculture (USDA) has been collecting this information and providing FDA with the data FDA needs to calculate the amount of user fees assessed to tobacco product manufacturers and importers. USDA intends to cease collecting this information starting in fiscal year 2015 (October 2014). Consistent with the requirements of the FD&C Act, the final rule requires the submission of this information to FDA instead of USDA.

DATES: This rule is effective August 11, 2014.

FOR FURTHER INFORMATION CONTACT: Nancy Boocker or Annette Marthaler,

Food and Drug Administration, Center for Tobacco Products, Document Control Center, Bldg. 71, Rm. G335, 10903 New Hampshire Ave., Silver Spring, MD 20993–0002; 1–877–287–1373, *CTPRegulations@fda.hhs.gov*.

SUPPLEMENTARY INFORMATION:

Executive Summary

Purpose of the Final Rule

The final rule will provide FDA with the information it needs to calculate the amount of user fees assessed for each domestic manufacturer and importer of tobacco products subject to chapter IX of the FD&C Act. The total amount of user fees for each fiscal year is specified in section 919(b)(1) of the FD&C Act. That total is divided into four equal quarterly assessments. The FD&C Act provides for the total quarterly assessment to be allocated among classes of tobacco products and then, within each class of tobacco products, among individual domestic manufacturers and importers. In specifying how to determine each of these two allocations—to a class of tobacco products and then to a domestic manufacturer or importer within a particular class of tobacco products—section 919 of the FD&C Act references the Fair and Equitable Tobacco Reform Act of 2004 (FETRA, Pub. L. 108–357 (7 U.S.C. 518 et seq.)), which is administered by USDA. To date, FDA has received the information needed to calculate user fees from USDA. When the USDA program sunsets at the end of fiscal year 2014 (September 30, 2014), FDA, as required by the FD&C Act, will need to provide for an alternative source of the information necessary to calculate user fees.

Legal Authority

This rule is being issued based upon FDA's authority to calculate, assess, and collect tobacco product user fees pursuant to section 919 of the FD&C Act as well as FDA's rulemaking authority under sections 909(a) and 701(a).

Summary of the Major Provisions

The final rule applies to domestic manufacturers and importers of four classes of tobacco products: Cigarettes, snuff, chewing tobacco, and roll-your-own tobacco. Beginning October 2014, the rule requires each domestic manufacturer or importer of these four product classes to submit to FDA specific information regarding units of product removed [1] into domestic commerce and Federal excise taxes paid for each class of tobacco product. The information must be submitted on a monthly basis, even in months when no tobacco product is removed into domestic commerce. This final rule specifies that FDA will continue to follow the current method for allocating the total fees among classes of tobacco product. We will calculate the appropriate allocation by multiplying the total units removed (sticks or pounds) for the class by the 2003 maximum excise tax rate for that class and then calculating each class' percentage of the total quarterly assessment. The final rule also specifies that FDA will continue to use the current method of assessing user fees within each tobacco product class—by multiplying the total amount assessed to the class times the percentage share of Federal excise taxes paid by each domestic manufacturer and importer using information required to be provided to FDA under this final rule. If additional classes of tobacco products are deemed subject to FDA's tobacco regulation, FDA will conduct a new rulemaking to subject those classes to this user fee rule. In addition, the final rule includes provisions about notification of assessments, payment of assessments, procedures for disputing an assessment, and penalties for failure to report required information to FDA or failure to pay tobacco product user fees.

Costs and Benefits

Under our primary baseline, starting in fiscal year 2015, FDA would obtain the information necessary for collecting user fees directly from Federal Agencies (other than USDA) that collect such information. Compared with this baseline, the final rule will impose private costs on industry to submit data to FDA on a monthly basis, with an approximately offsetting reduction in government information collection costs. The net effect may be a small social cost or benefit. This final rule also allows FDA to be in control of the data needed for calculating and billing user fees and resolves impediments that may otherwise exist to FDA's ability to use the data for its intended purpose.

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I. Background

The Family Smoking Prevention and Tobacco Control Act (Tobacco Control Act) was enacted on June 22, 2009 (Pub. L. 111–31), amending the FD&C Act and providing FDA with the authority to regulate tobacco products. Section 101(b) of the Tobacco Control Act amends the FD&C Act by adding new chapter IX (sections 900–920 (21 U.S.C. 387–387u)). Chapter IX provides FDA with tools and funds to regulate tobacco products and imposes certain obligations on domestic tobacco product manufacturers and importers. Included among FDA's authorities are the authorities to assess and collect user fees.

In enacting the Tobacco Control Act, Congress found that tobacco use is the single most preventable cause of disease, disability, and death in the United States. Each year, over 400,000 people die prematurely from smoking or exposure to secondhand smoke. Approximately 8.6 million people in the United States live with a serious illness caused by smoking. A consensus exists within the scientific and medical communities that tobacco products are inherently dangerous and cause cancer, heart disease, and other serious adverse health effects (section 2(2), (3), and (13) of the Tobacco Control Act).

The Tobacco Control Act grants FDA the authority to regulate tobacco products and to protect the public from the harmful effects of tobacco use. Section 901(b) of the FD&C Act provides that chapter IX applies to cigarettes, cigarette tobacco, roll-your-own tobacco, and smokeless tobacco. It also permits FDA to issue a regulation to deem other tobacco products subject to the FD&C Act.[2] More specifically, the Tobacco Control Act gives FDA the authority to, among other things:

- Restrict cigarettes and smokeless tobacco retail sales to youth;
- Require owners and operators of tobacco companies to register annually and be subject to biennial inspection by FDA (section 905 of the FD&C Act);
- require manufacturers and importers who wish to market a new tobacco product to obtain a marketing

[1] Removal is defined at 26 U.S.C. 5702 as ''the removal of tobacco products or cigarette papers or tubes, or any processed tobacco, from the factory or from internal revenue bond under section 5704, as the Secretary [of Treasury] shall by regulation prescribe, or release from customs custody, and shall also include the smuggling or other unlawful importation of such articles into the United States.''

[2] On April 25, 2014, FDA published a notice of proposed rulemaking to propose that additional tobacco products be deemed subject to chapter IX of the FD&C Act (79 FR 23142).

order from FDA prior to marketing that product (section 910 of the FD&C Act);

- require each manufacturer or importer to report ''all constituents, including smoke constituents as applicable, identified by [FDA] as harmful or potentially harmful to health in each tobacco product, and as applicable in the smoke of each tobacco product, by brand and by quantity in each brand and subbrand'' (section 904(a)(3) of the FD&C Act);
- establish tobacco product standards if FDA finds that it is appropriate for the protection of the public health (section 907(a)(3) of the FD&C Act);
- conduct compliance check inspections of tobacco product retailers to determine a retailer's compliance with Federal laws and regulations;
- establish science and research programs to inform the development of tobacco product regulations and better understand the risks associated with tobacco use;
- educate the public about the harmful effects of tobacco use; and
- in accordance with section 919, assess and collect user fees from each domestic manufacturer and importer of tobacco products subject to the tobacco product provisions of the FD&C Act.

Section 919(c)(2) of the FD&C Act provides that tobacco product user fees are the sole source of funding for FDA's regulation of tobacco products. Therefore, FDA considers these fees to be critical to the Agency's ability to achieve its mission to protect and promote the public health. User fees provide FDA with a source of stable, consistent funding that has made possible our implementation of the Tobacco Control Act. The revenues from these fees fund the Agency's regulation of tobacco products and the tobacco industry, as described previously.

In the **Federal Register** of May 31, 2013 (78 FR 32581), FDA issued a notice of proposed rulemaking (NPRM) to add 21 CFR part 1150 to require domestic tobacco product manufacturers and importers to submit to FDA information needed to calculate the amount of user fees assessed under the FD&C Act. This final rule requires domestic tobacco product manufacturers and importers to submit that information beginning October 2014.

The final rule is issued under section 919(a) of the FD&C Act, which requires FDA, in accordance with that section, to ''assess user fees on, and collect such fees from, each manufacturer and importer of tobacco products'' subject to the tobacco product provisions of chapter IX of the FD&C Act. The total amount of user fees for each fiscal year is specified in section 919(b)(1) of the FD&C Act, and under section 919(a) we are to assess and collect a proportionate amount each quarter of the fiscal year. The FD&C Act provides for the total assessment to be allocated among classes of tobacco products. The class allocation is based on each tobacco product class' volume of tobacco products removed into commerce. Within each class of tobacco products, an individual domestic manufacturer or importer is assessed a user fee based on its market share for that tobacco product class.

In specifying how to determine each of these two allocations—to a class of tobacco products and then to a domestic manufacturer or importer within a particular class of tobacco products—section 919 of the FD&C Act references the Fair and Equitable Tobacco Reform Act of 2004 (FETRA, Public Law 108–357 (7 U.S.C. 518 et seq.)). In determining the user fees to be assessed on each class of tobacco products, section 919(b)(2)(B)(ii) of the FD&C Act provides that the applicable percentage for each tobacco product class ''shall be the percentage determined under section 625(c) of [FETRA] for each such class of product for such fiscal year.'' In determining the user fee to be paid by each company, section 919(b)(4) of the FD&C Act directs that we use percentage share information ''determined for purposes of allocations under subsections (e) through (h) of section 625 of [FETRA].''

FETRA provides for a Tobacco Transition Payment Program (TTPP), administered by the USDA, through which eligible former tobacco quota holders and tobacco producers receive payments in 10 equal installments in each fiscal year 2005 through 2014. FETRA provides for the establishment of quarterly assessments on each domestic manufacturer and importer of tobacco products to fund the 10-year TTPP. The last assessment under FETRA will be in September 2014, which will encompass the 39th and 40th quarterly TTPP assessments. The issuance of the 40th, or last, quarterly assessment will be on September 1, 2014, rather than on December 1, 2014, in accordance with statutory requirements specified in section 625(d)(3)(A) of FETRA (see 78 FR 46905, August 2, 2013). Because section 919 refers to FETRA information and calculations that are currently being made by USDA, FDA has been relying on USDA information for its tobacco product user fee calculations. In light of the sunset of the TTPP program, we are issuing this final rule consistent with section 919(b)(7) of the FD&C Act, which requires that no later than fiscal year 2015, we ensure we are able to make the determinations necessary for assessing tobacco product user fees.

Both USDA's TTPP program and FDA's user fee program follow a two-step process to calculate quarterly assessments:

- Step A allocates assessments among the six classes of tobacco products statutorily identified in those programs—cigarettes, cigars, snuff, chewing tobacco, pipe tobacco, and roll-your-own tobacco—based on each class' volume of tobacco products removed into commerce (section 625(c) of FETRA; 7 CFR 1463.4, 1463.5; and section 919(b)(2)(B) of the FD&C Act). To make this allocation, we will use the same approach and publicly available TTB data that is currently used by USDA (see 78 FR 32581 at 32585 and 32586; 70 FR 7007 at 7007 and 7008, February 10, 2005). The volume of tobacco products removed into domestic commerce for each class is multiplied by the maximum 2003 Federal excise tax rate for that class to generate a dollar figure for the class of tobacco products. The dollar figures for each of the six classes of tobacco products are added, and this aggregate dollar figure is the denominator. The dollar figure for each class of tobacco products is the numerator, and when divided by the aggregate dollar figure, the resulting quotient is the percentage attributable to the class. By using a fixed excise tax rate as a conversion factor, this calculation bases changes in user fee assessments solely on changes in volume of tobacco products removed. As discussed in the NPRM, cigars and pipe tobacco are two classes of products that are not currently regulated under chapter IX of the FD&C Act; as such, they are not currently assessed user fees by FDA. Section 919 provides that the allocation of fees that otherwise would be assessed to unregulated classes of tobacco products are to be reallocated to the classes of tobacco products currently subject to chapter IX of the FD&C Act. Therefore, the total dollar amount of allocations that would be assessed for cigars and pipe tobacco is reallocated, based on relative percentages already calculated, to the four classes of currently regulated tobacco products: Cigarettes, snuff, chewing tobacco, and roll-your-own tobacco.
- Step B allocates the assessment for each class of tobacco products among the domestic manufacturers and importers in that class, so that each domestic manufacturer's or importer's assessment is proportional to its percentage share within that class (section 625(e) through (h) of FETRA; 7

CFR 1463.7; and section 919(b)(3) through (b)(5) of the FD&C Act).

II. Overview of the Final Rule

We considered all of the comments to the NPRM. We are finalizing portions of the proposed rule with only minor changes. In response to the comments, we have revised § 1150.15, regarding disputes, to clarify how initial disputes concerning fees and any subsequent requests for further Agency review are to be submitted, the date on which they are due, and that domestic manufacturers and importers are eligible to dispute an assessment. We also clarify that a dispute and any subsequent request for further review must be legible and in English. Although not raised by comments, we have also made minor clarifying edits to §§ 1150.3, 1150.5 and 1150.7. We have also revised § 1150.7(a)(1) to recognize that cigarettes are divided into subclasses for excise tax purposes (small and large cigarettes) and to clarify that our Step A calculations will use the maximum 2003 excise tax rate for small cigarettes for that subclass, rather than using the maximum 2003 excise tax rate (i.e., the excise tax rate for large cigarettes) for all cigarettes. This revision applies only for cigarettes because there are separate excise tax subclasses for cigarettes, and, therefore does not apply to chewing tobacco, roll-your-own tobacco, or snuff. We are not finalizing the portions of the proposed rule relating to the assessment of fees on cigars and pipe tobacco. As described more fully in section III.A of this document, we will revise our user fee regulations in the future if FDA deems cigars or pipe tobacco subject to FDA's authority under chapter IX of the FD&C Act. In addition, as discussed in section III.A, we may revise our user fee regulations if FDA deems additional tobacco products, other than cigars and pipe tobacco, subject to FDA's authority.

III. Comments on the Proposed Rule

We received 12 comments on the proposed rule. Comments were received from tobacco product manufacturers, trade associations, and individuals. To make it easier to identify comments and our responses, the word ''Comment,'' in parentheses, will appear before each comment, and the word ''Response,'' in parentheses, will appear before each response. We have numbered the comments to make it easier to distinguish between comments; the numbers are for organizational purposes only and do not reflect the order in which we received the comments or any value associated with them. We have combined similar comments under one numbered comment. In addition to the comments specific to this rulemaking that we address in the following paragraphs, we received two general comments: One expressing a view that all cigarettes should be prohibited, and one expressing a view that too much attention has been focused on the regulation of tobacco products. These comments express broad policy views and do not address specific points related to this rulemaking. Therefore, these general comments do not require a response.

A. Tobacco Products Not Currently Subject to FDA Regulation

(Comment 1) Multiple comments addressed FDA's authority to assess and collect user fees from domestic manufacturers and importers of products that, in the future, may be deemed subject to FDA's jurisdiction, particularly electronic cigarettes. Some comments stated that FDA must assess and collect fees because no ''free riders'' are allowed under section 919(a) of the FD&C Act. These comments relied on the language in section 919(a) of the FD&C Act that FDA shall ''assess user fees on, and collect such fees from, each manufacturer and importer of tobacco products subject to [chapter IX].'' The comments asserted that, unless deemed products are subject to user fees, ''some regulated manufacturers and importers would have to pay the cost of their regulation plus the cost of regulating the nonpaying manufacturers and importers,'' which would provide the nonpaying manufacturers and importers a significant competitive advantage in terms of reduced costs and prices for their products. Several of the comments claimed that failure to assess user fees on deemed products would violate the Fifth Amendment. Some comments also contended that exempting some products from user fees would be unfair to existing classes, arbitrary and capricious, and violate the Administrative Procedure Act (5 U.S.C. Subchapter II).

In contrast, other comments stated that FDA does not have the authority to assess user fees for any class other than the six classes named in section 919(b)(2)(B) of the FD&C Act and in FETRA. These comments noted that section 919(a) provides that fees must be assessed and collected ''in accordance with this section'' and, therefore, that FDA can assess fees only on those classes identified in section 919 and FETRA. One of these comments also noted that the reallocation provision in section 919(b)(2)(B)(iv) permits reallocation only to regulated classes of the six FETRA classes. Similarly, another comment stated that FDA cannot deem electronic cigarette manufacturers to meet the definition of domestic manufacturer because FDA ''is bound under the FD&C Act to follow the allocation procedures established under FETRA.''

Other comments focused on the burden of regulation more generally to say that their products should be exempt from user fee assessments. One comment argued that premium cigars should be exempt from FDA regulation generally and user fees specifically because FDA regulation would be disproportionately burdensome, as exemplified by the new product requirements in section 910 of the FD&C Act, which would be triggered by the often minor variations intended to alter the taste and aroma of a premium cigar.

(Response) Because these comments are related to tobacco products that are not currently subject to FDA's regulation under chapter IX of the FD&C Act, we do not need to address them at this time. This final rule applies to only domestic manufacturers and importers of the classes of tobacco products identified in section 919 that are currently subject to FDA's regulation under chapter IX of the FD&C Act.

We are not finalizing the portions of the proposed rule relating to the assessment of fees on the cigar and pipe tobacco classes. Instead, we have reserved § 1150.7(a)(2) and § 1150.9(a)(2) should a user fee assessment be applied to cigars and pipe tobacco and limited the definition of ''units of product'' in § 1150.3 by removing the reference to cigars or pipe tobacco. We did not delete cigars and pipe tobacco from the definition of ''class of tobacco products'' because that term is used in § 1150.7(b) describing our reallocation of user fees for any class of tobacco products (such as cigars or pipe tobacco) that is not deemed by FDA to be subject to regulation under chapter IX of the FD&C Act. If FDA deems cigars or pipe tobacco, we will respond to comments regarding these provisions and revise these user fee regulations.

We recognize that the issue of whether FDA has authority to assess user fees on future deemed products, other than cigars and pipe tobacco, is controversial. FDA intends to further explore issues related to user fee assessments on tobacco products that may be deemed subject to chapter IX of the FD&C Act by soliciting public comment. FDA will make any appropriate changes to the user fee regulations in a new rulemaking.

(Comment 2) Other comments raised concerns regarding user fee calculations

under section 919 in relation to specific products or classes of products that may be deemed subject to FDA's jurisdiction. For example, one comment stated that FDA should not adopt USDA's retrospective calculation method for determining class percentage allocations at Step A because of concerns that a regulation deeming additional products subject to FDA regulation could dramatically alter class allocations from year to year and that class allocation calculations using this method will not be an accurate reflection of each class's current share of the market. This comment stated that small businesses may no longer be able to sell affected products, including dissolvables, electronic cigarettes, and cigars, but may still have to pay their share of their respective classes' user fees.

(Response) As discussed, certain tobacco products (including two classes—cigars and pipe tobacco—that are listed in section 919), are not currently subject to FDA's regulation under chapter IX of the FD&C Act. These comments relate to tobacco products that are not currently subject to chapter IX of the FD&C Act. Because this final rule is only addressing tobacco products that are currently subject to FDA's regulation, we do not address these comments at this time.

B. Use of the FETRA Framework

(Comment 3) One comment stated that FDA should calculate the applicable percentages for class and individual manufacturers on the basis of net domestic volume rather than gross domestic volume. The comment noted that ''FETRA's reliance on gross domestic volume overestimates the actual amount of product ultimately removed into domestic commerce, thereby producing inaccurate user fee assessments at both the class and individual [m]anufacturer levels.'' The comment indicated that inaccurate user fee assessments may result in overpayment by some manufacturers.

(Response) We disagree with this comment and will continue to rely on gross domestic volume in our user fee calculations. Section 919 of the FD&C Act directs us to calculate the applicable percentages of each class, and of each domestic manufacturer or importer within each class, by reference to FETRA (section 919(b)(2)(B)(ii) and (b)(4) of the FD&C Act). FETRA defines and relies on ''gross domestic volume'' to determine class assessments and allocations to each domestic manufacturer and importer within each class (7 U.S.C. 518d(a), (c)(2), and (e)(1)). We note that, while the use of gross rather than net domestic volume might increase an individual company's numerator, it would also increase the denominator for the class. We, therefore, do not think that use of gross domestic volume is likely to significantly affect an individual domestic manufacturer or importer unless there is a disproportionately large difference between a company's net domestic volume and its gross domestic volume as compared to other companies in the class.

(Comment 4) One comment stated that FDA should use the current Federal excise tax rate in Step A, not the 2003 excise tax rate used by USDA. The comment noted that, at the time the comment was submitted, this issue was the subject of ongoing litigation, and the comment urged FDA to make its own determination about which tax rate to use. This and other comments urged FDA to instead compute each class' percentage of the user fees based on the actual Federal excise taxes paid by each class during the relevant fiscal year. One comment supported the continued use of the 2003 excise tax rate, saying that FDA is bound by the FD&C Act to use those rates.

(Response) We disagree with the comments that suggested we use a method other than the 2003 maximum excise tax rate to determine the class allocation. Section 919(b)(2)(B)(ii) of the FD&C Act directs us to use, for the class allocations, the percentage determined under section 625(c) of FETRA (7 U.S.C. 518d). As discussed in the preamble to the proposed rule (78 FR 32581 at 32582), USDA determines the percentages under section 625(c) of FETRA by using the 2003 maximum Federal excise tax rate to convert the volume of each tobacco product class measured in different units (sticks and pounds) to a common metric: Dollar amounts. USDA used 2003 maximum excise tax rates because it determined that Congress used them as a conversion factor to create a common unit across all six classes of tobacco products subject to assessments under FETRA when Congress set the initial class allocations under FETRA. The 2003 maximum excise tax rate has been used since the inception of the TTPP to convert the volume of each tobacco product class to dollar amounts, from which USDA calculates the percentage for each class. This has been upheld as a reasonable interpretation of FETRA (*Philip Morris USA, Inc.* v. *Vilsack,* 736 F.3d 284 (4th Cir. 2013)).

Since the inception of FDA's tobacco user fee program, FDA has been using the class percentages calculated by USDA using this methodology. In this final rule, FDA is adopting the same approach as USDA for class allocations. Because section 919 relies on the FETRA class allocation methodology and provides for class allocation among the same tobacco product classes, it is reasonable for FDA to continue using the 2003 maximum Federal excise tax rates as a conversion factor (converting sticks and pounds to dollars). Continuing to use the 2003 rates also allows FDA, just as it allows USDA, to allocate the total user fees among the classes based on changes in each class' percentage of gross domestic volume over time. Because it is a fixed conversion factor, it will limit changes in user fee assessments to changes in volumes. Moreover, the changes from the 2003 rates to the 2009 rates were not proportionate among the classes. Thus, if FDA were to start using the 2009 rates after USDA's program sunsets, this would cause a change in class allocations that would not be limited to the changes in volume among the classes.

(Comment 5) One comment stated that FDA should use the actual units (e.g., sticks for cigarettes and cigars) removed from bonded storage to calculate market share within those classes of tobacco products (Step B) instead of the amount of Federal excise tax paid. The comment noted that using excise taxes to determine market share favors importers over domestic manufacturers because importers can sell cigars to distributors at a lower price than domestic manufacturers due to lower wages, taxes, and regulatory costs. The comment also noted that using excise taxes to calculate market share within a class of tobacco products (Step B) favors companies that do not accurately calculate excise tax.

(Response) This issue is relevant primarily for imposing user fees on cigar manufacturers and importers, which is not addressed in this final rule. Cigars are currently the only tobacco product for which variable excise taxes may be based on price of the product rather than a flat tax based on sticks or weight.[3] In accordance with FETRA, USDA calculates the percentage share of a domestic manufacturer or importer within a class by dividing the volume of tobacco products (in either sticks or pounds) for the manufacturer or importer by the total volume of tobacco products (in either sticks or pounds) for

[3] Under section 919(b)(5) of the FD&C Act, if user fee assessments were to be imposed on cigars, the statute requires that the percentage share of each domestic manufacturer or importer of cigars must be based on the excise taxes paid by a domestic manufacturer or importer over the course of the prior fiscal year rather than during the prior fiscal quarter.

that class. USDA uses excise taxes as a proxy for volume for all classes except cigars because the tax rate by volume is uniform within each of those classes. This final rule, in § 1150.9, follows that approach. For products for which excise taxes do not vary, there should be no difference in calculating individual assessments using excise taxes or actual units because a firm's percentage of the total class will remain the same. In addition, FDA will have information regarding both excise taxes paid and actual units removed for each domestic manufacturer and importer from information provided in Form FDA 3852 (Ref. 1). Therefore, FDA could check that excise taxes were calculated accurately.

C. FDA's Implementation

(Comment 6) Several comments urged FDA to consider the impact of the proposed rule on small manufacturers and importers. These comments suggested that FDA take steps to recognize ''differences in the scale and resources of regulated entities.''

(Response) FDA does recognize that domestic manufacturers and importers have varying levels of resources available. In an effort to minimize the need for additional resources and for continuity, the rule requires that domestic manufacturers and importers submit essentially the same information to FDA that they are currently submitting to USDA. In addition, actual user fee assessments are based on relative market share so that small domestic manufacturers and importers with fewer products in commerce will pay a relatively smaller share of the total assessment for the fiscal year.

(Comment 7) One comment recommended that FDA ''develop a schedule for periodically reevaluating and adjusting user fee percentage allocations'' for tobacco product classes as well as manufacturers and importers to ensure that allocations are fair and equitable.

(Response) FDA agrees, and our rule provides for adjustments for percentage allocations for both tobacco product classes and individual domestic manufacturers and importers. For tobacco product classes, § 1150.7 provides for yearly class allocations among the regulated classes of tobacco products. Also, § 1150.9(a) provides for calculation of assessments within each class on a quarterly basis, based on information from the prior quarter. In addition, § 1150.9(b) explains that on an annual basis, FDA will make any necessary adjustments for individual domestic manufacturers and importers if needed to account for any corrections, such as the addition of one or more domestic manufacturers or importers that were not included in relevant calculations under § 1150.9(a).

(Comment 8) Several comments stated that refunds for overpayment of user fees should include interest on the amount that was incorrectly assessed. Some comments indicated that the Internal Revenue Code provides for interest on overpayments (26 U.S.C. 6611(a)) and that FDA should adopt this approach or a similar approach to refunds.

(Response) FDA disagrees with these comments. In order to recover interest from the United States, there must be an explicit waiver of sovereign immunity related to interest payments (see, e.g., *United States* v. *N.Y. Rayon Importing Co.,* 329 U.S. 654, 659 (1947)). Congress alone has authority to waive the government's sovereign immunity. The Internal Revenue Code provision cited by some comments is specific to the payment of internal revenue tax and provides that interest ''shall be allowed and paid upon any overpayment in respect of any internal revenue tax.'' The TTPP also explicitly requires that interest be paid on refunded amounts (7 U.S.C. 518d(j)). In contrast, the FD&C Act does not require FDA to pay interest on refunds for overpayment of tobacco product user fees. Moreover, the FD&C Act does not require FDA to pay interest on refunds for overpayment in any other user fee context, and FDA does not pay interest on such refunds.

(Comment 9) Several comments indicated that FDA should clarify the process by which manufacturers and importers may appeal a user fee assessment. One comment detailed the provisions that FDA should include in an appeals process (e.g., establishing timeframes for such challenges as well as FDA review and response, putting the disputed fee in an escrow account pending appeal). This comment also requested that the rule specifically permit judicial review in U.S. district court of FDA's decisions regarding disputes. Another comment suggested that FDA adopt USDA's dispute resolution process for user fees.

(Response) To address some of the concerns raised by the comments, FDA has added information to § 1150.15 on how to submit a dispute. FDA has also revised § 1150.15 to clarify that the dispute must be received by FDA within 45 days of the date on FDA's invoice. However, we believe that establishing additional requirements to the appeals process is unnecessary at this time. To date, FDA has received few requests for corrections regarding individual user fees. Accordingly, FDA has provided a framework in § 1150.15 on where, when, and how to submit a dispute and request for additional review under § 10.75. Should the need arise, FDA may issue additional information through a guidance document specific to tobacco product user fee assessment disputes.

In addition, and of its own initiative, FDA has added the requirements that disputes be legible (FDA must be able to read the document) and in English. These requirements will help expedite FDA's review of the dispute and request for additional review.

(Comment 10) One comment stated that FDA should clarify the data verification provisions for user fees. The comment indicated support for the use of third-party data sources for the purpose of identifying manufacturers and importers who are not providing FDA with market share information (nonreporters) or who understate that information (underreporters). However, the comment noted that third-party data should be used only to identify nonreporters and underreporters within the six classes and should not be used to calculate actual market shares (which must be calculated using excise tax data). This comment also asked FDA to clarify that third-party data could be used to calculate market share for tobacco products not within the six classes if FDA determines there is no better alternative available.

(Response) FDA agrees that it can use information available to the Agency to help ensure that domestic manufacturers and importers are providing the information required under this rule. As stated in § 1150.5(a) FDA will use information submitted to FDA as required under § 1150.5 and any other available information, as the Agency determines appropriate, to make user fee assessments. We do not agree that it is necessary to describe or limit the sources of data that FDA might use.

(Comment 11) One comment suggested that FDA obtain data about product removals directly from the Treasury Department's Alcohol and Tobacco Tax and Trade Bureau (TTB). The comment stated that monthly data submissions are unnecessary and unduly burdensome since this information is already collected by TTB. The comment indicated that FDA should require manufacturers to execute a release or waiver permitting TTB to report this information to FDA and that failure to execute such a release or waiver could be construed as an admission of adulteration under section 902(4) of the FD&C Act. However, the comment noted that manufacturers of regulated tobacco products that do not fit within TTB's excise tax structure

could submit information directly to FDA. Another comment suggested that FDA seek a legislative amendment to ensure that FDA has access to excise tax data. In contrast, one comment supported FDA's transition plan for submitting data and noted that it should not be burdensome because manufacturers and importers are familiar with the reporting of this information and the submissions will continue to be made to a single Federal Agency.

(Response) We agree with the comment that, because the rule requires that domestic manufacturers and importers submit to FDA the same information that they have been submitting to USDA (i.e., a summary form supported by the relevant tax forms), the impact of this rule should be minimal and not unduly burdensome. We also note that there are statutory limitations on the access and use by other Federal Agencies of the data collected by TTB, and those limitations preclude us from solely using that data to implement section 919 of the FD&C Act. The summary form will enable us to efficiently identify the amount of tobacco product removed and subject to Federal excise tax, and the supporting tax forms will enable us to verify the accuracy of the information on the summary form. We believe that submission of information directly to FDA regarding removals and imports is important to ensuring that we have the information necessary to efficiently and accurately calculate the amount of user fees assessed.

IV. Legal Authority

Section 919(b)(7) of the FD&C Act requires FDA to ensure that we are able to determine the applicable percentages described in section 919(b)(2) and the percentage shares described in section 919(b)(4). Section 909(a) of the FD&C Act authorizes FDA to issue regulations requiring tobacco product manufacturers or importers to make such reports and provide such information as may be reasonably required to assure that their tobacco products are not adulterated or misbranded and to otherwise protect public health. Under section 902(4) of the FD&C Act, a tobacco product is deemed to be adulterated if the manufacturer or importer of the tobacco product fails to pay a user fee assessed to it under section 919. In addition, section 701(a) of the FD&C Act (21 U.S.C. 371(a)) gives FDA general rulemaking authority to issue regulations for the efficient enforcement of the FD&C Act. Consistent with these authorities, FDA is issuing this rule, which is intended to ensure that we are able to make the determinations required by section 919 of the FD&C Act and to assess and collect tobacco product user fees.

V. Environmental Impact

The Agency has determined under 21 CFR 25.30(h) that this action is of a type that does not individually or cumulatively have a significant effect on the human environment. Therefore, neither an environmental assessment nor an environmental impact statement is required.

VI. Analysis of Impacts

FDA has examined the impacts of the final rule under Executive Order 12866, Executive Order 13563, the Regulatory Flexibility Act (5 U.S.C. 601–612), and the Unfunded Mandates Reform Act of 1995 (Pub. L. 104–4). Executive Orders 12866 and 13563 direct Agencies to assess all costs and benefits of available regulatory alternatives and, when regulation is necessary, to select regulatory approaches that maximize net benefits (including potential economic, environmental, public health and safety, and other advantages; distributive impacts; and equity). The Agency believes that this final rule is not a significant regulatory action under Executive Order 12866.

The Regulatory Flexibility Act requires Agencies to analyze regulatory options that would minimize any significant impact of a rule on small entities. The potential impact on small entities is uncertain, and FDA is unable to rule out the possibility that this final rule may have a significant economic impact on a substantial number of small entities.

Section 202(a) of the Unfunded Mandates Reform Act of 1995 requires that Agencies prepare a written statement, which includes an assessment of anticipated costs and benefits, before proposing ''any rule that includes any Federal mandate that may result in the expenditure by State, local, and tribal governments, in the aggregate, or by the private sector, of $100,000,000 or more (adjusted annually for inflation) in any one year.'' The current threshold after adjustment for inflation is $141 million, using the most current (2012) Implicit Price Deflator for the Gross Domestic Product. FDA does not expect this final rule to result in any 1-year expenditure that would meet or exceed this amount.

Under our primary baseline, starting in fiscal year 2015, FDA would obtain the information necessary for collecting user fees directly from Federal Agencies (other than USDA) that collect such information. Compared with this baseline, this final rule will impose private costs on industry to submit data to FDA on a monthly basis, with an approximately offsetting reduction in government information collection costs. The net effect of this may be a small social cost or benefit. This final rule also allows FDA to be in control of the data needed for calculating and billing user fees and resolves impediments that may otherwise exist to FDA's ability to use the data for its intended purpose. Compared with other possible baseline scenarios, this final rule can be expected to eliminate the potential need for additional legislation and allow the collection of user fees after 2014 to proceed more smoothly than it could without legislation.

Compared to the primary baseline, the estimated one-time private sector transition cost is $159.60 per manufacturer or importer, including small manufacturers and importers, and the annual compliance cost is $2,553.60. One option for regulatory relief would be to exempt firms from reporting in a particular month if they did not introduce any units of any tobacco products for which user fees are assessed into domestic commerce. Another option for regulatory relief would be to require submission of either the FDA form or copies of forms submitted to other Agencies. The full analysis of economic impacts is available as Ref. 2 in Docket No. FDA–2012–N–0920 and at *http://www.fda.gov/AboutFDA/ReportsManualsForms/Reports/EconomicAnalyses/default.htm*.

VII. Paperwork Reduction Act of 1995

This final rule contains information collection provisions that are subject to review by the Office of Management and Budget (OMB) under the Paperwork Reduction Act of 1995 (44 U.S.C. 3501–3520). The title, description, and respondent description of the information collection provisions are shown in the following paragraphs with an estimate of the annual reporting burden. Included in the estimate is the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing each collection of information.

Title: Tobacco Products, User Fees, Requirements for the Submission of Data Needed to Calculate User Fees for Domestic Manufacturers and Importers of Tobacco Products.

Description: This final rule requires each tobacco product domestic manufacturer and importer to submit to FDA information needed to calculate

and assess user fees under the FD&C Act.

The USDA has been collecting information from manufacturers and importers to calculate percentage share for its purposes, and providing FDA with the data FDA needs to determine user fee assessments under the FD&C Act. USDA will cease collecting this information starting in fiscal year 2015. Consistent with the requirements of the FD&C Act, this final rule would continue the submission of this information, but to FDA rather than USDA, and thus would ensure that FDA continues to have the information needed to calculate the amount of user fees assessed to each entity and collect those fees. Section 919 of the FD&C Act establishes the user fee allocation and collection process, which references the FETRA framework for determining tobacco product class allocations and individual domestic manufacturer or importer allocations. As is now required by USDA under FETRA, in this final rule FDA requires domestic manufacturers and importers of tobacco products to submit a form each month with summary information and copies of the reports or forms that relate to the tobacco products removed into domestic commerce.

Description of Respondents: Domestic manufacturers and importers of tobacco products.

TABLE 1—ESTIMATED ANNUAL REPORTING BURDEN [1]

21 CFR Section	Number of respondents	Number of responses per respondent	Total annual responses	Hours per response	Total hours
1150.5(a), (b)(1), (b)(2), and FDA Form 3852; General identifying information provided by manufacturers and importers of FDA regulated tobacco products and identification and removal information (monthly)	200	12	2,400	3	7,200
1150.5(b)(3) Certified Copies (monthly)	200	12	2,400	1	2,400
1150.13 Submission of user fee information with user fee payment (identifying information, fee amount, etc.) (quarterly)	100	4	400	1	400
1150.15(a) Submission of user fee dispute (annually)	10	1	10	10	100
1150.15(d) Submission of request for further review of dispute of user fee (annually)	5	1	5	10	50
Total					10,150

[1]There are no capital costs or operating and maintenance costs associated with this collection of information.

Table 1 describes the annual reporting burden of 10,150 hours as a result of the provisions set forth in this final rule. Our estimated number of respondents is based on information we received from USDA on the number of reports it receives from domestic manufacturers and importers each month. The estimate of 200 respondents reflects both reports of no removal into domestic commerce and reports of removal of tobacco product into domestic commerce. The estimate of 100 respondents reflects an average number of domestic manufacturers and importers who may be subject to the payment of fees each fiscal quarter. Although there were no comments on the number of appeals and requests for further review, after discussing internally, we increased our estimate of the number of appeals from 1 to 10, and requests for further review from 1 to 5 in an abundance of caution in case there is an increase in requests for review during the transition from USDA to FDA.

For § 1150.5(a), (b)(1), and (b)(2), FDA estimates that 200 domestic manufacturers and importers will each submit identifying information (e.g., mailing address, telephone number, email address) and summarized tax information on a monthly basis (12 submissions annually) on Form FDA 3852, resulting in a total burden of 7,200 hours. For § 1150.5(b)(3), FDA estimates that 200 domestic manufacturers and importers will each submit, on a monthly basis (12 times annually), certified copies of the returns and forms that relate to the removal of tobacco products into domestic commerce and the payment of Federal excise taxes imposed under chapter 52 of the Internal Revenue Code of 1986, resulting in a total burden of 2,400 hours.

For § 1150.13, FDA estimates that 100 domestic manufacturers and importers will be submitting user fee payments on a quarterly basis. Therefore, the number of burden hours for this section is 400 hours. FDA estimates that approximately 10 of those respondents assessed user fees will dispute the amounts under § 1150.15(a), for a total amount of 100 hours. FDA also estimates that of those who dispute their user fees, five will ask for further review by FDA under § 1150.15(d), for a total amount of 50 hours. Total burden hours for this rule are 10,150 hours (7,200 + 2,400 + 400 + 100 + 50).

The information collection provisions in this final rule have been submitted to OMB for review as required by section 3507(d) of the Paperwork Reduction Act of 1995. The requirements were approved and assigned OMB control number 0910–0749. This approval expires on June 30, 2017. An Agency may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a currently valid OMB control number.

VIII. Federalism

FDA has analyzed this final rule in accordance with the principles set forth in Executive Order 13132. FDA has determined that the final rule does not contain policies that have substantial direct effects on the States, on the relationship between the National Government and the States, or on the distribution of power and responsibilities among the various levels of government. Accordingly, the Agency has concluded that the final rule does not contain policies that have federalism implications as defined in the Executive order and, consequently, a federalism summary impact statement is not required.

IX. References

The following references have been placed on display in the Division of Dockets Management (see **ADDRESSES**) and may be seen by interested persons between 9 a.m. and 4 p.m., Monday through Friday, and are available electronically at *http://www.regulations.gov.* (FDA has verified

the Web site address in this reference section, but FDA is not responsible for any subsequent changes to the Web site after this document publishes in the **Federal Register**.)

1. Form FDA 3852.

2. Regulatory Impact Analysis. Available at: *http://www.fda.gov/AboutFDA/ReportsManualsForms/Reports/EconomicAnalyses/default.htm.*

List of Subjects in 21 CFR Part 1150

Tobacco products, User fees.

■ Therefore, under the Federal Food, Drug, and Cosmetic Act and under authority delegated to the Commissioner of Food and Drugs, chapter I of title 21 is amended by adding part 1150 to subchapter K to read as follows:

PART 1150—USER FEES

Sec.

1150.1 Scope.
1150.3 Definitions.
1150.5 Required information.
1150.7 Yearly class allocation.
1150.9 Domestic manufacturer or importer assessment.
1150.11 Notification of assessments.
1150.13 Payment of assessments.
1150.15 Disputes.
1150.17 Penalties.

Authority: 21 U.S.C. 371, 387b, 387i, 387s.

§ 1150.1 Scope.

This part establishes requirements related to tobacco product user fees under section 919 of the Federal Food, Drug, and Cosmetic Act (21 U.S.C. 387s). The total amount of user fees may not exceed the amount specified for that fiscal year in section 919(b) of the Federal Food, Drug, and Cosmetic Act. All domestic manufacturers and importers of tobacco products are required to pay to FDA their percentage share of the total assessment for a fiscal year.

§ 1150.3 Definitions.

The following definitions are applicable to this part:

Class of tobacco products means each of the following types of tobacco products as defined in 26 U.S.C. 5702 and for which taxes are required to be paid for the removal of such into domestic commerce: Cigarettes, cigars, snuff, chewing tobacco, pipe tobacco, and roll-your-own tobacco.

Domestic manufacturer means a person who is required to obtain a permit from the Alcohol and Tobacco Tax and Trade Bureau of the Department of the Treasury with respect to the production of tobacco products under title 27 of the Code of Federal Regulations.

Fiscal year quarter means a quarter in a fiscal year (the fiscal year is October 1 through September 30). The fiscal year quarters are October 1–December 31, January 1–March 31, April 1–June 30, and July 1–September 30.

Importer means a person who is required to obtain a permit from the Alcohol and Tobacco Tax and Trade Bureau of the Department of the Treasury with respect to the importation of tobacco products under title 27 of the Code of Federal Regulations.

Total assessment means the total amount of user fees (in dollars) authorized to be assessed and collected for a specific fiscal year under section 919 of the Federal Food, Drug, and Cosmetic Act.

Units of product means:

(1) The number of sticks for cigarettes, or

(2) The weight (measured in pounds) for snuff, chewing tobacco, and roll-your-own tobacco.

Units of product removed and not tax exempt means the units of product:

(1) Removed (as defined by 26 U.S.C. 5702), and

(2) Not exempt from Federal excise tax under chapter 52 of title 26 of the United States Code at the time of their removal under that chapter or the Harmonized Tariff Schedule of the United States.

Yearly class allocation means the amount of user fees (in dollars) assessed for a class of tobacco products for a particular fiscal year.

§ 1150.5 Required information.

(a) *General.* Each domestic manufacturer and importer of tobacco products that are part of a class of tobacco products that is subject to regulation under chapter IX of the Federal Food, Drug, and Cosmetic Act must submit the information described in this section for such products each month beginning October 2014, and the information must be received by FDA no later than the 20th day of each month. The information must be submitted using the form that FDA provides. The information must be submitted even if the domestic manufacturer or importer had no removals subject to tax during the prior month. FDA will use the information submitted under this section and any other available information, as FDA determines appropriate, to make tobacco product user fee assessments.

(b) *Contents.* Each domestic manufacturer and importer must submit the following:

(1) *Identification information.* (i) Its name and the mailing address of its principal place of business;

(ii) The name and a telephone number including area code of an office or individual that FDA may contact for further information;

(iii) The email address and postal address at which it wishes to receive notifications FDA sends under this part;

(iv) The Alcohol and Tobacco Tax and Trade Bureau (TTB) Permit Number(s); and

(v) The Employer Identification Number(s) (EIN).

(2) *Removal information.* The units of product, by class, removed and not tax exempt for the prior month and the Federal excise tax it paid, by class, for such removal.

(i) This information must be reported for each TTB tobacco permit.

(ii) If the domestic manufacturer or importer did not remove any amount of tobacco product, it must report that no tobacco product was removed into domestic commerce.

(3) *Certified copies.* Certified copies of the returns and forms that relate to:

(i) The removal of tobacco products into domestic commerce (as defined by section 5702 of the Internal Revenue Code of 1986); and

(ii) The payment of the Federal excise taxes imposed under chapter 52 of the Internal Revenue Code of 1986.

§ 1150.7 Yearly class allocation.

For each fiscal year, FDA will allocate the total assessment among the classes of tobacco products.

(a) *Calculation.* FDA will calculate the percentage shares for each class as follows:

(1) FDA will multiply the units of product removed and not tax exempt for the most recent full calendar year by the 2003 maximum Federal excise tax rate for that applicable class or subclass (class dollar figure).

(2) [Reserved]

(3) FDA will total the class dollar figures for all tobacco classes for the most recent full calendar year (total dollar figure).

(4) FDA will divide the class dollar figure by the total dollar figure to determine the percentage share for each class.

(5) FDA will calculate the allocation for each class of tobacco products by multiplying the percentage share for each class by the total assessment.

(b) *Reallocation.* For any class of tobacco products that is not deemed by FDA to be subject to regulation under chapter IX of the Federal Food, Drug, and Cosmetic Act, the amount of user fees that would otherwise be assessed to such class of tobacco products will be reallocated to the classes of tobacco products that are subject to chapter IX of the Federal Food, Drug, and Cosmetic Act in the same manner and based on

the same relative percentages otherwise determined under paragraph (a) of this section.

§ 1150.9 Domestic manufacturer or importer assessment.

Each quarter, FDA will calculate the assessment owed by each domestic manufacturer or importer for that quarter.

(a) *Calculation.* (1) For each class of tobacco products, FDA will calculate the percentage share for each domestic manufacturer and importer by dividing the Federal excise taxes that it paid for the class for the prior quarter by the total excise taxes that all domestic manufacturers and importers paid for the class for that same quarter.

(2) [Reserved]

(3) If the percentage share calculated for a domestic manufacturer or importer in this section, as applicable, is less than 0.0001 percent, the share is excluded from the assessment for that class of tobacco products.

(4) Within each class of tobacco products, the assessment owed by a domestic manufacturer or importer for the quarter is the yearly class allocation, determined as described in § 1150.7, divided by four, multiplied by the domestic manufacturer's or importer's percentage share, truncated to the fourth decimal place, for that class of tobacco products.

(b) *Adjustments.* Annually, FDA will make any necessary adjustments to individual domestic manufacturer or importer assessments if needed to account for any corrections (for example, to include domestic manufacturers or importers that were not included in a relevant assessment calculation).

§ 1150.11 Notification of assessments.

(a) *Notification.* No later than 30 calendar days before the end of each fiscal year quarter, FDA will notify each domestic manufacturer and importer of the amount of the quarterly assessment imposed on the domestic manufacturer or importer.

(b) *Content of notification.* The notification under paragraph (a) of this section will include the following:

(1) The amount of the quarterly assessment imposed on the domestic manufacturer or importer and the date that payment of the assessment must be received by FDA;

(2) Class assessment information, including each class' initial percentage share, the reallocation amount (if any) and each class' percentage share after any such reallocation, and the quarterly assessment for each class;

(3) Domestic manufacturer or importer assessment information, including the domestic manufacturer's or importer's percentage share of each relevant class of tobacco products and invoice amount;

(4) Any adjustments FDA has made under § 1150.9(b);

(5) The manner in which assessments are to be remitted to FDA;

(6) Information about the accrual of interest if a payment is late; and

(7) Information regarding where to send a dispute and when it needs to be sent.

§ 1150.13 Payment of assessments.

(a) Payment of an assessment must be received by FDA no later than the last day of each fiscal year quarter.

(b) Payments must be submitted to FDA in U.S. dollars and in the manner specified in the notification.

(c) Except as provided in paragraph (d) of this section, if an assessment is not received by the last day of the fiscal year quarter, FDA will begin assessing interest on the unpaid amount in accordance with 31 U.S.C. 3717.

(d) If FDA does not send the notification described in § 1150.11(a) 30 calendar days before the end of a quarter, no interest will be assessed by FDA under paragraph (c) of this section until 30 calendar days have elapsed from the date FDA sent notification of the amount owed.

(e) If a domestic manufacturer or importer disputes the amount of an assessment, it must still pay the assessment in accordance with paragraphs (a) and (b) of this section.

§ 1150.15 Disputes.

(a) A domestic tobacco manufacturer or importer may dispute an FDA assessment. The dispute must include the basis for the dispute, and the dispute must be:

(1) Submitted in writing;

(2) Received by FDA no later than 45 days after the date on the assessment notification;

(3) Legible and in English; and

(4) Sent to the address found on our Web site (*http://www.fda.gov/tobaccoproducts*).

(b) If FDA determines that there was an error related to the assessment and the assessment was too high, FDA will refund the amount assessed in error to the domestic manufacturer or importer.

(c) FDA will provide a dated, written response, and its response will provide information about how to submit a request for further Agency review.

(d) A request for further Agency review under § 10.75 of this chapter may be submitted. Such a request must be submitted in writing by the domestic manufacturer or importer and received by FDA within 30 days from the date on FDA's response. The request for further Agency review must be legible, in English, and submitted to the address found on our Web site (*http://www.fda.gov/tobaccoproducts*).

§ 1150.17 Penalties.

(a) Under section 902(4) of the Federal Food, Drug, and Cosmetic Act (21 U.S.C. 387b), a tobacco product is deemed adulterated if the domestic manufacturer or importer of the tobacco product fails to pay a user fee assessed to such manufacturer or importer by the later of the date the assessment is due, 30 days from the date FDA sent notification of the amount owed, or 30 days after final Agency action on a resolution of any dispute as to the amount of the fee.

(b) Under section 902(4) of the Federal Food, Drug, and Cosmetic Act, a tobacco product is deemed adulterated if the domestic manufacturer or importer of the tobacco product fails to report the information required by § 1150.5 to calculate assessments under this part.

(c) The failure to report the information required by § 1150.5 to calculate assessments under this part is a prohibited act under section 301(e) of the Federal Food, Drug, and Cosmetic Act.

(d) Information submitted under § 1150.5 is subject to 18 U.S.C. 1001 and other appropriate civil and criminal statutes.

Dated: July 7, 2014.

Leslie Kux,

Assistant Commissioner for Policy.

[FR Doc. 2014–16153 Filed 7–9–14; 8:45 am]

BILLING CODE 4164–01–P

DEPARTMENT OF THE TREASURY

Internal Revenue Service

26 CFR Part 1

[TD 9674]

RIN 1545–BM07

Guidelines for the Streamlined Process of Applying for Recognition of Section 501(c)(3) Status

Correction

In rule document 2014–15623 on pages 37630–37632 of the issue of Wednesday, July 2, 2014 make the following correction:

PART 1—INCOME TAXES

On page 37631, in the third column, in the 26th line from the bottom,

''*§ 1.501(c)(3)''* should read ''*§ 1.501(c)(3)–1T''*.

[FR Doc. C1–2014–15623 Filed 7–9–14; 8:45 am]

BILLING CODE 1505–01–D

DEPARTMENT OF THE TREASURY

Office of Foreign Assets Control

31 CFR Part 541

Zimbabwe Sanctions Regulations

AGENCY: Office of Foreign Assets Control, Treasury.

ACTION: Final rule.

SUMMARY: The Department of the Treasury's Office of Foreign Assets Control (OFAC) is adopting as final, with changes, the Zimbabwe Sanctions Regulations that previously were published in an interim final rule. These changes primarily amend the Zimbabwe Sanctions Regulations to implement Executive Order 13391 of November 22, 2005, ''Blocking Property of Additional Persons Undermining Democratic Processes or Institutions in Zimbabwe,'' and Executive Order 13469 of July 25, 2008, ''Blocking Property of Additional Persons Undermining Democratic Processes or Institutions in Zimbabwe.''

DATES: *Effective:* July 10, 2014.

FOR FURTHER INFORMATION CONTACT: Assistant Director for Licensing, tel.: 202/622–2480, Assistant Director for Policy, tel.: 202/622–6746, Assistant Director for Regulatory Affairs, tel.: 202/622–4855, Assistant Director for Sanctions Compliance & Evaluation, tel.: 202/622–2490, OFAC, or Chief Counsel (Foreign Assets Control), tel.: 202/622–2410, Office of the General Counsel, Department of the Treasury (not toll free numbers).

SUPPLEMENTARY INFORMATION:

Electronic and Facsimile Availability

This document and additional information concerning OFAC are available from OFAC's Web site (*www.treasury.gov/ofac*). Certain general information pertaining to OFAC's sanctions programs also is available via facsimile through a 24-hour fax-on-demand service, tel.: 202/622–0077.

Background

OFAC originally issued the Zimbabwe Sanctions Regulations, 31 CFR Part 541, on July 29, 2004 (the ''Regulations''), as an interim final rule to implement Executive Order 13288 of March 6, 2003, ''Blocking Property of Persons Undermining Democratic Processes or Institutions in Zimbabwe'' (68 FR 11457, March 10, 2003) (E.O. 13288), effective at 12:01 eastern standard time on March 7, 2003. In E.O. 13288, the President, invoking the authority of, *inter alia,* the International Emergency Economic Powers Act (50 U.S.C. 1701–1706) (IEEPA), determined that the actions and policies of certain members of the Government of Zimbabwe and other persons to undermine Zimbabwe's democratic processes or institutions, contributing to the deliberate breakdown in the rule of law in Zimbabwe, to politically motivated violence and intimidation in that country, and to political and economic instability in the southern African region, constitute an unusual and extraordinary threat to the foreign policy of the United States and declared a national emergency to deal with that threat. In E.O. 13288, the President ordered the blocking, with certain exceptions, of all property and interests in property that are in the United States, that come within the United States, or that are or come within the possession or control of United States persons, including their overseas branches, of: (1) The persons listed in the Annex to E.O. 13288; and (2) any person determined by the Secretary of the Treasury, in consultation with the Secretary of State, to be owned or controlled by, or acting or purporting to act directly or indirectly for or on behalf of, any of the persons listed in the Annex to E.O. 13288. The property and interests in property of these persons may not be transferred, paid, exported, withdrawn, or otherwise dealt in.

OFAC is adopting as a final rule the interim final rule originally issued on July 29, 2004 (69 FR 45246), with changes to implement two more recent Executive orders and update the Regulations as set forth below.

On November 22, 2005, the President, invoking the authority of, *inter alia,* IEEPA, issued Executive Order 13391 (70 FR 71201, November 25, 2005) (E.O. 13391), effective at 12:01 a.m. eastern standard time on November 23, 2005. In E.O. 13391, the President took additional steps with respect to the continued actions and policies of certain persons who undermine Zimbabwe's democratic processes or institutions and with respect to the national emergency described and declared in E.O. 13288.

Section 1 of E.O. 13391 provides that the Annex to E.O. 13288, which contained the names of 77 individuals, is replaced and superseded in its entirety by the Annex to E.O. 13391, containing the names of 128 individuals and 33 entities.

Section 2 of E.O. 13391 amends E.O. 13288 by renumbering section 6 of E.O. 13288 as section 8, and by replacing sections 1 through 5 of E.O. 13288 with new sections 1 through 7. New section 1(a) of E.O. 13288, as amended by E.O. 13391 (amended E.O. 13288) blocks, with certain exceptions, all property and interests in property that are in the United States, that come within the United States, or that are or come within the possession or control of United States persons, including their overseas branches, of: (1) The persons listed in the Annex to amended E.O. 13288; and (2) any person determined by the Secretary of the Treasury, in consultation with the Secretary of State: (i) To have engaged in actions or policies to undermine Zimbabwe's democratic processes or institutions; (ii) to have materially assisted, sponsored, or provided financial, material, or technological support for, or goods or services in support of, such actions or policies or any person whose property and interests in property are blocked pursuant to amended E.O. 13288; (iii) to be or have been an immediate family member of any person whose property and interests in property are blocked pursuant to amended E.O. 13288; or (iv) to be owned or controlled by, or acting or purporting to act for or on behalf of, directly or indirectly, any person whose property and interests in property are blocked pursuant to amended E.O. 13288. The property and interests in property of these persons may not be transferred, paid, exported, withdrawn, or otherwise dealt in.

In new section 1(b) of amended E.O. 13288, the President determined that the making of donations of certain articles, such as food, clothing, and medicine, intended to be used to relieve human suffering, as specified in section 203(b)(2) of IEEPA (50 U.S.C. 1702(b)(2)), by, to, or for the benefit of any person whose property and interests in property are blocked pursuant to amended E.O. 13288, would seriously impair his ability to deal with the national emergency declared in E.O. 13288. The President, therefore, prohibited the donation of such items unless authorized by OFAC.

New section 1(c) of amended E.O. 13288 replaces old section 2(a) and provides that the prohibition on any transaction or dealing in blocked property or interests in property includes, but is not limited to, the making of any contribution or provision of funds, goods, or services by, to, or for the benefit of any person whose property and interests in property are blocked pursuant to amended E.O. 13288, and the receipt of any contribution or provision of funds, goods, or services from any such person.

New sections 2(a) and 2(b) of amended E.O. 13288 renumber old sections 2(b) and 2(c), and prohibit any transaction by a United States person or within the United States that evades or avoids, has the purpose of evading or avoiding, or attempts to violate any of the prohibitions set forth in amended E.O. 13288 as well as any conspiracy formed to violate such prohibitions.

New section 5 of amended E.O. 13288 replaces old section 4 and authorizes the Secretary of the Treasury, in consultation with the Secretary of State, to take such actions, including the promulgation of rules and regulations, and to employ all powers granted to the President by IEEPA, as may be necessary to carry out the purposes of amended E.O. 13288. Section 5 of amended E.O. 13288 also provides that the Secretary of the Treasury may redelegate any of these functions to other officers and agencies of the U.S. Government.

On July 25, 2008, the President, invoking the authority of, *inter alia,* IEEPA, issued Executive Order 13469 (73 FR 43841, July 29, 2008) (E.O. 13469). In E.O. 13469, the President found that the continued actions and policies of the Government of Zimbabwe and other persons to undermine Zimbabwe's democratic processes or institutions, manifested in the fundamentally undemocratic election held on June 27, 2008, to commit acts of violence and other human rights abuses against political opponents, and to engage in public corruption, including by misusing public authority, constitute an unusual and extraordinary threat to the foreign policy of the United States. To deal with that threat, the President expanded the scope of the national emergency declared in E.O. 13288 and relied upon for additional steps taken in E.O. 13391.

Section 1(a) of E.O. 13469 blocks, with certain exceptions, all property and interests in property that are in the United States, that come within the United States, or that are or come within the possession or control of United States persons, including their overseas branches, of any person determined by the Secretary of the Treasury, after consultation with the Secretary of State: (i) To be a senior official of the Government of Zimbabwe; (ii) to be owned or controlled by, directly or indirectly, the Government of Zimbabwe or an official or officials of the Government of Zimbabwe; (iii) to have engaged in actions or policies to undermine Zimbabwe's democratic processes or institutions; (iv) to be responsible for, or to have participated in, human rights abuses related to political repression in Zimbabwe; (v) to be engaged in, or to have engaged in, activities facilitating public corruption by senior officials of the Government of Zimbabwe; (vi) to be a spouse or dependent child of any person whose property and interests in property are blocked pursuant to E.O. 13288, E.O. 13391, or E.O. 13469; (vii) to have materially assisted, sponsored, or provided financial, material, logistical or technical support for, or goods or services in support of, the Government of Zimbabwe, any senior official thereof, or any person whose property and interests in property are blocked pursuant to E.O. 13288, E.O. 13391, or E.O. 13469; or (viii) to be owned or controlled by, or to have acted or purported to act for or on behalf of, directly or indirectly, any person whose property and interests in property are blocked pursuant to E.O. 13288, E.O. 13391, or E.O. 13469. The property and interests in property of the persons described above may not be transferred, paid, exported, withdrawn, or otherwise dealt in.

Sections 1(b) and 1(c) of E.O. 13469 contain provisions nearly identical to the same sections in amended E.O. 13288. Section 1(d) of E.O. 13469 states that the provisions of E.O. 13288 and E.O. 13391 remain in effect, and that E.O. 13469 does not affect any action taken pursuant to those orders. Sections 2 and 5 of E.O. 13469 also contain provisions nearly identical to the same sections in amended E.O. 13288.

OFAC today is amending the Regulations to implement the relevant provisions of E.O. 13391 and E.O. 13469, as well as to update certain provisions and to make other technical and conforming changes. OFAC is revising and republishing in its entirety subpart B of the Regulations, which sets forth the prohibitions contained in the Executive orders. In particular, OFAC is revising § 541.201 to incorporate the new designation criteria provided for in E.O. 13391 and E.O. 13469.

In subpart C, which defines key terms used throughout the Regulations, new §§ 541.313 through 541.315 are being added to define key terms used in the new blocking prohibitions or elsewhere in the Regulations. Also, certain existing definitions in subpart C are being updated or revised to take account of new provisions and to provide greater clarity with respect to the terms being used.

This rule also revises and republishes in its entirety subpart D, which contains interpretive sections regarding the Regulations. In particular, new § 541.408 is being added to clarify prohibitions with respect to charitable contributions, and new § 541.411 is being added to clarify that a person whose property and interests are blocked pursuant to this program has an interest in all property and interests in property of an entity in which it owns, directly or indirectly, a 50 percent or greater interest.

Transactions otherwise prohibited under the Regulations but found to be consistent with U.S. policy may be authorized by one of the general licenses contained in subpart E of the Regulations or by a specific license issued pursuant to the procedures described in subpart E of 31 CFR part 501. This rule also amends subpart E. In particular, a general license is being added in § 541.508, authorizing payments from outside the United States for the provision of legal services authorized in § 541.507. In addition, a general license that previously had been posted only on OFAC's Web site is being added in § 541.510, authorizing all transactions involving Agricultural Development Bank of Zimbabwe and Infrastructure Development Bank of Zimbabwe, subject to certain limitations.

Finally, this rule revises subparts G and H of the Regulations and republishes them in their entirety. Subpart G of the Regulations describes the civil and criminal penalties applicable to violations of the Regulations, as well as the procedures governing the potential imposition of a civil monetary penalty. Subpart H of the Regulations refers to subpart E of part 501 for applicable provisions relating to administrative procedures and contains a delegation of authority by the Secretary of the Treasury.

Public Participation

Because the amendment of 31 CFR part 541 involves a foreign affairs function, the provisions of Executive Order 12866 of September 30, 1993, and the Administrative Procedure Act (5 U.S.C. 553) requiring notice of proposed rulemaking, opportunity for public participation, and delay in effective date are inapplicable. Because no notice of proposed rulemaking is required for this rule, the Regulatory Flexibility Act (5 U.S.C. 601–612) does not apply.

Paperwork Reduction Act

The collections of information related to the Regulations are contained in 31 CFR part 501 (the ''Reporting, Procedures and Penalties Regulations''). Pursuant to the Paperwork Reduction Act of 1995 (44 U.S.C. 3507), those collections of information have been approved by the Office of Management and Budget under control number 1505–

0164. An agency may not conduct or sponsor, and a person is not required to respond to, a collection of information unless the collection of information displays a valid control number.

List of Subjects in 31 CFR Part 541

Administrative practice and procedure, Banks, Banking, Blocking of assets, Credit, Foreign Trade, Penalties, Reporting and recordkeeping requirements, Securities, Services, Zimbabwe.

For the reasons set forth in the preamble, the Department of the Treasury's Office of Foreign Assets Control is adopting the interim final rule of July 29, 2004 (*see* 69 FR 45246), as final, with the following changes:

PART 541—ZIMBABWE SANCTIONS REGULATIONS

■ 1. The authority citation for part 541 is revised to read as follows:

Authority: 3 U.S.C. 301; 31 U.S.C. 321(b); 50 U.S.C. 1601–1651, 1701–1706; Pub. L. 101–410, 104 Stat. 890 (28 U.S.C. 2461 note); Pub. L. 110–96, 121 Stat. 1011 (50 U.S.C. 1705 note); E.O. 13288, 68 FR 11457, 3 CFR, 2003 Comp., p. 186; E.O. 13391, 70 FR 71201, 3 CFR, 2005 Comp., p. 206; E.O. 13469, 73 FR 43841, 3 CFR, 2008 Comp., p. 1025.

■ 2. Revise subpart B to read as follows:

Subpart B—Prohibitions

Sec.

541.201 Prohibited transactions involving blocked property.
541.202 Effect of transfers violating the provisions of this part.
541.203 Holding of funds in interest-bearing accounts; investment and reinvestment.
541.204 Evasions; attempts; causing violations; conspiracies.
541.205 Expenses of maintaining blocked physical property; liquidation of blocked property.
541.206 Exempt transactions.

Subpart B—Prohibitions

§ 541.201 Prohibited transactions involving blocked property.

(a) All property and interests in property that are in the United States, that come within the United States, or that are or come within the possession or control of any United States person, including any foreign branch, of the following persons are blocked and may not be transferred, paid, exported, withdrawn, or otherwise dealt in:

(1) The persons listed in the Annex to Executive Order 13288 of March 6, 2003, as amended by Executive Order 13391 of November 22, 2005;

(2) Any person determined by the Secretary of the Treasury, in consultation with the Secretary of State:

(i) To have engaged in actions or policies to undermine Zimbabwe's democratic processes or institutions;

(ii) To have materially assisted, sponsored, or provided financial, material, or technological support for, or goods or services in support of, actions or policies described in paragraph (a)(2)(i) of this section or any person whose property and interests in property are blocked pursuant to paragraphs (a)(1) or (a)(2) of this section;

(iii) To be or have been an immediate family member of any person whose property and interest in property are blocked pursuant to paragraphs (a)(1) or (a)(2) of this section; or

(iv) To be owned or controlled by, or acting or purporting to act for or on behalf of, directly or indirectly, any person whose property and interests in property are blocked pursuant to paragraphs (a)(1) or (a)(2) of this section; and

(3) Any person determined by the Secretary of the Treasury, after consultation with the Secretary of State:

(i) To be a senior official of the Government of Zimbabwe;

(ii) To be owned or controlled by, directly or indirectly, the Government of Zimbabwe or an official or officials of the Government of Zimbabwe;

(iii) To have engaged in actions or policies to undermine Zimbabwe's democratic processes or institutions;

(iv) To be responsible for, or to have participated in, human rights abuses related to political repression in Zimbabwe;

(v) To be engaged in, or to have engaged in, activities facilitating public corruption by senior officials of the Government of Zimbabwe;

(vi) To be a spouse or dependent child of any person whose property and interests in property are blocked pursuant to paragraph (a) of this section;

(vii) To have materially assisted, sponsored, or provided financial, material, logistical, or technical support for, or goods or services in support of, the Government of Zimbabwe, any senior official thereof, or any person whose property and interests in property are blocked pursuant to paragraph (a) of this section; or

(viii) To be owned or controlled by, or to have acted or purported to act for or on behalf of, directly or indirectly, any person whose property and interests in property are blocked pursuant to paragraph (a) of this section.

Note 1 to paragraph (a) of § 541.201: The names of persons listed in or designated pursuant to Executive Order 13288 of March 6, 2003, Executive Order 13391 of November 22, 2005, or Executive Order 13469 of July 25, 2008, whose property and interests in property are blocked pursuant to paragraph (a) of this section, are published in the **Federal Register** and incorporated into OFAC's Specially Designated Nationals and Blocked Persons List (SDN List) with the identifier ''[ZIMBABWE].'' The SDN List is accessible through the following page on OFAC's Web site: *www.treasury.gov/sdn.* Additional information pertaining to the SDN List can be found in Appendix A to this chapter. (*See* § 541.411 concerning entities that may not be listed on the SDN List but whose property and interests in property are nevertheless blocked pursuant to paragraph (a) of this section.)

Note 2 to paragraph (a) of § 541.201: The International Emergency Economic Powers Act (50 U.S.C. 1701–1706), in section 203 (50 U.S.C. 1702), authorizes the blocking of property and interests in property of a person during the pendency of an investigation. The names of persons whose property and interests in property are blocked pending investigation pursuant to paragraph (a) of this section also are published in the **Federal Register** and incorporated into the SDN List with the identifier ''[BPI–ZIMBABWE].''

Note 3 to paragraph (a) of § 541.201: Sections 501.806 and 501.807 of this chapter describe the procedures to be followed by persons seeking, respectively, the unblocking of funds that they believe were blocked due to mistaken identity, or administrative reconsideration of their status as persons whose property and interests in property are blocked pursuant to paragraph (a) of this section.

(b) The prohibitions in paragraph (a) of this section include, but are not limited to, prohibitions on the following transactions:

(1) The making of any contribution or provision of funds, goods, or services by, to, or for the benefit of any person whose property and interests in property are blocked pursuant to paragraph (a) of this section; and

(2) The receipt of any contribution or provision of funds, goods, or services from any person whose property and interests in property are blocked pursuant to paragraph (a) of this section.

(c) Unless authorized by this part or by a specific license expressly referring to this section, any dealing in any security (or evidence thereof) held within the possession or control of a U.S. person and either registered or inscribed in the name of, or known to be held for the benefit of, or issued by, any person whose property and interests in property are blocked pursuant to paragraph (a) of this section is prohibited. This prohibition includes but is not limited to the transfer (including the transfer on the books of any issuer or agent thereof), disposition, transportation, importation, exportation, or withdrawal of, or the endorsement or guaranty of signatures on, any such

security on or after the effective date. This prohibition applies irrespective of the fact that at any time (whether prior to, on, or subsequent to the effective date) the registered or inscribed owner of any such security may have or might appear to have assigned, transferred, or otherwise disposed of the security.

(d) The prohibitions in paragraph (a) of this section apply except to the extent transactions are authorized by regulations, orders, directives, rulings, instructions, licenses, or otherwise, and notwithstanding any contract entered into or any license or permit granted prior to the effective date.

§ 541.202 Effect of transfers violating the provisions of this part.

(a) Any transfer after the effective date that is in violation of any provision of this part or of any regulation, order, directive, ruling, instruction, or license issued pursuant to this part, and that involves any property or interest in property blocked pursuant to § 541.201(a), is null and void and shall not be the basis for the assertion or recognition of any interest in or right, remedy, power, or privilege with respect to such property or property interest.

(b) No transfer before the effective date shall be the basis for the assertion or recognition of any right, remedy, power, or privilege with respect to, or any interest in, any property or interest in property blocked pursuant to § 541.201(a), unless the person who holds or maintains such property, prior to that date, had written notice of the transfer or by any written evidence had recognized such transfer.

(c) Unless otherwise provided, a license or other authorization issued by OFAC before, during, or after a transfer shall validate such transfer or make it enforceable to the same extent that it would be valid or enforceable but for the provisions of this part and any regulation, order, directive, ruling, instruction, or license issued pursuant to this part.

(d) Transfers of property that otherwise would be null and void or unenforceable by virtue of the provisions of this section shall not be deemed to be null and void or unenforceable as to any person with whom such property is or was held or maintained (and as to such person only) in cases in which such person is able to establish to the satisfaction of OFAC each of the following:

(1) Such transfer did not represent a willful violation of the provisions of this part by the person with whom such property is or was held or maintained (and as to such person only);

(2) The person with whom such property is or was held or maintained did not have reasonable cause to know or suspect, in view of all the facts and circumstances known or available to such person, that such transfer required a license or authorization issued pursuant to this part and was not so licensed or authorized, or, if a license or authorization did purport to cover the transfer, that such license or authorization had been obtained by misrepresentation of a third party or withholding of material facts or was otherwise fraudulently obtained; and

(3) The person with whom such property is or was held or maintained filed with OFAC a report setting forth in full the circumstances relating to such transfer promptly upon discovery that:

(i) Such transfer was in violation of the provisions of this part or any regulation, ruling, instruction, license, or other directive or authorization issued pursuant to this part;

(ii) Such transfer was not licensed or authorized by OFAC; or

(iii) If a license did purport to cover the transfer, such license had been obtained by misrepresentation of a third party or withholding of material facts or was otherwise fraudulently obtained.

Note to paragraph (d) of § 541.202: The filing of a report in accordance with the provisions of paragraph (d)(3) of this section shall not be deemed evidence that the terms of paragraphs (d)(1) and (d)(2) of this section have been satisfied.

(e) Unless licensed pursuant to this part, any attachment, judgment, decree, lien, execution, garnishment, or other judicial process is null and void with respect to any property and interests in property blocked pursuant to § 541.201(a).

§ 541.203 Holding of funds in interest-bearing accounts; investment and reinvestment.

(a) Except as provided in paragraphs (e) or (f) of this section, or as otherwise directed by OFAC, any U.S. person holding funds, such as currency, bank deposits, or liquidated financial obligations, subject to § 541.201(a) shall hold or place such funds in a blocked interest-bearing account located in the United States.

(b)(1) For purposes of this section, the term *blocked interest-bearing account* means a blocked account:

(i) In a federally-insured U.S. bank, thrift institution, or credit union, provided the funds are earning interest at rates that are commercially reasonable; or

(ii) With a broker or dealer registered with the Securities and Exchange Commission under the Securities Exchange Act of 1934 (15 U.S.C. 78a *et seq.*), provided the funds are invested in a money market fund or in U.S. Treasury bills.

(2) Funds held or placed in a blocked account pursuant to paragraph (a) of this section may not be invested in instruments the maturity of which exceeds 180 days.

(c) For purposes of this section, a rate is commercially reasonable if it is the rate currently offered to other depositors on deposits or instruments of comparable size and maturity.

(d) For purposes of this section, if interest is credited to a separate blocked account or subaccount, the name of the account party on each account must be the same.

(e) Blocked funds held in instruments the maturity of which exceeds 180 days at the time the funds become subject to § 541.201(a) may continue to be held until maturity in the original instrument, provided any interest, earnings, or other proceeds derived therefrom are paid into a blocked interest-bearing account in accordance with paragraphs (a) or (f) of this section.

(f) Blocked funds held in accounts or instruments outside the United States at the time the funds become subject to § 541.201(a) may continue to be held in the same type of accounts or instruments, provided the funds earn interest at rates that are commercially reasonable.

(g) This section does not create an affirmative obligation for the holder of blocked tangible property, such as chattels or real estate, or of other blocked property, such as debt or equity securities, to sell or liquidate such property. However, OFAC may issue licenses permitting or directing such sales or liquidation in appropriate cases.

(h) Funds subject to this section may not be held, invested, or reinvested in a manner that provides immediate financial or economic benefit or access to any person whose property and interests in property are blocked pursuant to § 541.201(a), nor may their holder cooperate in or facilitate the pledging or other attempted use as collateral of blocked funds or other assets.

§ 541.204 Evasions; attempts; causing violations; conspiracies.

(a) Any transaction by a U.S. person or within the United States on or after the effective date that evades or avoids, has the purpose of evading or avoiding, causes a violation of, or attempts to violate any of the prohibitions set forth in this part is prohibited.

(b) Any conspiracy formed to violate any of the prohibitions set forth in this part is prohibited.

§ 541.205 Expenses of maintaining blocked physical property; liquidation of blocked property.

(a) Except as otherwise authorized, and notwithstanding the existence of any rights or obligations conferred or imposed by any international agreement or contract entered into or any license or permit granted prior to the effective date, all expenses incident to the maintenance of physical property blocked pursuant to § 541.201(a) shall be the responsibility of the owners or operators of such property, which expenses shall not be met from blocked funds.

(b) Property blocked pursuant to § 541.201(a) may, in the discretion of OFAC, be sold or liquidated and the net proceeds placed in a blocked interest-bearing account in the name of the owner of the property.

§ 541.206 Exempt transactions.

(a) *Personal communications.* The prohibitions contained in this part do not apply to any postal, telegraphic, telephonic, or other personal communication that does not involve the transfer of anything of value.

(b) *Information or informational materials.* (1) The prohibitions contained in this part do not apply to the importation from any country and the exportation to any country of any information or informational materials, as defined in § 541.304, whether commercial or otherwise, regardless of format or medium of transmission.

(2) This section does not exempt from regulation or authorize transactions related to information or informational materials not fully created and in existence at the date of the transactions, or to the substantive or artistic alteration or enhancement of informational materials, or to the provision of marketing and business consulting services. Such prohibited transactions include, but are not limited to, payment of advances for information or informational materials not yet created and completed (with the exception of prepaid subscriptions for widely circulated magazines and other periodical publications); provision of services to market, produce or co-produce, create, or assist in the creation of information or informational materials; and payment of royalties with respect to income received for enhancements or alterations made by U.S. persons to such information or informational materials.

(3) This section does not exempt or authorize transactions incident to the exportation of software subject to the Export Administration Regulations, 15 CFR parts 730–774, or to the exportation of goods (including software) or technology for use in the transmission of any data, or to the provision, sale, or leasing of capacity on telecommunications transmission facilities (such as satellite or terrestrial network connectivity) for use in the transmission of any data. The exportation of such items or services and the provision, sale, or leasing of such capacity or facilities to a person whose property and interests in property are blocked pursuant to § 541.201(a) are prohibited.

(c) *Travel.* The prohibitions contained in this part do not apply to transactions ordinarily incident to travel to or from any country, including importation or exportation of accompanied baggage for personal use, maintenance within any country including payment of living expenses and acquisition of goods or services for personal use, and arrangement or facilitation of such travel, including nonscheduled air, sea, or land voyages.

Subpart C—General Definitions

■ 3. Add new § 541.300 to read as follows:

§ 541.300 Applicability of definitions.

The definitions in this subpart apply throughout the entire part.

■ 4. Revise § 541.301 to read as follows:

§ 541.301 Blocked account; blocked property.

The terms *blocked account* and *blocked property* shall mean any account or property subject to the prohibitions in § 541.201 held in the name of a person whose property and interests in property are blocked pursuant to § 541.201(a), or in which such person has an interest, and with respect to which payments, transfers, exportations, withdrawals, or other dealings may not be made or effected except pursuant to a license or other authorization from OFAC expressly authorizing such action.

Note to § 541.301: *See* § 541.411 concerning the blocked status of property and interests in property of an entity that is 50 percent or more owned by a person whose property and interests in property are blocked pursuant to § 541.201(a).

■ 5. Revise § 541.302 to read as follows:

§ 541.302 Effective date.

The term *effective date* refers to the effective date of the applicable prohibitions and directives contained in this part as follows:

(a) Except as set forth in paragraph (c) of this section, with respect to a person whose property and interests in property are blocked pursuant to § 541.201(a)(1):

(1) As a result of being listed in the Annex to Executive Order 13391 of November 22, 2005, and except as provided in paragraph (a)(3) of this section, 12:01 a.m. eastern standard time on November 23, 2005;

(2) As a result of initially being listed in the Annex to Executive Order 13288 of March 6, 2003, and subsequently being listed in the Annex to Executive Order 13391 of November 22, 2005, 12:01 a.m. eastern standard time on March 7, 2003; or

(3) As a result of a determination pursuant to section 1(b) of Executive Order 13288 of March 6, 2003, as originally issued, regardless of whether the person was subsequently listed in the Annex to Executive Order 13391 of November 22, 2005, the earlier of the date of actual or constructive notice that such person's property and interests in property are blocked;

(b) Except as set forth in paragraphs (a) and (c) of this section, with respect to a person whose property and interests in property are otherwise blocked pursuant to § 541.201(a), the earlier of the date of actual or constructive notice that such person's property and interests in property are blocked; and

(c) With respect to the prohibition in § 541.201, as further explained in § 541.408, on the making of donations of articles, such as food, clothing, and medicine, intended to be used to relieve human suffering by, to, or for the benefit of persons whose property and interests in property are blocked pursuant to § 541.201(a), the later of the effective date as set forth in paragraphs (a) and (b) of this section and 12:01 a.m. eastern standard time on November 23, 2005.

■ 6. Revise § 541.306 to read as follows:

§ 541.306 Licenses; general and specific.

(a) Except as otherwise provided in this part, the term *license* means any license or authorization contained in or issued pursuant to this part.

(b) The term *general license* means any license or authorization the terms of which are set forth in subpart E of this part or made available on OFAC's Web site: *www.treasury.gov/ofac.*

(c) The term *specific license* means any license or authorization issued pursuant to this part, but not set forth in subpart E of this part or made available on OFAC's Web site: *www.treasury.gov/ofac.*

Note to § 541.306: See § 501.801 of this chapter on licensing procedures.

■ 7. Revise § 541.309 to read as follows:

§ 541.309 Transfer.

The term *transfer* means any actual or purported act or transaction, whether or not evidenced by writing, and whether or not done or performed within the United States, the purpose, intent, or effect of which is to create, surrender, release, convey, transfer, or alter, directly or indirectly, any right, remedy, power, privilege, or interest with respect to any property. Without limitation on the foregoing, it shall include the making, execution, or delivery of any assignment, power, conveyance, check, declaration, deed, deed of trust, power of attorney, power of appointment, bill of sale, mortgage, receipt, agreement, contract, certificate, gift, sale, affidavit, or statement; the making of any payment; the setting off of any obligation or credit; the appointment of any agent, trustee, or fiduciary; the creation or transfer of any lien; the issuance, docketing, filing, or levy of or under any judgment, decree, attachment, injunction, execution, or other judicial or administrative process or order, or the service of any garnishment; the acquisition of any interest of any nature whatsoever by reason of a judgment or decree of any foreign country; the fulfillment of any condition; the exercise of any power of appointment, power of attorney, or other power; or the acquisition, disposition, transportation, importation, exportation, or withdrawal of any security.

■ 8. Revise § 541.311 to read as follows:

§ 541.311 U.S. financial institution.

The term *U.S. financial institution* means any U.S. entity (including its foreign branches) that is engaged in the business of accepting deposits, making, granting, transferring, holding, or brokering a loan or other extension of credit, or purchasing or selling foreign exchange, securities, commodity futures or options, or procuring purchasers and sellers thereof, as principal or agent. It includes but is not limited to depository institutions, banks, savings banks, trust companies, securities brokers and dealers, commodity futures and options brokers and dealers, forward contract and foreign exchange merchants, securities and commodities exchanges, clearing corporations, investment companies, employee benefit plans, and U.S. holding companies, U.S. affiliates, or U.S. subsidiaries of any of the foregoing. This term includes those branches, offices, and agencies of foreign financial institutions that are located in the United States, but not such institutions' foreign branches, offices, or agencies.

■ 9. Add new § 541.313 to read as follows:

§ 541.313 Financial, material, or technological support; financial, material, logistical, or technical support.

The terms *financial, material, or technological support,* and *financial, material, logistical,* or *technical support* as used in, respectively, §§ 541.201(a)(2)(ii) and 541.201(a)(3)(vii), mean any property, tangible or intangible, including but not limited to currency, financial instruments, securities, or any other transmission of value; weapons or related materiel; chemical or biological agents; explosives; false documentation or identification; communications equipment; computers; electronic or other devices or equipment; technologies; lodging; safe houses; facilities; vehicles or other means of transportation; or goods. ''Technologies'' as used in this definition means specific information necessary for the development, production, or use of a product, including related technical data such as blueprints, plans, diagrams, models, formulae, tables, engineering designs and specifications, manuals, or other recorded instructions.

■ 10. Add new § 541.314 to read as follows:

§ 541.314 Government of Zimbabwe

The term *Government of Zimbabwe* means the Government of Zimbabwe, its agencies, instrumentalities, and controlled entities.

■ 11. Add new § 541.315 to read as follows:

§ 541.315 OFAC.

The term *OFAC* means the Department of the Treasury's Office of Foreign Assets Control.

■ 12. Revise subpart D to read as follows:

Subpart D—Interpretations

Sec.

541.401 Reference to amended sections.
541.402 Effect of amendment.
541.403 Termination and acquisition of an interest in blocked property.
541.404 Transactions ordinarily incident to a licensed transaction.
541.405 Provision of services.
541.406 Offshore transactions involving blocked property.
541.407 Payments from blocked accounts to satisfy obligations prohibited.
541.408 Charitable contributions.
541.409 Credit extended and cards issued by U.S. financial institutions to a person whose property and interests in property are blocked.
541.410 Setoffs prohibited.
541.411 Entities owned by a person whose property and interests in property are blocked.

Subpart D—Interpretations

§ 541.401 Reference to amended sections.

Except as otherwise specified, reference to any provision in or appendix to this part or chapter or to any regulation, ruling, order, instruction, directive, or license issued pursuant to this part refers to the same as currently amended.

§ 541.402 Effect of amendment.

Unless otherwise specifically provided, any amendment, modification, or revocation of any provision in or appendix to this part or chapter or of any order, regulation, ruling, instruction, or license issued by OFAC does not affect any act done or omitted, or any civil or criminal proceeding commenced or pending, prior to such amendment, modification, or revocation. All penalties, forfeitures, and liabilities under any such order, regulation, ruling, instruction, or license continue and may be enforced as if such amendment, modification, or revocation had not been made.

§ 541.403 Termination and acquisition of an interest in blocked property.

(a) Whenever a transaction licensed or authorized by or pursuant to this part results in the transfer of property (including any property interest) away from a person whose property and interests in property are blocked pursuant to § 541.201(a), such property shall no longer be deemed to be property blocked pursuant to § 541.201(a), unless there exists in the property another interest that is blocked pursuant to § 541.201(a), the transfer of which has not been effected pursuant to license or other authorization.

(b) Unless otherwise specifically provided in a license or authorization issued pursuant to this part, if property (including any property interest) is transferred or attempted to be transferred to a person whose property and interests in property are blocked pursuant to § 541.201(a), such property shall be deemed to be property in which such a person has an interest and therefore blocked.

§ 541.404 Transactions ordinarily incident to a licensed transaction.

(a) Any transaction ordinarily incident to a licensed transaction and necessary to give effect thereto is also authorized, except:

(1) An ordinarily incident transaction, not explicitly authorized within the terms of the license, by or with a person whose property and interests in property are blocked pursuant to § 541.201(a); or

(2) An ordinarily incident transaction, not explicitly authorized within the terms of the license, involving a debit to a blocked account or a transfer of blocked property.

(b) *Example.* A license authorizing a person to complete a securities sale involving Company A, whose property and interests in property are blocked pursuant to § 541.201(a), also authorizes other persons to engage in activities that are ordinarily incident and necessary to complete the sale, including transactions by the buyer, broker, transfer agents, and banks, provided that such other persons are not themselves persons whose property and interests in property are blocked pursuant to § 541.201(a).

§ 541.405 Provision of services.

(a) The prohibitions on transactions contained in § 541.201 apply to services performed in the United States or by U.S. persons, wherever located, including by a foreign branch of an entity located in the United States:

(1) On behalf of or for the benefit of a person whose property and interests in property are blocked pursuant to § 541.201(a); or

(2) With respect to property interests of any person whose property and interests in property are blocked pursuant to § 541.201(a).

(b) *Example.* U.S. persons may not, except as authorized by or pursuant to this part, provide legal, accounting, financial, brokering, freight forwarding, transportation, public relations, or other services to a person whose property and interests in property are blocked pursuant to § 541.201(a).

Note to § 541.405: *See* §§ 541.507 and 541.509 on licensing policy with regard to the provision of certain legal and emergency medical services.

§ 541.406 Offshore transactions involving blocked property.

The prohibitions in § 541.201 on transactions or dealings involving blocked property apply to transactions by any U.S. person in a location outside the United States with respect to property held in the name of a person whose property and interests in property are blocked pursuant to § 541.201(a).

§ 541.407 Payments from blocked accounts to satisfy obligations prohibited.

Pursuant to § 541.201, no debits may be made to a blocked account to pay obligations to U.S. persons or other persons, except as authorized by or pursuant to this part.

Note to § 541.407: *See also* § 541.502(e), which provides that no license or other authorization contained in or issued pursuant to this part authorizes transfers of or payments from blocked property or debits to blocked accounts unless the license or other authorization explicitly authorizes the transfer of or payment from blocked property or the debit to a blocked account.

§ 541.408 Charitable contributions.

Unless specifically authorized by OFAC pursuant to this part, no charitable contribution of funds, goods, services, or technology, including contributions to relieve human suffering, such as food, clothing, or medicine, may be made by, to, or for the benefit of, or received from, a person whose property and interests in property are blocked pursuant to § 541.201(a). For the purposes of this part, a contribution is made by, to, or for the benefit of, or received from, a person whose property and interests in property are blocked pursuant to § 541.201(a) if made by, to, or in the name of, or received from or in the name of, such a person; if made by, to, or in the name of, or received from or in the name of, an entity or individual acting for or on behalf of, or owned or controlled by, such a person; or if made in an attempt to violate, to evade, or to avoid the bar on the provision of contributions by, to, or for the benefit of such a person, or the receipt of contributions from such a person.

§ 541.409 Credit extended and cards issued by U.S. financial institutions to a person whose property and interests in property are blocked.

The prohibition in § 541.201 on dealing in property subject to that section prohibits U.S. financial institutions from performing under any existing credit agreements, including, but not limited to, charge cards, debit cards, or other credit facilities issued by a U.S. financial institution to a person whose property and interests in property are blocked pursuant to § 541.201(a).

§ 541.410 Setoffs prohibited.

A setoff against blocked property (including a blocked account), whether by a U.S. bank or other U.S. person, is a prohibited transfer under § 541.201 if effected after the effective date.

§ 541.411 Entities owned by a person whose property and interests in property are blocked.

A person whose property and interests in property are blocked pursuant to § 541.201(a) has an interest in all property and interests in property of an entity in which it owns, directly or indirectly, a 50 percent or greater interest. The property and interests in property of such an entity, therefore, are blocked, and such an entity is a person whose property and interests in property are blocked pursuant to § 541.201(a), regardless of whether the name of the entity is incorporated into OFAC's Specially Designated Nationals and Blocked Persons List (SDN List).

Subpart E—Licenses, Authorizations, and Statements of Licensing Policy

■ 13. Revise § 541.501 to read as follows:

§ 541.501 General and specific licensing procedures.

For provisions relating to licensing procedures, see part 501, subpart E of this chapter. Licensing actions taken pursuant to part 501 of this chapter with respect to the prohibitions contained in this part are considered actions taken pursuant to this part. General licenses and statements of licensing policy relating to this part also may be available through the Zimbabwe sanctions page on OFAC's Web site: *www.treasury.gov/ofac.*

■ 14. Amend § 541.502 by revising paragraphs (a) and (b) and adding new paragraphs (d), (e), and (f) to read as follows:

§ 541.502 Effect of license or authorization.

(a) No license or other authorization contained in this part, or otherwise issued by OFAC, authorizes or validates any transaction effected prior to the issuance of such license or other authorization, unless specifically provided in such license or authorization.

(b) No regulation, ruling, instruction, or license authorizes any transaction prohibited under this part unless the regulation, ruling, instruction, or license is issued by OFAC and specifically refers to this part. No regulation, ruling, instruction, or license referring to this part shall be deemed to authorize any transaction prohibited by any other part of this chapter unless the regulation, ruling, instruction, or license specifically refers to such part.

* * * * *

(d) Nothing contained in this part shall be construed to supersede the

requirements established under any other provision of law or to relieve a person from any requirement to obtain a license or other authorization from another department or agency of the U.S. Government in compliance with applicable laws and regulations subject to the jurisdiction of that department or agency. For example, exports of goods, services, or technical data which are not prohibited by this part or which do not require a license by OFAC, nevertheless may require authorization by the U.S. Department of Commerce, the U.S. Department of State, or other agencies of the U.S. Government.

(e) No license or other authorization contained in or issued pursuant to this part authorizes transfers of or payments from blocked property or debits to blocked accounts unless the license or other authorization explicitly authorizes the transfer of or payment from blocked property or the debit to a blocked account.

(f) Any payment relating to a transaction authorized in or pursuant to this part that is routed through the U.S. financial system should reference the relevant OFAC general or specific license authorizing the payment to avoid the blocking or rejection of the transfer.

■ 15. Revise § 541.503 to read as follows:

§ 541.503 Exclusion from licenses.

OFAC reserves the right to exclude any person, property, transaction, or class thereof from the operation of any license or from the privileges conferred by any license. OFAC also reserves the right to restrict the applicability of any license to particular persons, property, transactions, or classes thereof. Such actions are binding upon actual or constructive notice of the exclusions or restrictions.

■ 16. Revise § 541.504 to read as follows:

§ 541.504 Payments and transfers to blocked accounts in U.S. financial institutions.

Any payment of funds or transfer of credit in which a person whose property and interests in property are blocked pursuant to § 541.201(a) has any interest that comes within the possession or control of a U.S. financial institution must be blocked in an account on the books of that financial institution. A transfer of funds or credit by a U.S. financial institution between blocked accounts in its branches or offices is authorized, provided that no transfer is made from an account within the United States to an account held outside the United States, and further provided that a transfer from a blocked account may be made only to another blocked account held in the same name.

Note to § 541.504: See § 501.603 of this chapter for mandatory reporting requirements regarding financial transfers. *See also* § 541.203 concerning the obligation to hold blocked funds in interest-bearing accounts.

■ 17. Amend § 541.505 by revising paragraph (b) to read as follows:

§ 541.505 Entries in certain accounts for normal service charges authorized.

* * * * *

(b) As used in this section, the term *normal service charges* shall include charges in payment or reimbursement for interest due; cable, telegraph, internet, or telephone charges; postage costs; custody fees; small adjustment charges to correct bookkeeping errors; and, but not by way of limitation, minimum balance charges, notary and protest fees, and charges for reference books, photocopies, credit reports, transcripts of statements, registered mail, insurance, stationery and supplies, and other similar items.

■ 18. Amend § 541.506 by revising paragraph (c) to read as follows:

§ 541.506 Investment and reinvestment of certain funds.

* * * * *

(c) No immediate financial or economic benefit accrues (*e.g.,* through pledging or other use) to a person whose property and interests in property are blocked pursuant to § 541.201(a).

■ 19. Revise § 541.507 to read as follows:

§ 541.507 Provision of certain legal services authorized.

(a) The provision of the following legal services to or on behalf of persons whose property and interests in property are blocked pursuant to § 541.201(a) or any further Executive orders relating to the national emergency declared in E.O. 13288 of March 6, 2003, is authorized, provided that receipt of payment of professional fees and reimbursement of incurred expenses must be specifically licensed or otherwise authorized pursuant to § 541.508:

(1) Provision of legal advice and counseling on the requirements of and compliance with the laws of the United States or any jurisdiction within the United States, provided that such advice and counseling are not provided to facilitate transactions in violation of this part;

(2) Representation of persons named as defendants in or otherwise made parties to legal, arbitration, or administrative proceedings before any U.S. federal, state, or local court or agency;

(3) Initiation and conduct of legal, arbitration, or administrative proceedings before any U.S. federal, state, or local court or agency;

(4) Representation of persons before any U.S. federal, state, or local court or agency with respect to the imposition, administration, or enforcement of U.S. sanctions against such persons; and

(5) Provision of legal services in any other context in which prevailing U.S. law requires access to legal counsel at public expense.

(b) The provision of any other legal services to persons whose property and interests in property are blocked pursuant to § 541.201(a) or any further Executive orders relating to the national emergency declared in E.O. 13288 of March 6, 2003, not otherwise authorized in this part, requires the issuance of a specific license.

(c) Entry into a settlement agreement or the enforcement of any lien, judgment, arbitral award, decree, or other order through execution, garnishment, or other judicial process purporting to transfer or otherwise alter or affect property or interests in property blocked pursuant to § 541.201(a) or any further Executive orders relating to the national emergency declared in E.O. 13288 of March 6, 2003, is prohibited unless licensed pursuant to this part.

Note to § 541.507: U.S. persons seeking administrative reconsideration or judicial review of their designation or the blocking of their property and interests in property may apply for a specific license from OFAC to authorize the release of a limited amount of blocked funds for the payment of legal fees where alternative funding sources are not available. For more information, see OFAC's *Guidance on the Release of Limited Amounts of Blocked Funds for Payment of Legal Fees and Costs Incurred in Challenging the Blocking of U.S. Persons in Administrative or Civil Proceedings,* which is available on OFAC's Web site: *www.treasury.gov/ofac.*

§ 541.508 [Redesignated]

■ 20. Redesignate § 541.508 as § 541.509.

■ 21. Add new § 541.508 to read as follows:

§ 541.508 Payments for legal services from funds outside the United States authorized.

Receipts of payment of professional fees and reimbursement of incurred expenses for the provision of legal services authorized pursuant to § 541.507(a) to or on behalf of any person whose property and interests in property are blocked pursuant to

§ 541.201(a) or any further Executive orders relating to the national emergency declared in E.O. 13288 of March 6, 2003, are authorized from funds originating outside the United States, provided that:

(a) Prior to receiving payment for legal services authorized pursuant to § 541.507(a) rendered to persons whose property and interests in property are blocked pursuant to § 541.201(a) or any further Executive orders relating to the national emergency declared in E.O. 13288 of March 6, 2003, the U.S. person that is an attorney, law firm, or legal services organization provides to OFAC a copy of a letter of engagement or a letter of intent to engage specifying the services to be performed and signed by the individual to whom such services are to be provided or, where services are to be provided to an entity, by a legal representative of the entity. The copy of a letter of engagement or a letter of intent to engage, accompanied by correspondence referencing this paragraph (a), is to be mailed to: Licensing Division, Office of Foreign Assets Control, U.S. Department of the Treasury, 1500 Pennsylvania Avenue NW., Annex, Washington, DC 20220.

(b) The funds received by U.S. persons as payment of professional fees and reimbursement of incurred expenses for the provision of legal services authorized pursuant to § 541.507(a) must not originate from:

(1) A source within the United States;

(2) Any source, wherever located, within the possession or control of a U.S. person; or

(3) Any individual or entity, other than the person on whose behalf the legal services authorized pursuant to § 541.507(a) are to be provided, whose property and interests in property are blocked pursuant to any part of this chapter or any Executive order.

Note to paragraph (b) of § 541.508: This paragraph authorizes the blocked person on whose behalf the legal services authorized pursuant to § 541.507(a) are to be provided to make payments for authorized legal services using funds originating outside the United States that were not previously blocked. Nothing in this paragraph authorizes payments for legal services using funds in which any other person whose property and interests in property are blocked pursuant to § 541.201(a), any other part of this chapter, or any Executive order holds an interest.

(c) *Reports.* (1) U.S. persons who receive payments in connection with legal services authorized pursuant to § 541.507(a) must submit quarterly reports no later than 30 days following the end of the calendar quarter during which the payments were received providing information on the funds received. Such reports shall specify:

(i) The individual or entity from whom the funds originated and the amount of funds received; and

(ii) If applicable:

(A) The names of any individuals or entities providing related services to the U.S. person receiving payment in connection with authorized legal services, such as private investigators or expert witnesses;

(B) A general description of the services provided; and

(C) The amount of funds paid in connection with such services.

(2) In the event that no transactions occur or no funds are received during the reporting period, a statement is to be filed to that effect; and

(3) The reports, which must reference this section, are to be mailed to: Licensing Division, Office of Foreign Assets Control, U.S. Department of the Treasury, 1500 Pennsylvania Avenue NW., Annex, Washington, DC 20220.

Note 1 to § 541.508: U.S. persons who receive payments in connection with legal services authorized pursuant to § 541.507(a) do not need to obtain specific authorization to contract for related services that are ordinarily incident to the provision of those legal services, such as those provided by private investigators or expert witnesses, or to pay for such services. Additionally, U.S. persons do not need to obtain specific authorization to provide related services that are ordinarily incident to the provision of legal services authorized pursuant to § 541.507(a).

■ 22. Revise newly redesignated § 541.509 to read as follows:

§ 541.509 Authorization of emergency medical services.

The provision of nonscheduled emergency medical services in the United States to persons whose property or interests in property are blocked pursuant to § 541.201(a) or any further Executive orders relating to the national emergency declared in E.O. 13288 of March 6, 2003, is authorized, provided that all receipt of payment for such services must be specifically licensed.

■ 23. Add new § 541.510 to read as follows:

§ 541.510 Transactions related to Agricultural Development Bank of Zimbabwe and Infrastructure Development Bank of Zimbabwe authorized.

(a) Except as provided in paragraphs (b) and (c) of this section, all transactions involving Agricultural Development Bank of Zimbabwe and Infrastructure Development Bank of Zimbabwe are authorized.

(b) This section does not authorize transactions involving any person whose property and interests in property are blocked pursuant to § 541.201(a), other than Agricultural Development Bank of Zimbabwe and Infrastructure Development Bank of Zimbabwe.

(c) This section does not authorize the unblocking of any property and interests in property that were blocked as of April 24, 2013, pursuant to 31 C.F.R. § 541.201(a), Executive Order 13288 of March 6, 2003, Executive Order 13391 of November 22, 2005, or Executive Order 13469 of July 25, 2008.

■ 24. Revise subpart G to read as follows:

Subpart G—Penalties

Sec.

541.701 Penalties.
541.702 Pre-Penalty Notice; settlement.
541.703 Penalty imposition.
541.704 Administrative collection; referral to United States Department of Justice.

Subpart G—Penalties

§ 541.701 Penalties.

(a) Attention is directed to section 206 of the International Emergency Economic Powers Act (50 U.S.C. 1705) (IEEPA), which is applicable to violations of the provisions of any license, ruling, regulation, order, directive, or instruction issued by or pursuant to the direction or authorization of the Secretary of the Treasury pursuant to this part or otherwise under IEEPA.

(1) A civil penalty not to exceed the amount set forth in section 206 of IEEPA may be imposed on any person who violates, attempts to violate, conspires to violate, or causes a violation of any license, order, regulation, or prohibition issued under IEEPA.

Note to paragraph (a)(1) of § 541.701: As of the date of publication in the **Federal Register** of the final rule amending and reissuing this part (July 10, 2014), IEEPA provides for a maximum civil penalty not to exceed the greater of $250,000 or an amount that is twice the amount of the transaction that is the basis of the violation with respect to which the penalty is imposed.

(2) A person who willfully commits, willfully attempts to commit, or willfully conspires to commit, or aids or abets in the commission of a violation of any license, order, regulation, or prohibition may, upon conviction, be fined not more than $1,000,000, or if a natural person, be imprisoned for not more than 20 years, or both.

(b) *Adjustments to penalty amounts.* (1) The civil penalties provided in IEEPA are subject to adjustment pursuant to the Federal Civil Penalties Inflation Adjustment Act of 1990 (Pub.

L. 101–410, as amended, 28 U.S.C. 2461 note).

(2) The criminal penalties provided in IEEPA are subject to adjustment pursuant to 18 U.S.C. 3571.

(c) Attention is also directed to 18 U.S.C. 1001, which provides that whoever, in any matter within the jurisdiction of the executive, legislative, or judicial branch of the Government of the United States, knowingly and willfully falsifies, conceals, or covers up by any trick, scheme, or device a material fact, or makes any materially false, fictitious, or fraudulent statement or representation, or makes or uses any false writing or document knowing the same to contain any materially false, fictitious, or fraudulent statement or entry shall be fined under title 18, United States Code, or imprisoned, or both.

(d) Violations of this part may also be subject to other applicable laws.

§ 541.702 Pre-Penalty Notice; settlement.

(a) *When required.* If OFAC has reason to believe that there has occurred a violation of any provision of this part or a violation of the provisions of any license, ruling, regulation, order, directive, or instruction issued by or pursuant to the direction or authorization of the Secretary of the Treasury pursuant to this part or otherwise under the International Emergency Economic Powers Act (IEEPA) and determines that a civil monetary penalty is warranted, OFAC will issue a Pre-Penalty Notice informing the alleged violator of the agency's intent to impose a monetary penalty. A Pre-Penalty Notice shall be in writing. The Pre-Penalty Notice may be issued whether or not another agency has taken any action with respect to the matter. For a description of the contents of a Pre-Penalty Notice, see Appendix A to part 501 of this chapter.

(b)(1) *Right to respond.* An alleged violator has the right to respond to a Pre-Penalty Notice by making a written presentation to OFAC. For a description of the information that should be included in such a response, see Appendix A to part 501 of this chapter.

(2) *Deadline for response.* A response to a Pre-Penalty Notice must be made within the applicable 30-day period set forth in this paragraph. The failure to submit a response within the applicable time period set forth in this paragraph shall be deemed to be a waiver of the right to respond.

(i) *Computation of time for response.* A response to a Pre-Penalty Notice must be postmarked or date-stamped by the U.S. Postal Service (or foreign postal service, if mailed abroad) or courier service provider (if transmitted to OFAC by courier) on or before the 30th day after the postmark date on the envelope in which the Pre-Penalty Notice was mailed. If the Pre-Penalty Notice was personally delivered by a non-U.S. Postal Service agent authorized by OFAC, a response must be postmarked or date-stamped on or before the 30th day after the date of delivery.

(ii) *Extensions of time for response.* If a due date falls on a federal holiday or weekend, that due date is extended to include the following business day. Any other extensions of time will be granted, at the discretion of OFAC, only upon specific request to OFAC.

(3) *Form and method of response.* A response to a Pre-Penalty Notice need not be in any particular form, but it must be typewritten and signed by the alleged violator or a representative thereof, must contain information sufficient to indicate that it is in response to the Pre-Penalty Notice, and must include the OFAC identification number listed on the Pre-Penalty Notice. A copy of the written response may be sent by facsimile, but the original also must be sent to OFAC's Enforcement Division by mail or courier and must be postmarked or date-stamped in accordance with paragraph (b)(2) of this section.

(c) *Settlement.* Settlement discussion may be initiated by OFAC, the alleged violator, or the alleged violator's authorized representative. For a description of practices with respect to settlement, see Appendix A to part 501 of this chapter.

(d) *Guidelines.* Guidelines for the imposition or settlement of civil penalties by OFAC are contained in Appendix A to part 501 of this chapter.

(e) *Representation.* A representative of the alleged violator may act on behalf of the alleged violator, but any oral communication with OFAC prior to a written submission regarding the specific allegations contained in the Pre-Penalty Notice must be preceded by a written letter of representation, unless the Pre-Penalty Notice was served upon the alleged violator in care of the representative.

§ 541.703 Penalty imposition.

If, after considering any written response to the Pre-Penalty Notice and any relevant facts, OFAC determines that there was a violation by the alleged violator named in the Pre-Penalty Notice and that a civil monetary penalty is appropriate, OFAC may issue a Penalty Notice to the violator containing a determination of the violation and the imposition of the monetary penalty. For additional details concerning issuance of a Penalty Notice, see Appendix A to part 501 of this chapter. The issuance of the Penalty Notice shall constitute final agency action. The violator has the right to seek judicial review of that final agency action in federal district court.

§ 541.704 Administrative collection; referral to United States Department of Justice.

In the event that the violator does not pay the penalty imposed pursuant to this part or make payment arrangements acceptable to OFAC, the matter may be referred for administrative collection measures by the Department of the Treasury or to the United States Department of Justice for appropriate action to recover the penalty in a civil suit in a federal district court.

■ 25. Revise subpart H to read as follows:

Subpart H—Procedures

Sec.

541.801 Procedures.
541.802 Delegation by the Secretary of the Treasury.

§ 541.801 Procedures.

For license application procedures and procedures relating to amendments, modifications, or revocations of licenses; administrative decisions; rulemaking; and requests for documents pursuant to the Freedom of Information and Privacy Acts (5 U.S.C. 552 and 552a), see part 501, subpart E, of this chapter.

§ 541.802 Delegation by the Secretary of the Treasury.

Any action that the Secretary of the Treasury is authorized to take pursuant to Executive Order 13288 of March 6, 2003 (E.O. 13288), Executive Order 13391 of November 22, 2005, Executive Order 13469 of July 25, 2008, and any further Executive orders relating to the national emergency declared in E.O. 13288, may be taken by the Director of OFAC or by any other person to whom the Secretary of the Treasury has delegated authority so to act.

Dated: July 1, 2014.

Barbara C. Hammerle,

Acting Director, Office of Foreign Assets Control.

Approved: July 2, 2014.

David S. Cohen,

Under Secretary for Terrorism and Financial Intelligence, Department of the Treasury.

[FR Doc. 2014–16111 Filed 7–9–14; 8:45 am]

BILLING CODE P

ENVIRONMENTAL PROTECTION AGENCY

40 CFR Part 52

[EPA–R01–OAR–2009–0919 ; A–1–FRL–9810–2]

Approval and Promulgation of Air Quality Implementation Plans; Connecticut; Regional Haze

AGENCY: Environmental Protection Agency (EPA).

ACTION: Final rule.

SUMMARY: The Environmental Protection Agency (EPA) is approving a Connecticut State Implementation Plan (SIP) submittal addressing regional haze for the first planning period from 2008 through 2018 that was submitted by the Connecticut Department of Environmental Protection (now known as Connecticut Department of Energy and Environmental Protection or CT DEEP) on November 18, 2009, and March 12, 2012. These submittals address the requirements of the Clean Air Act (CAA) and EPA's rules that require States to prevent any future, and remedy any existing, manmade impairment of visibility in mandatory Class I areas caused by emissions of air pollutants from numerous sources located over a wide geographic area (also referred to as the regional haze program). States are required to assure reasonable progress toward the national goal of achieving natural visibility conditions in Class I areas.

DATES: This rule is effective on August 11, 2014.

ADDRESSES: EPA has established a docket for this action under Docket Identification No. EPA–R01–OAR–2009–0919. All documents in the docket are listed on the *www.regulations.gov* Web site. Although listed in the index, some information is not publicly available, i.e., CBI or other information whose disclosure is restricted by statute. Certain other material, such as copyrighted material, is not placed on the Internet and will be publicly available only in hard copy form. Publicly available docket materials are available either electronically through *www.regulations.gov* or in hard copy at the Office of Ecosystem Protection, U.S. Environmental Protection Agency, EPA New England Regional Office, Office of Ecosystem Protection, Air Quality Planning Unit, 5 Post Office Square—Suite 100, Boston, MA. EPA requests that if at all possible, you contact the contact listed in the **FOR FURTHER INFORMATION CONTACT** section to schedule your inspection. The Regional Office's official hours of business are Monday through Friday, 8:30 a.m. to 4:30 p.m., excluding legal holidays.

Copies of the documents relevant to this action are also available for public inspection during normal business hours, by appointment at the Bureau of Air Management, Department of Energy and Environmental Protection, State Office Building, 79 Elm Street, Hartford, CT 06106–1630.

FOR FURTHER INFORMATION CONTACT: Anne McWilliams, Air Quality Unit, U.S. Environmental Protection Agency, EPA New England Regional Office, 5 Post Office Square—Suite 100, (Mail Code OEP05–02), Boston, MA 02109—3912, telephone number (617) 918–1697, fax number (617) 918–0697, email *mcwilliams.anne@epa.gov*.

SUPPLEMENTARY INFORMATION: Throughout this document whenever ''we,'' ''us,'' or ''our'' is used, we mean EPA.

The following outline is provided to aid in locating information in this preamble.

I. Background and Purpose
II. Response to Comments on the March 26, 2012 Proposed Rulemaking
III. Response to Comments on the January 11, 2013 Supplemental Proposed Rulemaking
IV. Final Action
V. Statutory and Executive Order Reviews

I. Background and Purpose

On March 26, 2012, (77 FR 17367), EPA published a Notice of Proposed Rulemaking for the State of Connecticut in which we proposed to approve a Connecticut State Implementation Plan (SIP) submittal as meeting the applicable requirements of the Regional Haze Rule found at 40 CFR 51.308 for the first planning period from 2008 through 2018. The SIP had been submitted by CT DEEP on November 18, 2009, with additional submittals on February 24, 2012 and March 12, 2012.

In the SIP addressing regional haze submitted on November 18, 2009 (''Connecticut Regional Haze SIP Revision, Final, November 2009'') (CT RH SIP),[1] Connecticut chose to demonstrate that programs already developed by the State would provide greater reasonable progress in visibility improvement than source-by-source Best Available Retrofit Technology (BART). The State's demonstration was made in accordance with specific criteria for determining if an alternative measure achieves greater reasonable progress than BART as set out in the Regional Haze Rule at 40 CFR 51.308(e)(2) and (3). Connecticut's Alternative to BART demonstration relied on three components: (1) Connecticut's Regulations of Connecticut State Agencies (RCSA) Section 22a–174–19a (''Control of sulfur dioxide emissions from power plants and other large stationary sources of air pollution'') (Section 19a); (2) revisions to RCSA Section 22a–174–22 (''Control of nitrogen oxides emissions'') (Section 22), including subparagraph 22a–174–22(e)(3); and (3) RCSA Section 22a–174–22c (''The Clean Air Interstate Rule (CAIR) Nitrogen Oxides (NO_X) Ozone Season Trading Program'') (Section 22c). Section 22c implemented the NO_X trading program of the Clean Air Interstate Rule. At the time that Connecticut submitted its initial submission, reliance on the annual CAIR program in lieu of BART for electrical generating units (EGUs) had been demonstrated by EPA to achieve greater reasonable progress towards the national visibility goal than BART and the regional haze regulations have been revised to give the States the option of relying on CAIR to meet BART requirements. (70 FR 39104 (July 6, 2005)). In its Regional Haze SIP, however, Connecticut did not rely on this demonstration by EPA but rather on its own State-specific demonstration.

As discussed in greater detail in our March 26, 2012 proposal notice and later in this notice, CAIR subsequently was found to be inconsistent with the requirements of the CAA. *See North Carolina* v. *EPA,* 550 F.3d 1176 (D.C. Cir. 2008). To replace CAIR, EPA subsequently adopted the Cross-State Air Pollution Rule (CSAPR), which did not impose any ozone season NO_X emission limits for EGUs in Connecticut. To address this deficiency in their alternative to BART, CT DEEP proposed to adopt RCSA 22a–174–22d (Section 22d) as a replacement for Section 22c. Section 22d, once adopted, would have maintained the ozone season NO_X emission reductions that were required under the CAIR program.

On February 24, 2012, CT DEEP submitted a request for parallel processing of Section 22d. Under the parallel processing procedure, EPA proposed to take action on Section 22d before the State's final adoption of the regulation. At that time, the EPA was under a consent decree to take final action on the Connecticut Regional Haze SIP by July 13, 2012. Connecticut indicated that they planned to have a final adopted regulation by June 2012, prior to the deadline for EPA's final action. Based on the substance and the intended timeline for adoption of the proposed regulation, EPA proposed approval of Connecticut's proposed

[1] *See* Docket No. EPA–R01–OAR–2009–0919–0006 and associated attachments.

regulation Section 22d establishing an intrastate NO_X trading program as a CAIR replacement rule as one component of the State's Alternative to BART demonstration. Following a decision by the D.C. Circuit Court vacating the CSAPR trading programs that EPA had developed to replace CAIR, and ordering EPA to continue to implement CAIR, *see EME Homer City Generation, L.P.* v. *EPA,* 696 F.3d 7 (D.C. Cir. 2012), Connecticut concluded that it was unable to adopt Section 22d and withdrew its request for parallel processing of the state regulation.

On January 24, 2013 (78 FR 5158), EPA published a supplemental notice proposing approval of the Connecticut Alternative to BART demonstration based, in part, on Connecticut's CAIR rule (Section 22c), as originally submitted by CT DEEP on November 18, 2009. EPA proposed to approve Connecticut's reliance on Section 22c as one component (along with Sections 19a and 22) of the State's Alternative to BART demonstration and solicited comment on the State's reliance on this rule in its Regional Haze SIP.

In addition, as part of the March 26, 2012 rulemaking, EPA proposed the approval of Connecticut General Statute (CGS) 16a–21a, ''Sulfur content of home heating oil and off-road diesel fuel. Suspension of requirements for emergency.''

II. Response to Comments on the March 26, 2012 Proposed Rulemaking

EPA received comments on the March 26, 2012 proposed approval of the Connecticut Regional Haze SIP from the U.S. Forest Service and the Sierra Club. As Connecticut has not finalized Section 22d, EPA is not responding to comments relevant only to Section 22d. The following discussion summarizes and responds to relevant comments submitted by the Sierra Club. The Sierra Club raised concerns regarding the legality of BART alternatives generally and the means by which greater reasonable progress must be demonstrated before a BART alternative can be approved. The commenter also addressed two aspects of Connecticut's BART alternative, the intrastate trading programs for SO_2 and non-ozone-season NO_X, upon which the current Connecticut Regional Haze SIP still relies.

Comment 1: The Sierra Club commented that section 169A of the CAA does not allow States to adopt alternative programs that operate in lieu of source-specific BART. The Sierra Club acknowledged that the D.C. Circuit's decisions in *Center for Energy & Economic Development* v. *EPA,* 298 F.3d 653 (D.C. Cir. 2005) (''*CEED*'') and *Utility Air Regulatory Group* v. *EPA,* 471 F.3d 1333 (D.C. Cir. 2006) (''*UARG*'') expressly upheld EPA's allowance of such alternatives, but argued that these cases cannot be reconciled with the plain language of the Act.

Response 1: EPA disagrees with the commenter that BART alternatives are impermissible under the CAA. As the commenter notes, EPA's interpretation that the CAA allows States to devise alternative programs in lieu of source-specific BART was upheld in both the *CEED* and *UARG* decisions. Because the conclusions in these cases have not been upset or overturned by any subsequent decision of the D.C. Circuit, as explained in more detail in our response to a similar comment on EPA's January 24, 2013 supplemental proposed rulemaking, we disagree with the commenter's contention that *CEED* and *UARG* were decided erroneously or no longer have force.

Comment 2: The Sierra Club commented that EPA's regulations require a State seeking to rely on a BART alternative to include source-specific BART analyses in its SIP for each subject-to-BART source in the State *and* each source that is included in its BART alternative. Accordingly, because Connecticut did not include any source-specific BART analyses in its Regional Haze SIP, the Sierra Club contends that Connecticut's BART alternative is not approvable.

Response 2: EPA disagrees. The Regional Haze Rule requires States opting to implement an alternative program in lieu of BART to make a demonstration that the alternative will result in greater reasonable progress than would have resulted under source-specific BART. 40 CFR 51.308(e)(2)(i). To make such a demonstration, the State must compare the emission reductions that will likely be achieved by the BART alternative against a BART benchmark. The BART benchmark may be derived by conducting a five-factor BART analysis ''for each source subject to BART *and* covered by the alternative program.'' 40 CFR 51.308(e)(2)(i)(C) (emphasis added). Contrary to the commenter's suggestion, however, this language does not require a State to conduct a BART analysis for each source that is subject to BART within the State and for each source that is included in the BART alternative. Such a disjunctive reading would lead to a situation in which the BART benchmark would include emissions reductions from sources not subject to the BART requirements, which was clearly not EPA's intent. *See, e.g.,*71 FR 60612, 60619 (October 13, 2006). Rather, 40 CFR 51.308(e)(2)(i)(C) requires the State to conduct BART analyses only for those sources that are both subject to BART and included in the BART alternative. Under this natural (conjunctive) reading of the provision, the BART benchmark includes only those sources that would have required BART controls but for the creation of the alternative program.

We also note that Connecticut was not required to undertake any source-specific BART determinations in establishing a BART benchmark. As we noted in the preamble to the Regional Haze Rule, ''[t]he States . . . have flexibility in developing a method to determine the emission reductions that could be achieved through the application of BART.'' 64 FR 35714, 35742. Thus, in situations where the BART alternative ''has been designed primarily to meet a Federal or State requirement other than BART, a State can use a more simplified approach to demonstrating that the alternative program will make greater reasonable progress than BART.'' 71 FR 60612, 60615; *see also* 40 CFR 51.308(e)(2)(i)(C) (if a State's ''alternative measure has been designed to meet a requirement other than BART,'' then a State need not conduct source-by-source BART analyses to establish the BART benchmark). One such simplified approach specifically recommended by EPA in past rulemakings is for States to establish a BART benchmark based on the presumptive emission limits for EGUs contained in the BART Guidelines. *See* 71 FR 60612, 60619. Here, Connecticut's BART alternative consists of Section 19a (control of SO_2 emissions from power plants and other large stationary sources), Section 22 (control of NO_X emissions from similar sources, including intrastate emission trading applicable outside the ozone season), and Section 22c (CAIR NO_X Ozone Season Program), all three of which were developed to satisfy other air quality requirements. Therefore, consistent with EPA's regulations, Connecticut was not required to perform a five-factor BART analysis for any of its sources when setting its BART benchmark, but could opt instead for a simplified approach, such as one that relied upon presumptive emission limits.

Comment 3: The Sierra Club commented that Connecticut impermissibly compared the SO_2 reductions that would be achieved by its BART alternative to the reductions associated with presumptive BART limits developed by the Mid-Atlantic/Northeast Visibility Union (MANE–VU). The Sierra Club argued that the MANE–

VU presumptive limits underestimated the reductions that sources would achieve if they were subject to limits derived from a thorough five-factor analysis. Therefore, the Sierra Club concluded that Connecticut did not conclusively show that its BART alternative would provide greater reasonable progress than source-specific BART.

Response 3: As explained above, EPA has specifically endorsed the use of presumptive limits in setting a BART benchmark in situations such as this one. In referring to the presumptive limits for EGUs contained in the BART Guidelines, EPA previously stated that ''the presumptions represent a reasonable estimate of a stringent case BART, particularly because in developing a BART benchmark they would be applied across the board to a wide variety of units with varying impacts on visibility, at power plants of varying size and distance from Class I areas.'' 71 FR 60612, 60619. In other words, while in some instances conducting a case-by-case BART analysis based on the five factors could result in limits more stringent than the presumptive limits, in others instances a five-factor analysis could result in limits *less* stringent than the presumptive limits (including no additional controls at all). Because these differences are likely to balance out, it is reasonable for a State that is entitled to follow a simplified approach, such as Connecticut, to use presumptive limits in setting its BART benchmark. Here, Connecticut chose to use MANE–VU's presumptive limits, which are more stringent than those contained in the BART Guidelines. Consequently, EPA is satisfied that Connecticut's Regional Haze SIP adequately demonstrated that the State's BART alternative will provide for greater reasonable progress than source-specific BART.

Comment 4: The Sierra Club commented that, even when using the MANE–VU presumptive limits as the point of comparison, Connecticut failed to demonstrate that its BART alternative would result in greater reasonable progress than source-specific BART. For both SO_2 and NO_X, the Sierra Club argued that Connecticut impermissibly compared the emission reductions from all 59 sources covered by its BART alternative against the reductions that would be achieved by the much smaller set of seven subject-to-BART sources. In the case of NO_X, the Sierra Club further contended that, even under the State's flawed comparison, the evidence still showed that the reductions associated with requiring source-specific BART at the seven subject-to-BART sources would exceed the reductions at all 59 sources covered by the BART alternative. The Sierra Club also argued that three additional factors cited by Connecticut in its weight-of-evidence analysis—mandatory retirement of emission reduction credits, the addition of Exeter Energy to the State's CAIR budget, and the State's CAIR allowance allocation methodology—were insufficient to prove that the State's BART alternative would achieve greater reasonable progress. Finally, the Sierra Club reiterated that it would not be onerous for Connecticut to determine the appropriate level of BART control for each subject-to-BART source in setting its BART benchmark.

Response 4: EPA again disagrees with the commenter's strained reading of the Regional Haze Rule. As we stated in our response to comment 2, 40 CFR 51.308(e)(2)(i)(C) does not require States to undertake the task of conducting BART analyses for sources that could never be subject to BART controls in the first place. Rather, the BART benchmark should consist only of the emissions from those sources that are both subject to BART and included in the alternative program. This ensures that the benchmark does not include reductions from any subject-to-BART sources in the State that will not participate in the alternative program and therefore will still be required to install BART. Thus, Connecticut was correct to include in its BART benchmark only the emissions from the seven sources that were both subject to BART and included within the scope of its BART alternative. Moreover, States are permitted to include sources in an alternative program that are not otherwise BART-eligible in order to ensure that the program results in enough emission reductions to result in greater reasonable progress than source-specific BART. Consequently, EPA disagrees with the notion that Connecticut impermissibly conducted an ''apples-to-oranges'' comparison by including more sources in its BART alternative than would have been subject to control under source-specific BART.

EPA also disagrees with the Sierra Club's arguments regarding the weight-of-evidence analysis. It is important to note that EPA's weight-of-evidence analysis for NO_X draws upon, but is not identical to, Connecticut's analysis. *Compare* 77 FR at 17,377 *with id.* at 17,378–79.

The uncertainty in Connecticut's NO_X analysis derives from the fact that, for the BART benchmark, Connecticut estimated a range of NO_X emissions reductions between 3,120 tpy and 17,853 tpy. *See* 77 FR at 17,378 (Table 7); CT RH SIP at 9–34 (Table 9–16). The lower end of this range (3,120 tpy) resulted from imposition of the least stringent emission limits in the MANE–VU recommended range at every single BART-eligible source. Conversely, the upper end of the range (17,853 tpy) resulted from imposition of the most stringent emission limits in the MANE–VU recommended range at every single BART-eligible source.

EPA's weight-of- evidence approach acknowledges that it is not realistic to expect that source-specific BART determinations would result in imposition of the most stringent controls recommended by MANE–VU at each one of Connecticut's BART-eligible sources. *See* 77 FR at 17,378–79 for detailed discussion. Given the unlikelihood of this scenario, EPA considers it reasonable to conclude that the appropriate BART benchmark is considerably less than 17,853 tpy of reductions, and, in fact, less than 11,355 tpy of reductions (i.e., the amount attributable to Connecticut's BART alternative).

Furthermore, Connecticut's BART alternative can reasonably be expected to result in additional emissions reductions (if difficult to precisely quantify) that will occur as a consequence of the required reductions. First, the firm cap during ozone season impedes emissions growth during non-ozone season, while the restriction to intrastate trading during non-ozone season impedes emissions growth during ozone season. *See id.* at 17,379 and further discussion in Response 10. Second, Connecticut's CAIR allowance methodology (which allocates allowances based on electricity output, rather than heat input) can also reasonably be expected to result in actual reductions, not just a change in distribution. In a region like New England with a restructured electricity market, the least efficient generators are dispatched the least often, and under Connecticut's allocation scheme, units that run less often receive fewer CAIR allowances. Thus, the least efficient generators tend to generate less electricity in the first place and therefore receive fewer CAIR allowances, yet require more CAIR allowances for a given quantity of electric output. This tends to result in the least efficient sources operating less often, investing in controls, or repowering, and/or the more efficient sources over-controlling for the purpose of generating marketable allowances. While Connecticut has not modeled either of these effects quantitatively, they are likely to account for some additional reductions. Moreover, as

further discussed in Response 10, actual NO_X emissions are well below even the low end of the BART benchmark.

Comment 5: The Sierra Club commented that Connecticut has not demonstrated that the SO_2 and NO_X emission reductions relied upon in its BART alternative are surplus as required by the Regional Haze Rule. The Sierra Club contended that only the portion of the emission reductions that are surplus to what would otherwise be required to comply with the Clean Air Act may be credited to Connecticut's BART alternative.

Response 5: EPA disagrees that Connecticut has failed to show that the reductions it relied upon are surplus. To show that a BART alternative will achieve greater reasonable progress, the State must include in its SIP a ''demonstration that the emission reductions resulting from the [BART alternative] will be surplus to those reductions resulting from measures adopted to meet requirements of the CAA *as of the baseline date of the SIP.''* 40 CFR 51.308(e)(2)(iv) (emphasis added). In promulgating the Regional Haze Rule in 1999, we explained that the ''baseline date of the SIP'' in this context means ''the date of the emissions inventories on which the SIP relies,'' 64 FR 35714, 35742, which is ''defined as 2002 for regional haze purposes,'' 70 FR 39104, 39143. Any measure adopted after 2002 is accordingly ''surplus'' under 40 CFR 51.308(e)(2)(iv). Therefore, we believe that Connecticut's Regional Haze SIP adequately demonstrates that the reductions from the State's BART alternative, which consists entirely of regulations enacted after 2002, are properly considered surplus emission reductions for this purpose.

Comment 6: The Sierra Club commented that Connecticut must carefully scrutinize wet- and dry-scrubber technology and selective and non-selective catalytic reduction for Bridgeport Harbor Station Unit 3. The Sierra Club provided cost data and stated that the cost-effectiveness of such controls is reasonable.

Response 6: EPA disagrees that Connecticut was required to conduct a source-specific BART determination for Bridgeport Harbor Station Unit 3, regardless of the cost-effectiveness of additional controls. As discussed above in the response to comment 3, Connecticut was entitled to rely upon the presumptive BART limits established by MANE–VU in setting its BART benchmark. Therefore, no five-factor analysis, including an exploration of the costs of specific control technologies, was required for Bridgeport Harbor Station Unit 3 or any other BART-eligible unit.

III. Response to Comments on the January 11, 2013 Supplemental Proposed Rulemaking

In regard to the January 11, 2013 supplemental proposed rulemaking, EPA received comments from the Utility Air Regulatory Group (UARG) and a joint letter from Sierra Club, Earth Justice, and National Parks Conservation Association (for brevity referred to in the singular as, ''Sierra Club''). The UARG comments encouraged States to take into account CAIR-related emission reductions when developing and submitting Regional Haze SIPs, including the BART provisions. UARG stated that EPA should finalize the supplemental proposal and approve Connecticut's Regional Haze SIP in full. The following discussion summarizes and responds to the relevant adverse comments submitted by the Sierra Club on EPA's supplemental proposed approval of Connecticut's Regional Haze SIP.

Comment 7: The Sierra Club commented that because all elements of any SIP approved by EPA must be enforceable, EPA cannot approve the Connecticut SIP to the extent it relies on CAIR. The commenter argued that in light of the remand of the rule by the D.C. Circuit in *North Carolina,* CAIR is neither permanent nor enforceable. Sierra Club also stated that EPA has recognized that CAIR is temporary on a number of occasions and noted that most of EPA's actions to date implicating CAIR reflect that EPA can only rely on CAIR in a limited fashion, namely ''to temporarily preserve the environmental values covered by CAIR pending EPA's development and promulgation of a replacement rule that remedies CAIR's flaws.'' The commenter also noted that in the ''Cross-State Air Pollution Rule (CSAPR) is Better than BART'' rulemaking, which was issued after the *EME Homer City* court stayed CSAPR pending review, EPA found that CAIR was in place only temporarily and that the Agency could not fully approve Regional Haze SIPs that relied on the now-temporary reductions from CAIR. The commenter further argues that even if the emission reductions from CAIR were sufficiently permanent to be used in the 10-year initial planning period of the Connecticut SIP, there is no guarantee that any replacement rule for CAIR will require the same emission reductions for Connecticut.

Response 7: EPA agrees that all control measures in a SIP must be enforceable. *See* CAA 110(a)(2)(A). EPA disagrees, however, that CAIR is not enforceable at this time, given the scope of the court's order in *EME Homer City* and the issuance of the mandate in that case.

On May 12, 2005, EPA published CAIR, which requires significant reductions in emissions of SO_2 and NO_X from EGUs to limit the interstate transport of these pollutants and the ozone and fine particulate matter they form secondarily in the atmosphere. *See* 76 FR 70093. The D.C. Circuit initially vacated CAIR, *North Carolina* v. *EPA,* 531 F.3d 896 (D.C. Cir. 2008), but ultimately remanded the rule to EPA without vacatur to preserve the environmental benefits provided by CAIR, *North Carolina* v. *EPA,* 550 F.3d 1176, 1178 (D.C. Cir. 2008). In response to the court's decision, EPA issued CSAPR to address the interstate transport of NO_X and SO_2 in the eastern United States. *See* 76 FR 48208 (August 8, 2011). On August 21, 2012, the D.C. Circuit issued a decision to vacate CSAPR. In that decision, it also ordered EPA to continue administering CAIR ''pending . . . development of a valid replacement.'' *EME Homer City Generation,* 696 F.3d at 38.[2]

This directive from the D.C. Circuit in *EME Homer City* ensures that the reductions associated with CAIR will be enforceable and in place for a number of years. EPA has been ordered by the court to develop a new rule and the opinion makes clear that after promulgating that new rule EPA must provide States an opportunity to draft and submit SIPs to implement that rule. CAIR thus cannot be removed from a SIP as an enforceable measure until EPA has promulgated a final rule through a notice-and-comment rulemaking process, States have had an opportunity to draft and submit SIPs, EPA has reviewed the SIPs to determine if they can be approved, and EPA has taken action on the SIPs, including promulgating a Federal Implementation Plan (FIP) if appropriate. These steps alone will take many years, even with EPA and the States acting expeditiously. In the meantime, neither the State nor EPA has taken any final action to remove CAIR from the Connecticut SIP. These SIP provisions remain in place and are federally enforceable.

Further, in vacating CSAPR and requiring EPA to continue administering CAIR, the D.C. Circuit emphasized that the consequences of vacating CAIR ''might be more severe now in light of the reliance interests accumulated over the intervening four years.'' *EME Homer*

[2] EPA and other parties filed petitions for a writ of *certiorari* of the decision in *EME Homer City* with the Supreme Court on March 29, 2013.

City, 696 F.3d at 38. The accumulated reliance interests include the interests of States who reasonably assumed they could rely on reductions associated with CAIR to meet the requirements of the Regional Haze Rule.

The proposed and final EPA actions cited by the commenter as support for its argument that EPA has considered CAIR to be temporary all pre-date the vacatur of CSAPR and were based on EPA's expectation that CSAPR was the replacement for CAIR, and thus CAIR would end soon.[3] At the time of those actions, CAIR was reasonably expected to sunset by operation of law in a fairly short timeframe. That background assumption no longer applies. Based on the vacatur of CSAPR and the court's related decision to keep CAIR in force, EPA believes that it is appropriate at this time to rely on CAIR emission reductions as one component of the Connecticut Alternative to BART demonstration while a valid replacement rule is developed and until implementation plans complying with any such new rule are submitted by the States and acted upon by EPA or until the *EME Homer City* case is resolved in a way that provides different direction regarding CAIR and CSAPR.

As noted above, the commenter also argues that even if the emission reductions from CAIR were sufficiently permanent to be used in the first planning period of the Connecticut Regional Haze SIP, it is unclear what emissions reductions would be required in a future replacement rule for CAIR. The commenter is correct in that we do not know at this time what will be required of Connecticut in any replacement rule for CAIR. The uncertainty surrounding the requirements of a future replacement rule, however, does not mandate that source-by-source BART determinations be required today. For now, the Connecticut Regional Haze SIP addressed in today's action ensures that while CAIR is in place, the BART requirements will be met. The adequacy of the Connecticut Regional Haze SIP to address the BART requirements in the future will be better addressed when a replacement rule for CAIR has been promulgated and the Connecticut SIP revised to comply with that rule. This does not mean that the BART requirements will be later ignored. When Connecticut submits a SIP revision to remove Section 22c, either in response to an EPA replacement rule or for other purposes, the State will be required to demonstrate that such a SIP revision ensures that the BART requirements are met. *See* CAA § 110(l). EPA would then review the State action, submit its initial determination for public comment, and take final action after responding to significant public comments. This multi-step sequence of events will afford adequate opportunity to review the adequacy of Connecticut's approved Regional Haze SIP under the applicable legal framework at the time of removal of Section 22c. In sum, we do not agree with the commenter that the uncertainty surrounding the timing and contours of a replacement rule mandate that Connecticut undertake a source specific NO_X BART determination for its EGUs now rather at a later date when the current regulatory uncertainties have been resolved.

Comment 8: The commenter argues that EPA cannot approve Connecticut's proposal to rely on CAIR to satisfy its obligation to control NO_X at BART sources. The Sierra Club states that EPA must require BART determinations at all subject-to-BART sources. The commenter states that there is no statutory authority for EPA to allow a State to rely on CAIR as a better-than-BART alternative and that the force of the holdings in *Center for Energy & Economic Dev.* v. *EPA,* 398 F.3d 653 (D.C. Cir. 2005) and *Utility Air Regulatory Group* v. *EPA,* 471 F.3d 1333, 1340 (D.C. Cir. 2006) allowing EPA to do just that have been undermined by subsequent decisions of the D.C. Circuit. The commenter cite to several cases to support the argument that the CAA does not allow EPA to waive the statutory mandate for BART at ''each'' BART-eligible source.

Response 8: It is important to emphasize that Connecticut's Regional Haze SIP submission does not rely on 40 CFR 51.308(e)(4), sometimes known as the ''CAIR equals BART'' provision, which was at issue in *UARG* and which permits States to rely on CAIR in lieu of BART without any further analysis. Rather, Connecticut's submission relies on 40 CFR 51.308(e)(2), the ''Alternative to BART'' or ''Better than BART'' provision, which was at issue in *CEED* and which does require an analysis that the alternative measures will achieve greater reductions than source-by-source BART. *See id.* § 51.308(e)(2)(i). CT DEEP has submitted a combination of regulations (Sections 19a, 22, and 22c), and an appropriate analysis demonstrating that reductions will be superior to those from source-by-source BART, as part of its Alternative to BART package. *See* CT RH SIP, at 9–28 to 9–35; *see also* 77 FR at 17,373–17,380. Because of the complex history of this action, and to avoid any confusion, we emphasize that we are approving Connecticut's Regional Haze SIP under 40 CFR 51.308(e)(2), not section 51.308(e)(4).

The commenter's arguments that the plain language of the CAA precludes use of alternative programs (including but not limited to CAIR) to satisfy the BART requirements were raised and rejected in *CEED* and *UARG. CEED* and *UARG* remain good law and have not been questioned by subsequent D.C. Circuit decisions. The decisions cited by the commenter, *North Carolina* v. *EPA,* 531 F.3d 896, 906–08 (D.C. Cir. 2008) and *NRDC* v. *EPA,* 571 F.3d 1245, 1255–58 (D.C. Cir. 2009) address the requirements of sections 110(a)(2)(D)(i)(I) and 172(c)(1), respectively. Given the differences between the language of these statutory provisions and that of section 169A(b)(2), the courts' interpretation of these other provisions of the CAA do not undermine the two previous rulings of the same court interpreting the visibility provisions of the Act.[4]

Similarly, the Supreme Court's conclusions in *Massachusetts* v. *EPA,* 549 U.S. 497, 528–29 (2007) regarding the meanings of ''each'' and ''any'' do not conflict with or impact the EPA's reading of section 169A(b)(2) of the CAA or the D.C. Circuit's conclusion that the agency's interpretation of the statute is a reasonable one. As the *CEED* court explained, EPA interprets this provision to mean that ''each SIP's 'emission limits, schedules of compliance, and other measures' must 'include' BART only 'as may be necessary to make reasonable progress toward' national visibility goals.'' 398 F.3d 653, quoting 42 U.S.C. 7491(b)(2); *see also Central Arizona Water Conservation District* v. *EPA,* 990 F.2d 1531, 1543 (9th Cir. 1993) (upholding the same interpretation of section 169A(b)(2)). We do not agree, therefore, that 40 CFR 51.308(e)(2), EPA's regulation allowing for the use of

[3] On August 21, 2012, the D.C. Circuit issued an opinion to vacate CSAPR and keep CAIR in place pending promulgation of a valid replacement rule. However, the court also ordered the Clerk to withhold issuance of the mandate until seven days after disposition of any timely petition for rehearing or rehearing en banc. All petitions for rehearing were denied on January 24, 2013 and the mandate was issued by the D.C. Circuit on February 4, 2013. As noted above EPA and other parties subsequently filed petitions seeking Supreme Court review of the D.C. Circuit decision.

[4] Furthermore, in the regulation at issue in *NRDC,* states could rely on NO_X SIP Call or CAIR reductions without providing any analysis demonstrating how compliance with those programs would result in required reductions within each nonattainment area, and EPA had not provided any technical analysis to that effect either. *See NRDC,* 571 F.3d at 1256–57. That distinguishes *NRDC* from the issues here. As noted above, we are approving Connecticut's Regional Haze SIP under 40 CFR 51.308(e)(2), not section 51.308(e)(4).

alternative regulatory programs instead of source-specific BART determinations, is inconsistent with the CAA.

Comment 9: The Sierra Club commented that CAIR cannot be used as a substitute for BART because it provides inadequate visibility improvement. The commenter states that the visibility impacts at the Class I areas occur on a much shorter time frame than the annual or seasonal CAIR allocations. The commenter finds that the shorter averaging times for BART provides a more stringent, more protective limit than CAIR's allocations. The commenter states that appropriately averaged limits should be required even if new controls are not required.

Response 9: For a State which opts to pursue an Alternative to BART demonstration, the State must develop an analysis of the best system of continuous emission control technology available and associated emission reductions achievable for BART-eligible sources within the State subject to the alternative plan. The expected emission reductions must be compared to an analysis of the projected emission reductions achievable through the alternative measure. When crafting the alternative measures, States are not required to revise the emission limit to meet each unit's emission capability. In addition, the Regional Haze Rule does not limit the averaging period of the alternative measure. As the commenter suggested, visibility impairment can happen on a much shorter period (24-hour time period) than a seasonal limit, and thus the commenter suggests that a shorter averaging time would result in better visibility improvement. We disagree that a difference in averaging time would affect our conclusions that CAIR, in combination with the other emission limits in the Connecticut Regional Haze SIP, provides for greater reasonable progress than BART. The visibility evaluation required by the Regional Haze Rule requires States to evaluate visibility for the 20-percent best and 20-percent worst days. While EPA collects samples at the IMPROVE monitoring sites over a 24-hour time period, none of the visibility program requirements are based on these 24-hour peaks. Both the 20-percent best days and 20-percent worst days represent a relatively long time period, that is an average over one-fifth of the year, or 73 days. Because this is a relatively long time period, and even though it may be discontinuous, it tends to ''smooth out'' any variations that would occur over a shorter time period. Similarly, even a shorter 30-day rolling average BART limit represents a relatively long time period that would also tend to smooth out any spikes that may occur over a day. Thus, while a seasonal (in this case 5-month) emission limit may also smooth out the occasional high emission day, the longer averaging period will still provide visibility protection for the Class I area.

In addition, as allowed under 40 CFR 51.308(e)(2)(i)(C), the components of the Connecticut Alternative to BART were developed to meet other regulatory requirements. For example, the ozone season NO_X limits in Sections 22 and 22c were designed to meet the ozone National Ambient Air Quality Standard (NAAQS), an 8-hour average standard, which ensures that the emission limit will be consistently met.

Comment 10: The Sierra Club commented that the averaging time for the non-ozone season limitations consist entirely of a 0.15 lb/MMBtu NO_X emission limit applicable as averaged over the entire non-ozone season. Again, the Sierra Club contends that this limit does not provide the same averaging time protections as would a BART limit. Furthermore, the commenter continued, although it is not evident from EPA's discussion, most of the BART-eligible units regularly emit well above this non-ozone season limit, presumably taking advantage of Connecticut's application of emission credits. As EPA's original proposal acknowledges, there is no firm year-round cap on EGUs emissions which would be required of the BART-eligible units.

Response 10: While Connecticut's non-ozone season limits do not provide a firm year-round emission cap on each unit, a facility which exceeds the 0.15 lb/MMBtu limit can only use *intrastate* trading to meet its NO_X emission obligation. As a result, the emission reductions come from within the State, a similar geographic area. Moreover, as we noted in the NPR, ''the firm cap during ozone season acts as an impediment to emissions growth during nonozone season.'' 77 FR at 17379. This relationship works in both directions: The fact that Connecticut imposes a 0.15 lb/MMBtu NO_X limit during October through April, and allows only intrastate trading for facilities that exceed that limit, limits facilities' ability to emit above their CAIR allocations and comply with Section 22c simply by purchasing out-of-state allowances.

Data regarding actual emissions supports the argument that Connecticut's alternative program allows for facility flexibility while achieving emission reductions. The actual 2002 baseline NO_X emissions from the BART-identified sources were 4,054 tons of NO_X. The 2011 actual NO_X emissions from these sources under the Connecticut Alternative to BART are 557 tons.[5] These 2011 actual NO_X emissions are an order of magnitude lower than even the low-end projected 2006 BART benchmark emissions (9,701 tons) for these same sources.

Comment 11: The commenter suggests that the visibility impacts from several of the BART-eligible units are not, as EPA has described them, minimal. First, it is not clear that the submitted modeling actually reflects the 24-hour maximum emission input required by the BART Guidelines; therefore, the modeling may underestimate the visibility impacts. The commenter notes that Mid-Atlantic/Northeast Visibility Union (''MANE–VU'') has determined that 98 percent of visibility deterioration at Class I areas in its region came from sources with impacts between 0.2 and 0.3 deciviews (dv), based on the existing modeling, and at least one of Connecticut's BART-eligible units has that level of impact from its NO_X emissions. The Sierra Club emphasized that the exact purpose of the regional haze program is to reduce the cumulative impacts from multiple sources. For this reason, the Sierra Club commented that source-by-source analysis of the costs and benefits of additional retrofit technology and year-round lower limits with appropriate averaging time is required.

Response 11: We disagree with the conclusions the commenter draws from the MANE–VU report entitled ''Five-Factor Analysis of BART-Eligible Sources,'' Attachment W to Connecticut's SIP submission.

The purpose of the modeling discussed in Attachment W, as the title suggests, is to support a five-factor analysis for MANE–VU's recommended BART controls. EPA agrees that MANE–VU's modeling does not adhere to the requirements of the BART Guidelines for determining an appropriate threshold for exempting BART-eligible sources from further analysis for BART; however, this modeling was not done for exemption purposes, but rather to inform the decision making process for developing MANE–VU's recommended BART controls. In this context, EPA is not considering MANE–VU's modeling under 40 CFR part 51 Appendix Y (the BART Guidelines), but rather under 40 CFR 51.308(e)(2)(i)(C)'s requirement to establish a BART benchmark for comparison to an alternative program.

While it is true that the purpose of the regional haze program as a whole is to reduce the cumulative impacts from

[5] 2011 NO_X emission data from the Connecticut BART-identified EGUs is from the EPA Air Markets Program (*http://ampd.epa.gov/ampd/*).

multiple sources, even a source-specific BART determination includes consideration of ''the degree of improvement in visibility which may reasonably be anticipated to result from the use of such technology.'' 40 CFR 51.308(e)(1)(ii)(A). EPA's BART Guidelines allow States conducting source-by-source BART determinations to exempt sources with visibility impacts as high as 0.5 dv. *See* 40 CFR part 51 Appendix Y § III.A.1.

As part of its analysis, MANE–VU attempted to assess which sources had the greatest impact on visibility, in accordance with 40 CFR 51.308(e)(1)(ii)(A). However, MANE–VU decided to take a more stringent approach than the BART Guidelines' 0.5 dv threshold. *See* Attachment W at 14. The report states that ''the cumulative frequency visibility impact from all MANE–VU BART-eligible sources corresponds to a maximum 24-hr impact of 0.22 dv from the NWS [National Weather Service]-driven data and 0.29 dv from the MM5 [PSU/NCAR mesoscale model] data.'' Attachment W at 13–14. Based on these results, MANE–VU concluded that a range of 0.2 to 0.3 dv would represent a '''significant' impact at MANE–VU Class I areas on an average basis.'' *Id.* at 14. However, as the report stipulates, the analysis only included BART-eligible units within the MANE–VU area, excluding all other BART sources outside of the MANE–VU area, a limitation noted by the report. *See id.* at 13. Therefore, for purposes of developing its recommended BART controls, MANE–VU ''decided to place increased weight on sources with an individual visibility impact greater than 0.1 dv for this 1st order regional 5-factor analysis.'' *Id.* at 14. As MANE–VU noted, ''[t]his threshold is overly inclusive relative to exemption processes being conducted by other [Regional Planning Organizations] RPOs, but still provides MANE–VU states flexibility in choosing the weight to be given to the first of the five factors considered (i.e., the degree of visibility improvement that could result from BART).'' *Id.*

Only two of the BART-eligible sources in Connecticut have more than a 0.1 dv impact from NO_X, and only one source exceeds a 0.2 dv impact; the rest show impacts far less than these levels.[6] It is, of course, possible that a source-specific BART analysis at one or both of these units exceeding 0.1 dv impact would result in a more stringent BART limit at those particular units than apply under Connecticut's alternative program. However, it is also possible that full consideration of the other four factors would lead to *less* stringent limits than apply under Connecticut's alternative program. Moreover, it is also quite possibly (indeed, likely) that full consideration of the five factors would result in less stringent limits at the other five BART-eligible units (with impacts well below 0.1 dv) than apply under Connecticut's alternative program. Most importantly, and central to both Connecticut's and EPA's analyses, it is also very likely that source-by-source BART would result in fewer total emissions reductions (and therefore visibility improvements) than apply under Connecticut's alternative program. Thus, while any one particular source might have higher or lower emissions limits under source-by-source BART (as opposed to Connecticut's alternative program), as a whole, EPA does not agree that source-by-source BART would necessarily result in more stringent controls on the BART-eligible sources (let alone the non-BART-eligible sources) as a group.

[6] The highest visibility impacts due to NO_X were modeled to be: 0.31 dv from Bridgeport Harbor Unit 3, 0.14 dv from New Haven Harbor Unit 1, 0.06 dv from Middletown Unit 3, 0.04 dv from Montville Unit 6, 0.03 dv from Middletown Unit 4, 0.03 dv from Cascade Boxboard, and 0.01 dv from Norwalk Unit 2.

VI. Final Action

EPA is approving Connecticut's November 18, 2009, Regional Haze SIP submittal and March 12, 2012, supplemental submittal as meeting the applicable requirements of the Regional Haze Rule found in 40 CFR 51.308. In addition, EPA is approving Connecticut's RCSA Section 22a–174–19a, ''Control of sulfur dioxide emissions from power plants and other large stationary sources of air pollution''; revisions to RCSA Section 22a–174–22, ''Control of nitrogen oxides emissions,'' in particular subparagraph 22a–174–22(e)(3); and CGS 16a–21a, ''Sulfur content of home heating oil and off-road diesel fuel. Suspension of requirements for emergency.''

IV. Statutory and Executive Order Reviews

Under the Clean Air Act, the Administrator is required to approve a SIP submission that complies with the provisions of the Act and applicable Federal regulations. 42 U.S.C. 7410(k); 40 CFR 52.02(a). Thus, in reviewing SIP submissions, EPA's role is to approve State choices, provided that they meet the criteria of the Clean Air Act. Accordingly, this action merely approves State law as meeting Federal requirements and does not impose additional requirements beyond those imposed by State law. For that reason, this action:

- Is not a ''significant regulatory action'' subject to review by the Office of Management and Budget under Executive Order 12866 (58 FR 51735, October 4, 1993);
- does not impose an information collection burden under the provisions of the Paperwork Reduction Act (44 U.S.C. 3501 *et seq.*);
- is certified as not having a significant economic impact on a substantial number of small entities under the Regulatory Flexibility Act (5 U.S.C. 601 *et seq.*);
- does not contain any unfunded mandate or significantly or uniquely affect small governments, as described in the Unfunded Mandates Reform Act of 1995 (Pub. L. 104–4);
- does not have Federalism implications as specified in Executive Order 13132 (64 FR 43255, August 10, 1999);
- is not an economically significant regulatory action based on health or safety risks subject to Executive Order 13045 (62 FR 19885, April 23, 1997);
- is not a significant regulatory action subject to Executive Order 13211 (66 FR 28355, May 22, 2001);
- is not subject to requirements of Section 12(d) of the National Technology Transfer and Advancement Act of 1995 (15 U.S.C. 272 note) because it does not include measurement standards; and
- does not provide EPA with the discretionary authority to address, as appropriate, disproportionate human health or environmental effects, using practicable and legally permissible methods, under Executive Order 12898 (59 FR 7629, February 16, 1994).

In addition, this rule does not have tribal implications as specified by Executive Order 13175 (65 FR 67249, November 9, 2000), because the SIP is not approved to apply in Indian country located in the State, and EPA notes that it will not impose substantial direct costs on tribal governments or preempt tribal law.

The Congressional Review Act, 5 U.S.C. 801 *et seq.*, as added by the Small Business Regulatory Enforcement Fairness Act of 1996, generally provides that before a rule may take effect, the agency promulgating the rule must submit a rule report, which includes a copy of the rule, to each House of the Congress and to the Comptroller General of the United States. EPA will submit a report containing this action and other required information to the U.S. Senate, the U.S. House of Representatives, and the Comptroller General of the United States prior to publication of the rule in

the **Federal Register**. A major rule cannot take effect until 60 days after it is published in the **Federal Register**. This action is not a ''major rule'' as defined by 5 U.S.C. 804(2).

Under section 307(b)(1) of the Clean Air Act, petitions for judicial review of this action must be filed in the United States Court of Appeals for the appropriate circuit by September 8, 2014. Filing a petition for reconsideration by the Administrator of this final rule does not affect the finality of this action for the purposes of judicial review nor does it extend the time within which a petition for judicial review may be filed, and shall not postpone the effectiveness of such rule or action. This action may not be challenged later in proceedings to enforce its requirements. (See Section 307(b)(2).)

List of Subjects in 40 CFR Part 52

Environmental protection, Air pollution control, Carbon monoxide, Incorporation by reference, Intergovernmental relations, Lead, Nitrogen dioxide, Ozone, Particulate matter, Reporting and recordkeeping requirements, Sulfur oxides, Volatile organic compounds.

Dated: April 26, 2013.

Ira W. Leighton,

Acting Regional Administrator, EPA Region 1.

Original signature affirmed by:

Dated: May 27, 2014.

H. Curtis Spalding,

Regional Administrator, Region 1.

Editor's note: This document was received by the Office of the Federal Register on July 3, 2014.

Part 52 of chapter I, title 40 of the Code of Federal Regulations is amended as follows:

PART 52—APPROVAL AND PROMULGATION OF IMPLEMENTATION PLANS

■ 1. The authority citation for part 52 continues to read as follows:

Authority: 42 U.S.C. 7401 et seq.

Subpart H—Connecticut

■ 2. Section 52.370 is amended by adding paragraph (c)(103) to read as follows:

§ 52.370 Identification of plan.

* * * * *

(c) * * *

(103) Revisions to the State Implementation Plan submitted by the Connecticut Department of Environmental Protection on November 18, 2009, and Connecticut Department of Energy and Environmental Protection on March 12, 2012.

(i) Incorporation by reference.

(A) Regulations of Connecticut State Department of Environmental Protection Section 22a–174, effective December 28, 2000; as published in the Connecticut Law Journal on January 23, 2001.

(*1*) Section 22a–174–19a, ''Control of sulfur dioxide emissions from power plants and other large stationary sources of air pollution,'' with the following exceptions which Connecticut did not submit as part of the SIP revision because they are not applicable to the Connecticut Alternative to Best Available Retrofit Technology (BART) program:

(*i*) Section 22a–174–19a(a)(5);

(*ii*) Section 22a–174–19a(a)(8);

(*iii*) Section 22a–174–19a(a)(11);

(*iv*) In Section 22a–174–19a(a)(13); the sentence ''Early reduction credits shall qualify as SO_2 DERCs.'';

(*v*) Section 22a–174–19a(d);

(*vi*) Section 22a–174–19a(e)(4);

(*vii*) Section 22a–174–19a(f) through 19a(h); and

(*viii*) In Section 22a–174–19a(i)(2), the reference to ''or (e)(4).''

(*2*) Section 22a–174–22, ''Control of nitrogen oxide emissions,'' subsection (e)(3).

(B) Connecticut General Statute, Title 16a ''Planning and Energy Policy,'' Chapter 296 ''Operation of Fuel Supply Business,'' Section 16a–21a, ''Sulfur content of home heating oil and off-road diesel fuel. Suspension of requirements for emergency,'' effective June 2, 2008, as published in the State of Connecticut General Statutes, Revision of 1958, Revised to 2009.

(ii) Additional materials.

(A) The Connecticut Department of Environmental Protection document, ''Connecticut Regional Haze SIP Revision, Final, November 2009.''

(B) The Connecticut Department of Energy and Environmental Protection letter ''Clarification of Connecticut's 2008 $PM_{2.5}$ Attainment Demonstration,'' dated March 12, 2012, signed by Anne Gobin.

(C) The Connecticut Department of Energy and Environmental Protection letter ''Regional Haze State Implementation Plan,'' dated February 24, 2012, signed by Anne Gobin.

(D) The Connecticut Department of Energy and Environmental Protection letter ''Withdrawal of Request for Parallel Processing,'' dated November 23, 2012, signed by Anne R. Gobin.

■ 3. In § 52.385, Table 52.385 is amended by:

■ a. Adding a state citation ''22a–174–19a'' in order of ''Date adopted by State''; and

■ b. Adding an entry for existing state citation ''22a–174–22'' in order of ''Date adopted by State''; and

■ c. Adding a state citation ''Sec. 16a–21a'' at the end of the table.

The additions read as follows:

§ 52.385 EPA-approved Connecticut regulations.

* * * * *

TABLE 52.385—EPA-APPROVED REGULATIONS

Connecticut State citation	Title/subject	Dates		**Federal Register** citation	Section 52.370	Comments/ description
		Date adopted by State	Date approved by EPA			
*	*	*	*	*	*	*
22a–174–19a	Control of sulfur dioxide emissions from power plants and other large stationary sources of air pollution.	12/28/00	7/10/14	[Insert **Federal Register** page number where the document begins].	[Insert next available paragraph number in sequence].	Approves the sulfur dioxide emission standards and fuel sulfur limits for units subject to the CT NO_X Budget program. The following sections were not submitted as part of the SIP: Sections (a)(5); (a)(8); (a)(11); (d); (e)(4); (f); (g); (h); and in (i)(2) reference to (e)(4).
*	*	*	*	*	*	*
22a–174–22 ...	Control of nitrogen oxides emissions.	12/28/00	7/10/14	[Insert **Federal Register** page number where the document begins].	[Insert next available paragraph number in sequence].	Approves the Oct–April NO_X emission limits for units subject to the CT NO_X Budget program. Only section (e)(3) was submitted as part of the SIP revision.
*	*	*	*	*	*	*
Sec. 16a–21a	Sulfur content of home heating oil and off-road diesel fuel. Suspension of requirements for emergency.	6/2/08	7/10/14	[Insert **Federal Register** page number where the document begins].	[Insert next available paragraph number in sequence].	Approves the sulfur content of number two home heating oil and off road diesel at such time that New York, Massachusetts, and Rhode Island adopt similar limits.

[FR Doc. 2014–16071 Filed 7–9–14; 8:45 am]
BILLING CODE 6560–50–P

ENVIRONMENTAL PROTECTION AGENCY

40 CFR Part 52

[EPA–R03–OAR–2013–0241; FRL–9913–26-Region 3]

Approval and Promulgation of Air Quality Implementation Plans; Pennsylvania; Control of Commercial Fuel Oil Sulfur Limits for Combustion Units

AGENCY: Environmental Protection Agency (EPA).

ACTION: Final rule.

SUMMARY: The Environmental Protection Agency (EPA) is approving a State Implementation Plan (SIP) revision submitted by the Commonwealth of Pennsylvania. This revision will implement low-sulfur fuel oil provisions that will reduce the amount of sulfur in fuel oils used in combustion units, which will aid in reducing sulfur dioxide (SO_2) emissions and the formation of sulfates that cause decreased visibility. This action is being taken under the Clean Air Act (CAA).

DATES: This final rule is effective on July 10, 2014.

ADDRESSES: EPA has established a docket for this action under Docket ID Number EPA–R03–OAR–2013–0241. All documents in the docket are listed in the *http://www.regulations.gov* Web site. Although listed in the electronic docket, some information is not publicly available, i.e., confidential business information (CBI) or other information whose disclosure is restricted by statute. Certain other material, such as copyrighted material, is not placed on the Internet and will be publicly available only in hard copy form. Publicly available docket materials are available either electronically through *http://www.regulations.gov* or in hard copy for public inspection during normal business hours at the Air Protection Division, Environmental Protection Agency, Region III, 1650 Arch Street, Philadelphia, Pennsylvania 19103.

FOR FURTHER INFORMATION CONTACT: Gregory Becoat, (215) 814–2036, or by email at *becoat.gregory@epa.gov.*

SUPPLEMENTARY INFORMATION:

I. Background

On February 20, 2014 (79 FR 9701), EPA published a notice of proposed rulemaking (NPR) seeking comment on EPA's proposed approval of Pennsylvania's SIP revision that incorporates the Commonwealth's low-sulfur fuel oil provisions into the SIP. The SIP revision was submitted by the Commonwealth of Pennsylvania on February 25, 2013, adopting revisions to 25 Pennsylvania Code (Pa. Code) Chapters 121, 123, and 139. In response to the NPR, EPA received one comment, dated March 24, 2014, from Ms. Jane Kozinski, Assistant Commissioner for the State of New Jersey Department of Environmental Protection (NJDEP). A summary of the NJDEP comment and EPA's response is provided in Unit III. (Summary of Public Comment and EPA Response) of this final rulemaking action.

II. Summary of SIP Revision

The SIP revision incorporates Pennsylvania's low-sulfur fuel oil provisions which apply to the owners and/or operators of the following: (1) Refineries; (2) pipelines; (3) terminals; (4) retail outlet fuel storage facilities and ultimate consumers; (5) commercial and industrial facilities; and (6) facilities with a unit burning regulated fuel oil to produce electricity and domestic home heaters. The SIP revision implements low-sulfur fuel oil provisions that will reduce the amount of sulfur in fuel oils used in combustion units and amends

associated definitions, sampling and test methods, and recordkeeping and recording provisions. The low-sulfur fuel oil provisions will aid in reducing SO_2 emissions and the formation of sulfates that cause decreased visibility. EPA believes that these regulations will decrease SO_2 emissions in the Commonwealth from certain fuel combustion sources and therefore strengthen the Pennsylvania SIP. EPA also believes that the additional SO_2 emission reductions and reductions in sulfates from Pennsylvania sources will assist the Commonwealth in achieving further reasonable progress towards reducing regional haze.[1] The rationale for EPA's proposed action is explained in the NPR and will not be restated here. Relevant support documents for this action are available online at *http://www.regulations.gov,* Docket number EPA–R03–OAR–2013–0241.

III. Summary of Public Comment and EPA Response

Comment: NJDEP commented that Pennsylvania's SIP revision, which incorporates low-sulfur fuel oil regulations to reduce the sulfur content of distillate fuel oil to 500 parts per million (ppm), is not consistent with standards adopted by nearby states, which limit sulfur content to 15 ppm. NJDEP stated that a sulfur-content standard of 15 ppm would be consistent with the standard set in the Mid-Atlantic/Northeast Visibility Union (MANE–VU)'s agreement on measures to control air pollutants that contribute to regional haze. NJDEP expressed concern that Pennsylvania's adoption of a higher sulfur-content standard of 500 ppm may jeopardize continued progress to improve visibility levels at the Brigantine Wilderness Area (Brigantine). NJDEP stated that a sulfur-content standard of 15 ppm for distillate fuel oil is a reasonable, cost-effective air pollution control measure necessary to ensure that the reasonable progress goals (RPGs) at Brigantine are met in the future. NJDEP also stated that a lower sulfur-content standard of 15 ppm is a reasonable, cost-effective control measure for SO_2 and fine particulates and ''would make for a more widely-marketable fuel across the northeastern and mid-Atlantic United States.'' Further, NJDEP stated that in EPA's proposed approval of the Pennsylvania regional haze SIP, ''Pennsylvania reports that sulfur dioxide emission reductions from the closure of the Portland Power [P]lant in northeastern Pennsylvania will offset sulfur dioxide emissions expected from a 500 ppm sulfur content in distillate fuel oil in Pennsylvania.'' NJDEP commented that, on the contrary, lowering the sulfur content in distillate oil to 15 ppm would have a greater impact on visibility at Brigantine than reductions at Portland because emission reductions would occur over a widespread area from a large number of sources, especially from fuel-burning sources in metropolitan Philadelphia, which is frequently upwind of Brigantine.

Response: EPA appreciates NJDEP's comment on the SIP revision and acknowledges that Pennsylvania is a member state in MANE–VU. Pennsylvania participated fully in the MANE–VU consultation process, which resulted in a course of action for all participating states to reduce emissions to collectively meet the RPGs in the MANE–VU region.[2] The MANE–VU ''Ask'' provided the MANE–VU states, including Pennsylvania, with up to ten years to pursue adoption and implementation of reasonable and cost-effective nitrogen oxides (NO_X) and SO_2 emissions reduction measures. In its regional haze SIP, Pennsylvania stated that it ''will pursue these measures, as appropriate and necessary, and in five years at the time of Pennsylvania's first periodic SIP report, expects to report on progress toward adoption of these measures by 2018.'' With respect to the low-sulfur fuel strategy, the MANE–VU ''Ask'' established two sets of goals, one for the ''inner zone'' states of the MANE–VU region (Delaware, New Jersey, New York, and Pennsylvania, or portions thereof) and one goal for the ''outer zone'' states. The ''inner zone'' goals contained more aggressive compliance schedules and sulfur-content limits than the ''outer zone'' goals. Nevertheless, states in the ''inner zone'' could choose to comply with the ''outer zone'' goals if they experienced supply disruption issues, and the ''Ask'' effectively provided all states until 2018 to complete the implementation of their low-sulfur fuel strategies. Consistent with this approach, Pennsylvania indicated in its regional haze SIP that, ''[b]ased on supply concerns, Pennsylvania will pursue a strategy that will not be less stringent than the outer zone strategy and would meet the sulfur content emission limits listed above by 2018.''

On July 13, 2012, EPA finalized a limited approval of the Pennsylvania regional haze SIP (77 FR 41279). Subsequently, Pennsylvania submitted its February 25, 2013 SIP revision to EPA that included low-sulfur fuel regulations that met the ''outer zone'' strategy requirements and therefore do not require the sulfur content of distillate oil be reduced to 15 ppm.[3] As EPA explained in detail in the technical support document (TSD) [4] that accompanied our July 13, 2012 limited approval of the Pennsylvania regional haze SIP, Pennsylvania had secured an additional 23,051 tons in SO_2 reductions that were not anticipated at the time of the MANE–VU ''Ask.'' When these reductions are considered in combination with reductions that will result from Pennsylvania's low-sulfur fuel regulations, EPA believes that a 15 ppm limit on distillate oil is no longer ''appropriate and necessary'' to achieve the goals of the MANE–VU ''Ask'' during the first planning period ending in 2018. Consequently, EPA believes that the Pennsylvania regional haze SIP includes all measures necessary to obtain its share of the emission reductions needed to meet the RPGs of downwind states including New Jersey's and therefore has met the requirements of 40 CFR 51.308(d)(3)(ii). See 79 FR

[1] EPA originally finalized a limited approval of the Pennsylvania regional haze SIP on July 13, 2012. 77 FR 41279. Our approval was limited due to Pennsylvania's reliance upon the Clean Air Interstate Rule (CAIR) for certain emission requirements for electric generating units. In response to a petition for review of that final action in the United States Court of Appeals for the Third Circuit, EPA successfully moved for a voluntary remand without vacatur. On April 30, 2014, EPA reissued its final limited approval of the Pennsylvania SIP to implement the Commonwealth's regional haze program for the first planning period through 2018. 79 FR 24340. EPA is approving Pennsylvania's SIP revision to incorporate the low-sulfur fuel oil regulations as a SIP strengthening measure and not to address any specific regional haze requirements in the CAA or in 40 CFR 51.308.

[2] See ''Statement of the Mid-Atlantic/Northeast Visibility Union (MANE–VU) Concerning a Course of Action within MANE–VU toward Assuring Reasonable Progress'' (January 20, 2007), also known as the MANE–VU ''Ask,'' in Appendix M of the December 20, 2010 Pennsylvania regional haze SIP submission available in the docket for EPA's rulemaking approving the Pennsylvania regional haze SIP at *http://www.regulations.gov,* Docket ID Number EPA–R03–OAR–2012–0002.

[3] Pennsylvania's low-sulfur fuel oil regulations include a compliance date in 2016. The MANE–VU ''Ask'' provided for ''outer zone'' states to implement a low-sulfur fuel oil strategy by 2014 and ''to further reduce the sulfur content of distillate oil to 15 ppm by 2018, depending on supply availability.'' See Pennsylvania's December 20, 2010 regional haze SIP, Appendix M (MANE–VU ''Ask''). Pennsylvania cited concerns with desulfurization capacity at refineries when publishing its low-sulfur fuel oil regulations with the 500 ppm sulfur limit for distillate oil and 2016 compliance date. See 43 Pa. B. 806 (February 9, 2013).

[4] See ''Technical Support Document (TSD) for the Pennsylvania Regional Haze State Implementation Plan—Mid Atlantic and Northeast Visibility Union (MANE–VU) 'Asks' Reasonable Progress Goals'' (January 17, 2012) available in the docket for EPA's rulemaking approving the Pennsylvania regional haze SIP at *http://www.regulations.gov,* Docket ID Number EPA–R03–OAR–2012–0002.

24340 (April 30, 2014) (reissuing limited approval of Pennsylvania's regional haze SIP). However, EPA recognizes that a 15 ppm sulfur content limit for distillate oil, if subsequently implemented, would provide further SO_2 emissions reductions from Pennsylvania sources and further reasonable progress towards the national goal of remedying visibility impairment in Class I areas.

As EPA explained in the NPR for this rulemaking action, EPA believes these regulations strengthen the Pennsylvania SIP and provide additional SO_2 and sulfate reductions that supplement reductions from the Pennsylvania regional haze SIP. Therefore, EPA concludes that the adoption of a low-sulfur fuel oil strategy will provide Pennsylvania additional emission reductions furthering progress towards reducing emissions that contribute to visibility impairment and furthering reasonable progress in the first implementation period towards RPGs for Class I areas outside the Commonwealth affected by emissions from Pennsylvania's sources. While EPA appreciates NJDEP's comment that 15 ppm distillate fuel oil is a reasonable, cost-effective control measure, EPA has concluded that a 15 ppm limit on distillate oil is no longer ''appropriate and necessary'' for Pennsylvania to achieve the goals of the MANE–VU ''Ask'' during the first planning period ending in 2018.

While it is possible that a 15 ppm distillate fuel oil standard may result in greater visibility improvement at Brigantine than the closure of Portland as NJDEP alleges, EPA previously concluded in its TSD supporting approval of Pennsylvania's regional haze SIP that Pennsylvania's delay in implementing low-sulfur fuel oil regulations was not anticipated to interfere with the ability of other states to meet their respective RPGs.[5] Based on our previous approval of Pennsylvania's regional haze SIP, and particularly upon our conclusion that a 15 ppm limit on distillate oil is no longer ''appropriate and necessary'' to achieve the goals of the MANE–VU ''Ask,'' EPA believes the approved Pennsylvania regional haze SIP adequately addresses visibility impacts from Pennsylvania emission sources on Class I areas outside the Commonwealth, including Brigantine, for the first implementation period and ensures sufficient emission reductions for Class I area states to meet their RPGs. See 77 FR 41279 and 79 FR 24340. Any significant changes in emissions of visibility-impairing pollutants or impacts at Class I areas can be addressed when Pennsylvania evaluates its progress made in the first implementation period towards RPGs for the Class I areas outside the Commonwealth affected by emissions from Pennsylvania's sources as required by 40 CFR 51.308(g). If Pennsylvania's assessment determines an adjustment to its SIP is necessary to ensure reasonable progress, EPA regulations require a SIP revision within a year of the five-year progress report. *See* 40 CFR 51.308(h)(4).

Finally, EPA appreciates NJDEP's comment regarding potential increased availability and marketability of lower sulfur distillate fuel oil if Pennsylvania were to implement a 15 ppm sulfur-content standard. However, this comment is not relevant to this rulemaking action and no further response is required.

[5] EPA notes that it was our conclusion in the TSD supporting approval of Pennsylvania's regional haze SIP, and not Pennsylvania's, that additional SO_2 emission reductions from Federally enforceable measures at point sources such as the Portland Power Plant supported our conclusion that the delay in implementing a low-sulfur fuel oil strategy was not anticipated to interfere with the ability of other states to meet their respective RPGs.

IV. Final Action

EPA has determined that the revisions made to 25 Pa. Code Chapters 121, 123, and 139 meet the SIP revision requirements of the CAA and is approving the amendments to Pennsylvania's regulations for commercial fuel oil sulfur limits for combustion units.

V. Statutory and Executive Order Reviews

A. General Requirements

This action, which makes a determination of attainment based on air quality, will result in the suspension of certain Federal requirements and/or will not impose any additional requirements beyond those imposed by state law. For that reason, this action:

- Is not a ''significant regulatory action'' subject to review by the Office of Management and Budget under Executive Order 12866 (58 FR 51735, October 4, 1993);
- Does not impose an information collection burden under the provisions of the Paperwork Reduction Act (44 U.S.C. 3501 *et seq.*);
- Is certified as not having a significant economic impact on a substantial number of small entities under the Regulatory Flexibility Act (5 U.S.C. 601 *et seq.*);
- Does not contain any unfunded mandate or significantly or uniquely affect small governments, as described in the Unfunded Mandates Reform Act of 1995 (Pub. L. 104–4);
- Does not have Federalism implications as specified in Executive Order 13132 (64 FR 43255, August 10, 1999);
- Is not an economically significant regulatory action based on health or safety risks subject to Executive Order 13045 (62 FR 19885, April 23, 1997);
- Is not a significant regulatory action subject to Executive Order 13211 (66 FR 28355, May 22, 2001);
- Is not subject to requirements of Section 12(d) of the National Technology Transfer and Advancement Act of 1995 (15 U.S.C. 272 note) because application of those requirements would be inconsistent with the CAA; and
- Does not provide EPA with the discretionary authority to address, as appropriate, disproportionate human health or environmental effects, using practicable and legally permissible methods, under Executive Order 12898 (59 FR 7629, February 16, 1994).

In addition, this rulemaking action does not have tribal implications as specified by Executive Order 13175 (65 FR 67249, November 9, 2000), because the determination is not approved to apply in Indian country located in the state, and EPA notes that it will not impose substantial direct costs on tribal governments or preempt tribal law.

B. Submission to Congress and the Comptroller General

The Congressional Review Act, 5 U.S.C. 801 *et seq.,* as added by the Small Business Regulatory Enforcement Fairness Act of 1996, generally provides that before a rule may take effect, the agency promulgating the rule must submit a rule report, which includes a copy of the rule, to each House of the Congress and to the Comptroller General of the United States. EPA will submit a report containing this action and other required information to the U.S. Senate, the U.S. House of Representatives, and the Comptroller General of the United States prior to publication of the rule in the **Federal Register**. A major rule cannot take effect until 60 days after it is published in the **Federal Register**. This action is not a ''major rule'' as defined by 5 U.S.C. 804(2).

C. Petitions for Judicial Review

Under section 307(b)(1) of the CAA, petitions for judicial review of this action must be filed in the United States Court of Appeals for the appropriate circuit by September 8, 2014. Filing a petition for reconsideration by the Administrator of this final rule does not affect the finality of this action for the purposes of judicial review nor does it

extend the time within which a petition for judicial review may be filed, and shall not postpone the effectiveness of such rule or action.

This action, approving the implementation of low-sulfur fuel oil provisions that will reduce the amount of sulfur in fuel oils used in combustion units in Pennsylvania, may not be challenged later in proceedings to enforce its requirements. See section 307(b)(2).

List of Subjects in 40 CFR Part 52

Environmental protection, Air pollution control, Incorporation by reference, Particulate matter, Reporting and recordkeeping requirements, Sulfur oxides.

Dated: June 11, 2014.

W.C. Early,

Acting Regional Administrator, Region III.

Therefore, 40 CFR part 52 is amended as follows:

PART 52—[AMENDED]

■ 1. The authority citation for part 52 continues to read as follows:

Authority: 42 U.S.C. 7401 *et seq.*

■ 2. In § 52.2020, the paragraph (c)(1) table is amended by revising the entries for Title 25, Chapters 121, 123, and 139, Sections 121.1, 123.22, 139.4, and 139.16 and adding entries for Title 25, Chapter 123, Sections 123.22(f) and 123.22(g) to read as follows:

§ 52.2020 Identification of plan.

* * * * *

(c) * * *

(1) * * *

State citation	Title/subject	State effective date	EPA approval date	Additional explanation/ § 52.2063 citation
Title 25—Environmental Protection Article III—Air Resources				
Chapter 121—General Provisions				
Section 121.1	Definitions	02/09/13	07/10/14 [*insert* ***Federal Register*** *citation*].	Added and amended definitions.
*	* *	*	* *	*
Chapter 123—Standards for Contaminants				
*	* *	*	* *	*
Section 123.22	Combustion units. [General provisions—air basins and non-air basins.	02/09/13	07/10/14 [*insert* ***Federal Register*** *citation*].	Amended sections 123.22(a), 123.22(b), 123.22(c), 123.22(d), and 123.22(e).
*	* *	*	* *	*
Section 123.22(f)	Combustion units—Sampling and testing.	02/09/13	07/10/14 [*insert* ***Federal Register*** *citation*].	New section.
Section 123.22(g)	Combustion units—Record-keeping and reporting.	02/09/13	07/10/14 [*insert* ***Federal Register*** *citation*].	New section
*	* *	*	* *	*
Chapter 139—Sampling and Testing				
*	* *	*	* *	*
Section 139.4	References	02/09/13	07/10/14 [*insert* ***Federal Register*** *citation*].	Amended and added references.
*	* *	*	* *	*
Section 139.16	Sulfur in fuel oil	02/09/13	07/10/14 *[insert* ***Federal Register*** *citation*].	Amended to add cross references.
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[FR Doc. 2014–16087 Filed 7–9–14; 8:45 am]

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ENVIRONMENTAL PROTECTION AGENCY

40 CFR Part 62

[EPA–R03–OAR–2013–0475; FRL–9913–32–Region 3]

Approval and Promulgation of State Air Quality Plans for Designated Facilities and Pollutants; Delaware, District of Columbia, and West Virginia; Control of Emissions From Existing Sewage Sludge Incinerator Units

AGENCY: The Environmental Protection Agency (EPA).

ACTION: Direct final rule.

SUMMARY: The Environmental Protection Agency (EPA) is taking direct final action to approve the Clean Air Act (CAA) negative declarations for the State of Delaware, the District of Columbia, and the State of West Virginia for existing sewage sludge incinerator (SSI) units. These negative declarations certify that SSI units subject to the requirements of sections 111(d) and 129 of the CAA do not exist within the jurisdictional boundaries of the Delaware Department of Natural Resources and Environmental Control (DNREC), the District Department of the Environment (DDOE), and the West Virginia Department of Environmental Protection (WVDEP). EPA is accepting the negative declarations in accordance with the requirements of the CAA.

DATES: This rule is effective on September 8, 2014 without further notice, unless EPA receives adverse written comment by August 11, 2014. If EPA receives such comments, it will publish a timely withdrawal of the direct final rule in the **Federal Register** and inform the public that the rule will not take effect.

ADDRESSES: Submit your comments, identified by Docket ID Number EPA–R03–OAR–2013–0475 by one of the following methods:

A. *www.regulations.gov.* Follow the on-line instructions for submitting comments.

B. Email: *rehn.brian@epa.gov.*

C. Mail: EPA–R03–OAR–2013–0475, Brian Rehn, Acting Associate Director, Office of Permits and Air Toxics, Mailcode 3AP10, U.S. Environmental Protection Agency, Region III, 1650 Arch Street, Philadelphia, Pennsylvania 19103.

D. Hand Delivery: At the previously-listed EPA Region III address. Such deliveries are only accepted during the Docket's normal hours of operation, and special arrangements should be made for deliveries of boxed information.

Instructions: Direct your comments to Docket ID No. EPA–R03–OAR–2013–0475. EPA's policy is that all comments received will be included in the public docket without change, and may be made available online at *www.regulations.gov,* including any personal information provided, unless the comment includes information claimed to be Confidential Business Information (CBI) or other information whose disclosure is restricted by statute. Do not submit information that you consider to be CBI or otherwise protected through *www.regulations.gov* or email. The *www.regulations.gov* Web site is an ''anonymous access'' system, which means EPA will not know your identity or contact information unless you provide it in the body of your comment. If you send an email comment directly to EPA without going through *www.regulations.gov,* your email address will be automatically captured and included as part of the comment that is placed in the public docket and made available on the Internet. If you submit an electronic comment, EPA recommends that you include your name and other contact information in the body of your comment and with any disk or CD–ROM you submit. If EPA cannot read your comment due to technical difficulties and cannot contact you for clarification, EPA may not be able to consider your comment. Electronic files should avoid the use of special characters, any form of encryption, and be free of any defects or viruses.

Docket: All documents in the electronic docket are listed in the *www.regulations.gov* index. Although listed in the index, some information is not publicly available, i.e., CBI or other information whose disclosure is restricted by statute. Certain other material, such as copyrighted material, is not placed on the Internet and will be publicly available only in hard copy form. Publicly available docket materials are available either electronically in *www.regulations.gov* or in hard copy during normal business hours at the Air Protection Division, U.S. Environmental Protection Agency, Region III, 1650 Arch Street, Philadelphia, Pennsylvania 19103. Copies of the submittals are available at the Delaware Department of Natural Resources and Environmental Control, 89 Kings Highway, P.O. Box 1401, Dover, Delaware 19903, the District of Columbia Department of the Environment, Air Quality Division, 1200 1st Street NE., Fifth Floor, Washington, DC 20002, and the West Virginia Department of Environmental Protection, Division of Air Quality, 601 57th Street SE., Charleston, West Virginia 25304.

FOR FURTHER INFORMATION CONTACT: Mike Gordon, (215) 814–2039, or by email at *gordon.mike@epa.gov.*

SUPPLEMENTARY INFORMATION:

I. Background

EPA's statutory authority for the regulation of new and existing solid waste incineration units is outlined in CAA sections 129 and 111. Section 129 of the CAA is specific to solid waste combustion, and requires EPA to establish performance standards for each category of solid waste incineration units. These standards include new source performance standards (NSPS), applicable to new units, and emissions guidelines for existing units. Under CAA section 129, an NSPS or emissions guideline must contain numerical emissions limitations for particulate matter, opacity (as appropriate), sulfur dioxide, hydrogen chloride, oxides of nitrogen, carbon monoxide, lead, cadmium, mercury, and dioxins and dibenzofurans. While the NSPS is directly applicable to affected facilities, the emissions guidelines for existing units are intended for states to use in order to develop a state plan to submit to EPA. Once approved by EPA, the state plan becomes federally enforceable. If a State does not submit an approvable state plan to EPA, EPA is responsible for enforcing and implementing a federal plan.

While section 129 of the CAA is specific to the combustion of solid waste, it also relies on CAA section 111 in promulgating the NSPS and emissions guidelines. Section 111 of the CAA gives EPA the statutory authority to promulgate an NSPS and/or emissions guideline for certain categories of stationary sources, and describes the procedural requirements for the development and implementation of these standards. More specifically, CAA section 111(d) requires EPA to establish procedures for States to submit a state plan to EPA for the regulation of existing sources whenever emissions guidelines are promulgated. The general provisions for the submittal and approval of state plans are codified in 40 CFR part 60, subpart B and 40 CFR part 62, subpart A.

States have options other than submitting a state plan in order to fulfill their obligations under CAA sections 111(d) and 129. If a State does not have any existing solid waste incineration units for the relevant emissions guidelines, 40 CFR 60.23(b) and 62.06

provide that a letter may be submitted certifying that no such units exist within the State (i.e., negative declaration) in lieu of a state plan. The negative declaration exempts the State from the requirements of subpart B that would otherwise require the submittal of a CAA section 111(d)/129 plan.

On March 21, 2011 (76 FR 15372), EPA promulgated new source performance standards, 40 CFR part 60, subpart LLLL, and emission guidelines, subpart MMMM, for new and existing SSI units, respectively. Existing SSI units are units that commenced construction on or before October 14, 2010. The DNREC, DDOE, and WVDEP have each determined that there are no existing SSI units subject to CAA sections 111(d) and 129 requirements in their individual air pollution control jurisdictions. In order to fulfill obligations under CAA sections 111(d) and 129, DNREC, DDOE, and WVDEP submitted negative declaration letters to EPA on February 7, 2012, July 26, 2012, and August 27, 2012, respectively. The submittal of these declarations exempts DNREC, DDOE, and WVDEP from the requirement to submit a state plan for existing SSI units.

II. Final EPA Action

In this direct final action, EPA is amending part 62 to reflect receipt of the negative declaration letters from DNREC, DDOE, and WVDEP. EPA is publishing this rule without prior proposal because EPA views this as a noncontroversial amendment and anticipates no adverse comment. However, in the ''Proposed Rules'' section of this **Federal Register**, EPA is publishing a separate document that will serve as the proposal to approve the negative declarations if adverse comments are filed. This rule will be effective on September 8, 2014 without further notice unless EPA receives adverse comment by August 11, 2014. If EPA receives adverse comment, EPA will publish a timely withdrawal in the **Federal Register** informing the public that the rule will not take effect. EPA will address all public comments in a subsequent final rule based on the proposed rule. EPA will not institute a second comment period on this action. Any parties interested in commenting must do so at this time.

III. Statutory and Executive Order Reviews

A. General Requirements

Under Executive Order 12866 (58 FR 51735, October 4, 1993), this action is not a ''significant regulatory action'' and therefore is not subject to review by the Office of Management and Budget. For this reason, this action is also not subject to Executive Order 13211, ''Actions Concerning Regulations That Significantly Affect Energy Supply, Distribution, or Use'' (66 FR 28355, May 22, 2001). This action merely notifies the public of EPA receipt of negative declarations from air pollution control agencies without any existing SSI units in their jurisdiction. This action imposes no requirements. Accordingly, EPA certifies that this rule will not have a significant economic impact on a substantial number of small entities under the Regulatory Flexibility Act (5 U.S.C. 601 *et seq.*). Because this action does not impose any additional enforceable duty beyond that required by state law, it does not contain any unfunded mandate or significantly or uniquely affect small governments, as described in the Unfunded Mandates Reform Act of 1995 (Pub. L. 104–4). This action also does not have tribal implications because it will not have a substantial direct effect on one or more Indian tribes, on the relationship between the Federal Government and Indian tribes, or on the distribution of power and responsibilities between the Federal Government and Indian tribes, as specified by Executive Order 13175 (65 FR 67249, November 9, 2000). This action also does not have Federalism implications because it does not have substantial direct effects on the States, on the relationship between the national government and the States, or on the distribution of power and responsibilities among the various levels of government, as specified in Executive Order 13132 (64 FR 43255, August 10, 1999). This action merely approves negative declarations for existing SSI units from DNREC, DDOE, and WVDEP and does not alter the relationship or the distribution of power and responsibilities established in the Clean Air Act. This action also is not subject to Executive Order 13045 ''Protection of Children from Environmental Health Risks and Safety Risks'' (62 FR 19885, April 23, 1997), because it is not economically significant.

With regard to negative declarations for existing solid waste incineration facilities received by EPA from states, EPA's role is to notify the public of the receipt of such negative declarations and revise 40 CFR part 62 accordingly. In this context, in the absence of a prior existing requirement for the State to use voluntary consensus standards (VCS), EPA has no authority to approve or disapprove a CAA section 111(d)/129 plan negative declaration submission for failure to use VCS. It would thus be inconsistent with applicable law for EPA, when it reviews a CAA section 111(d)/129 negative declaration, to use VCS in place of a section 111(d)/129 negative declaration that otherwise satisfies the provisions of the Clean Air Act. Thus, the requirements of section 12(d) of the National Technology Transfer and Advancement Act of 1995 (15 U.S.C. 272 note) do not apply. This action does not impose an information collection burden under the provisions of the Paperwork Reduction Act of 1995 (44 U.S.C. 3501 *et seq.*).

B. Submission to Congress and the Comptroller General

The Congressional Review Act, 5 U.S.C. 801 *et seq.,* as added by the Small Business Regulatory Enforcement Fairness Act of 1996, generally provides that before a rule may take effect, the agency promulgating the rule must submit a rule report, which includes a copy of the rule, to each House of the Congress and to the Comptroller General of the United States. EPA will submit a report containing this action and other required information to the U.S. Senate, the U.S. House of Representatives, and the Comptroller General of the United States prior to publication of the rule in the **Federal Register**. A major rule cannot take effect until 60 days after it is published in the **Federal Register**. This action is not a ''major rule'' as defined by 5 U.S.C. 804(2).

C. Petitions for Judicial Review

Under section 307(b)(1) of the CAA, petitions for judicial review of this action must be filed in the United States Court of Appeals for the appropriate circuit by September 8, 2014. Filing a petition for reconsideration by the Administrator of this final rule does not affect the finality of this action for the purposes of judicial review nor does it extend the time within which a petition for judicial review may be filed, and shall not postpone the effectiveness of such rule or action. Parties with objections to this direct final rule are encouraged to file a comment in response to the parallel notice of proposed rulemaking for this action published in the proposed rules section of this **Federal Register**, rather than file an immediate petition for judicial review of this direct final rule, so that EPA can withdraw this direct final rule and address the comment in the proposed rulemaking. This action approving negative declarations for SSI units from DNREC, DDOE, and WVDEP may not be challenged later in proceedings to enforce its requirements. (See section 307(b)(2).)

List of Subjects in 40 CFR Part 62

Environmental protection, Administrative practice and procedure, Air pollution control, Aluminum, Fertilizers, Fluoride, Intergovernmental relations, Paper and paper products industry, Phosphate, Reporting and recordkeeping requirements, Sulfur oxides, Sulfur acid plants, Waste treatment and disposal.

Dated: June 11, 2014.

W.C. Early,

Acting Regional Administrator, Region III.

40 CFR part 62 is amended as follows:

PART 62—APPROVAL AND PROMULGATION OF STATE PLANS FOR DESIGNATED FACILITIES AND POLLUTANTS

■ 1. The authority citation for part 62 continues to read as follows:

Authority: 42 U.S.C. 7401 *et seq.*

Subpart I—Delaware

■ 2. Subpart I is amended by adding after § 62.1990 an undesignated center heading and § 62.1995 to read as follows:

Emissions From Existing Sewage Sludge Incineration Units

§ 62.1995 Identification of plan—negative declaration.

Letter from the Delaware Department of Natural Resources and Environmental Control, submitted to EPA on February 7, 2012, certifying that there are no known existing sewage sludge incineration units in the State of Delaware.

Subpart J—District of Columbia

■ 3. Subpart J is amended by adding after § 62.2155 an undesignated center heading and § 62.2160 to read as follows:

Emissions From Existing Sewage Sludge Incineration Units

§ 62.2160 Identification of plan—negative declaration.

Letter from the District Department of the Environment, submitted to EPA on July 26, 2012, certifying that there are no known existing sewage sludge incineration units in the District of Columbia.

Subpart XX—West Virginia

■ 4. Subpart XX is amended by adding after § 62.12165 an undesignated center heading and § 62.12170 to read as follows:

Emissions From Existing Sewage Sludge Incineration Units

§ 62.12170 Identification of plan—negative declaration.

Letter from the West Virginia Department of Environmental Protection, submitted to EPA on August 27, 2012, certifying that there are no known existing sewage sludge incineration units in the State of West Virginia.

[FR Doc. 2014–16034 Filed 7–9–14; 8:45 am]

BILLING CODE 6560–50–P

FEDERAL COMMUNICATIONS COMMISSION

47 CFR Parts 27 and 90

[WT Docket No. 96–86; FCC 13–40]

The Development of Operational, Technical and Spectrum Requirements for Meeting Federal, State and Local Public Safety Communications Requirements Through the Year 2010

AGENCY: Federal Communications Commission.

ACTION: Final rule.

SUMMARY: This document adopts minor changes to the rules governing the 700 MHz public safety narrowband spectrum (769–775/799–805 MHz). The rule changes eliminate or update outdated technical requirements and offer public safety licensees additional flexibility to operate their 700 MHz narrowband land mobile radio systems. This document also adopts a corresponding change to the emission limits of commercial transmitters operating in the Guard Band B Block spectrum (775–776/805–806 MHz) and addresses recommendations from the National Coordination Committee (NCC) for changes to the 700 MHz narrowband rules.

DATES: Effective August 11, 2014. The incorporation by reference of certain publications listed in the rule is approved by the Director of the Federal Register as of August 11, 2014.

FOR FURTHER INFORMATION CONTACT: Brian Marenco, Policy and Licensing Division, Public Safety and Homeland Security Bureau, (202) 418–0838.

SUPPLEMENTARY INFORMATION: This is a summary of the Commission's Seventh Report and Order in WT Docket No. 96–86, FCC 13–40, released on April 1, 2013. The document is available for download at *http://fjallfoss.fcc.gov/edocs_public/*. The complete text of this document is also available for inspection and copying during normal business hours in the FCC Reference Information Center, Portals II, 445 12th Street SW., Room CY–A257, Washington, DC 20554. To request materials in accessible formats for people with disabilities (Braille, large print, electronic files, audio format), send an email to *FCC504@fcc.gov* or call the Consumer & Governmental Affairs Bureau at 202–418–0530 (voice), 202–418–0432 (TTY).

1. In 1998, the Commission established the initial band plan and service rules for the 24 megahertz of public safety spectrum in the 700 MHz band, which it reallocated from TV channels 60–69 in accordance with the mandate expressed in the Balanced Budget Act of 1997, 63 FR 58645, November 2, 1998. The Commission also divided the 24 megahertz of spectrum into narrowband (6.25 kilohertz channel) and wideband (50 kilohertz channel) segments.

2. In 2005, the Commission adopted the Sixth Report and Order in WT Docket No. 96–86 which revised the Commission's rules regarding adjacent channel power (ACP) emission limits for the 700 MHz public safety band, 70 FR 21663, April 27, 2005. In the accompanying Seventh Notice of Proposed Rule Making (Seventh NPRM), the Commission sought comment and issued tentative conclusions regarding proposals filed by TIA–PRS, Access Spectrum, Nortel/EADS and the NCC to revise various rules governing the 700 MHz public safety narrowband spectrum, including additional proposed revisions to the ACP rules.

3. In 2007, the Commission adopted the 700 MHz Second Report and Order in PS Docket No. 06–229, which revised the band plan and service rules governing both the commercial and public safety portions of the 700 MHz band, 72 FR 48814, August 24, 2007. Among other things, the Commission redesignated 10 megahertz of public safety 700 MHz spectrum (at 763–768/793–798 MHz) for broadband use and established a plan for development of a nationwide, interoperable broadband public safety communications network. In order to accommodate the new public safety broadband allocation, the Commission eliminated the public safety 50 kilohertz wideband channels and consolidated the public safety 6.25 kilohertz narrowband channels into their current locations at 769–775 and 799–805 MHz.

4. In the Seventh Report and Order, the Commission resolves the proposals considered in the Seventh NPRM that affect the consolidated 700 MHz narrowband channels (6.25 kilohertz). The Commission does not address

proposals in the Seventh NPRM that related to the former 700 MHz wideband channels (50 kilohertz), because the elimination of wideband channels in the 700 MHz Second Report and Order renders these portions of the Seventh NPRM moot.

5. The Commission, in the Seventh Report and Order, updates certain ACP limits pertaining to transmitters operating on public safety narrowband (769–775/799–805 MHz) or Guard Band B Block (775–776/805–806 MHz) spectrum. The Commission also clarifies its trunking rules, incorporates by reference the most current industry encryption and interoperability standards, removes limitations on secondary fixed operations and permits public safety licensees to transmit their station identification digitally. The Commission also addresses recommendations from the NCC.

Procedural Matters

A. Final Regulatory Flexibility Analysis

6. The Final Regulatory Flexibility Analysis required by section 604 of the Regulatory Flexibility Act, 5 U.S.C. 604, is included in Appendix A of the Seventh Report and Order.

B. Paperwork Reduction Act of 1995 Analysis

7. The actions taken in the Seventh Report and Order in WT Docket No. 96–86 have been analyzed with respect to the Paperwork Reduction Act of 1995, Pub. L. 104–13, and found to impose no new or modified recordkeeping requirements or burdens on the public.

Final Regulatory Flexibility Analysis

8. As required by the Regulatory Flexibility Act (RFA), an Initial Regulatory Flexibility Analysis (IRFA) was incorporated into the *Seventh NPRM* of this proceeding. The Commission sought written public comment on the IRFA. The RFA requires that an agency prepare a regulatory flexibility analysis for notice-and-comment rulemaking proceedings, unless the agency certifies that ''the rule will not, if promulgated, have a significant economic impact on a substantial number of small entities.'' The RFA generally defines ''small entity'' as having the same meaning as the terms ''small business,'' ''small organization,'' and ''small governmental jurisdiction.'' In addition, the term ''small business'' has the same meaning as the term ''small business concern'' under the Small Business Act. A ''small business concern'' is one which: (1) Is independently owned and operated; (2) is not dominant in its field of operation; and (3) satisfies any additional criteria established by the Small Business Administration (SBA). The present Final Regulatory Flexibility Analysis (FRFA) conforms to the RFA.

A. Need for, and Objectives of, the Proposed Rules

9. In the *Seventh Report and Order,* the Commission adopts changes to its rules covering public safety narrowband spectrum at 769–775 MHz and 799–805 MHz in order to ensure that the technical standards in its rules remain up to date so public safety users can benefit from the latest narrowband technology. The changes the Commission adopts include updating its Adjacent Channel Power (ACP) limits, clarifying its trunking rules and incorporating by reference the most current industry encryption and interoperability standards.

B. Summary of Significant Issues Raised by Public Comments in Response to the IRFA

10. There were no comments filed that specifically addressed the rules and policies proposed in the IRFA.

C. Description and Estimate of the Number of Small Entities to Which the Rules Will Apply

11. The RFA directs agencies to provide a description of and, where feasible, an estimate of the number of small entities that may be affected by the proposed rules, if adopted. The RFA generally defines the term ''small entity'' as having the same meaning as the terms ''small business,'' ''small organization,'' and ''small governmental jurisdiction.'' In addition, the term ''small business'' has the same meaning as the term ''small business concern'' under the Small Business Act. A small business concern is one which: (1) Is independently owned and operated; (2) is not dominant in its field of operation; and (3) satisfies any additional criteria established by the SBA.

12. *Public Safety Radio Licensees.* As a general matter, Public Safety Radio Licensees include police, fire, local government, forestry conservation, highway maintenance, and emergency medical services. For the purpose of determining whether a Public Safety Radio Licensee is a small business as defined by the SBA, we use the broad census category, Wireless Telecommunications Carriers (except Satellite). This definition provides that a small entity is any such entity employing no more than 1,500 persons. The Commission does not require Public Safety Radio Licensees to disclose information about number of employees, so the Commission does not have information that could be used to determine how many Public Safety Radio licensees constitute small entities under this definition.

13. *700 MHz Guard Band Licenses.* In the 700 MHz Guard Band Order, the Commission adopted size standards for ''small businesses'' and ''very small businesses'' for purposes of determining their eligibility for special provisions such as bidding credits and installment payments. A small business in this service is an entity that, together with its affiliates and controlling principals, has average gross revenues not exceeding $40 million for the preceding three years. Additionally, a ''very small business'' is an entity that, together with its affiliates and controlling principals, has average gross revenues that are not more than $15 million for the preceding three years. SBA approval of these definitions is not required. An auction of 52 Major Economic Area (MEA) licenses commenced on September 6, 2000, and closed on September 21, 2000. Of the 104 licenses auctioned, 96 licenses were sold to nine bidders. Five of these bidders were small businesses that won a total of 26 licenses. A second auction of 700 MHz Guard Band licenses commenced on February 13, 2001, and closed on February 21, 2001. All eight of the licenses auctioned were sold to three bidders. One of these bidders was a small business that won a total of two licenses.

14. *Radio and Television Broadcasting and Wireless Communications Equipment Manufacturing.* The Census Bureau defines this category as follows: ''This industry comprises establishments primarily engaged in manufacturing radio and television broadcast and wireless communications equipment. Examples of products made by these establishments are: Transmitting and receiving antennas, cable television equipment, GPS equipment, pagers, cellular phones, mobile communications equipment, and radio and television studio and broadcasting equipment.'' The SBA has developed a small business size standard for Radio and Television Broadcasting and Wireless Communications Equipment Manufacturing, which is: All such firms having 750 or fewer employees. According to Census Bureau data for 2007, there were a total of 939 establishments in this category that operated for part or all of the entire year. According to Census bureau data for 2007, there were a total of 919 firms in this category that operated for the entire year. Of this total, 771 had less than 100 employees and 148 had more than 100

employees. Thus, under that size standard, the majority of firms can be considered small.

D. Description of Projected Reporting, Recordkeeping and Other Compliance Requirements

15. This *Seventh Report and Order* does not adopt a rule that will entail reporting, recordkeeping, and/or third-party consultation.

E. Steps Taken To Minimize Significant Economic Impact on Small Entities and Significant Alternatives Considered

16. The RFA requires an agency to describe any significant alternatives that it has considered in reaching its approach, which may include the following four alternatives (among others): (1) The establishment of differing compliance or reporting requirements or timetables that take into account the resources available to small entities; (2) the clarification, consolidation, or simplification of compliance or reporting requirements under the rule for small entities; (3) the use of performance, rather than design, standards; and (4) an exemption from coverage of the rule, or any part thereof, for small entities.

17. In formulating rule changes in the *Seventh Report and Order,* the Commission strived to ensure Public Safety Radio Licensees benefit from innovative new services. In each case cited below, the Commission considered the alternative of leaving the rule unchanged but concluded the rule changes it adopted would reduce economic burdens and benefit Public Safety Radio Licensees, 700 MHz Guard Band Licenses and/or Wireless Communications Equipment Manufacturers.

18. *Adjacent Channel Power.* The rule changes the Commission adopts regarding Adjacent Channel Power (ACP) will result in cost savings to manufacturers by reducing the complexity of transmitters with a consequent savings to Public Safety Radio Licensees and 700 MHz Guard Band Licenses while at the same time maintaining the overall level of ACP protection necessary to guard against interference.

19. *Secondary Fixed Operations and Digital Station Identification.* The rule changes the Commission adopts regarding secondary fixed operations and digital station identification will provide Public Safety Radio Licensees increased capability to meet their communications needs. Absent these rule changes, Public Safety Radio Licensees would endure increased regulatory burdens for no practical purpose.

20. *Trunking Requirement.* We clarify our trunking requirements to eliminate ambiguity in order to ensure Public Safety Radio Licensees benefit from the increased efficiency resulting from trunked operations. Absent this rule clarification, Public Safety Radio Licensees would be unable to reap the benefits of trunking on State License channels.

21. *Encryption and Narrowband Interoperability Standards.* We update our rules to reflect the most current industry standards for encryption and interoperability. To ensure a minimum impact on Public Safety Radio Licensees and Wireless Communications Equipment Manufacturers we grandfather equipment certified under the old standards, thus obviating the need for previously approved equipment to be recertified.

F. Federal Rules That May Duplicate, Overlap, or Conflict With the Proposed Rules

22. None.

G. Report to Congress

23. The Commission will send a copy of the *Seventh Report and Order,* including the FRFA, in a report to be sent to Congress pursuant to the Small Business Regulatory Enforcement Fairness Act of 1996. In addition, the Commission will send a copy of the Seventh Report and Order, including this FRFA, to the Chief Counsel for Advocacy of the Small Business Administration.

Ordering Clauses

24. Accordingly, *it is ordered* that, pursuant to sections 1, 4(i), 303, 316, 332 and 337 of the Communications Act of 1934, as amended, 47 U.S.C. 151, 154(i), 303, 316, 332 and 337, the Seventh Report and Order *is hereby adopted.*

25. *It is further ordered* that the amendments of the Commission's rules as set forth in Appendix C of the Seventh Report and Order *are adopted,* effective August 11, 2014.

26. *It is further ordered* that the Commission *shall send* a copy of the Seventh Report and Order in a report to be sent to Congress and the General Accounting Office pursuant to the Congressional Review Act, 5 U.S.C. 801(a)(1)(A).

List of Subjects

47 CFR Part 27

Radio.

47 CFR Part 90

Incorporation by reference, Radio.

Federal Communications Commission.

Marlene H. Dortch,

Secretary.

For the reasons discussed in the preamble, the Federal Communications Commission amends 47 CFR parts 27 and 90 as follows:

PART 27—MISCELLANEOUS WIRELESS COMMUNICATIONS SERVICES

■ 1. The authority citation for part 90 continues to read as follows:

Authority: 47 U.S.C. 154, 301, 302, 303, 307, 309, 332, 336, and 337 unless otherwise noted.

■ 2. Section 27.53 is amended by:

■ a. Revising the last entry of the tables for ''6.25 kHz Base Transmitter ACP Requirements'', ''12.5 kHz Base Transmitter ACP Requirements'', ''25 kHz Base Transmitter ACP Requirements'', and ''150 kHz Base Transmitter ACP Requirements'' below paragraph (e)(6).

■ b. Adding a footnote 1 to the tables for ''6.25 kHz Base Transmitter ACP Requirements'', ''12.5 kHz Base Transmitter ACP Requirements'', ''25 kHz Base Transmitter ACP Requirements'', and ''150 kHz Base Transmitter ACP Requirements'' below paragraph (e)(6).

The revisions and additions read as follows:

§ 27.53 Emission limits.

* * * * *

(e) * * *

(6) * * *

* * * * *

6.25 kHz Base Transmitter ACP Requirements

Offset from center frequency (kHz)	Measurement bandwidth (kHz)	Maximum ACP (dBc)
* * * * * * *	*	*
In the paired receive band	30 (s)	[1] −85

[1] Although we permit individual base transmitters to radiate a maximum ACP of −85 dBc in the paired receive band, licensees deploying these transmitters may not exceed an ACP of −100 dBc in the paired receive band when measured at either the transmitting antenna input port or the output of the transmitter combining network. Consequently, licensees deploying these transmitters may need to use external filters to comply with the more restrictive ACP limit.

12.5 kHz Base Transmitter ACP Requirements

Offset from center frequency (kHz)	Measurement bandwidth (kHz)	Maximum ACP (dBc)
* * * * * * *	*	*
In the paired receive band	30 (s)	[1] −85

[1] Although we permit individual base transmitters to radiate a maximum ACP of −85 dBc in the paired receive band, licensees deploying these transmitters may not exceed an ACP of −100 dBc in the paired receive band when measured at either the transmitting antenna input port or the output of the transmitter combining network. Consequently, licensees deploying these transmitters may need to use external filters to comply with the more restrictive ACP limit.

25 kHz Base Transmitter ACP Requirements

Offset from center frequency (kHz)	Measurement bandwidth (kHz)	Maximum ACP (dBc)
* * * * * * *	*	*
In the paired receive band	30 (s)	[1] −85

[1] Although we permit individual base transmitters to radiate a maximum ACP of −85 dBc in the paired receive band, licensees deploying these transmitters may not exceed an ACP of −100 dBc in the paired receive band when measured at either the transmitting antenna input port or the output of the transmitter combining network. Consequently, licensees deploying these transmitters may need to use external filters to comply with the more restrictive ACP limit.

150 kHz Base Transmitter ACP Requirements

Offset from center frequency (kHz)	Measurement bandwidth (kHz)	Maximum ACP (dBc)
* * * * * * *	*	*
In the receive band	30(s)	[1] −85

[1] Although we permit individual base transmitters to radiate a maximum ACP of −85 dBc in the paired receive band, licensees deploying these transmitters may not exceed an ACP of −100 dBc in the paired receive band when measured at either the transmitting antenna input port or the output of the transmitter combining network. Consequently, licensees deploying these transmitters may need to use external filters to comply with the more restrictive ACP limit.

* * * * *

PART 90—PRIVATE LAND MOBILE RADIO SERVICES

■ 3. The authority citation for part 90 continues to read as follows:

Authority: Sections 4(i), 11, 303(g), 303(r), and 332(c)(7) of the Communications Act of 1934, as amended, 47 U.S.C. 154(i), 161, 303(g), 303(r), and 332(c)(7), and Title VI of the Middle Class Tax Relief and Job Creation Act of 2012, Pub. L. 112–96, 126 Stat. 156.

■ 4. Section 90.235 is amended by revising paragraph (l) to read as follows:

§ 90.235 Secondary fixed signaling operations.

* * * * *

(l) Secondary fixed signaling operations conducted in accordance with the provisions of §§ 90.317(a), 90.557 and 90.637 are exempt from the foregoing provisions of this section.

■ 5. Section 90.527 is amended by revising paragraph (b) to read as follows:

§ 90.527 Regional plan requirements.

* * * * *

(b) *Modification of regional plans.* Regional plans may be modified by submitting a written request, signed by the regional planning committee, to the Chief, Public Safety and Homeland Security Bureau. The request must contain the full text of the modification. Modifications are considered either major or minor. Regional planning committees must certify that successful coordination with all adjacent regions has occurred for major modifications and that all such regions concur with the major modification. Unless requested otherwise by the regional planning committee, the Bureau will only place major modifications on public notice for comment.

(1) Except as noted below, modifications changing the way channels are allocated, allotted or coordinated are considered major modifications.

(2) Modifications changing how channels are allotted are considered minor modifications only if:

(i) The proposed channel change or channel addition involves a facility located more than seventy miles from the adjacent region border;

(ii) The co-channel or adjacent channel interference contour of the facility changing or adding the channel does not intersect the border of an adjacent region, or

(iii) The proposed channel change or channel addition has been coordinated in writing with any affected adjacent region.

(3) Changes in membership or leadership of regional planning committees are considered minor modifications.

■ 6. Section 90.537 is revised to read as follows:

§ 90.537 Trunking requirement.

(a) *General use and State License channels.* All systems using six or more narrowband channels in the 769–775 MHz and 799–805 MHz frequency bands must be trunked systems, except for those described in paragraph (b) of this section.

(b) *Interoperability and low power channels.* Trunking is permitted only on Interoperability channels specified in § 90.531(b)(1)(iii). Trunked use must be strictly on a secondary, non-interference basis to conventional operations. The licensee must monitor and immediately release these channels when they are needed for interoperability purposes. All systems using narrowband low power channels listed in § 90.531(b)(3) and (4) are exempt from the trunking requirements described in paragraph (a) of this section.

■ 7. Section 90.543 is amended by:

■ a. Revising the last entry of the tables for ''6.25 kHz Base Transmitter ACP Requirements'', ''12.5 kHz Base Transmitter ACP Requirements'', and ''25 kHz Base Transmitter ACP Requirements'' below paragraph (a).

■ b. Adding a footnote 1 to the tables for ''6.25 kHz Base Transmitter ACP Requirements'', ''12.5 kHz Base Transmitter ACP Requirements'', and ''25 kHz Base Transmitter ACP Requirements'' below paragraph (a).

The revisions and additions read as follows:

§ 90.543 Emission limitations.

* * * * *

(a) * * *

* * * * *

6.25 kHz Base Transmitter ACP Requirements

Offset from center frequency (kHz)	Measurement bandwidth (kHz)	Maximum ACP (dBc)
* * * * *	*	*
In the paired receive band	30 (s)	[1] –85

[1] Although we permit individual base transmitters to radiate a maximum ACP of –85 dBc in the paired receive band, licensees deploying these transmitters may not exceed an ACP of –100 dBc in the paired receive band when measured at either the transmitting antenna input port or the output of the transmitter combining network. Consequently, licensees deploying these transmitters may need to use external filters to comply with the more restrictive ACP limit.

12.5 kHz Base Transmitter ACP Requirements

Offset from center frequency (kHz)	Measurement bandwidth (kHz)	Maximum ACP (dBc)
* * * * *	*	*
In the paired receive band	30 (s)	[1] –85

[1] Although we permit individual base transmitters to radiate a maximum ACP of –85 dBc in the paired receive band, licensees deploying these transmitters may not exceed an ACP of –100 dBc in the paired receive band when measured at either the transmitting antenna input port or the output of the transmitter combining network. Consequently, licensees deploying these transmitters may need to use external filters to comply with the more restrictive ACP limit.

25 kHz Base Transmitter ACP Requirements

Offset from center frequency (kHz)	Measurement bandwidth (kHz)	Maximum ACP (dBc)
* * * * *	*	*
In the paired receive band	30 (s)	[1] –85

[1] Although we permit individual base transmitters to radiate a maximum ACP of –85 dBc in the paired receive band, licensees deploying these transmitters may not exceed an ACP of –100 dBc in the paired receive band when measured at either the transmitting antenna input port or the output of the transmitter combining network. Consequently, licensees deploying these transmitters may need to use external filters to comply with the more restrictive ACP limit.

* * * * *

■ 8. Section 90.548 is revised to read as follows:

§ 90.548 Interoperability Technical Standards.

(a) Transmitters designed after August 11, 2014 to operate on the narrowband interoperability achannels in the 769–775 and 799–805 MHz band (*see* § 90.531) shall conform to the following technical standards (transmitters

certified prior to this date are grandfathered):

(1) Transmitters designed for voice operation shall include a 12.5 kilohertz bandwidth mode of operation conforming to the following standards: ANSI/TIA–102.BAAA–A–2003 and ANSI/TIA–102.BABA–2003.

(2) Transmitters designed for data transmission shall include a 12.5 kilohertz bandwidth mode of operation conforming to the following standards: ANSI/TIA–102.BAEA–B–2012, ANSI/TIA–102.BAAA–A–2003, ANSI/TIA–102.BAEB–A–2005, and ANSI/TIA–102.BAEE–B–2010.

(b) The Director of the Federal Register approves these incorporations by reference in accordance with 5 U.S.C. 552(a) and 1 CFR part 51. Material incorporated by reference may be inspected at the Federal Communications Commission, 445 12th Street SW., Washington, DC (Reference Information Center) [202–418–0270] or at the National Archives and Records Administration (NARA). For information on the availability of this material at NARA, call 202–741–6030, or go to: *http://www.archives.gov/federal_register/code_of_federal_regulations/ibr_locations.html.*

(1) TIA/EIA, 2500 Wilson Boulevard, Arlington, VA 22201 703–907–7974. These standards are also available from Global Engineering Documents, 15 Inverness Way East, Englewood, CO 80112; or the American National Standards Institute, 25 West 43rd Street, Fourth Floor, New York, NY 10036, *www.ansi.org.*

(i) ANSI/TIA–102.BAAA–A–2003, Project 25 FDMA–Common Air Interface, approved September 2003.

(ii) ANSI/TIA–102.BABA–2003, Project 25 Vocoder Description, approved December 2003.

(iii) ANSI/TIA–102.BAEA–B–2012, Project 25 Data Overview—New Technology Standards Project—Digital Radio Technical Standards, approved June 2012.

(iv) ANSI/TIA–102.BAEB–A–2005, Project 25 Packet Data Specification—New Technology Standards Project—Digital Radio Technical Standards, approved March 2005.

(v) ANSI/TIA–102.BAEE–B–2010, Project 25 Radio Management Protocols—New Technology Standards Project—Digital Radio Technical Standards, approved May 2010.

(2) [Reserved]

■ 9. Section 90.553 is amended by revising paragraph (b) to read as follows:

§ 90.553 Encryption.

* * * * *

(b) If encryption is employed, then transmitters manufactured after August 11, 2014 must use the Advanced Encryption Standard (AES) specified in ANSI/TIA–102.AAAD–A: Project 25 Digital Land Mobile Radio-Block Encryption Protocol, approved August 20, 2009 Until 2030, manufacturers may also include the Digital Encryption Standard (DES) or Triple Data Encryption Algorithm (TDEA), in addition to but not in place of AES, for compatibility with legacy radios that lack AES capability. The Director of the Federal Register approves this incorporation by reference in accordance with 5 U.S.C. 552(a) and 1 CFR part 51. The standard can also be purchased from TIA/EIA, 2500 Wilson Boulevard, Arlington, VA 22201 703–907–7974; Global Engineering Documents, 15 Inverness Way East, Englewood, CO 80112; or the American National Standards Institute, 25 West 43rd Street, Fourth Floor, New York, NY 10036, *www.ansi.org.* Material incorporated by reference may be inspected at the Federal Communications Commission, 445 12th Street SW., Washington, DC (Reference Information Center) 202–418–0270 or at the National Archives and Records Administration (NARA). For information on the availability of this material at NARA, call 202–741–6030, or go to: *http://www.archives.gov/federal_register/code_of_federal_regulations/ibr_locations.html.*

* * * * *

■ 10. Section 90.557 is added to subpart R to read as follows:

§ 90.557 Secondary fixed signaling operations.

Trunked and conventional 700 MHz narrowband systems may conduct fixed ancillary signaling and data transmissions subject to the following requirements:

(a) Operations are permitted only on:

(1) Narrowband State License channels specified in § 90.531(b)(5), subject to the discretion of the relevant State licensee; and

(2) Narrowband General Use channels specified in § 90.531(b)(6), subject to the discretion of the regional planning committee.

(b) All operations must be on a secondary, non-interference basis to the primary mobile operation of any other licensee.

(c) The output power at the remote site must not exceed 30 watts.

(d) Automatic means must be provided to deactivate the remote transmitter in the event the carrier remains on for a period in excess of three minutes.

(e) Operational fixed stations authorized pursuant to this section are exempt from the requirements of §§ 90.425, 90.429, and 90.559.

(f) Any operations undertaken in a shared use environment must be conducted pursuant to an agreement between the licensee and each participant, as set forth in § 90.179.

■ 11. Section 90.559 is added to subpart R to read as follows:

§ 90.559 Station Identification.

(a) Conventional systems of communication shall be identified in accordance with existing regulations governing such matters.

(b) Trunked systems of communication, except as noted in paragraph (c) of this section, shall be identified through the use of an automatic device which transmits the call sign of the base station facility at 30 minute intervals. Such station identification shall be made on the lowest frequency in the base station trunk group assigned the licensee. Should this frequency be in use at the time station identification is required, such identification may be made at the termination of the communication in progress on this frequency. Identification may be made by voice or International Morse Code. When the call sign is transmitted in International Morse Code, it must be at a rate of between 15 to 20 words per minute and by means of tone modulation of the transmitter, the tone frequency being between 800 and 1000 hertz.

(c) Stations operating in the 769–775/799–805 MHz band that are licensed on an exclusive basis, and normally employ digital signals for the transmission of data, text, control codes, or digitized voice may also be identified by digital transmission of the call sign. A licensee that identifies its station in this manner must provide the Commission, upon its request, information sufficient to decode the digital transmission and ascertain the call sign transmitted.

[FR Doc. 2014–16042 Filed 7–9–14; 8:45 am]

BILLING CODE 6712–01–P

DEPARTMENT OF TRANSPORTATION

Federal Motor Carrier Safety Administration

49 CFR Part 395

Hours of Service for Commercial Motor Vehicle Drivers; Regulatory Guidance Concerning Records of Duty Status Generated by Logging Software Programs

AGENCY: Federal Motor Carrier Safety Administration (FMCSA), DOT.

ACTION: Notice of regulatory guidance.

SUMMARY: FMCSA revises its regulatory guidance concerning records of duty status (RODS) generated by logging software programs on laptop computers, tablets, and smartphones. These logging software programs are used by certain drivers to help them prepare RODS, but the computers, tablets, and smartphones with such software do not meet FMCSA's requirements for automatic on-board recording devices (AOBRDs). The revision of the guidance clarifies the relationship between the Agency's policy concerning the use of logging software programs and the Agency's January 4, 2011, regulatory guidance concerning electronic signatures by removing the requirement that drivers print and sign paper copies of RODS generated through such logging software, provided the driver is able to sign the RODS electronically at the end of each work day and display the electronic record at the roadside. This guidance provides the motor carrier industry, and Federal, State, and local motor carrier enforcement officials with uniform information regarding computer software and devices used by drivers to assist them with hours-of-service (HOS) recordkeeping. All prior Agency interpretations and regulatory guidance, including memoranda and letters, are rescinded to the extent they are inconsistent with this guidance.

DATES: This regulatory guidance is effective July 10, 2014.

FOR FURTHER INFORMATION CONTACT: Thomas L. Yager, Chief, Driver and Carrier Operations Division, Federal Motor Carrier Safety Administration, 1200 New Jersey Avenue SE., Washington, DC 20590; telephone 202–366–4325; email *mcpsd@dot.gov.*

SUPPLEMENTARY INFORMATION:

Legal Basis

The Motor Carrier Safety Act of 1984 (Pub. L. 98–554, Title II, 98 Stat. 2832, October 30, 1984) (the 1984 Act) authorizes the Secretary of Transportation to regulate commercial motor vehicles (CMVs) and equipment, and the drivers and motor carriers that operate them. Section 211 of the 1984 Act also gives the Secretary broad power to ''prescribe recordkeeping and reporting requirements'' and to ''perform other acts the Secretary considers appropriate.'' (49 U.S.C. 31133(a)(8) and (10)). The Administrator of FMCSA has been delegated authority under 49 CFR 1.87(f) to carry out the functions vested in the Secretary by 49 U.S.C. chapter 311, subchapters I and III, relating to CMV programs and safety regulation.

Background

On January 4, 2011, FMCSA published regulatory guidance for § 390.31 of the Federal Motor Carrier Safety Regulations (FMCSRs) concerning electronic signatures and documents (76 FR 411). The guidance explained how electronic signatures could be used under the existing regulations while the Agency considers a notice-and-comment rulemaking to amend the FMCSRs to explicitly allow electronic signatures on documents required by the safety regulations. The guidance provides a short-term solution for allowing the use of electronic signatures, to the greatest extent possible under the existing regulations, consistent with the requirements of the Government Paperwork Elimination Act of 1998 (GPEA) and the Electronic Signatures in Global and National Commerce Act of 2000 (E–SIGN). The purpose of GPEA is to improve customer service and governmental efficiency through the use of information technology. The purpose of E–SIGN is to promote the use of electronic recordkeeping in private commerce by establishing legal equivalence between traditional paper-based methods and electronic methods.

On April 28, 2014, FMCSA published a notice of proposed rulemaking concerning ''Electronic Documents and Signatures'' (79 FR 23306). The proposed regulatory amendments would permit the use of electronic methods to sign, certify, generate, exchange or maintain records so long as the documents accurately reflect the information in the record and can be used for their intended purpose.

Records of Duty Status

Generally, drivers of CMVs as defined in 49 CFR 390.5 who are subject to the Federal hours-of-service requirements must record their duty status for each 24-hour period. However, the rules provide limited exemptions to the RODS requirements, including an exemption for the following drivers:

- CMV drivers (whether the vehicles require a commercial driver's license (CDL) or not) who operate within 100 air-miles of their normal work reporting location and satisfy the time limitations and recordkeeping requirements of § 395.1(e)(1).
- Drivers of property-carrying CMVs for which a CDL is not required and who operate within a 150 air-mile radius of the location where the driver reports for duty and satisfy the time limitations and recordkeeping requirements of § 395.1(e)(2).[1]

For drivers that must prepare RODS, 49 CFR 395.8 specifies a particular ''grid'' or type of form that must be used to document the driver's activities during the 24-hour period.

As an alternative to written RODS, 49 CFR 395.15 allows the use of AOBRDs. The AOBRD regulation was adopted in 1988. To be considered a compliant device, an AOBRD must be integrally synchronized with specific operations of the CMV in which it is installed (see 49 CFR 395.2, Definitions, AOBRD). Use of AOBRDs is voluntary.

Several vendors market software products to assist the driver in recording and storing RODS information electronically. Laptop computers, tablets, and smartphones running driver logging software should not be confused with AOBRDs because the devices are not integrally synchronized with the specific operations of the CMV on which they are being used. Drivers must manually input their duty status information (e.g., driving time, on-duty not driving, etc.) directly into the computer, tablet or smartphone.

Although FMCSA has allowed CMV drivers to use driver logging software, the Agency's regulatory guidance explains that drivers must print and sign the RODS that these devices generate, for each 24-hour period, just as the driver would with any handwritten RODS. The existing Questions 27 and 28 for § 395.8 (available through *www.fmcsa.dot.gov*) read as follows:

''*Question 27:* Would a driver who prepares his/her log on a computer, 'digitally' signs the log, and then transmits it directly to the carrier, be in compliance with 49 CFR 395.8(f)(2)?

Guidance: No. The driver's activities must be recorded in accordance with the provisions of § 395.8(f)(2). This section requires that all entries relating to driver's duty status must be legible and in the driver's own handwriting.''

''*Question 28:* May a driver use a computer to generate his or her record

[1] A driver who qualifies for this exception is not eligible for the 100 air-mile exception under 49 CFR 395.1(e)(1).

of duty status (log book) and then manually sign the computer printouts in lieu of handwritten logs?

Guidance: A driver may use a computer to generate the graph grid and entries for the record of duty status or log books, provided the computer-generated output includes the minimum information required by § 395.8 and is formatted in accordance with the rules. In addition, the driver must:

1. Be capable of printing the record of duty status for the current 24-hour period at the request of an enforcement officer.

2. Print the record of duty status at the end of each 24-hour period, and sign it in his or her handwriting to certify that all entries required by this section are true and correct.

3. Maintain a copy of printed and signed records of duty status for the previous 7 consecutive days and make it available for inspection at the request of an enforcement officer.''

Electronic Signatures and Hours-of-Service Records

Question 11 from the January 2011 regulatory guidance notice for § 390.31 advises motor carriers and other parties that they may use electronic methods to generate, sign, maintain and/or exchange any document that is generated and maintained or exchanged by private parties, regardless of whether FMCSA subsequently requires them to be produced or displayed to Federal and State enforcement personnel. The list of examples of documents includes RODS.

The Regulatory Guidance for § 390.31 was originally developed to allow motor carriers to store documents in electronic format. The January 2011 revisions to the Guidance expand the scope to allow documents to be created, maintained, and generated in electronic format. Specifically, as stated in the January 2011 Notice:

- Any electronic record or signature is considered the legal equivalent of a paper document or signature if it is the functional equivalent with respect to integrity, accuracy, and accessibility.
- [This revised] guidance establishes parity between paper and electronic records and signatures, greatly expanding interested parties' ability to use electronic records.

The January 2011 regulatory guidance is consistent with the Agency's previous policy concerning RODS prepared using logging software in that it continues to accept them as equivalent to paper documents. Signatures may be electronically embedded on printed copies or may be manually added to printed copies of the records.

Guidance Question 9 to § 390.31 provides that documents stored electronically must be capable of being reproduced in the same time frame as the original document. A paper RODS must be presented to an enforcement official upon request. Therefore, the electronically-stored RODS must also be printed for an enforcement official upon request during a roadside inspection.

Today's guidance harmonizes the January 2011 guidance interpreting § 390.31 with the previously issued guidance interpreting 49 CFR 395.8. FMCSA withdraws Question 27 for § 395.8, which currently states that a driver who prepares his/her log on a computer, 'digitally' signs the log, and then transmits it directly to the carrier, would not be in compliance with 49 CFR 395.8(f)(2). In addition, FMCSA revises the response to Question 28 for § 395.8 to make clear that a driver may create, sign and store electronic RODS if certain conditions are met.

Hours of Service for Commercial Motor Vehicle Drivers Regulatory Guidance for 49 CFR 395.8, Driver's Record of Duty Status

Question 28: May a driver use a computer, tablet, or smartphone (that is not an Automatic On-Board Recording Device) to create, electronically sign, and store the record of duty status (RODS)?

Guidance: Yes. A driver may make manual duty-status entries to a computer, tablet, or smartphone program that is used to generate the graph grid and entries for the record of duty status (RODS) or log book, provided the electronically-generated display (if any) and output includes the minimum information required by § 395.8 and is formatted in accordance with that section. The driver must sign the RODS (manually or electronically) at the end of each 24-hour period to certify that all required entries are true and correct.

(A) If electronic signatures are not used:

- The driver must print and manually sign the RODS daily.
- The driver must have in his or her possession the printed and signed RODS for the prior seven consecutive days (if required on those days).
- The driver should be given an opportunity to print and manually sign the current day's RODS at the time of the inspection.

(B) If RODS have been electronically signed:

- At the time of an inspection of records by an enforcement official, the driver may display the current and prior seven days RODS to the official on the device's screen.
- If the enforcement official requests printed copies of the RODS, the driver must be given an opportunity to print the current and prior seven days RODS (if required on those days) at the time of inspection.

Issued on: June 17, 2014.

Anne S. Ferro,

Administrator.

[FR Doc. 2014–15951 Filed 7–9–14; 8:45 am]

BILLING CODE 4910–EX–P

Proposed Rules

Federal Register
Vol. 79, No. 132
Thursday, July 10, 2014

This section of the FEDERAL REGISTER contains notices to the public of the proposed issuance of rules and regulations. The purpose of these notices is to give interested persons an opportunity to participate in the rule making prior to the adoption of the final rules.

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 73

[Docket No. FAA–2014–0370; Airspace Docket No. 14–ASO–2]

RIN 2120–AA66

Proposed Redesignation and Expansion of Restricted Area R–4403; Gainesville, MS

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Notice of proposed rulemaking (NPRM).

SUMMARY: This action proposes to remove restricted area R–4403 Gainesville, MS, and replace it with an expanded area that would be redesignated as R–4403A, B, C, D, E and F, Stennis Space Center, MS. The expanded restricted airspace would be used to support mission requirements of the National Aeronautics and Space Administration (NASA) and the Naval Special Warfare Command (NSWC).

DATES: Comments must be received on or before August 25, 2014.

ADDRESSES: Send comments on this proposal to the U.S. Department of Transportation, Docket Operations, M–30, 1200 New Jersey Avenue SE., West Building Ground Floor, Room W12–140, Washington, DC 20590–0001; telephone: (202) 366–9826. You must identify FAA Docket No. FAA–2014–0370 and Airspace Docket No. 14–ASO–2, at the beginning of your comments. You may also submit comments through the Internet at *www.regulations.gov.* Comments on environmental and land use aspects should be directed to: David Lorance, P.E., Center Operations Directorate, Roy S. Estess Building 1100, Mail Code RA02, Stennis Space Center, MS 39529–6000.

FOR FURTHER INFORMATION CONTACT: Paul Gallant, Airspace Policy and Regulations Group, Office of Airspace Services, Federal Aviation Administration, 800 Independence Avenue SW., Washington, DC 20591; telephone: (202) 267–8783.

SUPPLEMENTARY INFORMATION:

Comments Invited

Interested parties are invited to participate in this proposed rulemaking by submitting such written data, views, or arguments as they may desire. Comments that provide the factual basis supporting the views and suggestions presented are particularly helpful in developing reasoned regulatory decisions on the proposal. Comments are specifically invited on the overall regulatory, aeronautical, economic, environmental, and energy-related aspects of the proposal.

Communications should identify both docket numbers (FAA Docket No. FAA–2014–0370 and Airspace Docket No. 14–ASO–2) and be submitted in triplicate to the Docket Management System (see **ADDRESSES** section for address and phone number). You may also submit comments through the Internet at *www.regulations.gov.*

Commenters wishing the FAA to acknowledge receipt of their comments on this action must submit with those comments a self-addressed, stamped postcard on which the following statement is made: ''Comments to FAA Docket No. FAA–2014–0370 and Airspace Docket No. 14–ASO–2.'' The postcard will be date/time stamped and returned to the commenter.

All communications received on or before the specified closing date for comments will be considered before taking action on the proposed rule. The proposal contained in this action may be changed in light of comments received. All comments submitted will be available for examination in the public docket both before and after the closing date for comments. A report summarizing each substantive public contact with FAA personnel concerned with this rulemaking will be filed in the docket.

Availability of NPRMs

An electronic copy of this document may be downloaded through the Internet at *www.regulations.gov.*

You may review the public docket containing the proposal, any comments received and any final disposition in person at the Dockets Office (see **ADDRESSES** section for address and phone number) between 9:00 a.m. and 5:00 p.m., Monday through Friday, except Federal holidays. An informal docket may also be examined during normal business hours at the office of the Operations Support Group, Eastern Service Center, Federal Aviation Administration, 1701 Columbia Ave., College Park, GA 30337.

Persons interested in being placed on a mailing list for future NPRM's should contact the FAA's Office of Rulemaking, (202) 267–9677, for a copy of Advisory Circular No. 11–2A, Notice of Proposed Rulemaking Distribution System, which describes the application procedure.

Background

Restricted area R–4403, Gainesville, MS, was originally designated as of January 6, 1966 (30 FR 10287) for NASA's static testing of large space vehicle rocket stages. R–4403 is a rectangular area, measuring approximately 2 nautical miles (NM) by 2.5 NM with a designated altitude from the surface up to 5,000 feet MSL.

NASA and NSWC have jointly proposed an expansion of R–4403. The existing restricted area is too small to fully contain hazards to aviation associated with rocket engine testing and untethered space vehicle propulsion system testing. In addition, NSWC requested restricted airspace to be used for conducting full mission profile training for Special Operations Forces (SOF). This training allows air and ground units to practice integrating their operations to eliminate potential conflicts and coordination problems that could otherwise arise during complex missions when deployed.

R–4403A and B would be used for NASA activities, while R–4403C through F would be used by SOF units to conduct integrated training in air and ground tactics prior to their deployment on real-world missions. The Stennis Space Center has the potential to enable combined SOF training for riverine, jungle and airborne forces. Currently, the Stennis Space Center lacks a live-fire air-to-ground capability. This deficiency reduces SOF mission integration training in the employment of air and ground units to no more than a communications exercise. The proposed expansion of R–4403 would provide the live-fire air-to-ground capability which is critical to realistic full mission profile training.

The Proposal

The FAA is proposing an amendment to 14 CFR part 73 to remove restricted area R–4403, Gainesville, MS, and redesignate and expand the size of the airspace to consist of six subareas: R–4403A, B, C, D, E and F, Stennis Space Center, MS. The FAA is proposing this action at the request of NASA and the NSWC. R–4403A and B would be used for NASA activities, such as continuing rocket engine testing and untethered space vehicle propulsion system testing. The NSWC would use the proposed R–4403C, D, E and F for integrated Special Operations Forces training. The proposed restricted areas are described below.

R–4403A would extend within a 2.5-NM radius of lat. 30°21′51″ N., long. 89°35′39″ W. R–4403A would extend from the surface to 12,000 feet MSL. It would replace R–4403 with an expanded area to more fully contain NASA rocket engine testing hazards, including testing of new rocket engine technologies.

R–4403B would be used by NASA for untethered space vehicle propulsion testing. The area would extend upward from the surface to 6,000 feet MSL. These vehicles are utilized to explore planets and asteroids. Testing of these vehicles involves potential hazards since failure of the vehicle, its propulsion system or propellant tanks can result in explosion of the vehicle. The propensity for this to occur is greater with these vehicles than with a standard aircraft because of the extremely volatile nature of the propellants and the poor aerodynamic characteristics of the vehicle during earth-based operation. The proposed R–4403B is designed to contain the flight profiles of these vehicles as well as any potential hazards to nonparticipating aircraft.

R–4403C would contain a ground target for air-to-surface weapons firing by aircraft such as armed helicopters and AC–130 gunships. Surface-to-air laser firing would also be conducted. The area would extend upward from the surface to 6,000 feet MSL.

R–4403D would be used in conjunction with R–4403C. It would have the same lateral dimensions as R–4403C and would extend above R–4403C from 6,000 feet MSL to 10,000 feet MSL. This area would contain air-to-ground weapons firing, as well as surface-to-air laser firing.

R–4403E would contain a ground target for air-to-surface weapons firing and surface-to-air laser firing. The area would extend upward from the surface to 10,000 feet MSL.

R–4403F would be used in conjunction with R–4403E. R–4403F would wrap around the northeast corner of R–4403E and would extend upward from 4,000 feet MSL to 10,000 feet MSL.

The proposed time of designation for R–4403A and R–4403B is ''Intermittent, 1000 to 0300 local time, as activated by NOTAM at least 24 hours in advance.'' The proposed time of designation for R–4403C, D, E and F is ''Intermittent, 1800 to 2400 local time as activated by NOTAM at least 24 hours in advance; other times by NOTAM with ATC approval. (Note: The term ''Intermittent'' is used to indicate occasional, irregular, or changeable use periods). During periods when the proposed restricted areas are not needed by the using agencies, the airspace would be returned to the controlling agency for access by other airspace users.

A color graphic depiction of the proposed restricted areas will be posted under the ''Supporting & Related Material'' section on the *www.regulations.gov* Web site (search FAA–2014–0370).

The FAA has determined that this proposed regulation only involves an established body of technical regulations for which frequent and routine amendments are necessary to keep them operationally current. Therefore, this proposed regulation: (1) Is not a ''significant regulatory action'' under Executive Order 12866; (2) is not a ''significant rule'' under Department of Transportation (DOT) Regulatory Policies and Procedures (44 FR 11034; February 26, 1979); and (3) does not warrant preparation of a regulatory evaluation as the anticipated impact is so minimal. Since this is a routine matter that will only affect air traffic procedures and air navigation, it is certified that this proposed rule, when promulgated, will not have a significant economic impact on a substantial number of small entities under the criteria of the Regulatory Flexibility Act.

The FAA's authority to issue rules regarding aviation safety is found in Title 49 of the United States Code. Subtitle I, Section 106 describes the authority of the FAA Administrator. Subtitle VII, Aviation Programs, describes in more detail the scope of the agency's authority.

This rulemaking is promulgated under the authority described in Subtitle VII, Part A, Subpart I, Section 40103. Under that section, the FAA is charged with prescribing regulations to assign the use of the airspace necessary to ensure the safety of aircraft and the efficient use of airspace. This regulation is within the scope of that authority as it would restructure the restricted airspace at the Stennis Space Center, MS, to enhance aviation safety and accommodate essential NASA and NSWC requirements.

Environmental Review

This proposal will be subjected to an environmental analysis in accordance with FAA Order 1050.1E, ''Environmental Impacts: Policies and Procedures,'' prior to any FAA final regulatory action.

List of Subjects in 14 CFR Part 73

Airspace, Prohibited Areas, Restricted Areas.

The Proposed Amendment

In consideration of the foregoing, the Federal Aviation Administration proposes to amend 14 CFR part 73 as follows:

PART 73—SPECIAL USE AIRSPACE

■ 1. The authority citation for part 73 continues to read as follows:

Authority: 49 U.S.C. 106(g), 40103, 40113, 40120; E.O. 10854, 24 FR 9565, 3 CFR, 1959–1963 Comp., p. 389.

§ 73.44 (Amended)

■ 2. § 73.44 is amended as follows:

* * * * *

R–4403 Gainesville, MS [Removed]

* * * * *

R–4403A Stennis Space Center, MS [New]

Boundaries. Within a 2.5-NM radius centered at lat. 30°21′51″ N., long. 89°35′39″ W.

Designated altitudes. Surface to 12,000 feet MSL.

Time of designation. Intermittent, 1000 to 0300 local time, as activated by NOTAM at least 24 hours in advance.

Controlling agency. FAA, Houston ARTCC.

Using agency. NASA, Director, Stennis Space Center, Bay St. Louis, MS.

* * * * *

R–4403B Stennis Space Center, MS [New]

Boundaries. Beginning at lat. 30°29′37″ N., long. 89°35′16″ W.; to lat. 30°29′37″ N., long. 89°32′33″ W.; thence clockwise along a 0.85 NM arc centered at lat. 30°28′46″ N., long. 89°32′33″ W.; to lat. 30°28′46″ N., long. 89°31′34″ W.; to lat. 30°26′25″ N., long. 89°31′34″ W.; to lat. 30°24′02″ N., long. 89°31′34″ W.; thence counterclockwise along a 4.2 NM arc centered at lat. 30°22′04″ N., long. 89°27′17″ W.; to lat. 30°20′22″ N., long.

89°31′43″ W.; to lat. 30°19′25″ N., long. 89°35′00″ W.; to lat. 30°18′23″ N., long. 89°40′17″ W.; to lat. 30°21′08″ N., long. 89°42′25″ W.; to lat. 30°22′22″ N., long. 89°42′58″ W.; to lat. 30°23′44″ N., long. 89°42′43″ W.; to lat. 30°26′40″ N., long. 89°40′51″ W.; thence counterclockwise along a 3 NM arc centered at lat. 30°29′15″ N., long. 89°39′04″ W.; to lat. 30°27′08″ N., long. 89°36′37″ W.; to lat. 30°27′58″ N., long. 89°35′27″ W.; to lat. 30°28′47″ N., long. 89°35′27″ W.; to the point of beginning.

Designated altitudes. Surface to 6,000 feet MSL.

Time of designation. Intermittent, 1000 to 0300 local time, as activated by NOTAM at least 24 hours in advance.

Controlling agency. FAA, Houston ARTCC.

Using agency. NASA, Director, Stennis Space Center, Bay St. Louis, MS.

* * * * *

R–4403C Stennis Space Center, MS [New]

Boundaries. Beginning at lat. 30°27′58″ N., long. 89°35′27″ W.; to lat. 30°22′35″ N., long. 89°35′27″ W.; to lat. 30°20′22″ N., long. 89°31′43″ W.; to lat. 30°19′25″ N., long. 89°35′00″ W.; to lat. 30°18′23″ N., long. 89°40′17″ W.; to lat. 30°21′08″ N., long. 89°42′25″ W.; to lat. 30°22′22′ N., long. 89°42′58″ W.; to lat. 30°23′44″ N., long. 89°42′43″ W.; to lat. 30°26′40″ N., long. 89°40′51″ W.; thence counterclockwise along a 3 NM arc centered at lat. 30°29′15″ N., long. 89°39′04″ W.; to lat. 30°27′08″ N., long. 89°36′37″ W.; to the point of beginning.

Designated altitudes. Surface to but not including 6,000 feet MSL.

Time of designation. Intermittent, 1800 to 2400 local time, as activated by NOTAM at least 24 hours in advance; other times by NOTAM with ATC approval.

Controlling agency. FAA, Houston ARTCC.

Using agency. U.S. Navy, Deputy Commander, Naval Special Warfare Command, Naval Special Warfare N31 Branch, Stennis Space Center, Bay St. Louis, MS.

* * * * *

R–4403D Stennis Space Center, MS [New]

Boundaries. Beginning at lat. 30°27′58″ N., long. 89°35′27″ W.; to lat. 30°22′35″ N., long. 89°35′27″ W.; to lat. 30°20′22″ N., long. 89°31′43″ W.; to lat. 30°19′25″ N., long. 89°35′00″ W.; to lat. 30°18′23″ N., long. 89°40′17″ W.; to lat. 30°21′08″ N., long. 89°42′25″ W.; to lat. 30°22′22″ N., long. 89°42′58″ W.; to lat. 30°23′44″ N., long. 89°42′43″ W.; to lat. 30°26′40″ N., long. 89°40′51″ W.; thence counterclockwise along a 3 NM arc centered at lat. 30°29′15″ N., long. 89°39′04″ W.; to lat. 30°27′08″ N., long. 89°36′37″ W.; to the point of beginning.

Designated altitudes. 6,000 feet MSL to 10,000 feet MSL.

Time of designation. Intermittent, 1800 to 2400 local time, as activated by NOTAM at least 24 hours in advance; other times by NOTAM with ATC approval.

Controlling agency. FAA, Houston ARTCC.

Using agency. U.S. Navy, Deputy Commander, Naval Special Warfare Command, Naval Special Warfare N31 Branch, Stennis Space Center, Bay St. Louis, MS.

* * * * *

R–4403E Stennis Space Center, MS [New]

Boundaries. Beginning at lat. 30°29′37″ N., long. 89°35′16″ W.; to lat. 30°29′37″ N., long. 89°32′33″ W.; thence clockwise along a 0.85 NM arc centered at lat. 30°28′46″ N., long. 89°32′33″ W.; to lat. 30°28′46″ N., long. 89°31′34″ W.; to lat. 30°26′25″ N., long. 89°31′34″ W.; to lat. 30°24′02″ N., long. 89°31′34″ W.; thence counterclockwise along a 4.2 NM arc centered at lat. 30°22′04″ N., long. 89°27′17″ W.; to lat. 30°20′22″ N., long. 89°31′43″ W.; to lat. 30°22′35″ N., long. 89°35′27″ W.; to lat. 30°27′58″ N., long. 89°35′27″ W,; to lat. 30°28′47″ N., long. 89°35′27″ W.; to the point of beginning.

Designated altitudes. Surface to 10,000 feet MSL.

Time of designation. Intermittent, 1800 to 2400 local time, as activated by NOTAM at least 24 hours in advance; other times by NOTAM with ATC approval.

Controlling agency. FAA, Houston ARTCC.

Using agency. U.S. Navy, Deputy Commander, Naval Special Warfare Command, Naval Special Warfare N31 Branch, Stennis Space Center, Bay St. Louis, MS.

* * * * *

R–4403F Stennis Space Center, MS [New]

Boundaries. Beginning at lat. 30°29′37″ N., long. 89°35′16″ W.; thence clockwise along a 2.5 NM arc centered at lat. 30°28′46″ N., long. 89°32′33″ W.; to lat. 30°26′25″ N., long. 89°31′34″ W.; to lat. 30°28′46″ N., long. 89°31′34″ W.; thence counterclockwise along a 0.85 NM arc centered at lat. 30°28′46″ N., long. 89°32′33″ W.; to lat. 30°29′37″ N., long. 89°32′33″ W.; to the point of beginning.

Designated altitudes. 4,000 feet MSL to 10,000 feet MSL.

Time of designation. Intermittent, 1800 to 2400 local time, as activated by NOTAM at least 24 hours in advance; other times by NOTAM with ATC approval.

Controlling agency. FAA, Houston ARTCC.

Using agency. U.S. Navy, Deputy Commander, Naval Special Warfare Command, Naval Special Warfare N31 Branch, Stennis Space Center, Bay St. Louis, MS.

* * * * *

Issued in Washington, DC, on July 2, 2014.

Gary A. Norek,

Manager, Airspace Policy and Regulations Group.

[FR Doc. 2014–16059 Filed 7–9–14; 8:45 am]

BILLING CODE 4910–13–P

DEPARTMENT OF STATE

22 CFR Part 181

[Public Notice: 8780]

RIN 1400–AD53

Publication, Coordination, and Reporting of International Agreements: Amendments

AGENCY: Department of State.

ACTION: Proposed rule with request for comment.

SUMMARY: The Treaties and Other International Acts Series (TIAS) is the official treaty series of the United States and serves as evidence of the treaties, and international agreements other than treaties, in all courts of law and equity of the United States, and in public offices of the federal government and of the states, without any need of further authentication. Certain international agreements may be exempted from publication in TIAS, if the Department of State provides notice in its regulations. With this proposed rule, the Department of State is proposing to update those regulations to exempt three additional agreement categories.

DATES: The Department of State will consider comments submitted before September 8, 2014.

FOR FURTHER INFORMATION CONTACT: Courtney Rusin, Treaty Affairs, Office of the Legal Adviser, Department of State, Washington, DC 20520, (202) 647–1345, or at *treatyoffice@state.gov.*

SUPPLEMENTARY INFORMATION: Pursuant to 1 U.S.C. 112a, the Secretary of State is required to cause to be published annually a compilation of all treaties and international agreements to which the United States is a party that were signed, proclaimed, or ''with reference

to which any other final formality ha[d] been executed'' during the calendar year.

The Secretary of State, however, may determine that publication of particular categories of agreements is not required if certain criteria are met (See 1 U.S.C. 112a(b)). The criteria are:

(1) Such agreements are not treaties which have been brought into force for the United States after having received Senate advice and consent pursuant to section 2(2) of Article II of the Constitution of the United States;

(2) The public interest in such agreements is insufficient to justify their publication, because (A) as of the date of enactment of the Foreign Relations Authorization Act, Fiscal Years 1994 and 1995, the agreements are no longer in force; (B) the agreements do not create private rights or duties, or establish standards intended to govern government action in the treatment of private individuals; (C) in view of the limited or specialized nature of the public interest in such agreements, such interest can adequately be satisfied by an alternative means; or (D) the public disclosure of the text of the agreement would, in the opinion of the President, be prejudicial to the national security of the United States; and

(3) Copies of such agreements (other than those in paragraph (2)(D)), including certified copies where necessary for litigation or similar purposes, will be made available by the Department of State upon request.

Pursuant to 1 U.S.C. 112a(c), any such determination must be published in the **Federal Register**. The Department proposes adding to 22 CFR 181.8(a) the following three categories of international agreements that it believes do not require publication in the Treaties and Other International Acts Series due to the consistently limited nature of public interest:

(1) Bilateral acquisition and cross servicing agreements and logistics support agreements governing the mutual exchange of logistics support, supplies and services with the military of certain countries or international organizations. An example of this type of agreement is at the following link: *http://www.state.gov/documents/organization/176721.pdf.*

(2) Bilateral agreements relating to the provision of health care to military personnel on a reciprocal basis. An example of this type of agreement is at the following link: *http://www.state.gov/documents/organization/190389.pdf.*

(3) Bilateral agreements for the reduction of intergovernmental debts. An example of this type of agreement is at the following link: *http://www.state.gov/documents/organization/163485.pdf.*

In selecting these categories, the Department focused on areas comprising a large volume of agreements that, due to their specialized nature, do not appear to be of general public interest justifying publication. The Department will provide copies of these agreements upon request. The public can request agreements through regular FOIA channels or through the contact information provided on the Treaty Office Web site—*http://www.state.gov/s/l/treaty/index.htm* (*treatyoffice@state.gov* or 202–647–1345). Together, these categories of agreements comprise approximately eight to ten per cent of agreements published annually. Non-publication of these categories of agreements will moderate future publication requirements, thus permitting agreements of greater interest to be published in a timelier manner. The Department of State does not intend to publish agreements in the above categories that were concluded before publication of this notice and not previously published in TIAS.

In addition to the changes described above, the Department of State proposes that Section 181(a)(9) be amended to refer to the newer Executive Order dealing with classified information.

Regulatory Analysis

Administrative Procedures Act

The Department is issuing this proposed rule for comment in accordance with the Administrative Procedure Act (5 U.S.C. 553).

Regulatory Flexibility Act/Executive Order 13272: Small Business

This rulemaking is hereby certified as not expected to have a significant impact on a substantial number of small entities under the criteria of the Regulatory Flexibility Act, 5 U.S.C. 601 et seq.

The Small Business Regulatory Enforcement Fairness Act of 1996

This rulemaking does not constitute a major rule, as defined by 5 U.S.C. 804, for purposes of congressional review of agency rulemaking.

The Unfunded Mandates Reform Act of 1995

The Unfunded Mandates Reform Act of 1995, 2 U.S.C. 1532, generally requires agencies to prepare a statement before proposing any rule that may result in an annual expenditure of $100 million or more by State, local, or tribal governments, or by the private sector. This rule will not result in any such expenditure nor would it significantly or uniquely affect small governments.

Executive Orders 12372 and 13132: Federalism and EO 13175, Impact on Tribes

This rule will not have substantial direct effects on the States, on the relationship between the national government and the States, or on the distribution of power and responsibilities among the various levels of government. Nor will the regulations have federalism implications warranting the application of Executive Orders 12372 and 13132. This rule will not have tribal implications, will not impose costs on Indian tribal governments, and will not pre-empt tribal law. Accordingly, the requirements of Executive Order 13175 do not apply to this rulemaking.

Executive Orders 12866 and 13563: Regulatory Review

This rule has been drafted in accordance with the principles of Executive Orders 12866 and 13563. This rule has been determined not to be a significant rulemaking under section 3 of E.O. 12866. With respect to the costs and benefits of this rule, the Department notes that TIAS is no longer printed in paper form, so there are no printing cost savings due to omitting these agreements from publication. TIAS agreements are posted digitally on the Department's Web site. However, before publication, they still have to be proofread and formatted correctly for the web, which takes time away from publishing agreements that more consistently attract public interest. There is no cost to the public from this rulemaking. As noted above, the public still has access to these agreements by making a simple request to the Department.

Executive Order 12988: Civil Justice Reform

This rule has been reviewed in light of sections 3(a) and 3(b)(2) of Executive Order No. 12988 to eliminate ambiguity, minimize litigation, establish clear legal standards, and reduce burden.

The Paperwork Reduction Act of 1995

Under the Paperwork Reduction Act of 1995 (44 U.S.C. 3501 *et seq.*), Federal agencies must obtain approval from OMB for each collection of information they conduct, sponsor, or require through regulation. This rule contains no new collection of information requirements.

List of Subjects in 22 CFR Part 181

Treaties.

For the reasons set forth above, 22 CFR part 181 is proposed to be amended as follows:

PART 181—[AMENDED]

■ 1. The authority citation for part 181 continues to read as follows:

Authority: 1 U.S.C. 112a, 112b; and 22 U.S.C. 2651a.

■ 2. Amend § 181.8 by:

■ a. Revising paragraphs (a)(9), (12), and (13) and adding paragraphs (a)(14), (15), and (16); and

■ b. Revising paragraph (b).

The revisions and additions to read as follows:

§ 181.8 Publication.

(a) * * *

(9) Agreements that have been given a national security classification pursuant to Executive Order No. 13526, its predecessors, or its successors;

* * * * *

(12) Bilateral agreements that apply to specified education and leadership development programs designed to acquaint U.S. and foreign armed forces, law enforcement, homeland security, or related personnel with limited, specialized aspects of each other's practices or operations;

(13) Bilateral agreements between aviation agencies governing specified aviation technical assistance projects for the provision of managerial, operational, and technical assistance in developing and modernizing the civil aviation infrastructure;

(14) Bilateral acquisition and cross servicing agreements and logistics support agreements;

(15) Bilateral agreements relating to the provision of health care to military personnel on a reciprocal basis; and

(16) Bilateral agreements for the reduction of intergovernmental debts.

(b) In addition to those listed in paragraph (a) of this section, the following categories of agreements will not be published in United States Treaties and Other International Agreements:

(1) Agreements on the subjects listed in paragraphs (a)(1) through (9) of this section that had not been published as of February 26, 1996;

(2) Agreements on the subjects listed in paragraphs (a)(10) through (13) of this section that had not been published as of September 8, 2006; and

(3) Agreements on the subjects listed in paragraphs (a)(14) through (16) of this section that had not been published as of [*date of publication of the final rule in the* ***Federal Register***].

Dated: June 4, 2014.

Michael J. Mattler,

Assistant Legal Adviser for Treaty Affairs, Department of State.

[FR Doc. 2014–15012 Filed 7–9–14; 8:45 am]

BILLING CODE 4710–08–P

DEPARTMENT OF HOMELAND SECURITY

Coast Guard

33 CFR Part 165

[Docket Number USCG–2014–0460]

RIN 1625–AA00

Safety Zone, Miami Paddle Challenge, Biscayne Bay; Miami, FL

AGENCY: Coast Guard, DHS.

ACTION: Notice of proposed rulemaking.

SUMMARY: The Coast Guard proposes to establish a temporary safety zone on the waters of Biscayne Bay located west of Key Biscayne and south of Rickenbacker Causeway in Miami, Florida during the Miami Paddle Challenge, a series of paddle boat races. The Miami Paddle Challenge is scheduled to take place on September 13, 2014. The temporary safety zone is necessary to provide for the safety of race participants, participant vessels, spectators, and the general public during the event. The safety zone will establish a regulated area that will encompass the event area. Non-participant persons and vessels will be prohibited from entering, transiting through, anchoring in, or remaining within the safety zone unless authorized by the Captain of the Port Miami or a designated representative.

DATES: Comments and related material must be received by the Coast Guard on or before August 25, 2014.

Requests for public meetings must be received by the Coast Guard on or before August 11, 2014.

ADDRESSES: You may submit comments identified by docket number using any one of the following methods:

(1) *Federal eRulemaking Portal: http://www.regulations.gov.*

(2) *Fax:* 202–493–2251.

(3) *Mail or Delivery:* Docket Management Facility (M–30), U.S. Department of Transportation, West Building Ground Floor, Room W12–140, 1200 New Jersey Avenue SE., Washington, DC 20590–0001. Deliveries accepted between 9 a.m. and 5 p.m., Monday through Friday, except federal holidays. The telephone number is 202–366–9329.

See the ''Public Participation and Request for Comments'' portion of the **SUPPLEMENTARY INFORMATION** section below for further instructions on submitting comments. To avoid duplication, please use only one of these three methods.

FOR FURTHER INFORMATION CONTACT: If you have questions on this rule, call or email Petty Officer John K. Jennings, Sector Miami Prevention Department, Coast Guard; telephone (305) 535–4317, email *John.K.Jennings@uscg.mil.* If you have questions on viewing or submitting material to the docket, call Cheryl Collins, Program Manager, Docket Operations, telephone (202) 366–9826.

SUPPLEMENTARY INFORMATION:

Table of Acronyms

DHS Department of Homeland Security
FR Federal Register
NPRM Notice of Proposed Rulemaking

A. Public Participation and Request for Comments

We encourage you to participate in this rulemaking by submitting comments and related materials. All comments received will be posted without change to *http://www.regulations.gov* and will include any personal information you have provided.

1. Submitting Comments

If you submit a comment, please include the docket number for this rulemaking, indicate the specific section of this document to which each comment applies, and provide a reason for each suggestion or recommendation. You may submit your comments and material online at *http://www.regulations.gov,* or by fax, mail, or hand delivery, but please use only one of these means. If you submit a comment online, it will be considered received by the Coast Guard when you successfully transmit the comment. If you fax, hand deliver, or mail your comment, it will be considered as having been received by the Coast Guard when it is received at the Docket Management Facility. We recommend that you include your name and a mailing address, an email address, or a telephone number in the body of your document so that we can contact you if we have questions regarding your submission.

To submit your comment online, go to *http://www.regulations.gov,* type the docket number USCG–2014–0460 in the ''SEARCH'' box and click ''SEARCH.'' Click on ''Submit a Comment'' on the line associated with this rulemaking.

If you submit your comments by mail or hand delivery, submit them in an unbound format, no larger than 8½ by 11 inches, suitable for copying and

electronic filing. If you submit comments by mail and would like to know that they reached the Facility, please enclose a stamped, self-addressed postcard or envelope. We will consider all comments and material received during the comment period and may change the rule based on your comments.

2. Viewing Comments and Documents

To view comments, as well as documents mentioned in this preamble as being available in the docket, go to *http://www.regulations.gov,* type the docket number (USCG–2014–0460) in the ''SEARCH'' box and click ''SEARCH.'' Click on Open Docket Folder on the line associated with this rulemaking. You may also visit the Docket Management Facility in Room W12–140 on the ground floor of the Department of Transportation West Building, 1200 New Jersey Avenue SE., Washington, DC 20590, between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays.

3. Privacy Act

Anyone can search the electronic form of comments received into any of our dockets by the name of the individual submitting the comment (or signing the comment, if submitted on behalf of an association, business, labor union, etc.). You may review a Privacy Act notice regarding our public dockets in the January 17, 2008, issue of the **Federal Register** (73 FR 3316).

4. Public Meeting

We do not now plan to hold a public meeting. But you may submit a request for one, using one of the methods specified under **ADDRESSES**. Please explain why you believe a public meeting would be beneficial. If we determine that one would aid this rulemaking, we will hold one at a time and place announced by a later notice in the **Federal Register**.

B. Regulatory History and Information

In 2012, the Coast Guard enacted a temporary final rule for that year's running of the Miami Paddle Challenge. That rule was effective from 6 a.m. through 4 p.m. on September 29, 2012. Information about that rule is available under docket number USCG–2012–0722. No permanent final rule has been published in regards to this marine event.

C. Basis and Purpose

The legal basis for the rule is the Coast Guard's authority to establish regulated navigation areas and other limited access areas: 33 U.S.C. 1231; 50 U.S.C. 191; 33 CFR 1.05–1, 6.04–1, 160.5; Department of Homeland Security Delegation No. 0170.1.

The purpose of the rule is to provide for the safety of life on navigable waters of the United States during the Miami Paddle Challenge.

D. Discussion of Proposed Rule

On September 13, 2014, the Cystic Fibrosis Foundation is sponsoring the Miami Paddle Challenge. Over 150 paddle boats are expected to participate in the event. Participant paddle boats will include: Kayaks, surfskis, paddleboards, outriggers, sculls, canoes, dories, and dragon boats.

The proposed rule will establish a safety zone that will encompass certain waters of Biscayne Bay located west of Key Biscayne and south of Rickenbacker Causeway in Miami, Florida. The safety zone will be enforced from 5 a.m. until 5 p.m. on September 13, 2014. The safety zone will establish an area around the event where non-participant persons and vessels are prohibited from entering, transiting through, anchoring in, or remaining within. Non-participant persons and vessels may request authorization to enter, transit through, anchor in, or remain within the safety zone by contacting the Captain of the Port Miami by telephone at 305–535–4472, or a designated representative via VHF radio on channel 16. If authorization to enter, transit through, anchor in, or remain within the event area is granted by the Captain of the Port Miami or a designated representative, all persons and vessels receiving such authorization must comply with the instructions of the Captain of the Port Miami or a designated representative. The Coast Guard will provide notice of the safety zone by Local Notice to Mariners, Broadcast Notice to Mariners, and on-scene designated representatives.

E. Regulatory Analyses

We developed this proposed rule after considering numerous statutes and executive orders related to rulemaking. Below we summarize our analyses based on a number of these statutes or executive orders.

1. Regulatory Planning and Review

This proposed rule is not a significant regulatory action under section 3(f) of Executive Order 12866, Regulatory Planning and Review, as supplemented by Executive Order 13563, Improving Regulation and Regulatory Review, and does not require an assessment of potential costs and benefits under section 6(a)(3) of Executive Order 12866 or under section 1 of Executive Order 13563. The Office of Management and Budget has not reviewed it under those Orders. The economic impact of this proposed rule is not significant for the following reasons: (1) The safety zone will be enforced for only 12 hours; (2) although non-participant persons and vessels will not be able to enter, transit through, anchor in, or remain within the event area without authorization from the Captain of the Port Miami or a designated representative, they may operate in the surrounding area during the enforcement period; (3) non-participant persons and vessels may still enter, transit through, anchor in, or remain within the event area during the enforcement period if authorized by the Captain of the Port Miami or a designated representative; and (4) the Coast Guard will provide advance notification of the safety zone to the local maritime community by Local Notice to Mariners and Broadcast Notice to Mariners.

2. Impact on Small Entities

The Regulatory Flexibility Act (5 U.S.C. 601–612), we have considered the impact of this proposed rule on small entities. The Coast Guard certifies under 5 U.S.C. 605(b) that this proposed rule will not have a significant economic impact on a substantial number of small entities.

This rule may affect the following entities, some of which may be small entities: The owners or operators of vessels intending to enter, transit through, anchor in, or remain within that portion of Biscayne Bay encompassed within the safety zone from 5 a.m. until 5 p.m. on September 13, 2014. For the reasons discussed in the Regulatory Planning and Review section above, this rule will not have a significant economic impact on a substantial number of small entities.

If you think that your business, organization, or governmental jurisdiction qualifies as a small entity and that this rule would have a significant economic impact on it, please submit a comment (see **ADDRESSES**) explaining why you think it qualifies and how and to what degree this rule would economically affect it.

3. Assistance for Small Entities

Under section 213(a) of the Small Business Regulatory Enforcement Fairness Act of 1996 (Pub. L. 104–121), we want to assist small entities in understanding this proposed rule. If the rule would affect your small business, organization, or governmental jurisdiction and you have questions concerning its provisions or options for compliance, please contact the person

listed in the **FOR FURTHER INFORMATION CONTACT**, above. The Coast Guard will not retaliate against small entities that question or complain about this proposed rule or any policy or action of the Coast Guard.

4. Collection of Information

This proposed rule will not call for a new collection of information under the Paperwork Reduction Act of 1995 (44 U.S.C. 3501–3520).

5. Federalism

A rule has implications for federalism under Executive Order 13132, Federalism, if it has a substantial direct effect on the States, on the relationship between the national government and the States, or on the distribution of power and responsibilities among the various levels of government. We have analyzed this proposed rule under that Order and determined that this rule does not have implications for federalism.

6. Protest Activities

The Coast Guard respects the First Amendment rights of protesters. Protesters are asked to contact the person listed in the **FOR FURTHER INFORMATION CONTACT** section to coordinate protest activities so that your message can be received without jeopardizing the safety or security of people, places or vessels.

7. Unfunded Mandates Reform Act

The Unfunded Mandates Reform Act of 1995 (2 U.S.C. 1531–1538) requires Federal agencies to assess the effects of their discretionary regulatory actions. In particular, the Act addresses actions that may result in the expenditure by a State, local, or tribal government, in the aggregate, or by the private sector of $100,000,000 (adjusted for inflation) or more in any one year. Though this proposed rule would not result in such an expenditure, we do discuss the effects of this rule elsewhere in this preamble.

8. Taking of Private Property

This proposed rule would not cause a taking of private property or otherwise have taking implications under Executive Order 12630, Governmental Actions and Interference with Constitutionally Protected Property Rights.

9. Civil Justice Reform

This proposed rule meets applicable standards in sections 3(a) and 3(b)(2) of Executive Order 12988, Civil Justice Reform, to minimize litigation, eliminate ambiguity, and reduce burden.

10. Protection of Children From Environmental Health Risks

We have analyzed this proposed rule under Executive Order 13045, Protection of Children from Environmental Health Risks and Safety Risks. This rule is not an economically significant rule and would not create an environmental risk to health or risk to safety that might disproportionately affect children.

11. Indian Tribal Governments

This proposed rule does not have tribal implications under Executive Order 13175, Consultation and Coordination with Indian Tribal Governments, because it would not have a substantial direct effect on one or more Indian tribes, on the relationship between the Federal Government and Indian tribes, or on the distribution of power and responsibilities between the Federal Government and Indian tribes.

12. Energy Effects

This proposed rule is not a ''significant energy action'' under Executive Order 13211, Actions Concerning Regulations That Significantly Affect Energy Supply, Distribution, or Use.

13. Technical Standards

This proposed rule does not use technical standards. Therefore, we did not consider the use of voluntary consensus standards.

14. Environment

We have analyzed this proposed rule under Department of Homeland Security Management Directive 023–01 and Commandant Instruction M16475.lD, which guide the Coast Guard in complying with the National Environmental Policy Act of 1969 (NEPA) (42 U.S.C. 4321–4370f). The Coast Guard previously completed a Categorical Exclusion Determination for this temporary safety zone in 2013. The regulation for the 2013 occurrence is similar in all aspects to this year's regulation; therefore the same Categorical Exclusion Determination is being referenced for this year's regulation. The Categorical Exclusion Determination is available in the docket folder for USCG–2013–0565 at *www.regulations.gov*. This proposed rule involves establishing a safety zone that will be enforced from 5 a.m. until 5 p.m. on September 13, 2014. This rulemaking is categorically excluded from further review under paragraph 34(g) of Figure 2–1 of the Commandant Instruction. We seek any comments or information that may lead to the discovery of a significant environmental impact from this proposed rule.

List of Subjects in 33 CFR Part 165

Harbors, Marine safety, Navigation (water), Reporting and recordkeeping requirements, Security measures, and Waterways.

For the reasons discussed in the preamble, the Coast Guard proposes to amend 33 CFR part 165 as follows:

PART 165—REGULATED NAVIGATION AREAS AND LIMITED ACCESS AREAS

■ 1. The authority citation for part 165 continues to read as follows:

Authority: 33 U.S.C. 1231; 50 U.S.C. 191; 33 CFR 1.05–1, 6.04–1, 160.5; Department of Homeland Security Delegation No. 0170.1.

■ 2. Add a temporary § 165.T07–0460 to read as follows:

§ 165.T07–0460 Safety Zone; Miami Paddle Challenge, Biscayne Bay; Miami, FL.

(a) *Regulated Area.* The following regulated area is a safety zone. All waters of Biscayne Bay located west of Key Biscayne and south of Rickenbacker Causeway encompassed within the following points: Starting at point 1 in position 25°44′44″ N, 80°11′52″ W; thence east to point 2 in position 25°44′43″ N, 80°11′43″ W; thence southwest to point 3 in position 25°40′29″ N, 80°15′08″ W; thence northwest to point 4 in position 25°40′39″ N, 80°15′21″ W; thence northeast to point 5 in position 25°42′56″ N, 80°13′56″ W; thence northeast back to origin. All coordinates are North American Datum 1983.

(b) *Definition.* The term ''designated representative'' means Coast Guard Patrol Commanders, including Coast Guard coxswains, petty officers, and other officers operating Coast Guard vessels, and Federal, state, and local officers designated by or assisting the Captain of the Port Miami in the enforcement of the regulated area.

(c) *Regulations.*

(1) All non-participant persons and vessels are prohibited from entering, transiting through, anchoring in or remaining within the safety zone unless authorized by the Captain of the Port Miami or a designated representative.

(2) Non-participant persons and vessels desiring to enter, transit through, anchor in, or remain within the safety zone may contact the Captain of the Port Miami by telephone at 305–535–4472, or a designated representative via VHF radio on channel 16. If authorization to enter, transit through, anchor in, or remain within the safety zone is granted

by the Captain of the Port Miami or a designated representative, all persons and vessels receiving such authorization must comply with the instructions of the Captain of the Port Miami or a designated representative.

(3) The Coast Guard will provide notice of the regulated area by Local Notice to Mariners, Broadcast Notice to Mariners and on-scene designated representatives.

(d) *Enforcement.* This rule will be enforced from 5 a.m. until 5 p.m. on September 13, 2014.

Dated: June 25, 2014.

A.J. Gould,

Captain, U.S. Coast Guard, Captain of the Port Miami.

[FR Doc. 2014–16066 Filed 7–9–14; 8:45 am]

BILLING CODE 9110–04–P

ENVIRONMENTAL PROTECTION AGENCY

40 CFR Part 52

[EPA–R10–OAR–2014–0141: FRL–9913–47–Region–10]

Approval and Promulgation of Implementation Plans; Washington: General Regulations for Air Pollution Sources

AGENCY: Environmental Protection Agency (EPA).

ACTION: Proposed rule.

SUMMARY: The Environmental Protection Agency (EPA) is proposing to approve revisions to the Washington State Implementation Plan (SIP) submitted by the Department of Ecology (Ecology) on January 27, 2014. These revisions were submitted in accordance with the requirements of section 110 of the Clean Air Act (hereinafter the Act or CAA), which requires states to develop a plan for the implementation, maintenance, and enforcement of the National Ambient Air Quality Standards (NAAQS). The revisions update the general air quality regulations that apply to sources within Ecology's jurisdiction, including the minor new source review permitting program. Ecology's submittal also includes regulations covering the major source Prevention of Significant Deterioration (PSD) and the major Nonattainment New Source Review (NNSR) permitting program; however the EPA intends to address the major source permitting regulations in separate actions.

DATES: Comments must be received on or before August 11, 2014.

ADDRESSES: Submit your comments, identified by Docket ID No. EPA–R10–OAR–2014–0141, by any of the following methods:

A. *www.regulations.gov:* Follow the on-line instructions for submitting comments.

B. *Mail:* Jeff Hunt, EPA Region 10, Office of Air, Waste and Toxics (AWT–107), 1200 Sixth Avenue, Suite 900, Seattle, WA 98101.

C. *Email: R10-Public_Comments@epa.gov.*

D. *Hand Delivery:* EPA Region 10 Mailroom, 9th Floor, 1200 Sixth Avenue, Suite 900, Seattle, WA 98101. Attention: Jeff Hunt, Office of Air, Waste and Toxics, AWT–107. Such deliveries are only accepted during normal hours of operation, and special arrangements should be made for deliveries of boxed information.

Instructions: Direct your comments to Docket ID No. EPA–R10–OAR–2014–0141. The EPA's policy is that all comments received will be included in the public docket without change and may be made available online at *www.regulations.gov,* including any personal information provided, unless the comment includes information claimed to be Confidential Business Information (CBI) or other information the disclosure of which is restricted by statute. Do not submit information that you consider to be CBI or otherwise protected through *www.regulations.gov* or email. The *www.regulations.gov* Web site is an ''anonymous access'' system, which means the EPA will not know your identity or contact information unless you provide it in the body of your comment. If you send an email comment directly to the EPA without going through *www.regulations.gov* your email address will be automatically captured and included as part of the comment that is placed in the public docket and made available on the Internet. If you submit an electronic comment, the EPA recommends that you include your name and other contact information in the body of your comment and with any disk or CD–ROM you submit. If the EPA cannot read your comment due to technical difficulties and cannot contact you for clarification, the EPA may not be able to consider your comment. Electronic files should avoid the use of special characters, any form of encryption, and be free of any defects or viruses.

Docket: All documents in the electronic docket are listed in the *www.regulations.gov* index. Although listed in the index, some information is not publicly available, i.e., CBI or other information the disclosure of which is restricted by statute. Certain other material, such as copyrighted material, is not placed on the Internet and will be publicly available only in hard copy form. Publicly available docket materials are available either electronically in *www.regulations.gov* or in hard copy during normal business hours at the Office of Air, Waste and Toxics, EPA Region 10, 1200 Sixth Avenue, Seattle, WA 98101.

FOR FURTHER INFORMATION CONTACT: For information on the New Source Review permitting program, please contact Donna Deneen at (206) 553–6706 or *deneen.donna@epa.gov.* For information on the Washington SIP in general, please contact Jeff Hunt at (206) 553–0256, *hunt.jeff@epa.gov,* or by using the above EPA, Region 10 address.

SUPPLEMENTARY INFORMATION: Throughout this document wherever ''we'', ''us'' or ''our'' are used, it is intended to refer to the EPA.

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I. Purpose of Proposed Action

The purpose of this action is to propose approval of revisions to

Washington's SIP submitted to the EPA by Ecology on January 27, 2014. The SIP submittal revises and amends portions of Chapter 173–400 of the Washington Administrative Code (WAC) currently in the Federally-approved Washington SIP (40 CFR part 52, subpart WW). This action proposes to update the SIP to reflect many of the changes to Chapter 173–400 WAC, last revised November 28, 2012. Ecology did not submit to the EPA those sections of Chapter 173–400 WAC that have not changed since the last SIP approval by the EPA. Ecology also did not submit certain provisions of Chapter 173–400 WAC because they are not related to the criteria pollutants regulated under title I of the CAA, not essential for meeting and maintaining the NAAQS, or not related to the requirements for SIPs under section 110 of the CAA. The proposed SIP revisions covered by this action are explained in more detail below, along with an evaluation of how these rules comply with the CAA requirements for SIPs. Also included is a discussion of how the EPA intends to act on the remainder of Ecology's submittal, covering the major source PSD and NNSR specific regulations in separate actions.

II. Background for Proposed Action

Title I of the CAA, as amended by Congress in 1990, specifies the general requirements for states to submit SIPs to attain or maintain the NAAQS and the EPA's actions regarding approval of those SIPs. With this action we are proposing approval of many revisions to the SIP, including housekeeping changes such as updated references, renumbering, and clarifying wording, as well as more substantive changes. Further background on and analysis of the substantive changes is provided below.

III. Washington SIP Revisions

A. WAC 173–400–020, Applicability

As described in the Ecology submittal, Chapter 70.94 Revised Code of Washington (RCW), *Washington Clean Air Act* directs Ecology to establish regulations to implement the state air quality programs and requirements. In the case of Chapter 173–400 WAC, the Ecology regulations apply statewide, except where a local clean air agency has implemented its own regulations.[1] Chapter 70.94 RCW also specifies that the local agency and Ecology regulations do not apply to the energy facilities under the purview of the Energy Facilities Site Evaluation Council (EFSEC). EFSEC is given primary authority for the permitting of energy projects listed in Chapter 80.50 RCW, and the EPA-approved EFSEC regulations are also contained in the SIP under 40 CFR part 52, subpart WW. In the case of permitting stationary sources of air pollution, Ecology's submittal states that the intent of the Washington Clean Air Act is that local clean air agencies, EFSEC, and Ecology have primary responsibility for implementing programs and regulations to control air pollution in their respective jurisdictions. The EPA also notes that under the SIP-approved provisions of WAC 173–405–012, WAC 173–410–012, and WAC 173–415–012, Ecology has statewide, direct jurisdiction for kraft pulp mills, sulfite pulping mills, and primary aluminum plants. The revised language of WAC 173–400–020 states:

> (1) The provisions of this chapter shall apply statewide, except for specific subsections where a local authority has adopted and implemented corresponding local rules that apply only to sources subject to local jurisdiction as provided under RCW 70.94.141 and 70.94.331.

Because under revised WAC 173–400–020(1), the applicability of Chapter 173–400 WAC in a local clean air agency's jurisdiction depends on whether the local agency has adopted and is implementing corresponding local rules that apply only to sources subject to local jurisdiction, the EPA's proposed approval of the submitted Chapter 173–400 WAC provisions is limited to only those counties where there is no local clean air agency and Ecology has direct jurisdiction, excluding sources subject to EFSEC regulations. These counties are: Adams, Asotin, Chelan, Columbia, Douglas, Ferry, Franklin, Garfield, Grant, Kittitas, Klickitat, Lincoln, Okanogan, Pend Oreille, San Juan, Stevens, Walla Walla, and Whitman counties, as well as statewide jurisdiction for kraft pulp mills, sulfite pulping mills, and primary aluminum plants covered under the SIP-approved applicability provisions of WAC 173–405–012, WAC 173–410–012, and WAC 173–415–012.

For the remaining counties and sources under the direct jurisdiction of local clean air agencies and sources under EFSEC jurisdiction, the statewide version of Chapter 173–400 WAC last approved by the EPA in 1995 will remain in the SIP. In addition, the corresponding local air agency regulations listed in 40 CFR part52, subpart WW, will also apply. This dual set of federally-approved regulations in the SIP will continue to apply until the EPA has an opportunity to work with the state and local authorities to clarify whether the local agencies wish to rely on the newly revised provisions of Chapter 173–400 WAC or use local agency corresponding provisions as replacements in the SIP. Due to the complexity of working with regulations from seven different local air agencies, the EPA intends to take a phased approach in reviewing and updating the Washington SIP. However, in the short term, the EPA sees considerable value in proposing approval of updated regulations covering the eighteen counties under Ecology's direct jurisdiction, and the three source categories subject to Ecology's direct jurisdiction.

B. WAC 173–400–030, Definitions

This section contains a list of terms and definitions used throughout Chapter 173–400 WAC. Many of the changes made since the EPA's last approval are clarifying or housekeeping in nature. For example, many of the definitions related to visibility protection were moved to WAC 173–400–117, *Special Protection Requirements for Federal Class I Areas.* Similarly, many of the definitions specific to the major source PSD and NNSR programs were relocated to WAC 173–400–720, *Prevention of Significant Deterioration Program* and WAC 173–400–810, *Nonattainment Area New Source Review Program* and will be acted on in separate actions. Ecology did not submit for approval the definition of ''Toxic air pollutant (TAP)'' or ''toxic air contaminant'' contained in a new subsection, WAC 173–400–030(91), because these pollutants are not criteria pollutants or EPA-identified precursors under section 110 of the CAA.

An important revision to WAC 173–400–030 is the inclusion of fine particulate matter ($PM_{2.5}$) definitions consistent with the EPA's definitions. On March 4, 2014, the EPA approved Chapter 173–476 WAC, *Ambient Air Quality Standards,* which includes $PM_{2.5}$ and all other criteria pollutants consistent with, or more stringent than, the Federal NAAQS (79 FR 12077). Inclusion of $PM_{2.5}$ related definitions in WAC 173–400–030(70) and (71), along with the definition of criteria pollutants in WAC 173–400–030(21) and the NAAQS in WAC 173–400–030(49), supports this previous action and provides additional clarity in Chapter 173–400 WAC.

For a full description of the definitional changes, please see Ecology's submittal in the docket for

[1] Although the Washington statutes and regulations use the term ''local authority,'' these entities are now more commonly referred to as ''local clean air agencies'' or ''local agencies'' and that terminology will be used in this proposal.

this action. The EPA reviewed all of the changes and is proposing to determine that they are consistent with the definitions in 40 CFR 51.100 and meet the requirements for approval under section 110 of the CAA.

C. WAC 173–400–040, General Standards for Maximum Emissions

Aside from numerous nonsubstantive or editorial changes, the main change to this section is the addition of three narrow exemptions from the twenty percent opacity standard which, as explained below, the EPA proposes to approve as either de minimis activities and/or activities that are appropriately bounded to limit emissions to de minimis levels.

The first exemption under WAC 173–400–040(2)(e)(i) relates to visible emissions reader certification testing. Ecology's analysis for this exemption explains that this exemption is required in order to allow for certification of readers under 40 CFR Part 60 Appendix A, Method 9 because the reader certification testing protocol requires opacity values above the opacity standard in WAC 173–400–040(2) as part of the testing process. Given the limited circumstances under which this exemption will apply, the EPA believes this visible emissions reader certification testing exemption is sufficiently narrow so as not to interfere with attainment or maintenance of the NAAQS and is therefore proposing to determine that it meets the requirements for approval under section 110 of the CAA.

The second exemption under WAC 173–400–040(2)(e)(ii) relates to military training exercises. Ecology's submittal explains that military training using obscurants is a necessary component of national defense and that the presence of obscurants emanating from a discrete source (such as a smoke pot) could be classified as a violation of the state opacity standard without an exemption. Ecology's submittal describes environmental assessments (EAs) performed by the Army that indicate that no offsite exceedance of a NAAQS would occur with adherence to the location usage criteria within the EAs. The submittal also explains that Ecology has included as limitations on the exemption specific requirements to control/reduce the offsite impacts from obscurant training based on the results of the EAs, such as the tracking of weather conditions so that a training is canceled if winds patterns change such that the obscurant could travel beyond the boundaries of the military site/reservation. Based on this analysis and the fact that the EPA has approved a similar exemption in another state (77 FR 2488, January 18, 2012), the EPA is proposing to determine that this military training exemption will not interfere with attainment or maintenance of the NAAQS and meets the requirements for approval under section 110 of the CAA.

The final new exemption under WAC 173–400–040(2)(e)(iii) relates to firefighter training. Ecology's submittal and analysis explains that the exemption implements a statutory provision allowing instructional fires for firefighter training, and that there are limitations and requirements in place that minimize this activity and the associated air impacts. Based on Ecology's submittal and the expected limited occurrence of the exempted activity, the EPA is proposing to determine that the exemption for firefighter training will not interfere with attainment and maintenance of the NAAQS and meets the requirements for approval under section 110 of the CAA.

In summary, the EPA has reviewed the revisions to the portions of WAC 173–400–040 submitted by Ecology and proposes to determine that they meet the requirements for approval under section 110 of the CAA. In so doing, the EPA notes that Ecology did not submit for EPA approval WAC 173–400–040(2)(c) and (d); WAC 173–400–040(3); WAC 173–400–040(5); and WAC 173–400–040(7), second paragraph. These sections are not currently part of the SIP because they are unbounded director's discretion provisions, not related to criteria pollutants regulated under title I of the CAA, not essential for meeting and maintaining the NAAQS, or not related to the requirements for SIPs under section 110 of the CAA. For more information on these provisions that Ecology did not include in its SIP submission, please see the EPA's proposed action on the Washington SIP (60 FR 9802, Feb. 22, 1995) and the final action (60 FR 28726, June 2, 1995).

D. WAC 173–400–050, Emission Standards for Combustion and Incineration Units

The EPA approved WAC 173–400–050(1) through (3) into the SIP in 1993. The EPA's subsequent approval of Chapter 173–400 WAC in 1995 made no changes to these provisions. In this action, Ecology requested that the EPA approve minor wording changes and updates to WAC 173–400–050(1). Ecology also modified WAC 173–400–050(3), which had been previously disapproved by the EPA as an impermissible director's discretion provision (60 FR 28726, June 2, 1995), and has requested approval. As revised, WAC 173–400–050(3) contains criteria for modifying the default oxygen correction factor when appropriate, such as where the source is also subject to a New Source Performance Standard (NSPS) and that standard has a different oxygen correction factor. Ecology's revisions to subsection (3) provide adequately bounded requirements for the use of an alternative oxygen correction factor and satisfy previous concerns. The EPA is therefore proposing to determine that the changes to WAC 173–400–050(1) and (3) meet the requirements for approval under section 110 of the CAA.

Ecology also requested that the EPA remove the previously approved WAC 173–400–050(2) from the SIP because it does not regulate criteria pollutants covered under title I of the CAA, is not essential for meeting and maintaining the NAAQS, and is not a requirement for SIPs under section 110 of the CAA. Ecology's submission explains that this subsection regulates emissions from incinerators that are not subject to regulation under the state solid waste incinerator rule or under Federal NSPS rules that have been adopted by the state, such as small incinerators at grocery stores and apartment buildings that are no longer common. Ecology also explains that total carbonyls are not a criteria air pollutant or an EPA-designated precursor to criteria pollutants and, consistent with previous EPA decisions, are therefore not appropriate for inclusion in a SIP. Ecology also states that, to the extent any of these sources remain and that the carbonyls subject to this limitation are volatile organic compounds (VOCs) or particulate matter (which are criteria pollutants or EPA-designated precursors), such emissions will be regulated as VOCs or particulate matter emissions from the source under other requirements of the SIP. For these reasons, the EPA agrees with Ecology that removal of this specific provision from the SIP will not affect attainment or maintenance of the NAAQS and is not otherwise needed to meet the requirements for SIPs under section 110 of the CAA and we therefore propose to approve the removal of WAC 173–400–050(2) from the SIP.

E. WAC 173–400–060, Emission Standards for General Process Units

Ecology's changes to this section include an updated reference to EPA test methods and a minor word change. The EPA reviewed these changes and is proposing to determine that WAC 173–400–060 meets the requirements for approval under section 110 of the CAA.

F. WAC 173–400–070, Emission Standards for Certain Source Categories

Ecology requested that the EPA replace WAC 173–400–070(1) through (6) currently in the SIP with updated versions, adopted as of November 28, 2012. The changes add silo burners as sources covered by the emission standards of this subsection, expand the areas for which additional requirements may be established (by removing the reference to sensitive areas in WAC 173–400–040(1)(d)), and include minor language clarifications and updated references. The EPA reviewed these changes and is proposing to determine that they meet the requirements for approval under section 110 of the CAA.

G. WAC 173–400–081, Startup and Shutdown and WAC 173–400–091, Voluntary Limits on Emissions

Ecology's update to both of these sections consists of very minor wording changes from the versions last approved by the EPA. One change merits further discussion. WAC 173–400–091 authorizes Ecology to issue regulatory orders setting voluntary limits on the potential to emit of a source, which limits could be used to allow a source to avoid applicability of certain CAA ''major'' source programs. In 1995, the EPA approved this regulation as meeting the requirements for Federally-enforceable state operating permit programs set forth in 54 FR 27274 (June 28, 1989), with respect to criteria pollutants and pollutants regulated under the PSD program under section 110 of the CAA (as part of the SIP) and with respect to hazardous air pollutants under section 112(l) of the CAA (as part of Ecology's CAA section 112 program and not as part of the SIP). See 60 FR 9805 (proposed action); 60 FR 28726 (final action). Ecology has revised WAC 173–400–091 to delete the language stating that such orders ''shall be federally enforceable upon approval of this section as an element of the Washington state implementation plan.'' This is consistent with a Federal court decision vacating the requirement that limits be Federally-enforceable to be effective as a means of limiting a source's ''potential to emit'' for purposes of avoiding being considered a major source under the PSD or major NNSR program. Because Ecology has requested EPA approval of this revised provision in the Washington SIP, however, limits on potential to emit such pollutants created under WAC 173–400–091 will continue to be Federally-enforceable, notwithstanding the revised language in Ecology's rule. See Release of Interim Policy on Federal Enforceability of Limitations on Potential to Emit, by John S. Seitz, Director, Office of Air Quality Planning and Standards, Office of Air and Radiation and Robert I. Van Heuvelen, Director, Office of Regulatory Enforcement, Office of Enforcement and Compliance Assurance, dated January 22, 1996. As with our previous approval, we are approving the revised version for purposes of the Washington SIP only with respect to criteria pollutants and pollutants regulated under the PSD program. In sum, the EPA reviewed the changes to these regulations and we are proposing to determine that they meet the requirements for approval under section 110 of the CAA.

H. WAC 173–400–100, Registration Program

The registration program was approved into the SIP in 1993 under WAC 173–400–100. Ecology has since significantly revised this section and the registration program, which is now contained in WAC 173–400–099 through –104. Ecology has not submitted these sections for approval and has requested that the version of WAC 173–400–100 currently in the SIP be removed. Ecology's submittal explains that, unlike the version of WAC 173–400–100 currently in the Federally-approved SIP, Washington's current registration regulations (WAC 173–400–099 through –104) no longer are a means of determining the applicability of Washington's new source review permitting requirements. Moreover, the registration provisions do not impose air pollution control requirements on sources or implement or enforce Federal standards. Based on the EPA's review of the section and Ecology's explanation for its request, we are proposing to remove WAC 173–400–100 from the SIP.

I. WAC 173–400–105, Records, Monitoring, and Reporting

WAC 173–400–105 contains provisions implementing the air emissions reporting requirements and source surveillance requirements in 40 CFR part 51, subparts A and K. Revisions to this section update references to pollutants (requiring the inclusion of $PM_{2.5}$, oxides of nitrogen, and ammonia in emission inventories), test methods, and continuous emissions monitoring requirements. Revisions also clarify the existing exemption for monitoring required of sources subject to Federal standards, such as the NSPS or National Emissions Standards for Hazardous Air Pollutants (NESHAPS). A key change is the addition of detailed requirements for continuous emission monitoring systems (CEMs) that are not required by NSPS, NESHAPS or other identified Federal standards. The EPA reviewed the changes to WAC 173–400–105 and we are proposing to determine that the changes meet the requirements for approval under section 110 of the CAA and 40 CFR part 51, subparts A and K.

J. Minor New Source Review: WAC 173–400–110; WAC 173–400–111; WAC 173–400–112; WAC 173–400–113; WAC 173–400–036; and WAC 173–400–560

Ecology's minor NSR program [2] was last approved into the SIP in 1995. Since then, Ecology has revised the applicability provisions, restructured the regulations, made many clarifying revisions, and made some substantive revisions. Together, WAC 173–400–110 through –113 are the starting point for any source seeking to construct a new source or modify an existing source. Specific provisions in these sections direct sources constructing a ''major'' source or making a ''major modification'' to a ''major'' source in an attainment or unclassifiable area to also comply with the requirements of WAC 173–400–700 through –750 (PSD) and in a nonattainment area to also comply with the requirements of WAC 173–400–800 through –860 (major NNSR). See, for example, WAC 173–400–110(1)(d). As discussed above, although Ecology's submittal also includes regulations covering the PSD and the major NNSR permitting programs, the EPA intends to address these major source NSR program regulations in separate actions. Accordingly, the EPA's review of and proposed approval of the revised WAC 173–400–110 through –113, 173–400–036, and 173–400–560 in this action is not a determination that these revised regulations meet requirements for approval of a SIP-approved PSD permitting program (40 CFR 51.166) or a SIP-approved major NNSR permitting program (40 CFR 51.165).

1. Applicability

As discussed in Ecology's SIP submittal, the minor NSR rules approved by the EPA in 1995 required (1) all new sources listed as being required to register with the state or the local clean air agency and (2) existing sources being modified and having emission increases to undergo NSR and receive an order of approval prior to

[2] Ecology's NSR rules refer to the approval document as an ''order'' or ''order of approval'' rather than a permit and an application as a ''notice of construction application'' rather than a permit application.

construction. State law was amended in 1996 to require Ecology to develop a listing of de minimis emission sources which would not require pre-construction review and approval. Specifically, RCW 70.94 .152(11) states, ''[n]o person is required to submit a notice of construction or receive approval for a new source that is deemed by the department of ecology or board to have de minimis impact on air quality. The department of ecology shall adopt and periodically update rules identifying categories of de minimis new sources. The department of ecology may identify de minimis new sources by category, size, or emission thresholds.'' RCW 70.94 .152(12) adds, ''[f]or purposes of this section, 'de minimis new sources' means new sources with trivial levels of emissions that do not pose a threat to human health or the environment.''

In response to that statutory directive, Ecology revised WAC 173–400–110 to exempt from review de minimis emission sources in two different ways: (1) Through a list of emission units and activities determined to have de minimis emissions, and (2) through annual emissions threshold levels determined to be de minimis for non-listed emission units and activities. Ecology's annual emission exemption thresholds are equal to five percent of the PSD significance levels defined in 40 CFR 52.21(b)(23), as they existed in 1997. In its submittal, Ecology explains that its annual emissions exemption thresholds are lower than the levels in the SIPs of 12 other states it reviewed in developing its thresholds, and also lower than the annual emissions exemption thresholds in the EPA's rule for New Sources and Modifications in Indian Country (Tribal NSR rule) at 40 CFR 49.153(b)(3), Table 1. Ecology also compared its list of exempted emission units and activities with those of 12 other states and the EPA's Tribal NSR rule and found that its list of exempt units and activities is similar to the lists of other states and in the Tribal NSR rule, although each state's list reflects differences in the mix of sources and priorities of the state. Ecology noted that where a particular exempt unit or activity had a size cutoff to be considered de minimis, Ecology's cutoffs were often lower than for comparable emission units and activity exemptions in the SIPs of other states.

In addition to comparing its exemption list and thresholds to those of other states with SIP-approved minor NSR programs and with the Tribal NSR rule, Ecology also conducted modeling to demonstrate that its list of exempt emission units and activities, and its exemption thresholds would not cause or contribute to an exceedance of the NAAQS. Ecology's justification and modeling is also supported by the EPA's ambient air quality monitoring data for the State of Washington. This information shows that, despite increasingly more stringent NAAQS over the years, Washington has remained in attainment for all criteria pollutants with the exception of one area designated as nonattainment for $PM_{2.5}$ in 2009 that has since met the standard.[3]

2. Permit Processing and Issuance

Ecology has consolidated in WAC 173–400–111 many of the permit processing and issuance criteria the EPA previously approved into the SIP and that were previously contained in WAC 173–400–110, WAC 173–400–112, and WAC 173–400–113. This section now contains provisions for determining the completeness of applications, criteria for approval of notice of construction approvals, timeframes for issuing approvals, appeals, and revisions. The EPA views this consolidation of the permit issuance and processing procedures as administrative, clarifying, and non-substantive.

3. Minor NSR in Nonattainment Areas

The EPA last approved this section on June 2, 1995 (60 FR 28726). The current version of WAC 173–400–112, adopted in 2012, remains substantively the same for minor sources in nonattainment areas. The most significant change is that Ecology moved the major NNSR requirements to WAC 173–400–800 through –850 in order to provide clarity and to more easily incorporate changes to the EPA program, including implementation of the 2002 NSR Reform requirements (67 FR 80186, December 31, 2002). As discussed above, the EPA intends to evaluate WAC 173–400–800 through –850 in a separate proposed action in the near future. However, in the interim, we believe there is significant value in proposing approval of the revised WAC 173–400–112 so that the federally enforceable SIP will contain the most up to date requirements for minor sources in nonattainment areas.

4. Minor NSR in Attainment and Unclassifiable Areas

Most of the revisions submitted for approval in WAC 173–400–113 are clarifying in nature, but do not substantively alter the underlying provisions previously approved by the EPA. For example, Ecology's rules still require that a new source or modification will employ ''best available control technology'' for all pollutants not previously emitted or whose emissions would increase as a result of the new source or modification, which goes beyond the minimum requirements for a minor NSR program in 40 CFR 51.160.

We note that Ecology did not submit as part of its SIP revision the second sentence in subsection (3), which relies on impact levels in Table 4 of this regulation as a basis for concluding that a proposed new source or modification does not cause or contribute to a violation of the NAAQS. The language in this sentence is similar to language that was recently vacated by a court and repealed by the EPA in the EPA's PSD regulations with respect to $PM_{2.5}$. See *Sierra Club* v. *EPA,* 703 F.3d 458 (D.C. Cir. 2013); 78 FR 73698 (December 9, 2013). Ecology explained that its decision not to submit this sentence in subsection (3) is to ensure that its SIP is consistent with the court decision.

In subsection (4), Ecology has included $PM_{2.5}$ significance levels for determining if impacts from a new major source or major modification to a major source in an attainment or unclassifiable area will cause or contribute to a violation of an ambient air quality standard in a nearby nonattainment area. Ecology's significance levels contained in WAC 173–400–113(4)(a) are the same as the EPA's significance levels contained in 40 CFR 51.165(b)(2). Ecology also added WAC 173–400–113(4)(b) to implement the emission reduction offset provisions contained in 40 CFR 51.165(b)(3).

5. Relocation of Portable Sources

The state regulations regarding portable sources were originally part of the SIP-approved regulations under WAC 173–400–110(5). Ecology moved these provisions to a stand-alone section, WAC 173–400–036. Portable sources that meet the requirements of this section may, without obtaining a site-specific or permitting authority-specific order of approval, relocate and operate in any jurisdiction in which the permitting authority has adopted this section by reference. Permitting

[3] The Tacoma-Pierce County fine particulate matter ($PM_{2.5}$) nonattainment area (Tacoma-Pierce County) was designated for violating the 24-hour $PM_{2.5}$ NAAQS established in 2006 (71 FR 61144, October 17, 2006). For this area, elevated 24-hour $PM_{2.5}$ levels were driven by residential wood smoke emissions (74%) rather than industrial emissions (2%). In part due to community outreach, more stringent controls on residential wood smoke, and fleet turnover with cleaner cars, Tacoma-Pierce County met the 24-hour $PM_{2.5}$ NAAQS based on 2009–2011 data (77 FR 53772, September 4, 2012), as well as more recent 2010–2012 data (78 FR 57503, September 19, 2013).

authority participation in the inter-jurisdictional provisions of this section is optional. Before a source can move, it must: Already have an approved notice of construction order identifying the emission units as a portable source; submit a relocation notice and a copy of the applicable portable source order of approval to the permitting authority with jurisdiction over the intended operation location a minimum of fifteen calendar days before the portable source begins operation at the new location; submit the emission inventory required under WAC 173–400–105 to each permitting authority in whose jurisdiction the portable source operated during the preceding year; and limit operations to one year or less. Importantly, a source moving into nonattainment area that emits a pollutant or precursor for which the area is classified as nonattainment must obtain a site-specific order of approval and may not rely on this provision. In addition, major stationary sources must comply with all otherwise applicable PSD requirements.

6. General Orders of Approval

WAC 173–400–560 provides an alternative path to meeting minor NSR permit obligations for certain new sources, fulfilling the requirements contained in WAC 173–400–110, 173–400–111, 173–400–112, or 173–400–113. Under this provision, Ecology is authorized to issue a general order of approval that would authorize construction or modification of a specific type of emission unit or source, subject to specified terms and conditions. The general order of approval must identify criteria by which an emission unit or source may qualify for coverage under the associated general order of approval and include terms and conditions under which the owner or operator agrees to install and/or operate the covered emission unit or source.

Ecology's SIP revision submittal explains that it intends to use this authority for source categories where it has had considerable experience in issuing approvals, where ''best available control technology'' (BACT) emission controls have not been changing or anticipated to change in the near future, and the use of BACT emission controls will protect the NAAQS. To date, Ecology has issued general orders of approval for dairy anaerobic digesters, concrete batch plants, gas-powered emergency electric generators, rock crushers, small water heaters and steam generating boilers, auto body shops, and asphalt plants. Importantly, applying for a general order of approval is not an option if the emission unit or source is part of a major stationary source or major modification subject to the requirements of WAC 173–400–700 through –750 or WAC 173–400–800 through –860, if the emission unit or source triggers applicability of the operating permit program under Chapter 173–401 WAC, or if the new source or modification would require modification of an existing operating permit. These limitations are designed to ensure that the applicant does not divide a project into smaller projects to avoid major NSR permitting, or does not avoid additional requirements found in WAC 173–401, *Air Operating Permits.*

7. Summary

The EPA has reviewed the revisions to WAC 173–400–110 to 113, –036, and 560 as well as the information submitted by Ecology in its submittal. Based on our review, we are proposing to determine that these provisions, together with the public notice requirements in WAC 173–400–171 discussed below, meet the requirements for an approvable minor NSR program under 110 of the CAA and 40 CFR 51.160, 51.161, and 51.163. The EPA also notes that Ecology is not submitting for approval into the SIP several provisions in WAC 173–400–110 through 113, –036, and –560, primarily related to toxic air pollutants, because these sections are not related to regulation of criteria pollutants, are not essential for meeting and maintaining the NAAQS, or are not otherwise required under section 110 of the CAA. A full list of the sections not submitted for approval into the SIP is included in the docket for this action.

K. WAC 173–400–116, Increment Protection

As previously discussed, the EPA intends to evaluate and propose a determination on the major source permitting programs, PSD and major NNSR, in separate actions. Because WAC 173–400–116 implements the PSD increment protection requirements, the EPA will address this section in a separate action as part of our evaluation of Ecology's PSD program contained in WAC 173–400–700 through –750.

L. WAC 173–400–117, Special Protection Requirements for Federal Class I Areas

WAC 173–400–117 applies only to major sources. The EPA intends to address this section in a separate action as part of our evaluation of Ecology's PSD program contained in WAC 173–400–700 through –750.

M. WAC 173–400–118, Designation of Class I, II, and III Areas

This new section codifies the designation of Class I areas previously approved into the Washington SIP in WAC 173–400–030, *Definitions.* These areas are the Alpine Lakes Wilderness, Glacier Peak Wilderness, Goat Rocks Wilderness, Adams Wilderness; Mount Rainier National Park, North Cascades National Park, Olympic National Park, Pasayten Wilderness, and Spokane Indian Reservation. WAC 173–400–118 also lays out procedures for redesignation of Class I, II, and III areas consistent with the EPA requirements contained in 40 CFR 51.166(g). The EPA reviewed this new section and we are proposing to determine that it meets the requirements for approval under section 110 of the CAA and 40 CFR 51.166(g).

N. WAC 173–400–131, Issuance of Emission Reduction Credits

This new section implements a program to issue emission reduction credits useable for offsets required by the NNSR permitting program. The EPA will address this section in a separate action as part of our evaluation of Ecology's NNSR program contained in WAC 173–400–800 through –860.

O. WAC 173–400–136, Use of Emission Reduction Credits (ERC)

This new section implements the requirements for the use of emission reduction credits, including their use as offsets required by the NNSR permitting program and other uses allowed in Chapter 173–400 WAC. The EPA will address this section in a separate action as part of our evaluation of Ecology's NNSR program contained in WAC 173–400–800 through –860.

P. WAC 173–400–151, Retrofit Requirements for Visibility Protection

This section implementing the Best Available Retrofit Technology (BART) program for existing stationary sources was last approved by the EPA in 1995. Ecology has revised the rule to address a number of inconsistencies with the requirements of 40 CFR part 51, sections 51.301–306, in particular, to align the definition of ''existing stationary facility'' (previously in WAC 173–400–030(26) and now in WAC 173–400–151) with the Federal definition in 40 CFR 51.301 by limiting BART applicability to the 26 listed source types and categories, and to those facilities that came into existence between 1962 and 1977. Because the version of the rule currently in the SIP had not previously been applied to any source, revising it to be consistent with the Federal definition had no substantive effect on

the actual implementation of the BART process or defining which sources could be potentially subject to BART in Washington. This revision was used to develop the 2010 Regional Haze State Implementation Plan for Washington. The EPA reviewed these changes to the BART program and we are proposing to determine that they meet the requirements for approval under section 110 of the CAA and 40 CFR part 51, subpart P, Protection of Visibility.

Q. WAC 173–400–171, Public Notice

The section establishes procedures for informing the public of the receipt of Notice of Construction applications and on the criteria that would result in a public notice and public comment period on the permitting agency's proposed action. The version of this regulation currently approved in the SIP limits the types of Notice of Construction applications that are subject to public notice and comment to those that would authorize emissions above certain thresholds. Since then, Ecology has broadened its public notice and comment requirements so that notice of receipt of each Notice of Construction application is posted on the permitting authority's Web site. In addition, to requiring notice and a 30-day public comment period on Notice of Construction applications that would authorize emissions above certain thresholds, this provision now also requires notice and a 30-day public comment period on any application for which a written request for public notice and comment was received as a result of the internet posting. In addition, this section requires notice and public comment for certain actions, such as use of a modified or substituted air quality model, other than a guideline model in 40 CFR part 51, appendix W; orders issued under WAC 173–400–091 that establish limitations on a source's potential to emit; and any application or other action for which the permitting authority determines that there is significant public interest. The EPA reviewed these changes to the public participation procedures and we are proposing to determine that they meet the requirements for approval under section 110 of the CAA, including for minor NSR (see 40 CFR 51.161), Federally-enforceable state operating permit programs (54 FR 27274, June 28, 1989), and stack height procedures (40 CFR 51.164). As with the EPA's review and proposed action on WAC 173–400–110 through –113, our review and proposed action on WAC 173–400–171 in this notice is not a determination that this revised regulations meet requirements for approval under the EPA's regulations for SIP-approved PSD permitting programs (40 CFR 51.166) or SIP-approved major NNSR permitting programs (40 CFR 51.165).

R. WAC 173–400–175, Public Information

This new section provides that, subject to certain exceptions, all information, including copies of notice of construction applications, orders, and applications to modify orders are available for public inspection. As provided in RCW 70.94.205 information that relates ''to processes or production unique to the owner or operator, or is likely to affect adversely the competitive position of such owner or operator if released to the public or to a competitor'' can be claimed as exempt from disclosure except to the extent such information is ambient air quality data or emission data. The EPA reviewed this new section and is proposing to determine that it meets the requirements for approval under section 110 of the CAA and 40 CFR 51.116(c) and 51.230(f).

S. WAC 173–400–200, Creditable Stack Height and Dispersion Techniques

This section last modified effective February 10, 2005, makes only minor wording clarifications from the version previously approved into the SIP. The EPA reviewed these minor changes and is proposing to determine that they meet the requirements for approval under section 110 of the CAA, including the stack height provisions in 40 CFR 51.118 and the stack height procedures in 40 CFR 51.164.

IV. The EPA's Proposed Action

Consistent with the discussion above, the EPA proposes to approve many of the submitted SIP provisions and to take action on the remaining provisions separately, as discussed below. This action, if finalized, will result in changes to the Washington SIP in 40 CFR part 52, subpart WW.

A. Rules To Approve Into the SIP

The EPA proposes to approve into the SIP at 40 CFR part 52, subpart WW, the Ecology regulations listed in Table 1. It is important to note that Ecology did not submit for approval into the SIP certain provisions of Chapter 173–400 WAC, generally because they are not related to the criteria pollutants regulated under title I of the CAA, are not essential for meeting and maintaining the NAAQS, or are not related to the requirements for SIPs under section 110 of the CAA. These exceptions are noted in the ''Explanation'' column of the table. The EPA's review of and proposed approval of the revised WAC 173–400–110 through –113, 173–400–036, 173–400–171, and 173–400–560 in this action is not a determination that these revised regulations meet requirements for major sources such as a SIP-approved PSD permitting program (40 CFR 51.166), a SIP-approved major NNSR permitting program (40 CFR 51.165), or a SIP-approved visibility program (40 CFR 51.307). These regulations are marked with asterisks in Table 1. The EPA will evaluate these regulations for consistency with the requirements for major NSR permitting programs and visibility in a separate action.

TABLE 1—WASHINGTON STATE DEPARTMENT OF ECOLOGY REGULATIONS FOR PROPOSED APPROVAL

State citation	Title/subject	State effective date	Explanation
Chapter 173–400 WAC, General Regulations for Air Pollution Sources			
173–400–020	Applicability	12/29/12.	
173–400–030	Definitions	12/29/12	Except: 173–400–030(91).
173–400–036*	Relocation of Portable Sources	12/29/12.	
173–400–040	General Standards for Maximum Emissions	4/1/11	Except: 173–400–040(2)(c); 173–400–040(2)(d); 173–400–040(3); 173–400–040(5); 173–400–040(7), second paragraph.

TABLE 1—WASHINGTON STATE DEPARTMENT OF ECOLOGY REGULATIONS FOR PROPOSED APPROVAL—Continued

State citation	Title/subject	State effective date	Explanation
173–400–050	Emission Standards for Combustion and Incineration Units.	12/29/12	Except: 173–400–050(4); 173–400–050(5).
173–400–060	Emission Standards for General Process Units	2/10/05.	
173–400–070	Emission Standards for Certain Source Categories.	12/29/12	Except: 173–400–070(7); 173–400–070(8).
173–400–081	Startup and Shutdown	4/1/11.	
173–400–091	Voluntary Limits on Emissions	4/1/11.	
173–400–105	Records, Monitoring, and Reporting	12/29/12.	
173–400–110*	New Source Review (NSR) for Sources and Portable Sources.	12/29/12	Except: 173–400–110(1)(c)(ii)(C); 173–400–110(1)(e); 173–400–110(2)(d); The part of WAC 173–400–110(4)(b)(vi) that says, • ''not for use with materials containing toxic air pollutants, as listed in chapter 173–460 WAC,''; The part of 400–110(4)(e)(iii) that says, • ''where toxic air pollutants as defined in chapter 173–460 WAC are not emitted''; The part of 400–110(4)(e)(f)(i) that says, • ''that are not toxic air pollutants listed in chapter 173–460 WAC''; The part of 400–110(4)(h)(xviii) that says, • '', to the extent that toxic air pollutant gases as defined in chapter 173–460 WAC are not emitted''; The part of 400–110 (4)(h)(xxxiii) that says, • ''where no toxic air pollutants as listed under chapter 173–460 WAC are emitted''; The part of 400–110(4)(h)(xxxiv) that says, • '', or ≤1% (by weight) toxic air pollutants as listed in chapter 173–460 WAC''; The part of 400–110(4)(h)(xxxv) that says, • ''or ≤1% (by weight) toxic air pollutants''; The part of 400–110(4)(h)(xxxvi) that says, • ''or ≤1% (by weight) toxic air pollutants as listed in chapter 173–460 WAC''; 400–110(4)(h)(xl), second sentence; The last row of the table in 173–400–110(5)(b) regarding exemption levels for Toxic Air Pollutants.
173–400–111*	Processing Notice of Construction Applications for Sources, Stationary Sources and Portable Sources.	12/29/12	Except: 173–400–111(3)(h); 173–400–111(3)(i); The part of 173–400–111(8)(a)(v) that says, • ''and 173–460–040,''; 173–400–111(9).
173–400–112*	Requirements for New Sources in Nonattainment Areas—Review for Compliance with Regulations.	12/29/12	Except: 173–400–112(8).
173–400–113*	New Sources in Attainment or Unclassifiable Areas—Review for Compliance with Regulations.	12/29/12	Except: 173–400–113(3), second sentence.
173–400–118	Designation of Class I, II, and III Areas	12/29/12.	
173–400–151	Retrofit Requirements for Visibility Protection	2/10/05.	
173–400–171*	Public Notice and Opportunity for Public Comment.	12/29/12	Except: The part of 173–400–171(3)(b) that says, • ''or any increase in emissions of a toxic air pollutant above the acceptable source impact level for that toxic air pollutant as regulated under chapter 173–460 WAC''; 173–400–171(12).
173–400–175	Public Information	2/10/05.	
173–400–200	Creditable Stack Height and Dispersion Techniques.	2/10/05.	

TABLE 1—WASHINGTON STATE DEPARTMENT OF ECOLOGY REGULATIONS FOR PROPOSED APPROVAL—Continued

State citation	Title/subject	State effective date	Explanation
173–400–560 *	General Order of Approval	12/29/12	Except: The part of 173–400–560(1)(f) that says, • ''173–460 WAC''.

B. Rules To Remove From the SIP

For the reasons discussed in section H above, the EPA is proposing to remove from the SIP 173–400–100 WAC, originally adopted September 20, 1993, and which has since been revised.

C. Rules on Which No Action Is Taken

As previously discussed, the EPA intends to evaluate and propose a determination on the major source permitting programs, major NNSR and PSD, in separate actions. Table 2 lists the rules upon which the EPA is taking no action at this time.

TABLE 2—WASHINGTON STATE DEPARTMENT OF ECOLOGY REGULATIONS UPON WHICH THE EPA IS TAKING NO ACTION AT THIS TIME

State citation	Title/subject
173–400–116	Increment Protection.
173–400–117	Special Protection Requirements for Federal Class I Areas.
173–400–131	Issuance of Emission Reduction Credits.
173–400–136	Use of Emission Reduction Credits (ERC).
173–400–700	Review of Major Stationary Sources of Air Pollution.
173–400–710	Definitions.
173–400–720	Prevention of Significant Deterioration (PSD).
173–400–730	Prevention of Significant Deterioration Application Processing Procedures.
173–400–740	PSD Permitting Public Involvement Requirements.
173–400–750	Revisions to PSD Permits.
173–400–800	Major Stationary Source and Major Modification in a Nonattainment Area.
173–400–810	Major Stationary Source and Major Modification Definitions
173–400–820	Determining if a New Stationary Source or Modification to a Stationary Source is Subject to these Requirements.
173–400–830	Permitting Requirements.
173–400–840	Emission Offset Requirements.
173–400–850	Actual Emissions Plantwide Applicability Limitation (PAL).
173–400–860	Public Involvement Procedures.

In addition, as discussed above, the EPA's proposed approval of WAC 173–400–110 through 113, –036, –560, and –171 in this **Federal Register** publication is not a determination that these revised regulations meet requirements for approval under the EPA's regulations for SIP-approved PSD permitting programs (40 CFR 51.166) or SIP- approved major NNSR permitting programs (40 CFR 51.165). The EPA will evaluate WAC 173–400–110 through 113, –036, –560, and –171 for consistency with the requirements for major NSR permitting programs and visibility in a separate action.

D. Scope of Proposed Action

As previously discussed with respect to WAC 173–400–020, *Applicability,* the EPA's proposed approval for this action is limited to only those counties or sources where the Department of Ecology has direct jurisdiction. This proposed action excludes sources subject to EFSEC or local clean air agency jurisdiction. The counties where Ecology has direct jurisdiction are: Adams, Asotin, Chelan, Columbia, Douglas, Ferry, Franklin, Garfield, Grant, Kittitas, Klickitat, Lincoln, Okanogan, Pend Oreille, San Juan, Stevens, Walla Walla, and Whitman counties. The EPA also notes that under the SIP approved provisions of WAC 173–405–012, WAC 173–410–012, and WAC 173–415–012, Ecology has statewide, direct jurisdiction for kraft pulp mills, sulfite pulping mills, and primary aluminum plants.

V. Statutory and Executive Order Reviews

Under the CAA, the Administrator is required to approve a SIP submission that complies with the provisions of the Act and applicable Federal regulations. 42 U.S.C. 7410(k); 40 CFR 52.02(a). Thus, in reviewing SIP submissions, the EPA's role is to approve state choices, provided that they meet the criteria of the CAA. Accordingly, this proposed action merely approves the state's law as meeting Federal requirements and does not impose additional requirements beyond those imposed by the state's law. For that reason, this proposed action:

- Is not a ''significant regulatory action'' subject to review by the Office of Management and Budget under Executive Order 12866 (58 FR 51735, October 4, 1993);
- does not impose an information collection burden under the provisions of the Paperwork Reduction Act (44 U.S.C. 3501 *et seq.*);
- is certified as not having a significant economic impact on a substantial number of small entities under the Regulatory Flexibility Act (5 U.S.C. 601 *et seq.*);
- does not contain any unfunded mandate or significantly or uniquely affect small governments, as described in the Unfunded Mandates Reform Act of 1995 (Pub. L. 104–4);
- does not have Federalism implications as specified in Executive Order 13132 (64 FR 43255, August 10, 1999);

• is not an economically significant regulatory action based on health or safety risks subject to Executive Order 13045 (62 FR 19885, April 23, 1997);

• is not a significant regulatory action subject to Executive Order 13211 (66 FR 28355, May 22, 2001);

• is not subject to the requirements of Section 12(d) of the National Technology Transfer and Advancement Act of 1995 (15 U.S.C. 272 note) because this action does not involve technical standards; and

• does not provide the EPA with the discretionary authority to address, as appropriate, disproportionate human health or environmental effects, using practicable and legally permissible methods, under Executive Order 12898 (59 FR 7629, February 16, 1994).

In addition, this rule does not have tribal implications as specified by Executive Order 13175 (65 FR 67249, November 9, 2000), because it will not impose substantial direct costs on tribal governments or preempt tribal law. The SIP is not approved to apply in Indian country located in the state, except for non-trust land within the exterior boundaries of the Puyallup Indian Reservation, also known as the 1873 Survey Area. Under the Puyallup Tribe of Indians Settlement Act of 1989, 25 U.S.C. 1773, Congress explicitly provided state and local agencies in Washington authority over activities on non-trust lands within the 1873 Survey Area and the EPA is therefore approving this SIP on such lands. Consistent with EPA policy, the EPA nonetheless provided a consultation opportunity to the Puyallup Tribe in a letter dated February 25, 2014. The EPA did not receive a request for consultation.

List of Subjects in 40 CFR Part 52

Environmental protection, Air pollution control, Carbon monoxide, Incorporation by reference, Intergovernmental relations, Lead, Nitrogen dioxide, Ozone, Particulate matter, Reporting and recordkeeping requirements, Sulfur oxides, Volatile organic compounds.

Dated: June 26, 2014.

Dennis J. McLerran,

Regional Administrator, Region 10.

[FR Doc. 2014–16141 Filed 7–9–14; 8:45 am]

BILLING CODE 6560–50–P

ENVIRONMENTAL PROTECTION AGENCY

40 CFR Part 62

[EPA–R03–OAR–2013–0475; FRL–9913–31-Region 3]

Approval and Promulgation of State Air Quality Plans for Designated Facilities and Pollutants; Delaware, District of Columbia, and West Virginia; Control of Emissions From Existing Sewage Sludge Incinerator Units

AGENCY: The Environmental Protection Agency (EPA).

ACTION: Proposed rule.

SUMMARY: The Environmental Protection Agency (EPA) is proposing to approve Clean Air Act (CAA) negative declarations for the State of Delaware, the District of Columbia, and the State of West Virginia for existing sewage sludge incinerator (SSI) units. These negative declarations certify that SSI units subject to the requirements of sections 111(d) and 129 of the CAA do not exist within the jurisdictional boundaries of the Delaware Department of Natural Resources and Environmental Control (DNREC), the District Department of the Environment (DDOE), and the West Virginia Department of Environmental Protection (WVDEP).

DATES: Comments must be received in writing by August 11, 2014.

ADDRESSES: Submit your comments, identified by Docket ID Number EPA–R03–OAR–2013–0475 by one of the following methods:

A. *www.regulations.gov.* Follow the on-line instructions for submitting comments.

B. Email: *rehn.brian@epa.gov.*

C. Mail: EPA–R03–OAR–2013–0475, Brian Rehn, Acting Associate Director, Office of Permits and Air Toxics, Mailcode 3AP10, U.S. Environmental Protection Agency, Region III, 1650 Arch Street, Philadelphia, Pennsylvania 19103.

D. Hand Delivery: At the previously-listed EPA Region III address. Such deliveries are only accepted during the Docket's normal hours of operation, and special arrangements should be made for deliveries of boxed information.

Instructions: Direct your comments to Docket ID No. EPA–R03–OAR–2013–0475. EPA's policy is that all comments received will be included in the public docket without change, and may be made available online at *www.regulations.gov,* including any personal information provided, unless the comment includes information claimed to be Confidential Business Information (CBI) or other information whose disclosure is restricted by statute. Do not submit information that you consider to be CBI or otherwise protected through *www.regulations.gov* or email. The *www.regulations.gov* Web site is an ''anonymous access'' system, which means EPA will not know your identity or contact information unless you provide it in the body of your comment. If you send an email comment directly to EPA without going through *www.regulations.gov,* your email address will be automatically captured and included as part of the comment that is placed in the public docket and made available on the Internet. If you submit an electronic comment, EPA recommends that you include your name and other contact information in the body of your comment and with any disk or CD–ROM you submit. If EPA cannot read your comment due to technical difficulties and cannot contact you for clarification, EPA may not be able to consider your comment. Electronic files should avoid the use of special characters, any form of encryption, and be free of any defects or viruses.

Docket: All documents in the electronic docket are listed in the *www.regulations.gov* index. Although listed in the index, some information is not publicly available, i.e., CBI or other information whose disclosure is restricted by statute. Certain other material, such as copyrighted material, is not placed on the Internet and will be publicly available only in hard copy form. Publicly available docket materials are available either electronically in *www.regulations.gov* or in hard copy during normal business hours at the Air Protection Division, U.S. Environmental Protection Agency, Region III, 1650 Arch Street, Philadelphia, Pennsylvania 19103. Copies of the submittals are available at the Delaware Department of Natural Resources and Environmental Control, 89 Kings Highway, P.O. Box 1401, Dover, Delaware 19903, the District of Columbia Department of the Environment, Air Quality Division, 1200 1st Street NE., Fifth Floor, Washington, DC 20002, and the West Virginia Department of Environmental Protection, Division of Air Quality, 601 57th Street SE., Charleston, West Virginia 25304.

FOR FURTHER INFORMATION CONTACT: Mike Gordon, (215) 814–2039, or by email at *gordon.mike@epa.gov.*

SUPPLEMENTARY INFORMATION: In the ''Rules and Regulations'' section of this **Federal Register**, the EPA is approving these negative declarations in a direct

final rule without prior proposal because the Agency views this as a noncontroversial submittal and anticipates no adverse comments. A detailed rationale for the approval is set forth in the direct final rule. If no adverse comments are received in response to this action, no further activity is contemplated. If EPA receives adverse comments, the direct final rule will be withdrawn and all public comments received will be addressed in a subsequent final rule based on this proposed rule. EPA will not institute a second comment period. Any parties interested in commenting on this action should do so at this time.

For further information regarding the negative declarations for SSI units submitted by DNREC, DDOE, and WVDEP, please see the information provided in the direct final action, with the same title, that is located in the ''Rules and Regulations'' section of this **Federal Register** publication.

Dated: June 11, 2014.

W.C. Early,

Acting.

[FR Doc. 2014–16032 Filed 7–9–14; 8:45 am]

BILLING CODE 6560–50–P

DEPARTMENT OF DEFENSE

GENERAL SERVICES ADMINISTRATION

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

48 CFR Part 15

[FAR Case 2013–012; Docket No. 2013–0012; Sequence No. 1]

RIN 9000–AM57

Federal Acquisition Regulation; Review and Justification of Pass-Through Contracts

AGENCY: Department of Defense (DoD), General Services Administration (GSA), and National Aeronautics and Space Administration (NASA).

ACTION: Proposed rule.

SUMMARY: DoD, GSA, and NASA are proposing to amend the Federal Acquisition Regulation (FAR) to implement section 802 of the National Defense Authorization Act of Fiscal Year 2013. This section provides additional requirements relative to the review and justification of Pass-Through contracts.

DATES: Interested parties should submit written comments to the Regulatory Secretariat at one of the addressees shown below on or before September 9, 2014 to be considered in the formation of the final rule.

ADDRESSES: Submit comments in response to FAR Case 2013–012 by any of the following methods:

- *Regulations.gov: http://www.regulations.gov.* Submit comments via the Federal eRulemaking portal by searching for ''FAR Case 2013–012''. Select the link ''Comment Now'' that corresponds with ''FAR Case 2013–012.'' Follow the instructions provided at the ''Comment Now'' screen. Please include your name, company name (if any), and ''FAR Case 2013–012'' on your attached document.
- *Fax:* 202–501–4067.
- *Mail:* General Services Administration, Regulatory Secretariat (MVCB), ATTN: Ms. Flowers, 1800 F Street NW., 2nd Floor, Washington, DC 20405.

Instructions: Please submit comments only and cite FAR Case 2013–012, in all correspondence related to this case. All comments received will be posted without change to *http://www.regulations.gov,* including any personal and/or business confidential information provided.

FOR FURTHER INFORMATION CONTACT: Mr. Edward N. Chambers, Procurement Analyst, at 202–501–3221, for clarification of content. For information pertaining to status or publication schedules, contact the Regulatory Secretariat at 202–501–4755. Please cite FAR Case 2013–012.

SUPPLEMENTARY INFORMATION:

I. Background

The National Defense Authorization Act (NDAA) for Fiscal Year 2013 was signed into law and effective on December 31, 2012. Section 802 of the law provides additional requirements relative to the review and justification of Pass-Through contracts. Specifically, this law requires in those instances where an offeror for a contract, task order, or delivery order informs the agency pursuant to FAR 52.215–22 of their intention to award subcontracts for more than 70 percent of the total cost of work to be performed under the contract, task order, or delivery order, the contracting officer is required to (1) consider the availability of alternative contract vehicles and the feasibility of contracting directly with a subcontractor or subcontractors that will perform the bulk of the work; (2) make a written determination that the contracting approach selected is in the best interest of the Government; and (3) document the basis for such determination. Therefore, FAR 15.404–1(h) is being created by this rule to implement these statutory requirements.

However, Section 1615 of the NDAA for Fiscal Year 2014, which was signed into law and effective on December 26, 2013, provides that for contracts under the provisions of Section 46 of the Small Business Act (15 U.S.C. 657s) the requirements under Section 802 of the NDAA for Fiscal Year 2013 do not apply. Accordingly, the proposed rule exempts FAR Part 19 acquisitions.

While Section 802 only applies to contracts with the Department of Defense, the Department of State, and the United States Agency for International Development, for the purpose of consistency, it was decided to apply the section's requirements to all of the agencies subject to the FAR.

II. Executive Orders 12866 and 13563

Executive Orders (E.O.s) 12866 and 13563 direct agencies to assess all costs and benefits of available regulatory alternatives and, if regulation is necessary, to select regulatory approaches that maximize net benefits (including potential economic, environmental, public health and safety effects, distributive impacts, and equity). E.O. 13563 emphasizes the importance of quantifying both costs and benefits, of reducing costs, of harmonizing rules, and of promoting flexibility. This is a significant regulatory action and, therefore, was subject to review under section 6(b) of E.O. 12866, Regulatory Planning and Review, dated September 30, 1993. This rule is not a major rule under 5 U.S.C. 804.

III. Regulatory Flexibility Act

DoD, GSA, and NASA do not expect this proposed rule to have a significant economic impact on a substantial number of small entities within the meaning of the Regulatory Flexibility Act, 5 U.S.C. 601, *et seq.*, because the rule augments the current responsibilities of contracting officers relative to the review and justification of pass-through contracts and does not initiate or impose any new administrative or performance requirements on contractors.

Therefore, an Initial Regulatory Flexibility Analysis has not been performed. DoD, GSA, and NASA invite comments from small business entities concerns and other interested parties on the expected impact of this rule on small entities.

DoD, GSA, and NASA will also consider comments from small entities concerning the existing regulations in subparts affected by the rule consistent with 5 U.S.C. 610. Interested parties

must submit such comments separately and should cite 5 U.S.C. 610, FAR Case 2013–012, in correspondence.

IV. Paperwork Reduction Act

This rule does not contain any information collection requirements that require the approval of the Office of Management and Budget under the Paperwork Reduction Act (44 U.S.C chapter 35).

List of Subjects in 48 CFR Part 15

Government procurement.

Dated: July 2, 2014.

William Clark,

Acting Director, Office of Government-wide Acquisition Policy, Office of Acquisition Policy, Office of Government-wide Policy.

Therefore, DoD, GSA, and NASA propose to amend 48 CFR part 15 as set forth below:

PART 15—CONTRACTING BY NEGOTIATION

■ 1. The authority citation for 48 CFR part 15 continues to read as follows:

Authority: 40 U.S.C. 121(c); 10 U.S.C. chapter 137; and 51 U.S.C. 20113.

■ 2. Amend section 15.404–1 by adding paragraph (h) to read as follows.

§ 15.404–1 Proposal analysis techniques.

* * * * *

(h) *Review and justification of pass-through contracts.* (1) The requirements of this paragraph (h) are applicable to all agencies. The requirements apply by law to the Department of Defense, the Department of State, and the United States Agency for International Development, per Section 802 of the National Defense Authorization Act (NDAA) for Fiscal Year 2013. The requirements apply as a matter of policy to other Federal agencies.

(2) Except as provided in paragraph (h)(3) of this section, when an offeror for a contract or a task or delivery order informs the contracting officer pursuant to 52.215–22 that it intends to award subcontracts for more than 70 percent of the total cost of work to be performed under the contract, task or delivery order, the contracting officer shall—

(i) Consider the availability of alternative contract vehicles and the feasibility of contracting directly with a subcontractor or subcontractors that will perform the bulk of the work;

(ii) Make a written determination that the contracting approach selected is in the best interest of the Government; and

(iii) Document the basis for such determination.

(3) Contract actions under FAR Part 19 are exempt from the requirements of this paragraph (h).

[FR Doc. 2014–16149 Filed 7–9–14; 8:45 am]

BILLING CODE 6820–14–P

DEPARTMENT OF TRANSPORTATION

National Highway Traffic Safety Administration

49 CFR Part 571

[Docket No. NHTSA–2014–0080]

Federal Motor Vehicle Safety Standards; Rear Impact Guards, Rear Impact Protection

AGENCY: National Highway Traffic Safety Administration (NHTSA), Department of Transportation.

ACTION: Grant of petition for rulemaking.

SUMMARY: By initiating rulemaking to consider enhancing related safety standards, this notice grants the part of the petition for rulemaking submitted by Ms. Marianne Karth and the Truck Safety Coalition (Petitioners) requesting that the agency improve the safety of rear impact (underride) guards on trailers and single unit trucks. Based on the petition, available information, and the agency's analysis in progress, NHTSA has decided that the Petitioners' request related to rear impact guards merits further consideration. Therefore, the agency grants the Petitioners' request to initiate rulemaking on rear impact guards. NHTSA is planning on issuing two separate notices—an advanced notice of proposed rulemaking pertaining to rear impact guards and other safety strategies for single unit trucks, and a notice of proposed rulemaking focusing on rear impact guards on trailers and semitrailers. NHTSA is still evaluating the Petitioners' request to improve side guards and front override guards and will issue a separate decision on those aspects of the petition at a later date.

DATES: The Petitioners' request to initiate rulemaking on rear impact guards on trailers and single unit trucks is granted on July 10, 2014.

FOR FURTHER INFORMATION CONTACT:

For non-legal issues: Mr. Robert Mazurowski, Office of Crashworthiness Standards, National Highway Traffic Safety Administration, 1200 New Jersey Avenue SE., Washington, DC 20590 (202–366–1012). Mr. Mazurowski's fax number is: (202) 493–2990.

For legal issues: Mr. Ryan Hagen, Office of the Chief Counsel, National Highway Traffic Safety Administration, 1200 New Jersey Avenue SE., Washington, DC 20590 (202–366–2992). Mr. Hagen's fax number is: (202) 366–3820.

Background and Summary of Petition

On September 12, 2013, Ms. Karth and members of the Truck Safety Coalition (Petitioners) met with the Secretary of Transportation to discuss their petition for rulemaking on truck safety issues. The Petitioners requested a standard requiring improved underride guards be issued, and that the Department of Transportation begin studies and rulemakings for side guards and front override guards.

In additional correspondence from the Petitioners to the Department of Transportation following the meeting, the Petitioners stated that if the Federal motor vehicle safety standards (FMVSSs) for rear underride guards were amended to be equivalent to Canadian motor vehicle safety standards, injuries and fatalities could be avoided. Moreover, the Petitioners stated that all trucks and trailers should be required to be equipped with energy absorbing rear impact guards mounted 16 inches from the ground with vertical supports mounted 18 inches from the side edges.

On May 5, 2014, the Petitioners presented the Secretary of Transportation with more than 11,000 identical petitions from members of the public, again requesting the initiation of a rulemaking on rear impact guards. In particular, the Petitioners requested that the Department adopt a requirement for improved rear impact guards and that the Department begin the process of improving side guards and front override guards.[1]

Documents exchanged between the Petitioners and NHTSA in regard to this petition can be found at *http://www.regulations.gov* by entering docket number NHTSA–2014–0063.

Agency Analysis and Decision

The aspects of the petition that fall within NHTSA's authority relate to U.S. rear impact guards, side guards, and front override guards.[2] NHTSA is

[1] In their petition, the Petitioners also requested that the Department raise the minimum insurance liability limits that truck drivers are required to carry and take certain actions to improve enforcement of hours of service limits and reduce truck driver fatigue, both of which are actions under the jurisdiction of the Federal Motor Carrier Safety Administration (FMCSA), not NHTSA. Consequently, these two requests are not addressed in this notice, which is not intended to either grant or deny the petitioners request on these two actions.

[2] We note that the Insurance Institute for Highway Safety and the National Transportation Safety Board requested some of the same amendments to rear impact guards as the Petitioners.

granting the Petitioners' request with respect to rear impact guards and will initiate rulemakings on this issue. NHTSA is still evaluating the Petitioners' request to improve side guards and front override guards and will issue a separate decision on those aspects of the petitions at a later date.

The standards for rear impact protection that NHTSA will consider in its rulemaking are FMVSS No. 223, *Rear Impact Guards,* and FMVSS No. 224, *Rear Impact Protection.*[3] FMVSS No. 223 specifies equipment requirements for rear impact guards for trailers and semitrailers. FMVSS No. 224 specifies requirements for the installation of rear impact guards for trailers and semitrailers.

The major difference between the Canadian motor vehicle safety standard for rear impact protection (No. 223) on trailers and the relevant FMVSSs is that Canadian underride guards are required to meet higher strength and energy absorption requirements than U.S. underride guards.

As part of its analysis of the petition, NHTSA reviewed recent research it conducted on rear impact protection and rear underride occurrences. Specifically, NHTSA considered a 2013 University of Michigan Transportation Research Institute (UMTRI) report, a 2012 UMTRI report, a 2011 Insurance Institute for Highway Safety report on rear impact protection, and a 2002 Transport Canada report. The data and analysis in these reports indicate that amending the FMVSSs pertaining to rear impact protection could potentially improve the safety of light duty vehicles underriding trailers in rear end crashes.

As part of its rulemaking effort, NHTSA will take into account currently available data and seek additional information from the public, including Canadian officials. The agency plans to pursue rulemaking through two separate notices on distinct applications of rear impact protection. The first notice would be an advanced notice of proposed rulemaking pertaining to rear impact guards for single unit trucks and other safety strategies not currently applicable to single unit trucks. The second notice would be a notice of proposed rulemaking focusing on rear impact guards for trailers and semitrailers.

The agency notes that its granting of the petition submitted by Ms. Karth and the Truck Safety Coalition does not prejudge the outcome of the rulemaking or necessarily mean that a final rule will be issued. The determination of whether to issue a rule will be made after study of the requested action and the various alternatives in the course of the rulemaking proceeding, in accordance with statutory criteria.

Authority: 49 U.S.C. 322, 30111, 30115, 30117 and 30162, 30166; delegation of authority at 49 CFR 1.95, 49 CFR Part 552.

David M. Hines,

Acting Associate Administrator for Rulemaking.

[FR Doc. 2014–16018 Filed 7–9–14; 8:45 am]

BILLING CODE 4910–59–P

[3] 49 CFR 571.223; 571.224.

Notices

Federal Register
Vol. 79, No. 132
Thursday, July 10, 2014

This section of the FEDERAL REGISTER contains documents other than rules or proposed rules that are applicable to the public. Notices of hearings and investigations, committee meetings, agency decisions and rulings, delegations of authority, filing of petitions and applications and agency statements of organization and functions are examples of documents appearing in this section.

DEPARTMENT OF AGRICULTURE

Departmental Management; Public Meeting on Criteria for Eligibility for Participation in the BioPreferred® Program

AGENCY: Departmental Management, Office of Procurement and Property Management, USDA.

ACTION: Notice of public meeting.

SUMMARY: The Department of Agriculture (USDA) will hold a public meeting on August 1, 2014, beginning at 10:00 a.m. in Room 107A, Whitten Building and lasting until all comments are heard but not later than 5:00 p.m. for interested stakeholders to discuss the issue of incorporating previously excluded mature market products into the BioPreferred Program. USDA is seeking information from stakeholders on how to evaluate products for their eligibility to participate in the BioPreferred Program.

DATES: August 1, 2014.

Meeting Location: Room 107A, Whitten Building at the USDA, 1400 Independence Avenue SW., Washington, DC, 20024. Pre-registration for the meeting is not required but would be helpful, particularly if you wish to make a presentation. If you wish to register to attend please do so at this Web site: *http://www.biopreferred.gov* and state whether or not you wish to be recognized to make a formal presentation. The Whitten Building is located directly across from the USDA South Building, between 12th and 14th Streets, and Independence Avenue and Jefferson Drive. Enter through the Jefferson Drive entrance to the building. This is the entrance facing the National Mall.

Please have a driver's license or government issued Photo ID to present to building security. The nearest Metro station is ''Smithsonian,'' which is located at the Northeast corner of the South Building. Room 107–A is located on the first floor of the Whitten Building, adjacent to the large patio in the center of the building. Again, it is advisable that you register for the meeting even if you do not intend to speak as this approved list will be with the guards. Failure to register could result in your delayed entrance.

Those unable to attend the public meeting in person may listen to the meeting by calling 800–981–3173. The pass code is ''6557''. Participants using the audio bridge may submit questions or comments during the meeting via *biopreferred@usda.gov* or at a webinar address, the exact link of which will be sent to participants via email after registering.

FOR FURTHER INFORMATION CONTACT: Ron Buckhalt, BioPreferred Program Manager, Department of Agriculture, Office of Procurement and Property Management, Reporters Building, Room 361, 300 7th Street SW., Washington, DC 20024, (202) 205–4008 or via email at *RonB.Buckhalt@dm.usda.gov*.

SUPPLEMENTARY INFORMATION: Section 9002 of the Farm Security and Rural Investment Act of 2002 (Pub. L. 107–171) established a program for the procurement of USDA designated biobased products by Federal agencies and a voluntary program for the labeling of USDA Certified Biobased Products. USDA refers to the Federal procurement preference program and the voluntary labeling program together as the BioPreferred® Program. The Food, Conservation, and Energy Act of 2008 (2008 Farm Bill) (Pub. L. 110–246) and the Agricultural Act of 2014 (2014 Farm Bill) (Pub. L. 113–79) continued the BioPreferred Program and made changes to the procedures for its implementation.

The 2014 Farm Bill amends Section 9002 to include a directive that the BioPreferred Program shall ''promote biobased products, including forest products, that apply an innovative approach to growing, harvesting, sourcing, procuring, processing, manufacturing, or application of biobased products regardless of the date of entry into the marketplace.'' Thus, products that were previously considered to be mature market products (those that had a significant market share prior to 1972) and were ineligible for the BioPreferred Program, will now be included in the program if manufacturers demonstrate that they apply an ''innovative approach'' in the life cycle of their product. Working in conjunction with the USDA Forest Products Laboratory, as required by the 2014 Farm Bill (Section 9002(h)), USDA is developing a process to evaluate the eligibility of biobased products for the BioPreferred Program based on the use of ''innovative approaches'' within the life cycle of the products.

USDA is holding a public meeting to gather input from interested stakeholders on ''innovation.''

Dated: July 2, 2014.

Gregory L. Parham,

Assistant Secretary for Administration.

[FR Doc. 2014–16123 Filed 7–9–14; 8:45 am]

BILLING CODE 3410–93–P

DEPARTMENT OF AGRICULTURE

Forest Service

Black Hills Resource Advisory Committee Meeting

AGENCY: Forest Service, USDA.

ACTION: Notice of meeting.

SUMMARY: The Black Hills Resource Advisory Committee (RAC) will meet in Rapid City, South Dakota. The committee is authorized under the Secure Rural Schools and Community Self-Determination Act (the Act) and operates in compliance with the Federal Advisory Committee Act. The purpose of the committee is to improve collaborative relationships and to provide advice and recommendations to the Forest Service concerning projects and funding consistent with Title II of the Act. The meeting is open to the public. The purpose of the meeting is to accept new project proposals and recommend funding of project proposals for 2014.

DATES: The meeting will be held at 5:30 p.m. on July 24, 2014.

All RAC meetings are subject to cancellation. For status of meeting prior to attendance, please contact the person listed under **FOR FURTHER INFORMATION CONTACT**.

ADDRESSES: The meetings will be held at the Mystic Ranger District, 8221 South Highway 16, Rapid City, South Dakota.

Written comments may be submitted as described under **SUPPLEMENTARY INFORMATION**. All comments, including names and addresses when provided,

are placed in the record and are available for public inspection and copying. The public may inspect comments received at the Mystic Ranger District. Please call ahead to facilitate entry into the building.

FOR FURTHER INFORMATION CONTACT: Ruth Esperance, District Ranger, by phone at 605–343–1567 or via email at *resperance@fs.fed.us*.

Individuals who use telecommunication devices for the deaf (TDD) may call the Federal Information Relay Service (FIRS) at 1–800–877–8339 between 8:00 a.m. and 8:00 p.m., Eastern Standard Time, Monday through Friday.

SUPPLEMENTARY INFORMATION: Additional RAC information, including the meeting agenda and the meeting summary/minutes can be found at the following Web site: *http://www.fs.usda.gov/main/blackhills/workingtogether/advisorycommittees*. The agenda will include time for people to make oral statements of three minutes or less. Individuals wishing to make an oral statement should request in writing by July 14, 2014 to be scheduled on the agenda. Anyone who would like to bring related matters to the attention of the committee may file written statements with the committee staff before or after the meeting. Written comments and requests for time for oral comments must be sent to Ruth Esperance, District Ranger, 8221 South Highway 16, Rapid City, South Dakota, 57702; by email to *resperance@fs.fed.us,* or via facsimile to 605–343–7134.

Meeting Accommodations: If you are a person requiring reasonable accommodation, please make requests in advance for sign language interpreting, assistive listening devices or other reasonable accommodation for access to the facility or proceedings by contacting the person listed in the section titled **FOR FURTHER INFORMATION CONTACT**. All reasonable accommodation requests are managed on a case by case basis.

Dated: July 2, 2014

Dennis L. Jaeger,

Deputy Forest Supervisor.

[FR Doc. 2014–16145 Filed 7–9–14; 8:45 am]

BILLING CODE 3411–15–P

DEPARTMENT OF AGRICULTURE

Forest Service

Ketchikan Resource Advisory Committee

AGENCY: Forest Service, USDA.

ACTION: Notice of meeting.

SUMMARY: The Ketchikan Resource Advisory Committee (RAC) will meet in Ketchikan, Alaska. The committee is authorized under the Secure Rural Schools and Community Self-Determination Act (Pub. L. 110–343) (the Act) and operates in compliance with the Federal Advisory Committee Act. The purpose of the committee is to improve collaborative relationships and to provide advice and recommendations to the Forest Service concerning projects and funding consistent with Title II of the Act. The meeting is open to the public. The purpose of the meeting is to review current projects and recommend future projects.

DATES: The meeting will be held at 5:00 p.m. on August 12, 2014.

All RAC meetings are subject to cancellation. For status of meeting prior to attendance, please contact the person listed under **FOR FURTHER INFORMATION CONTACT.**

ADDRESSES: The meeting will be held at the Ketchikan Misty Fiords Ranger District, 3031 Tongass Avenue, Ketchikan, Alaska.

Written comments may be submitted as described under **SUPPLEMENTARY INFORMATION**. All comments, including names and addresses when provided, are placed in the record and are available for public inspection and copying. The public may inspect comments received at Ketchikan Misty Fiords Ranger District. Please call ahead to facilitate entry into the building.

FOR FURTHER INFORMATION CONTACT: Diane L. Daniels, RAC Coordinator, by phone at 907–228–4105 or via email at *ddaniels@fs.fed.us.*

Individuals who use telecommunication devices for the deaf (TDD) may call the Federal Information Relay Service (FIRS) at 1–800–877–8339 between 8:00 a.m. and 8:00 p.m., Eastern Standard Time, Monday through Friday. Please make requests in advance for sign language interpreting, assistive listening devices or other reasonable accommodation for access to the facility or proceedings by contacting the person listed above.

SUPPLEMENTARY INFORMATION: Additional RAC information, including the meeting agenda and the meeting summary/minutes can be found at the following Web site: *http://www.fs.usda.gov/tongass/*. The agenda will include time for people to make oral statements of three minutes or less. Individuals wishing to make an oral statement should request in writing by August 1, 2014 to be scheduled on the agenda. Anyone who would like to bring related matters to the attention of the committee may file written statements with the committee staff before or after the meeting. Written comments and requests for time for oral comments must be sent to Diane L. Daniels, RAC Coordinator, Ketchikan Misty Fiords Ranger District, 3031 Tongass Avenue, Ketchikan, AK 99901; by email to *ddaniels@fs.fed.us,* or via facsimile to 907–225–8738.

Meeting Accommodations: If you are a person requiring reasonable accommodation, please make requests in advance for sign language interpreting, assistive listening devices or other reasonable accommodation for access to the facility or proceedings by contacting the person listed in the section titled **FOR FURTHER INFORMATION CONTACT**. All reasonable accommodation requests are managed on a case by case basis.

Dated: June 30, 2014.

Jeffrey Defreest,

District Ranger.

[FR Doc. 2014–15982 Filed 7–9–14; 8:45 am]

BILLING CODE 3411–15–M

DEPARTMENT OF COMMERCE

Foreign-Trade Zones Board

[B–49–2013]

Foreign-Trade Zone 203—Moses Lake, Washington; Application for Reorganization (Expansion of Service Area) Under Alternative Site Framework

An application has been submitted to the Foreign-Trade Zones (FTZ) Board by the Port of Moses Lake Public Corporation, grantee of Foreign-Trade Zone 203, requesting authority to reorganize the zone to expand its service area under the alternative site framework (ASF) adopted by the FTZ Board (15 CFR 400.2(c)). The ASF is an option for grantees for the establishment or reorganization of zones and can permit significantly greater flexibility in the designation of new subzones or ''usage-driven'' FTZ sites for operators/users located within a grantee's ''service area'' in the context of the FTZ Board's standard 2,000-acre activation limit for a zone. The application was submitted pursuant to the Foreign-Trade Zones Act, as amended (19 U.S.C. 81a–81u), and the regulations of the FTZ Board (15 CFR part 400). It was formally docketed on July 3, 2014.

FTZ 203 was approved by the FTZ Board on October 18, 1994 (Board Order 702, 59 FR 54433, 10/31/1994) and reorganized under the ASF on 05/20/2011 (Board Order 1764 76 FR 31853, 06/01/2011). The zone project currently

has a service area that includes Benton, Chelan, Columbia, Douglas, Franklin, Grant, Kittitas, Lincoln and Walla Walla Counties, as well as portions of Okanogan and Yakima Counties, Washington.

The applicant is now requesting authority to expand the service area of the zone to include Adams County, Washington, as described in the application. If approved, the grantee would be able to serve sites throughout the expanded service area based on companies' needs for FTZ designation. The proposed expanded service area is adjacent to the Moses Lake, Washington U.S. Customs and Border Protection Ports of Entry.

In accordance with the FTZ Board's regulations, Christopher Kemp of the FTZ Staff is designated examiner to evaluate and analyze the facts and information presented in the application and case record and to report findings and recommendations to the FTZ Board.

Public comment is invited from interested parties. Submissions shall be addressed to the FTZ Board's Executive Secretary at the address below. The closing period for their receipt is September 8, 2014. Rebuttal comments in response to material submitted during the foregoing period may be submitted during the subsequent 15-day period to September 23, 2014.

A copy of the application will be available for public inspection at the Office of the Executive Secretary, Foreign-Trade Zones Board, Room 21013, U.S. Department of Commerce, 1401 Constitution Avenue NW., Washington, DC 20230–0002, and in the ''Reading Room'' section of the FTZ Board's Web site, which is accessible via *www.trade.gov/ftz.* For further information, contact Christopher Kemp at *Christopher.Kemp@trade.gov* or (202) 482–0862.

Dated: July 3, 2014.

Elizabeth Whiteman,

Acting Executive Secretary.

[FR Doc. 2014–16169 Filed 7–9–14; 8:45 am]

BILLING CODE 3510–DS–P

DEPARTMENT OF COMMERCE

Bureau of Industry and Security

Emerging Technology and Research Advisory Committee; Notice of Open Meeting

The Emerging Technology and Research Advisory Committee (ETRAC) will meet on August 1, 2014, 8:30 a.m., Room 6087B, at the Herbert C. Hoover Building, 14th Street between Pennsylvania and Constitution Avenues NW., Washington, DC. The Committee advises the Office of the Assistant Secretary for Export Administration on emerging technology and research activities, including those related to deemed exports.

Agenda

Friday, August 1

Open Session:

1. Welcome and Introductions
2. Opening Remarks by the Deputy Assistant Secretary for Export Administration
3. Status Report:
   —Export Control Classification Number Review
   —Recruitment for ETRAC members
   —Deemed export exemption proposal
4. Upcoming Emerging Technologies for review:
   —Synthetic biology
   —Genetic synthesis
   —Space security
   —Unmanned Aerial Vehicles
   —Fundamental research and public domain
   —Text mining
   —Additive manufacturing
   —Semiconductor Process Design Kits

The open session will be accessible via teleconference to 20 participants on a first come, first serve basis. To the conference, submit inquiries to Ms. Yvette Springer at *Yvette.Springer@bis.doc.gov*, no later than July 25, 2014.

A limited number of seats will be available for the public session. Reservations are not accepted. To the extent that time permits, members of the public may present oral statements to the Committee. The public may submit written statements at any time before or after the meeting. However, to facilitate the distribution of public presentation materials to the Committee members, the Committee suggests that presenters forward the public presentation materials prior to the meeting to Ms. Springer via email.

For more information, call Yvette Springer at (202) 482–2813.

Dated: July 3, 2014.

Yvette Springer,

Committee Liaison Officer.

[FR Doc. 2014–16116 Filed 7–9–14; 8:45 am]

BILLING CODE 3510–JT–P

DEPARTMENT OF COMMERCE

Bureau of Industry and Security

Materials Processing Equipment Technical Advisory Committee; Notice of Partially Closed Meeting

The Materials Processing Equipment Technical Advisory Committee (MPETAC) will meet on August 5, 2014, 9:00 a.m., Room 3884, in the Herbert C. Hoover Building, 14th Street between Pennsylvania and Constitution Avenues NW., Washington, DC. The Committee advises the Office of the Assistant Secretary for Export Administration with respect to technical questions that affect the level of export controls applicable to materials processing equipment and related technology.

Agenda

Open Session

1. Opening remarks and introductions.
2. Presentation of papers and comments by the Public.
3. Discussions on results from last, and proposals from last Wassenaar meeting.
4. Report on proposed and recently issued changes to the Export Administration Regulations.
5. Other business.

Closed Session

6. Discussion of matters determined to be exempt from the provisions relating to public meetings found in 5 U.S.C. app. 2 §§ 10(a)(1) and 10(a)(3).

The open session will be accessible via teleconference to 20 participants on a first come, first serve basis. To join the conference, submit inquiries to Ms. Yvette Springer at *Yvette.Springer@bis.doc.gov,* no later than July 29, 2014.

A limited number of seats will be available for the public session. Reservations are not accepted. To the extent that time permits, members of the public may present oral statements to the Committee. The public may submit written statements at any time before or after the meeting. However, to facilitate the distribution of public presentation materials to the Committee members, the Committee suggests that presenters forward the public presentation materials prior to the meeting to Ms. Springer via email.

The Assistant Secretary for Administration, with the concurrence of the delegate of the General Counsel, formally determined on January 27, 2014, pursuant to Section 10(d) of the Federal Advisory Committee Act, as amended (5 U.S.C. app. 2 § 10(d)), that the portion of the meeting dealing with matters the premature disclosure of which would be likely to frustrate significantly implementation of a proposed agency action as described in 5 U.S.C. 552b(c)(9)(B) shall be exempt from the provisions relating to public meetings found in 5 U.S.C. app. 2 §§ 10(a)(1) and 10(a)(3). The remaining portions of the meeting will be open to the public.

For more information, call Yvette Springer at (202) 482–2813.

Dated: July 3, 2014.

Yvette Springer,

Committee Liaison Officer.

[FR Doc. 2014–16117 Filed 7–9–14; 8:45 am]

BILLING CODE 3510–JT–P

DEPARTMENT OF COMMERCE

Bureau of Industry and Security

Emerging Technology and Research Advisory Committee (ETRAC); Notice of Recruitment of Private-Sector Members

SUMMARY: The Bureau of Industry and Security (BIS) is announcing a recruitment for new candidates to serve on the Emerging Technology and Research Advisory Committee (ETRAC) to advise the Department and other agency officials on: (a) The identification of emerging technologies and research and development activities that may be of interest from a BIS perspective; (b) the potential impact of Export Administration Regulations (EAR) on research activities; (c) technical and policy issues relating to controls under the EAR as a result of the Export Control Reform Initiative; (d) revisions of the Control List, including proposed revisions of multilateral controls in which the United States participates; (e) the issuance of regulations and (f) any other matters relating to actions designed to carry out the policy set forth in Section 3(2)(A) of the Export Administration Act.

The ETRAC will consist of experts drawn equally from academia, federal laboratories, and industry to ensure a comprehensive discussion of emerging technologies and research and development activities and their implications with regard to national and economic security. ETRAC members are appointed by the Secretary of Commerce and serve terms of not more than four consecutive years. The membership reflects the Department's commitment to attaining balance and diversity. ETRAC members must obtain secret-level clearance prior to appointment. These clearances are necessary so that members may be permitted access to the classified information needed to formulate recommendations to the Department of Commerce. The ETRAC will also reach out to other government and non-government experts to ensure a broad and thorough review of the issues. The ETRAC meets approximately four times per year. Members of the Committee will not be compensated for their services.

To respond to this recruitment notice, please send a copy of your resume to Ms. Yvette Springer at *Yvette.springer@bis.doc.gov.*

Deadline: This Notice of Recruitment will be open for one year from its date of publication in the **Federal Register**.

Dated: July 3, 2014.

Yvette Springer,

Committee Liaison Officer.

[FR Doc. 2014–16115 Filed 7–9–14; 8:45 am]

BILLING CODE 3510–JT–P

INTERNATIONAL TRADE COMMISSION

[USITC SE–14–024]

Government in the Sunshine Act Meeting Notice

AGENCY HOLDING THE MEETING: United States International Trade Commission.

TIME AND DATE: July 22, 2014 at 11:00 a.m.

PLACE: Room 101, 500 E Street SW., Washington, DC 20436, Telephone: (202) 205–2000.

STATUS: Open to the public.

MATTERS TO BE CONSIDERED:

1. Agendas for future meetings: None.
2. Minutes.
3. Ratification List.
4. Vote in Inv. Nos. 701–TA–522 and 731–TA–1258 (Preliminary) (Certain Passenger Vehicle and Light Truck Tires from China). The Commission is currently scheduled to complete and file its determinations on August 1, 2014; views of the Commission are currently scheduled to be completed and filed on August 5, 2014.
5. Vote in Inv. No. 731–TA–1145 (Review) (Steel Threaded Rod from China). The Commission is currently scheduled to complete and file its determination and views of the Commission on August 4, 2014.
6. Vote in Inv. No. 731–TA–1021 (Second Review) (Malleable Iron Pipe Fittings from China). The Commission is currently scheduled to complete and file its determination and views of the Commission on August 4, 2014.
7. Outstanding action jackets: None.

In accordance with Commission policy, subject matter listed above, not disposed of at the scheduled meeting, may be carried over to the agenda of the following meeting.

By order of the Commission.

Issued: July 8, 2014.

William R. Bishop,

Supervisory Hearings and Information Officer.

[FR Doc. 2014–16239 Filed 7–8–14; 4:15 pm]

BILLING CODE 7020–02–P

DEPARTMENT OF COMMERCE

National Oceanic and Atmospheric Administration

RIN 0648–XD362

Atlantic Highly Migratory Species Management-Based Research Needs and Priorities Document

AGENCY: National Marine Fisheries Service (NMFS), National Oceanic and Atmospheric Administration (NOAA), Commerce.

ACTION: Notice of availability; request for comments.

SUMMARY: NMFS announces the availability of the Atlantic Highly Migratory Species (HMS) Management-Based Research Needs and Priorities document. The purpose of this document is to communicate key research needs that directly support Atlantic HMS management. Atlantic HMS are defined as bluefin, bigeye, albacore, yellowfin, and skipjack tunas, swordfish, billfish (blue marlin, white marlin, roundscale spearfish, longbill spearfish, and sailfish), and sharks.

DATES: Written comments must be received by August 11, 2014.

ADDRESSES: Electronic copies of the Atlantic HMS Management-Based Research Needs and Priorities document may also be obtained on the Internet at: *http://www.nmfs.noaa.gov/sfa/hms/documents/hms_research_priorities_2014.pdf*.

You may submit comments on this document, identified by NOAA–NMFS–2014–0080, by any of the following methods:

- *Electronic Submission:* Submit all electronic public comments via the Federal e-Rulemaking Portal. Go to *www.regulations.gov/#!docketDetail;D=NOAA-NMFS-2014-0080,* click the ''Comment Now!'' icon, complete the required fields, and enter or attach your comments.
- *Mail:* Submit written comments to Margo Schulze-Haugen, NMFS/SF1, 1315 East-West Highway, National Marine Fisheries Service, SSMC3, Silver Spring, MD 20910.

Instructions: Comments sent by any other method, to any other address or individual, or received after the end of the comment period, may not be considered by NMFS. All comments received are a part of the public record and will generally be posted for public viewing on *www.regulations.gov* without change. All personal identifying information (e.g., name, address, etc.), confidential business information, or otherwise sensitive information

submitted voluntarily by the sender will be publicly accessible. NMFS will accept anonymous comments (enter ''N/A'' in the required fields if you wish to remain anonymous). Attachments to electronic comments will be accepted in Microsoft Word, Excel, or Adobe PDF file formats only.

FOR FURTHER INFORMATION CONTACT: Steve Durkee by phone at (202) 670–6637.

SUPPLEMENTARY INFORMATION: The Atlantic HMS Management-Based Research Needs and Priorities document was developed by the Highly Migratory Species (HMS) Management Division of NMFS to communicate key research needs that directly support Atlantic HMS management. Atlantic HMS are defined as bluefin, bigeye, albacore, yellowfin, and skipjack tunas, swordfish, billfish (blue marlin, white marlin, roundscale spearfish, longbill spearfish, and sailfish), and sharks. The document contains a list of near and long-term research needs and priorities that can be used by individuals and groups interested in Atlantic HMS to identify key research needs, improve management, reduce duplication, prioritize limited funding, and form a potential basis for future funding. The priorities range from biological/ecological needs to socio-economic needs.

The document is one of several efforts to highlight key research needs for HMS. One early effort, the HMS Research Plan, was developed by NMFS scientists across HMS disciplines in response to discussions at HMS Advisory Panel (AP) meetings. The HMS AP was interested in identifying specific research needs based upon known data gaps, however, the HMS AP felt that early versions of the HMS Research Plan needed more specificity with clear prioritization. Further revisions to that document are underway. This document complements the HMS Research Plan currently in draft and, although of different purpose, some aspects of the HMS Research Plan were included in this document. Other efforts are also underway in the Agency to identify key research needs relevant to Atlantic HMS management, such as the National Recreational Action Agenda and Regional Plans and the National Bycatch Reduction Engineering Program.

While some of the priorities were derived from stock assessment reviews, other priorities were identified while developing and proposing management measures. Many of the research priorities address key data gaps and/or ways to reduce fishing mortality and/or bycatch to more effectively manage HMS fisheries, either directly or by improving stock assessments. Because these needs were identified by fishery managers, these research priorities may not correspond directly with the research priorities and needs identified by the scientists throughout NMFS.

Ongoing survey and monitoring programs are not discussed unless there is a specific suggestion for expansion of an existing program. These survey and monitoring programs, which include but are not limited to shark nursery and essential fish habitat studies, fishery-independent surveys, and observer programs, are vital to stock assessments and effective HMS management. These ongoing survey and monitoring programs should be considered high priority.

Authority: 16 U.S.C. 971 *et seq.,* and 1801 *et seq.*

Dated: July 7, 2014.

Emily H. Menashes,

Acting Director, Office of Sustainable Fisheries, National Marine Fisheries Service.

[FR Doc. 2014–16168 Filed 7–9–14; 8:45 am]

BILLING CODE 3510–22–P

DEPARTMENT OF COMMERCE

National Oceanic and Atmospheric Administration

Science Advisory Board Meeting

AGENCY: Office of Oceanic and Atmospheric Research (OAR), National Oceanic and Atmospheric Administration (NOAA), Department of Commerce (DOC).

ACTION: Notice of open meeting.

SUMMARY: The Science Advisory Board (SAB) was established by a Decision Memorandum dated September 25, 1997, and is the only Federal Advisory Committee with responsibility to advise the Under Secretary of Commerce for Oceans and Atmosphere on strategies for research, education, and application of science to operations and information services. SAB activities and advice provide necessary input to ensure that National Oceanic and Atmospheric Administration (NOAA) science programs are of the highest quality and provide optimal support to resource management.

DATES: The meeting will be held Tuesday, July 29, 2014, from 10:30 a.m. to 5:30 p.m. MDT and Wednesday, July 30, 2014, from 8:30 a.m. to 1:15 p.m. MDT. These times and the agenda topics described below are subject to change. Please refer to the Web page *http://www.sab.noaa.gov/Meetings/meetings.html* for the most up-to-date meeting agenda.

ADDRESSES: The meeting will be held at the NOAA David Skaggs Research Center, 325 Broadway, Boulder, Colorado 80305. Please check the SAB Web site *http://www.sab.noaa.gov/Meetings/meetings.html* for directions to the meeting location.

FOR FURTHER INFORMATION CONTACT: Dr. Cynthia Decker, Executive Director, Science Advisory Board, NOAA, Rm. 11230, 1315 East-West Highway, Silver Spring, Maryland 20910. (Phone: 301–734–1156, Fax: 301–713–1459). Email: *Cynthia.Decker@noaa.gov;* or visit the NOAA SAB Web site at *http://www.sab.noaa.gov.*

SUPPLEMENTARY INFORMATION:

Status: The meeting will be open to public participation with a 15-minute public comment period on July 29 from 2:00–2:15 p.m. MDT (check Web site to confirm time). The SAB expects that public statements presented at its meetings will not be repetitive of previously submitted verbal or written statements. In general, each individual or group making a verbal presentation will be limited to a total time of two (2) minutes. Individuals or groups planning to make a verbal presentation should contact the SAB Executive Director by July 24, 2014, to schedule their presentation. Written comments should be received in the SAB Executive Director's Office by July 24, 2014, to provide sufficient time for SAB review. Written comments received by the SAB Executive Director after July 24, 2014, will be distributed to the SAB, but may not be reviewed prior to the meeting date. Seating at the meeting will be available on a first-come, first-served basis.

Special Accommodations: These meetings are physically accessible to people with disabilities. Requests for special accommodations may be directed no later than 12:00 p.m. on July 24, 2014, to Dr. Cynthia Decker, SAB Executive Director, SSMC3, Room 11230, 1315 East-West Hwy., Silver Spring, MD 20910; Email: *Cynthia.Decker@noaa.gov.*

Matters To Be Considered: The meeting will include the following topics: (1) Report on the Review of the Cooperative Institute for Meteorological Satellite Studies (CIMSS); (2) Report on the Review of the Joint Institute for the Study of the Atmosphere and the Ocean (JISAO); (3) Recommendations from the Gulf Coast Ecosystem Restoration Science Program Advisory Working Group (RSPAWG); (4) Overview of the Cooperative Institutes Review Process and Discussion of Review Criteria; (5)

NOAA Panel Discussion: A Retrospective Look at Two Colorado Flash Floods: Big Thompson 1976 and Front Range 2013; (6) NOAA Update; (7) Working Group Updates and (8) Science Presentations and Tours from NOAA programs in the David Skaggs Research Center.

Dated: July 1, 2014.

Jason Donaldson,

Chief Financial Officer, Office of Oceanic and Atmospheric Research, National Oceanic and Atmospheric Administration.

[FR Doc. 2014–16170 Filed 7–9–14; 8:45 am]

BILLING CODE 3510–KD–P

DEPARTMENT OF COMMERCE

National Oceanic and Atmospheric Administration

RIN 0648–XD123

Takes of Marine Mammals Incidental to Specified Activities; Taking Marine Mammals Incidental to San Nicolas Island Roads and Airfield Repairs Project

AGENCY: National Marine Fisheries Service (NMFS), National Oceanic and Atmospheric Administration (NOAA), Commerce.

ACTION: Notice; issuance of an incidental harassment authorization.

SUMMARY: In accordance with the Marine Mammal Protection Act (MMPA) regulations, notification is hereby given that NMFS has issued an Incidental Harassment Authorization (IHA) to the Department of the Navy (Navy), Naval Base Ventura County (NBVC), California, to take marine mammals, by harassment, incidental to the San Nicolas Island (SNI) roads and airfield repairs project.

DATES: Effective August 1, 2014, through November 30, 2014.

ADDRESSES: Electronic copies of the IHA, application, and associated Environmental Assessment (EA) and Finding of No Significant Impact (FONSI) may be obtained by writing to Jolie Harrison, Supervisor, Incidental Take Program, Permits and Conservation Division, Office of Protected Resources, National Marine Fisheries Service, 1315 East–West Highway, Silver Spring, MD 20910, telephoning the contact listed below (see **FOR FURTHER INFORMATION CONTACT**), or visiting the Internet at: *http://www.nmfs.noaa.gov/pr/permits/incidental.htm.* Documents cited in this notice may also be viewed, by appointment, during regular business hours, at the aforementioned address.

FOR FURTHER INFORMATION CONTACT: Candace Nachman, Office of Protected Resources, NMFS, (301) 427–8401.

SUPPLEMENTARY INFORMATION:

Background

Sections 101(a)(5)(A) and (D) of the MMPA (16 U.S.C. 1361 *et seq.*) direct the Secretary of Commerce to allow, upon request, the incidental, but not intentional, taking of small numbers of marine mammals by U.S. citizens who engage in a specified activity (other than commercial fishing) within a specified geographical region if certain findings are made and either regulations are issued or, if the taking is limited to harassment, a notice of a proposed authorization is provided to the public for review.

Authorization for incidental takings shall be granted if NMFS finds that the taking will have a negligible impact on the species or stock(s), will not have an unmitigable adverse impact on the availability of the species or stock(s) for subsistence uses (where relevant), and if the permissible methods of taking, other means of effecting the least practicable impact on the species or stock and its habitat, and requirements pertaining to the mitigation, monitoring and reporting of such takings are set forth. NMFS has defined ''negligible impact'' in 50 CFR 216.103 as ''. . . an impact resulting from the specified activity that cannot be reasonably expected to, and is not reasonably likely to, adversely affect the species or stock through effects on annual rates of recruitment or survival.''

Except with respect to certain activities not pertinent here, the MMPA defines ''harassment'' as: ''Any act of pursuit, torment, or annoyance which (i) has the potential to injure a marine mammal or marine mammal stock in the wild [Level A harassment]; or (ii) has the potential to disturb a marine mammal or marine mammal stock in the wild by causing disruption of behavioral patterns, including, but not limited to, migration, breathing, nursing, breeding, feeding, or sheltering [Level B harassment].''

Summary of Request

On October 23, 2013, we received an application from the Navy for the taking of marine mammals incidental to the SNI roads and airfield repairs project. NMFS determined that the application was adequate and complete on November 6, 2013.

The Navy proposes to repair roads and the airfield on SNI, California. The activity would occur from August 1 through November 30, 2014, with two separate deliveries of materials to the island during this time period. Each delivery requires approximately 5 days to complete. The following specific aspects of the activities are likely to result in the take of marine mammals: Barge beach landings, offloading, and removal and construction activities to prepare for barge landings. Take, by Level B harassment only, of northern elephant seal (*Mirounga angustirostris*), California sea lion (*Zalophus californianus*), and Pacific harbor seal (*Phoca vitulina richardsi*) is anticipated to result from the specified activity.

Description of the Specified Activity

Overview

NBVC plans to perform a maintenance and mission-critical infrastructure project at SNI to repair the roads and airfield. The proposed action would repair up to 12.45 mi of roads and culverts during two phases and one million ft^2 of airfield surface, shoulders, and culverts. The SNI roads and shoulder repairs will require approximately 43,500 tons of aggregate materials. Airfield repairs require approximately 151,500 tons of aggregate material. The required aggregate is not available on the island and must be delivered from the mainland. The pier at Daytona Beach is used for transfer of supplies to the island but is not designed to handle large volumes of heavy aggregate. The Navy, therefore, proposes to use barge beach landings on Daytona and Coast Guard Beaches for offloading materials and equipment needed to complete this maintenance and mission-critical infrastructure project. Aggregate would be shipped from the mainland U.S. to the off-shore area of SNI on a primary shipping barge (13,000-ton capacity). The aggregate would be transferred from the primary shipping barge to a smaller ''tender'' barge (2,000-ton capacity) that would land on the beach. Aggregate would be transferred from the shipping barge to the tender barge using a conveyor belt or loaders, then from the tender barge to dump trucks on shore using either loaders or conveyor belts. A typical barge landing operation includes: Re-grading the existing road from the beach; constructing a temporary ramp and berm on the beach; landing the barge; offloading the barge; removing the ramp and berm; and restoring the beach to its pre-barge landing condition.

The Navy identified the work as critical to maintaining mission readiness: The current degraded road is a safety concern for ordnance and operations transport; culvert repairs are necessary to reduce erosion and sedimentation; and mission-critical repairs are required at the SNI runway

that is currently degraded by sinkholes and surface deformations.

Dates and Duration

Up to four separate deliveries would occur each year for 5 years. One shipment of 13,000 tons of aggregate would require eight beach landings over 5 days (approximately two landings per day, 4 hours for each operation). Site preparation would take approximately 1 day, and the landings would occur over the remaining 4 days. Because both beaches are haul-out sites for California sea lions, Pacific harbor seals and northern elephant seals, beach landings would occur from August 1 through November 30, outside the breeding season, when these species are present only sporadically, and in lower numbers than in other times of the year.

This IHA is only for the period of August 1 through November 30, 2014. NBVC has submitted an application requesting regulations and a Letter of Authorization to cover these and other activities for a 5-year period. Table 1 outlines the proposed delivery schedule for this project.

TABLE 1—BARGE DELIVERY SUMMARY OVER THE 5-YEAR SPAN OF THE PROJECT

Project	Material required	# of primary shipping barge deliveries	Estimated delivery schedule	
Roads Repair (Phase I and Phase II)	43,500 tons	*3	Year 1	2 x 13,000 tons.
			Year 2	1 x 8,100 tons.
			Year 3	1 x 9,400 tons.
Airfield Repairs	151,500 tons	**12	Year 2	2 x 13,000 tons.
				1 x 4,900 tons.
			Year 3	3 x 13,000 tons.
				1 x 3,600 tons.
			Year 4	3 x 13,000 tons.
			Year 5	3 x 13,000 tons.

*Three primary barge shipments for roads repair include two full 13,000 ton shipments, and two co-mingled shipments, shared with airfield aggregate material (8,100 tons in Year 2 and 9,400 tons in Year 3).

**Twelve primary barge shipments for airfield repairs includes eleven full 13,000 ton shipments, and two co-mingled shipments shared with road repair aggregate material (4,900 tons in Year 2 and 3,600 tons in Year 3).

Specified Geographic Region

SNI is the outermost of eight Channel Islands off the coast of southern California, 63 nautical miles south-southwest of Laguna Point at NBVC Point Mugu and 75 nautical miles southwest of Los Angeles (see Figure 1 in the IHA application). SNI is owned by the Navy and is under the jurisdiction of NBVC. The island is approximately 9 mi long and 3.6 mi wide. Access to the island by the public is strictly controlled for security reasons and to safeguard against potential hazards associated with military operations. The main support and operational facilities on SNI include an airfield runway and terminal, housing and administration facilities, a power plant, a fuel farm, a reverse osmosis potable water system, and a public works and transportation department.

Daytona Beach is a wide sandy beach at the south end of SNI, the most sheltered part of the island (see Figure 1 in the IHA application). Water depth and soft bottom conditions off-shore support barge anchoring and beach landings. Beach Road is an all-weather paved access road that terminates at Daytona pier and a staging area. The equipment staging area is paved and equipped with electric light poles and adequate space for pier offloads. The staging area is enclosed by k-rails that would be temporarily moved to allow access to the beach-landed barge. The Navy has made barge beach landings at Daytona Beach many times in the past.

Coast Guard Beach is a sandy beach in a relatively sheltered part of the island at the east side of SNI, accessible by Beach Road (see Figure 1 in the IHA application). The Navy has used this site successfully in the past for barge deliveries. On Coast Guard Beach, there is approximately 300 ft from the access road to the high tide line. Coast Guard Beach has a gentler slope than Daytona Beach. The nearshore bottom is soft, and water depths of 2 to 5 ft are suitable for beach landings. Existing moorings in the area may potentially be used as anchorage points for the primary shipping barge. A short (0.1 mi) unpaved road that connects Coast Guard Beach to the proposed asphalt batch plant site would require re-grading to facilitate materials transport. To facilitate re-grading the access road, approximately 400 yd^3 of dirt would be used from the Former Borrow Pit, and additional material would be sourced from the Monroe Borrow Pit if necessary. A shallow surface scrape of six inches would occur across the Former Borrow Pit site to collect material for the access road. Re-grading would provide access widths from 30 to 12.5 ft wide and a smoother surface for hauling.

Detailed Description of Activities

The Notice of Proposed IHA (79 FR 10777, February 26, 2014) contains a full detailed description of the repair project, including descriptions of the steps in the delivery process. That information has not changed and is therefore not repeated here.

Comments and Responses

A Notice of Proposed IHA was published in the **Federal Register** on February 26, 2014 (79 FR 10777), for public comment. During the 30-day public comment period, NMFS received one letter from the Marine Mammal Commission. No other persons or organizations provided comments on the proposed issuance of an IHA for this activity. The Marine Mammal Commission recommended that NMFS issue the IHA, subject to inclusion of the proposed mitigation and monitoring measures. NMFS has included all of the mitigation and monitoring measures proposed in the Notice of Proposed IHA (79 FR 10777, February 26, 2014) in the issued IHA.

Description of Marine Mammals in the Area of the Specified Activity

Three species of pinnipeds occur regularly on SNI: northern elephant seal; California sea lion; and Pacific harbor seal. These species are protected under the MMPA and are not listed under the Endangered Species Act (ESA). These three species are expected in small numbers on Daytona and Coast Guard Beaches from August 1 through November 30. One northern fur seal

(*Callorhinus ursinus*) has been seen hauling out with a pup on SNI the past few years (G. Smith, Navy biologist, pers. comm.); however, the sightings are infrequent and not expected to occur within the activity area. Single individuals of Guadalupe fur seal (*Arctocephalus townsendi*) have been intermittently observed over the last few years hauled out along the southwest portion of SNI. Records indicate that they are not likely to occur on the eastern portion of SNI, where the activities would occur. Therefore, these two species are not considered further in this notice.

There are not expected to be any ''takes'' of cetaceans due to their rare occurrence in the inshore waters at SNI. Any cetaceans or marine mammals in the water surrounding barge landing areas would not be affected by the activities, since the distance from the project site precludes the potential for visual disturbance. A small translocated population of approximately 50 southern sea otters (*Enhydra lutris nereis*) occurs on SNI. This species is managed by the U.S. Fish and Wildlife Service and is not considered further in this IHA notice.

Table 2 in this document outlines the status, occurrence, seasonality, and abundance of the three marine mammal species most likely to occur in the project area. The Navy's IHA application contains additional detail on the presence and life history of these species. More information can also be found in the Notice of Proposed IHA (79 FR 10777, February 26, 2014) and the NMFS Stock Assessment Report available online at: *http://www.nmfs.noaa.gov/pr/sars/pdf/po2012.pdf.*

TABLE 2—ESA STATUS, OCCURRENCE, SEASONALITY IN THE PROJECT AREA, AND ABUNDANCE OF THE SPECIES MOST LIKELY TO OCCUR IN THE PROPOSED PROJECT AREA

Common name	Scientific name	Status	Occurrence	Seasonality	Abundance
Northern elephant seal	*Mirounga angustirostris*	NL	Common	Mostly December–mid-May	124,000
California sea lion	*Zalophus californianus*	NL	Common	Year round	296,750
Pacific harbor seal	*Phoca vitulina richardsi*	NL	Occasional to common	Mostly February–June	30,196

NL=Not listed under the ESA.

Potential Effects of the Specified Activity on Marine Mammals

This section includes a summary and discussion of the ways that the types of stressors associated with the specified activity (e.g., barge beach landings, offloading, and barge removal) have been observed to or are thought to impact marine mammals. This section may include a discussion of known effects that do not rise to the level of an MMPA take (for example, with acoustics, we may include a discussion of studies that showed animals not reacting at all to sound or exhibiting barely measurable avoidance). The discussion may also include reactions that we consider to rise to the level of a take and those that we do not consider to rise to the level of a take. This section is intended as a background of potential effects and does not consider either the specific manner in which this activity will be carried out or the mitigation that will be implemented or how either of those will shape the anticipated impacts from this specific activity. The ''Estimated Take by Incidental Harassment'' section later in this document will include a quantitative analysis of the number of individuals that are expected to be taken by this activity. The ''Negligible Impact Analysis'' section will include the analysis of how this specific activity will impact marine mammals and will consider the content of this section, the ''Estimated Take by Incidental Harassment'' section, the ''Proposed Mitigation'' section, and the ''Anticipated Effects on Marine Mammal Habitat'' section to draw conclusions regarding the likely impacts of this activity on the reproductive success or survivorship of individuals and from that on the affected marine mammal populations or stocks.

The majority of impacts are likely to occur from the presence of personnel and equipment during the proposed activities. Barge beach landings and associated construction could affect pinnipeds hauled out at Daytona and Coast Guard Beaches in two main ways:

1. Potential displacement of haul-out areas at the barge landing site; and

2. Potential impacts of sound associated with barge landing and construction.

Acoustic impacts, such as hearing impairment, are not anticipated, as equipment is located far enough away from pinnipeds that sound levels will not occur at injurious levels. In the ''Potential Effects of the Specified Activity on Marine Mammals'' section of the Notice of Proposed IHA (79 FR 10777, February 26, 2014), NMFS included a qualitative discussion of the different ways that the Navy's repairs project may potentially affect marine mammals. The information contained in that document has not changed. Please refer to the proposed IHA for the full discussion (79 FR 10777, February 26, 2014).

Anticipated Effects on Marine Mammal Habitat

No critical habitat exists in the area of the proposed activities. During the period of the activity, marine mammals may use various haul-outs around the barge landings and around SNI as places to rest and molt. The pinnipeds do not feed when hauled out. California sea lions and elephant seals displaced into water usually move down-beach and haul out farther away from activity, while harbor seals will most likely stay in the water (G. Smith, personal communication). Therefore, it is not expected that the barge activities will have any impact on the food or feeding success of the marine mammals. Although breeding occurs on SNI, the project dates have been planned to avoid the breeding/pupping season.

The sandy bottom would be disturbed offshore when the shipping barge dropped anchors and when the tender barge landed on the beach. Contact with the seafloor would temporarily increase turbidity, but no long-term adverse effects would result. Turbidity events would be limited to the duration of barge landing and offload.

The Navy anticipates and NMFS agrees that there will be no loss or permanent modification of the habitat used by marine mammal populations that haulout in the barge landing areas. Temporary sand ramps would be constructed at Daytona and Coast Guard beaches to allow for transfer of material from the barge to dump trucks on the beach. Additionally, two tractors would be positioned on either side of the landing area before the tender barge arrives to provide stable anchorage for the tender barge. The area of the temporary sand ramps would be re-shaped on completion of each shipping barge offload, at the end of the 5 day period. Disturbance to marine mammal

habitat would be only temporary. Because impacts are anticipated to be temporary, such that conditions will return to pre-activity conditions in a short amount of time, and food sources will not be impacted, the activity is not expected to cause significant or long-term consequences for individual marine mammals or their populations.

Mitigation

In order to issue an incidental take authorization (ITA) under section 101(a)(5)(D) of the MMPA, NMFS must set forth the permissible methods of taking pursuant to such activity, and other means of effecting the least practicable impact on such species or stock and its habitat, paying particular attention to rookeries, mating grounds, and areas of similar significance, and on the availability of such species or stock for taking for certain subsistence uses (where relevant). This section summarizes the required mitigation measures contained in the IHA.

Mitigation Measures in the Navy's Application

In the IHA application, the Navy described a variety of measures, which are designed to reduce the level of disturbance for marine mammals that might be hauled out near the proposed barge landing sites. Additionally, all operations will be coordinated with the NBVC Point Mugu Environmental Division. The mitigation measures include:

- All construction activity will take place within the proposed action footprint. Contractors will be provided with maps showing the centerlines and limits of surveys that were used for the environmental analyses in the final EA prepared by the Navy for this project (U.S. Navy, 2012) and informed that construction activity shall be confined to those corridors. Stakes will be used to delineate heavy equipment work and driving zones. Maps will include the locations of U.S. Army Corps of Engineers jurisdictional waters.
- All construction personnel must attend a mandatory environmental briefing at the start of the work day for work to be performed in sensitive habitats, and personnel attendance must be documented. For work in non-sensitive habitats, environmental briefings will occur weekly or as needed. Federal regulations regarding protected biological species must be emphasized, along with the importance of honoring environmental closure areas. The Environmental briefing would be given by Naval Facilities Engineering Command (NAVFAC) Southwest and NBVC personnel or the project biologist before work begins. If the training is given by the project biologist, then NAVFAC Southwest or NBVC staff would brief the project biologist, and the biologist would brief the crew on the resources and avoidance and compensation measures involved in the project. Environmental training will include a description of sensitive species and habitats potentially on or near the project site, and the surrounding habitat; details on each species' habitat requirements; the protective measures to be implemented for each species; and the responsibilities of the project biologist and of those on site to protect biological resources. The training will describe the requirements and boundaries of the project, the importance of complying with compensation measures, and the requirements for reporting non-compliance and any resolution methods. Training will provide information on and legal consequences of the potential effects of trash, trespassing, and harassing or harming designated sensitive habitat areas and species in or outside of the project footprint.
- Construction equipment will be inspected before mobilization to ensure no pinnipeds are under or near equipment.
- During barge landings and offloadings, the Navy biologist or qualified project biologist will displace pinnipeds from the landing site as necessary for the safety of the marine mammals and construction workers. Temporary barriers will be used, if necessary, to keep the displaced pinnipeds from re-entering the area. This effort will greatly minimize the potential for pinnipeds to be affected by project activities.
- No oil, fuel, or chemicals will be allowed to discharged to waters of the state. Vessels will be equipped with spill kits and cleanup materials, and operators will be trained in responding to an accidental release of oil, fuel, or chemicals. Offloading equipment will be checked for leaks at the start of beach grading and aggregate offloading each day.
- Measures will be taken to prevent spillage of aggregate during the barge to barge transfer process. Measures may include, but are not limited to, the use of a tarp or other barrier between the two barges, to capture spillage.

Additional Mitigation Measures Required by NMFS

In addition to the mitigation measures contained in the Navy's IHA application, NMFS has required the following mitigation measures:

- Displacement must be conducted in such a way as to avoid stampedes. Approach of pinnipeds must be conducted gradually.
- Displacement or flushing of pinnipeds should be avoided, whenever possible, if dependent pups are present.
- The Navy will suspend activities immediately if an injured marine mammal is found in the vicinity of the activity area and the activities could aggravate its condition further. The incident must be reported to NMFS immediately.

Mitigation Conclusions

NMFS has carefully evaluated the Navy's proposed mitigation measures and considered a range of other measures in the context of ensuring that NMFS prescribes the means of effecting the least practicable impact on the affected marine mammal species and stocks and their habitat. Our evaluation of potential measures included consideration of the following factors in relation to one another:

- The manner in which, and the degree to which, the successful implementation of the measures are expected to minimize adverse impacts to marine mammals;
- The proven or likely efficacy of the specific measure to minimize adverse impacts as planned; and
- The practicability of the measure for applicant implementation.

Based on our evaluation of the applicant's proposed measures, as well as other measures considered by NMFS, NMFS has determined that the required mitigation measures provide the means of effecting the least practicable impact on marine mammals species or stocks and their habitat, paying particular attention to rookeries, mating grounds, and areas of similar significance.

Monitoring and Reporting

In order to issue an ITA for an activity, section 101(a)(5)(D) of the MMPA states that NMFS must set forth ''requirements pertaining to the monitoring and reporting of such taking''. The MMPA implementing regulations at 50 CFR 216.104(a)(13) indicate that requests for ITAs must include the suggested means of accomplishing the necessary monitoring and reporting that will result in increased knowledge of the species and of the level of taking or impacts on populations of marine mammals that are expected to be present in the proposed action area. The Navy submitted a marine mammal monitoring plan as part of the IHA application. It can be found in Sections X and XII of the application.

Monitoring Measures

The Navy biologist will monitor pinniped reactions to beach barge landings to ensure pinniped protection and project compliance with the MMPA, and to ensure no Level A take occurs. The project biologist will monitor heavy equipment operation on the beach, as needed, to ensure compliance with compensation measures and will keep the project engineer, NAVFAC Southwest, and NBVC informed about construction that may threaten significant biological resources. The project biologist will record activities daily and provide electronic versions of biological monitoring reports at least weekly to NAVFAC Southwest and NBVC. The project biologist will be available to monitor construction activities to ensure compliance with sensitive biological resource avoidance and minimization measures, including implementation of specific measures for protection of marine mammals. The biologist will: (1) Ensure impacts on sensitive resources are minimized; (2) educate workers about sensitive habitats and how to implement avoidance and minimization measures; and (3) attend road repair-related meetings as needed.

Additionally, the Navy will implement the following three objectives from the 2010 Integrated Natural Resources Management Plan for NVBC, San Nicolas Island, California (INRMP):

1. Continue to monitor marine mammal populations and evaluate interactions related to island activities.

2. Monitor and protect island-wide pinniped breeding and haul-out sites.

3. Maintain adaptive management strategies to address complex issues related to marine mammal resource conflicts and occurrence.

More information regarding the INRMP and these monitoring goals can be found in the Navy's IHA application (see **ADDRESSES**).

Reporting Measures

A draft final report must be submitted to NMFS Office of Protected Resources within 90 days after the conclusion of the project. The report will include a summary of the information gathered pursuant to the monitoring requirements set forth in the IHA. The report must also summarize the results of the activities, marine mammal behavioral observations, and the estimated number of marine mammal takes. A final report must be submitted to the Director of the NMFS Office of Protected Resources and to the NMFS West Coast Regional Administrator within 30 days after receiving comments from NMFS on the draft final report. If no comments are received from NMFS, the draft final report will be considered to be the final report.

The Navy must also immediately report to NMFS the sighting of any injured marine mammals found in the vicinity of the activity area and the activities could aggravate the animal's condition further. Activities cannot resume until notified by NMFS via email or telephone.

Estimated Take by Incidental Harassment

Except with respect to certain activities not pertinent here, the MMPA defines ''harassment'' as: any act of pursuit, torment, or annoyance which (i) has the potential to injure a marine mammal or marine mammal stock in the wild [Level A harassment]; or (ii) has the potential to disturb a marine mammal or marine mammal stock in the wild by causing disruption of behavioral patterns, including, but not limited to, migration, breathing, nursing, breeding, feeding, or sheltering [Level B harassment]. Only take by Level B behavioral harassment is anticipated as a result of the roads and airfield repairs project. The barge landing and materials offload could temporarily displace marine mammals from their onshore haulouts, resulting in their movement into the water or down-beach. During barge landings, marine mammals may avoid the project area and haul out at other beach areas.

The Navy requested authorization and NMFS has authorized the take, by Level B (behavioral) harassment only, of Pacific harbor seals, California sea lions, and northern elephant seals. The Navy's IHA application and the Notice of Proposed IHA (79 FR 10777, February 26, 2014) contain a full discussion of how the take estimates were derived. Nothing has changed from the proposed IHA; therefore, the discussion is not repeated here.

Based on the survey data collected in 2011 and the number of days of activities, the Navy estimates that no more than 50 harbor seal displacements will occur each day, with the potential for take to be higher in August and lower in November, when harbor seal numbers are very low on SNI (Stewart and Yochem, 1984). It is estimated that 75 sea lion displacements will occur each day, but haul-out numbers at Coast Guard Beach are intermittent in fall. It is estimated that 25 elephant seal displacements will occur each day, with numbers increasing in October and November. Estimates include displacements during site preparation and off-loading. These numbers will likely include the displacement of returning individuals, such as elephant seals that will likely move back into the hazard area and have to be displaced multiple times. Table 3 presents the numbers of authorized takes by Level B (behavioral) harassment, the abundance of the stocks, the percentage of the stock potentially affected, and the population trend for each species or stock.

TABLE 3—AUTHORIZED LEVEL B HARASSMENT TAKE LEVELS, SPECIES OR STOCK ABUNDANCE, PERCENTAGE OF POPULATION PROPOSED TO BE TAKEN, AND SPECIES TREND STATUS

Common species name	Authorized level B take	Abundance of stock	Percentage of stock potentially affected	Population trend
Northern elephant seal	250	124,000	0.2	Increasing.
California sea lion	750	296,750	0.3	Increasing.
Pacific harbor seal	500	30,196	1.7	Stable.

Analysis and Determinations

Negligible Impact

Negligible impact is ''an impact resulting from the specified activity that cannot be reasonably expected to, and is not reasonably likely to, adversely affect the species or stock through effects on annual rates of recruitment or survival'' (50 CFR 216.103). A negligible impact finding is based on the lack of likely adverse effects on annual rates of recruitment or survival (i.e., population-level effects). An estimate of the number of Level B harassment takes, alone, is not enough information on which to base an impact determination. In addition to considering estimates of the

number of marine mammals that might be ''taken'' through behavioral harassment, NMFS must consider other factors, such as the likely nature of any responses (their intensity, duration, etc.), the context of any responses (critical reproductive time or location, feeding, migration, etc.), as well as the number and nature of estimated Level A harassment takes, the number of estimated mortalities, and effects on habitat.

These activities are anticipated to result in Level B harassment of hauled out pinnipeds in the form of displacement or behavioral disturbance. These activities are not anticipated to result in injury, serious injury, or mortality of any marine mammal species and none is authorized. The activities would only occur twice in a 4-month period, and each time, activities would only occur for 5 consecutive days. Therefore, activities would only occur for 10 days between August 1 and November 30.

None of the species for which take is authorized are listed as threatened or endangered under the ESA or as depleted under the MMPA. No critical habitat exists for these species. While certain beaches and haulouts on SNI have been used for mating, breeding, and pupping, the project dates have been selected to avoid these sensitive time periods.

Based on the analysis contained herein of the likely effects of the specified activity on marine mammals and their habitat, and taking into consideration the implementation of the required monitoring and mitigation measures, NMFS finds that the total marine mammal take from the Navy's roads and airfield repairs project will have a negligible impact on the affected marine mammal species or stocks.

Small Numbers

Based on survey counts of marine mammals anticipated to be present at the two proposed activity sites and the number of times the activity would occur, the Navy estimates that a total of 750 California sea lions, 500 Pacific harbor seals, and 250 northern elephant seals may be taken by Level B (behavioral) harassment during the course of the activities. These estimates represent less than 1% of the California breeding stock of northern elephant seals and the U.S. stock of California sea lions and represents 1.7% of the California stock of Pacific harbor seals. These take estimates represent the percentage of each species or stock that could be taken by Level B behavioral harassment if each animal is taken only once. The numbers of marine mammals taken are small relative to the affected species or stock sizes. In addition, the mitigation and monitoring measures (described previously in this document) required in the IHA are expected to reduce even further any potential disturbance to marine mammals. NMFS finds that small numbers of marine mammals will be taken relative to the populations of the affected species or stocks.

Impact on Availability of Affected Species for Taking for Subsistence Uses

There are no relevant subsistence uses of marine mammals implicated by this action. Therefore, NMFS has determined that the total taking of affected species or stocks would not have an unmitigable adverse impact on the availability of such species or stocks for taking for subsistence purposes.

Endangered Species Act (ESA)

No species listed under the ESA are expected to be affected by these activities. Therefore, NMFS has determined that a section 7 consultation under the ESA is not required.

National Environmental Policy Act (NEPA)

In June 2012, the Navy prepared a final EA for the *San Nicolas Island Roads and Airfield Repairs Project Naval Base Ventura County, California.* This EA is available on our Web site (see **ADDRESSES**). In June 2014, NMFS prepared its own EA that includes an analysis of potential environmental effects associated with NMFS' issuance of an IHA to the Navy to take marine mammals incidental to conducting the SNI roads and airfield repairs project. NMFS has finalized the EA and prepared a FONSI for this action. Therefore, preparation of an Environmental Impact Statement is not necessary.

Authorization

As a result of these determinations, NMFS has issued an IHA to the Navy for the take of marine mammals incidental to conducting a road and airfield repairs project on SNI, California, from August 1 through November 30, 2014, provided the previously mentioned mitigation, monitoring, and reporting requirements are incorporated.

Dated: July 7, 2014.

Perry F. Gayaldo,

Deputy Director, Office of Protected Resources, National Marine Fisheries Service.

[FR Doc. 2014–16148 Filed 7–9–14; 8:45 am]

BILLING CODE 3510–22–P

DEPARTMENT OF EDUCATION

[Docket No. ED–2014–ICCD–0049]

Agency Information Collection Activities; Submission to the Office of Management and Budget for Review and Approval; Comment Request; Student Support Services Annual Performance Report

AGENCY: Office of Postsecondary Education (OPE), Department of Education (ED).

ACTION: Notice.

SUMMARY: In accordance with the Paperwork Reduction Act of 1995 (44 U.S.C. chapter 3501 *et seq.*), ED is proposing an extension of an existing information collection.

DATES: Interested persons are invited to submit comments on or before August 11, 2014.

ADDRESSES: Comments submitted in response to this notice should be submitted electronically through the Federal eRulemaking Portal at *http://www.regulations.gov* by selecting Docket ID number ED–2014–ICCD–0049 or via postal mail, commercial delivery, or hand delivery. If the regulations.gov site is not available to the public for any reason, ED will temporarily accept comments at *ICDocketMgr@ed.gov.* Please note that comments submitted by fax or email and those submitted after the comment period will not be accepted; ED will only accept comments during the comment period in this mailbox when the regulations.gov site is not available. Written requests for information or comments submitted by postal mail or delivery should be addressed to the Director of the Information Collection Clearance Division, U.S. Department of Education, 400 Maryland Avenue SW., LBJ, Mailstop L–OM–2–2E319, Room 2E103, Washington, DC 20202.

FOR FURTHER INFORMATION CONTACT: For specific questions related to collection activities, please contact Lavelle Wright, 202–502–7674.

SUPPLEMENTARY INFORMATION: The Department of Education (ED), in accordance with the Paperwork Reduction Act of 1995 (PRA) (44 U.S.C. 3506(c)(2)(A)), provides the general public and Federal agencies with an opportunity to comment on proposed, revised, and continuing collections of information. This helps the Department assess the impact of its information collection requirements and minimize the public's reporting burden. It also helps the public understand the Department's information collection requirements and provide the requested

data in the desired format. ED is soliciting comments on the proposed information collection request (ICR) that is described below. The Department of Education is especially interested in public comment addressing the following issues: (1) Is this collection necessary to the proper functions of the Department; (2) will this information be processed and used in a timely manner; (3) is the estimate of burden accurate; (4) how might the Department enhance the quality, utility, and clarity of the information to be collected; and (5) how might the Department minimize the burden of this collection on the respondents, including through the use of information technology. Please note that written comments received in response to this notice will be considered public records.

Title of Collection: Student Support Services Annual Performance Report.

OMB Control Number: 1840–0525.

Type of Review: An extension of an existing information collection.

Respondents/Affected Public: Private sector.

Total Estimated Number of Annual Responses: 1,027.

Total Estimated Number of Annual Burden Hours: 15,405.

Abstract: Student Support Services Program grantees must submit the report annually. The reports are used to evaluate grantees' performance, and to award prior experience points at the end of each project (budget) period. The Department also aggregates the data to provide descriptive information on the projects and to analyze the impact of the Student Support Services Program on the academic progress of participating students.

Dated: July 7, 2014.

Kate Mullan,

Acting Director, Information Collection Clearance Division, Privacy, Information and Records Management Services, Office of Management.

[FR Doc. 2014–16114 Filed 7–9–14; 8:45 am]

BILLING CODE 4000–01–P

DEPARTMENT OF EDUCATION

Applications for New Awards; Parent Information and Training Program

AGENCY: Office of Special Education and Rehabilitative Services, Department of Education

ACTION: Notice.

Overview Information

Rehabilitation Services Administration—Parent Information and Training Program.

Notice inviting applications for new awards for fiscal year (FY) 2014.

Catalog of Federal Domestic Assistance (CFDA) Number: 84.235F.

DATES:

Applications Available: July 10, 2014.

Date of Pre-Application Webinar: July 15, 2014.

Deadline for Transmittal of Applications: August 11, 2014.

Full Text of Announcement

I. Funding Opportunity Description

Purpose of Program: The Parent Information and Training Program is designed to support projects that provide training and information to enable individuals with disabilities, and the parents, family members, guardians, advocates, or other authorized representatives of the individuals (hereafter collectively referred to as ''individuals with disabilities and their families''), to participate more effectively with professionals in meeting the vocational, independent living, and rehabilitation needs of individuals with disabilities. These grants are designed to meet the unique training and information needs of those individuals who live in the area to be served, particularly those who are members of populations that have been unserved or underserved by programs under the Rehabilitation Act of 1973, as amended (Rehabilitation Act).

Priority: In accordance with 34 CFR 75.105(b)(2)(v), this priority is from allowable activities specified in the statute (see section 303(c)(2) of the Rehabilitation Act (29 U.S.C. 773(c)(2))).

Absolute Priority: For FY 2014 and any subsequent year in which we make awards from the list of unfunded applicants from this competition, this priority is an absolute priority. Under 34 CFR 75.105(c)(3) we consider only applications that meet this priority.

Background: The purpose of this competition is to fund six Parent Training and Information (PTI) centers to meet the information and training needs of individuals with disabilities and their families, so that such individuals with disabilities can achieve their employment and independent living goals. The PTI centers will be distributed geographically to the extent possible throughout the country. They will be designed to meet the unique training and information needs of individuals with disabilities and their families who live in the area to be served, particularly those who are members of populations that have been unserved or underserved by other Rehabilitation Act programs. The centers will coordinate and work closely with the PTI centers established pursuant to section 671 of the Individuals with Disabilities Education Act (IDEA) and with centers for independent living.

The Department has funded PTI centers under IDEA for over 35 years. Research and experience has demonstrated that the education of youth with disabilities can be made more effective by strengthening parents' ability to participate fully in their children's education at school and at home. For example, research has found that trainings and programs, including those provided by the Office of Special Education Programs (OSEP), provide parents with much-needed information about how to monitor their children's progress, be productive members of the Individualized Education Program (IEP) team, and support their children's education at school (Newman, 2005).

In addition to the PTI centers funded under IDEA, the Department has funded PTI centers under the Rehabilitation Act since 1993. For individuals with disabilities and their families, particularly for youth of transition age, the need for information about transition, vocational rehabilitation (VR), independent living, and other adult services is very critical. The current Federal approach to assisting students with disabilities in transitioning to postsecondary education or the workforce necessitates that students and their parents navigate multiple programs and service systems in order to piece together the supports these students need to achieve maximum independence in adulthood. Under this complex structure, information dissemination and service coordination are essential (GAO, 2012).

Also, although families may be familiar with the supports provided while a youth with disabilities is in secondary school, the options available for postsecondary education and training, including how to obtain financial aid for such options, can often be daunting. Without receiving accurate and timely information about available services, students may miss opportunities to access needed services that could mean the difference between achieving an optimal level of self-sufficiency and relying on public assistance to meet their basic needs (GAO, 2012). Finally, although many youth with disabilities receive work experiences while in secondary school, additional exploration and on-the-job training experiences provided through a VR services program can introduce them to career possibilities not previously considered.

It is noteworthy that 80 percent of the individuals with disabilities and family members surveyed by the PTI centers funded from FY 2007 to FY 2011 reported that they have an increased knowledge of VR services based on the training they received; and that 89 percent of individuals with disabilities who received training believed that the training was highly relevant to their needs.

For over the past 20 years, PTI centers have provided information and training to thousands of individuals with disabilities and their families to help them better understand the varied eligibility requirements for, and the complex array of services provided by, programs that serve adults with disabilities. Having accurate and user-friendly information available helps to ensure that individuals with disabilities receive the services that will help them achieve their employment and independent living goals.

References

Newman, L. (2005). Family Involvement in the Educational Development of Youth with Disabilities. National Longitudinal Transition Study 2. 28 March 2005. Retrieved from: *www.nlts2.org/reports/2005_03/nlts2_report_2005_03_complete.pdf.*

United States Government Accountability Office (GAO). (2012). Report to the Ranking Member, Committee on Education and the Workforce, House of Representatives. Students with Disabilities, Better Federal Coordination Could Lesson Challenges in the Transition from High School. July 2012. Retrieved from: *www.gao.gov/assets/600/592329.pdf.*

This priority is:

Parent Information and Training Program.

Under this priority grants are awarded for the establishment or continuation of projects that provide information and training to assist individuals with disabilities and their parents, family members, guardians, advocates, or other authorized representatives (hereafter collectively referred to as ''individuals with disabilities and their families'') to participate more effectively with professionals in meeting the vocational, independent living, and rehabilitation needs of individuals with disabilities. To be considered for funding under this priority, an applicant must meet the application, programmatic, and administrative requirements of this priority. The applicant must address the following requirements and explain how it will assist individuals with disabilities, including youth of transition age, and their families to:

(1) Better understand vocational rehabilitation (VR) and independent living programs and services. To meet this requirement, the applicant may describe—

(i) How it will assess the need for information and training materials to inform individuals with disabilities and their families about VR and independent living services;

(ii) The materials and training that will be developed to explain the VR process and how VR is designed to lead to high-quality competitive employment outcomes in the integrated labor market for individuals with disabilities;

(iii) A plan for disseminating the materials developed; and

(iv) A plan for evaluating the information and training materials disseminated.

(2) Provide follow-up support for transition services and employment programs. To meet this requirement, the applicant may describe—

(i) A plan for developing the necessary follow-up activities so that individuals with disabilities experience a smooth transition from secondary school activities to employment and other post school activities;

(ii) How it will develop and disseminate training materials on transition services and employment programs;

(iii) A plan for evaluating the information and training materials disseminated on transition services and employment programs; and

(iv) How it will develop collaborative arrangements with VR service providers and employers in the area to be served that will facilitate the provision of transition services and employment programs to support individuals with disabilities and their families.

(3) Communicate more effectively with transition and rehabilitation personnel and other relevant professionals. To meet this requirement, the applicant may describe—

(i) How training will be provided to individuals with disabilities and their families to help them understand the language and the frame of reference that rehabilitation professionals use in their work so that such individuals and their families will be capable of communicating effectively with such professionals;

(ii) How the needs of individuals with disabilities and their families who are from culturally diverse backgrounds or who have varying communication needs will be addressed; and

(iii) How the effectiveness of the training will be evaluated.

(4) Provide support in the development of individualized plans for employment (IPEs). To meet this requirement the applicant may describe—

(i) How it will provide training to individuals with disabilities and their families to help them develop IEPs with a focus on transition services needed in order to achieve high-quality employment and independence and that will later be coordinated with the IPEs developed for the individuals; and

(ii) How it will provide training to individuals with disabilities and their families to help them develop comprehensive IPEs leading to employment goals consistent with the individuals' strengths, abilities, and informed choice.

(5) Provide support and expertise in obtaining information about rehabilitation and independent living programs, services, and resources that are appropriate. To meet this requirement the applicant may describe—

(i) How it will develop and disseminate materials to educate individuals with disabilities and their families about the array of transition, rehabilitation, and independent living services and programs available in the area to be served;

(ii) How it will provide information to individuals with disabilities from diverse ethnic, cultural, and linguistic backgrounds and how it will provide information in accessible formats (e.g., languages other than English, or in braille, or large print); and

(iii) How it will develop relationships with rehabilitation and independent living service providers in the area to be served so that the information the PTI provides is current and meaningful.

(6) Understand the provisions of the Rehabilitation Act, particularly provisions relating to employment, supported employment, and independent living. To meet this requirement the applicant may describe—

(i) How it would train individuals with disabilities and their families about how to access, and what to expect from, VR and independent living programs available under the Rehabilitation Act and how such services and programs can help individuals with disabilities achieve their goals in postsecondary education, independent living, and high-quality competitive employment in the integrated labor market, including supported employment; and

(ii) How it would provide information to individuals with disabilities and their families on the rights such individuals have to access these programs and their rights to due process if they are not satisfied with the services they receive.

Program Authority: 29 U.S.C. 773(c).

Applicable Regulations: (a) The Education Department General Administrative Regulations (EDGAR) in 34 CFR parts 74, 75, 77, 79, 80, 81, 82, 84, 86, 97, and 99. (b) The Education Department suspension and debarment regulations in 2 CFR part 3485.

Note: The regulations in 34 CFR part 79 apply to all applicants except federally recognized Indian tribes.

Note: The regulations in 34 CFR part 86 apply to institutions of higher education only.

II. Award Information

Type of Award: Discretionary grants.

Estimated Available Funds: $785,600.

Contingent upon the availability of funds and the quality of applications, we may make additional awards in FY 2015 from the list of unfunded applicants from this competition.

Estimated Range of Awards: $125,000–$130,933.

Estimated Average Size of Awards: $130,000.

Maximum Award: We will reject any application that proposes a budget exceeding $130,933 for a single budget period of 12 months. The Assistant Secretary for Special Education and Rehabilitative Services may change the maximum amount through a notice published in the **Federal Register**.

Estimated Number of Awards: 6.

Note: The Department is not bound by any estimates in this notice.

Project Period: Up to 60 months.

III. Eligibility Information

1. *Eligible Applicants:* Private nonprofit organizations that meet the requirements in section 303(c)(4) of the Rehabilitation Act.

A. An applicant must demonstrate the capacity and expertise to coordinate training and information activities with centers for independent living. In addition an applicant may wish to demonstrate the capacity and expertise to coordinate training and information activities with schools, VR agencies, and other relevant service providers.

B. An applicant must demonstrate the capacity and expertise to coordinate and work closely with parent information and training centers established pursuant to section 671 of IDEA.

C. An applicant must demonstrate the capacity and expertise to effectively conduct the training and information activities authorized in section 303 of the Rehabilitation Act.

D. In order to receive a grant under this program, an entity must:

(1)(A) Be governed by a board of directors that includes professionals in the field of VR and on which a majority of the members are individuals with disabilities or the parents, family members, guardians, advocates, or authorized representatives of the individuals. In addition, an applicant may include representatives from special education and other public and private agencies on the board, as appropriate; or

(B) Alternatively, have a membership that represents the interests of individuals with disabilities and must establish a special governing committee that includes professionals in the field of VR and on which a majority of the members are individuals with disabilities or the parents, family members, guardians, advocates, or authorized representatives of the individuals. In addition, an applicant may include representatives from special education and other public and private agencies on the governing committee, as appropriate; and

(2) Serve individuals with a full range of disabilities, and the parents, family members, guardians, advocates, or authorized representatives of the individuals.

2. *Cost Sharing or Matching:* This program does not require cost sharing or matching.

IV. Application and Submission Information

1. *Address to Request Application Package:* You can obtain an application package via the Internet, from the Education Publications Center (ED Pubs), or from the program office. To obtain a copy via the Internet, use the following address: *www.ed.gov/fund/grant/apply/grantapps/index.html.* To obtain a copy from ED Pubs, write, fax, or call the following: ED Pubs, U.S. Department of Education, P.O. Box 22207, Alexandria, VA 22304. Telephone, toll free: 1–877–433–7827. FAX: (703) 605–6794. If you use a telecommunications device for the deaf (TDD) or a text telephone (TTY), call, toll free: 1–877–576–7734.

You can contact ED Pubs at its Web site, also: *www.EDPubs.gov* or at its email address: *edpubs@inet.ed.gov.*

If you request an application from ED Pubs, be sure to identify this competition as follows: CFDA number 84.235F.

To obtain a copy from the program office, contact Tara Jordan, U.S. Department of Education, 400 Maryland Avenue SW., room 5040, Potomac Center Plaza (PCP), Washington, DC 20202–2800. Telephone: (202) 245–7341 or by email: *tara.jordan@ed.gov.*

If you use a TDD or a TTY, call the Federal Relay Service (FRS), toll free, at 1–800–877–8339.

Individuals with disabilities can obtain a copy of the application package in an accessible format (e.g., braille, large print, audiotape, or compact disc) by contacting the person or team listed under *Accessible Format* in section VIII of this notice.

2. *Content and Form of Application Submission:* Requirements concerning the content of an application, together with the forms you must submit, are in the application package for this competition.

Page Limit: The application narrative (Part III of the application) is where you, the applicant, address the selection criteria that reviewers use to evaluate your application. You must limit the application narrative to the equivalent of no more than 35 pages, using the following standards:

- A ''page'' is 8.5″ x 11″, on one side only, with 1″ margins at the top, bottom, and both sides.
- Double space (no more than three lines per vertical inch) all text in the application narrative, including titles, headings, footnotes, quotations, references, and captions, as well as all text in charts, tables, figures, and graphs.
- Use a font that is either 12 point or larger or no smaller than 10 pitch (characters per inch).
- Use one of the following fonts: Times New Roman, Courier, Courier New, or Arial. An application submitted in any other font (including Times Roman or Arial Narrow) will not be accepted.

The page limit does not apply to Part I, the cover sheet; Part II, the budget section, including the narrative budget justification; Part IV, the assurances and certifications; or the one-page abstract.

All other materials submitted (e.g., resumes, bibliography, or letters of support) cannot exceed 30 additional pages.

We will reject your application if you exceed the page limits.

3. *Submission Dates and Times:*

Applications Available: July 10, 2014.

Date of Pre-Application Webinar: Interested parties are invited to participate in a pre-application webinar. The pre-application webinar with staff from the Department will be held on July 15, 2014. The webinar will be recorded. For further information about the pre-application webinar, contact the person listed under **FOR FURTHER INFORMATION CONTACT** in section VII of this notice.

Deadline for Transmittal of Applications: August 11, 2014.

Applications for grants under this competition must be submitted electronically using the Grants.gov Apply site (Grants.gov). For information (including dates and times) about how to submit your application electronically, or in paper format by mail or hand delivery if you qualify for an exception to the electronic submission requirement, please refer to section IV. 7. *Other Submission Requirements* of this notice.

We do not consider an application that does not comply with the deadline requirements.

Individuals with disabilities who need an accommodation or auxiliary aid in connection with the application process should contact the person listed under **FOR FURTHER INFORMATION CONTACT** in section VII of this notice. If the Department provides an accommodation or auxiliary aid to an individual with a disability in connection with the application process, the individual's application remains subject to all other requirements and limitations in this notice.

4. *Intergovernmental Review:* This competition is subject to Executive Order 12372 and the regulations in 34 CFR part 79. However, under 34 CFR 79.8(a), we waive the intergovernmental review in order to make an award by the end of FY 2014.

5. *Funding Restrictions:* We reference regulations outlining funding restrictions in the *Applicable Regulations* section of this notice.

6. *Data Universal Numbering System Number, Taxpayer Identification Number, and System for Award Management:* To do business with the Department of Education, you must—

a. Have a Data Universal Numbering System (DUNS) number and a Taxpayer Identification Number (TIN);

b. Register both your DUNS number and TIN with the System for Award Management (SAM) (formerly the Central Contractor Registry (CCR)), the Government's primary registrant database;

c. Provide your DUNS number and TIN on your application; and

d. Maintain an active SAM registration with current information while your application is under review by the Department and, if you are awarded a grant, during the project period.

You can obtain a DUNS number from Dun and Bradstreet. A DUNS number can be created within one to two business days.

If you are a corporate entity, agency, institution, or organization, you can obtain a TIN from the Internal Revenue Service. If you are an individual, you can obtain a TIN from the Internal Revenue Service or the Social Security Administration. If you need a new TIN, please allow two to five weeks for your TIN to become active.

The SAM registration process can take approximately seven business days, but may take upwards of several weeks, depending on the completeness and accuracy of the data entered into the SAM database by an entity. Thus, if you think you might want to apply for Federal financial assistance under a program administered by the Department, please allow sufficient time to obtain and register your DUNS number and TIN. We strongly recommend that you register early.

Note: Once your SAM registration is active, you will need to allow 24 to 48 hours for the information to be available in Grants.gov and before you can submit an application through Grants.gov.

If you are currently registered with SAM, you may not need to make any changes. However, please make certain that the TIN associated with your DUNS number is correct. Also note that you will need to update your registration annually. This may take three or more business days.

Information about SAM is available at *www.SAM.gov.* To further assist you with obtaining and registering your DUNS number and TIN in SAM or updating your existing SAM account, we have prepared a SAM.gov Tip Sheet, which you can find at: *http://www2.ed.gov/fund/grant/apply/sam-faqs.html.*

In addition, if you are submitting your application via Grants.gov, you must (1) be designated by your organization as an Authorized Organization Representative (AOR); and (2) register yourself with Grants.gov as an AOR. Details on these steps are outlined at the following Grants.gov Web page: *www.grants.gov/web/grants/register.html.*

7. *Other Submission Requirements:*

Applications for grants under this competition must be submitted electronically unless you qualify for an exception to this requirement in accordance with the instructions in this section.

a. *Electronic Submission of Applications.*

Applications for grants under the Demonstration and Training: Parent Information and Training Program, CFDA number 84.235F, must be submitted electronically using the Governmentwide Grants.gov Apply site at *www.Grants.gov.* Through this site, you will be able to download a copy of the application package, complete it offline, and then upload and submit your application. You may not email an electronic copy of a grant application to us.

We will reject your application if you submit it in paper format unless, as described elsewhere in this section, you qualify for one of the exceptions to the electronic submission requirement *and* submit, no later than two weeks before the application deadline date, a written statement to the Department that you qualify for one of these exceptions. Further information regarding calculation of the date that is two weeks before the application deadline date is provided later in this section under *Exception to Electronic Submission Requirement.*

You may access the electronic grant application for the Parent Information and Training Program competition at *www.Grants.gov.* You must search for the downloadable application package for this competition by the CFDA number. Do not include the CFDA number's alpha suffix in your search (e.g., search for 84.235, not 84.235F).

Please note the following:

- When you enter the Grants.gov site, you will find information about submitting an application electronically through the site, as well as the hours of operation.
- Applications received by Grants.gov are date and time stamped. Your application must be fully uploaded and submitted and must be date and time stamped by the Grants.gov system no later than 4:30:00 p.m., Washington, DC time, on the application deadline date. Except as otherwise noted in this section, we will not accept your application if it is received—that is, date and time stamped by the Grants.gov system—after 4:30:00 p.m., Washington, DC time, on the application deadline date. We do not consider an application that does not comply with the deadline requirements. When we retrieve your application from Grants.gov, we will notify you if we are rejecting your application because it was date and time stamped by the Grants.gov system after 4:30:00 p.m., Washington, DC time, on the application deadline date.
- The amount of time it can take to upload an application will vary depending on a variety of factors, including the size of the application and the speed of your Internet connection. Therefore, we strongly recommend that you do not wait until the application deadline date to begin the submission process through Grants.gov.
- You should review and follow the Education Submission Procedures for submitting an application through Grants.gov that are included in the

application package for this competition to ensure that you submit your application in a timely manner to the Grants.gov system. You can also find the Education Submission Procedures pertaining to Grants.gov under News and Events on the Department's G5 system home page at *www.G5.gov.* In addition, for specific guidance and procedures for submitting an application through Grants.gov, please refer to the Grants.gov Web site at: *www.grants.gov/web/grants/applicants/apply-for-grants.html.*

- You will not receive additional point value because you submit your application in electronic format, nor will we penalize you if you qualify for an exception to the electronic submission requirement, as described elsewhere in this section, and submit your application in paper format.
- You must submit all documents electronically, including all information you typically provide on the following forms: The Application for Federal Assistance (SF 424), the Department of Education Supplemental Information for SF 424, Budget Information—Non-Construction Programs (ED 524), and all necessary assurances and certifications.
- You must upload any narrative sections and all other attachments to your application as files in a PDF (Portable Document) read-only, non-modifiable format. Do not upload an interactive or fillable PDF file. If you upload a file type other than a read-only, non-modifiable PDF or submit a password-protected file, we will not review that material.
- Your electronic application must comply with any page-limit requirements described in this notice.
- After you electronically submit your application, you will receive from Grants.gov an automatic notification of receipt that contains a Grants.gov tracking number. (This notification indicates receipt by Grants.gov only, not receipt by the Department.) The Department then will retrieve your application from Grants.gov and send a second notification to you by email. This second notification indicates that the Department has received your application and has assigned your application a PR/Award number (an ED-specified identifying number unique to your application).
- We may request that you provide us original signatures on forms at a later date.

Application Deadline Date Extension in Case of Technical Issues with the Grants.gov System: If you are experiencing problems submitting your application through Grants.gov, please contact the Grants.gov Support Desk, toll free, at 1–800–518–4726. You must obtain a Grants.gov Support Desk Case Number and must keep a record of it.

If you are prevented from electronically submitting your application on the application deadline date because of technical problems with the Grants.gov system, we will grant you an extension until 4:30:00 p.m., Washington, DC time, the following business day to enable you to transmit your application electronically or by hand delivery. You also may mail your application by following the mailing instructions described elsewhere in this notice.

If you submit an application after 4:30:00 p.m., Washington, DC time, on the application deadline date, please contact the person listed under **FOR FURTHER INFORMATION CONTACT** in section VII of this notice and provide an explanation of the technical problem you experienced with Grants.gov, along with the Grants.gov Support Desk Case Number. We will accept your application if we can confirm that a technical problem occurred with the Grants.gov system and that that problem affected your ability to submit your application by 4:30:00 p.m., Washington, DC time, on the application deadline date. The Department will contact you after a determination is made on whether your application will be accepted.

Note: The extensions to which we refer in this section apply only to the unavailability of, or technical problems with, the Grants.gov system. We will not grant you an extension if you failed to fully register to submit your application to Grants.gov before the application deadline date and time or if the technical problem you experienced is unrelated to the Grants.gov system.

Exception to Electronic Submission Requirement: You qualify for an exception to the electronic submission requirement, and may submit your application in paper format, if you are unable to submit an application through the Grants.gov system because—

- You do not have access to the Internet; or
- You do not have the capacity to upload large documents to the Grants.gov system;

and

- No later than two weeks before the application deadline date (14 calendar days or, if the fourteenth calendar day before the application deadline date falls on a Federal holiday, the next business day following the Federal holiday), you mail or fax a written statement to the Department, explaining which of the two grounds for an exception prevents you from using the Internet to submit your application.

If you mail your written statement to the Department, it must be postmarked no later than two weeks before the application deadline date. If you fax your written statement to the Department, we must receive the faxed statement no later than two weeks before the application deadline date.

Address and mail or fax your statement to: Tara Jordan, U.S. Department of Education, 400 Maryland Avenue SW., Room 5040, PCP, Washington, DC 20202–2800. FAX: (202) 245–7591.

Your paper application must be submitted in accordance with the mail or hand delivery instructions described in this notice.

b. *Submission of Paper Applications by Mail.*

If you qualify for an exception to the electronic submission requirement, you may mail (through the U.S. Postal Service or a commercial carrier) your application to the Department. You must mail the original and two copies of your application, on or before the application deadline date, to the Department at the following address: U.S. Department of Education, Application Control Center, Attention: (CFDA Number 84.235F), LBJ Basement Level 1, 400 Maryland Avenue SW., Washington, DC 20202–4260.

You must show proof of mailing consisting of one of the following:

(1) A legibly dated U.S. Postal Service postmark.

(2) A legible mail receipt with the date of mailing stamped by the U.S. Postal Service.

(3) A dated shipping label, invoice, or receipt from a commercial carrier.

(4) Any other proof of mailing acceptable to the Secretary of the U.S. Department of Education.

If you mail your application through the U.S. Postal Service, we do not accept either of the following as proof of mailing:

(1) A private metered postmark.

(2) A mail receipt that is not dated by the U.S. Postal Service.

If your application is postmarked after the application deadline date, we will not consider your application.

Note: The U.S. Postal Service does not uniformly provide a dated postmark. Before relying on this method, you should check with your local post office.

c. *Submission of Paper Applications by Hand Delivery.*

If you qualify for an exception to the electronic submission requirement, you (or a courier service) may deliver your paper application to the Department by hand. You must deliver the original and two copies of your application by hand,

on or before the application deadline date, to the Department at the following address: U.S. Department of Education, Application Control Center, Attention: (CFDA Number 84.235F), 550 12th Street SW., Room 7039, Potomac Center Plaza, Washington, DC 20202–4260.

The Application Control Center accepts hand deliveries daily between 8:00 a.m. and 4:30:00 p.m., Washington, DC time, except Saturdays, Sundays, and Federal holidays.

Note for Mail or Hand Delivery of Paper Applications: If you mail or hand deliver your application to the Department—

(1) You must indicate on the envelope and—if not provided by the Department—in Item 11 of the SF 424 the CFDA number, including suffix letter, if any, of the competition under which you are submitting your application; and

(2) The Application Control Center will mail to you a notification of receipt of your grant application. If you do not receive this notification within 15 business days from the application deadline date, you should call the U.S. Department of Education Application Control Center at (202) 245–6288.

V. Application Review Information

1. *Selection Criteria:* The selection criteria for this competition are from 34 CFR 75.210 and 34 CFR 373.10 and are listed in the application package.

2. *Review and Selection Process:* We remind potential applicants that in reviewing applications in any discretionary grant competition, the Secretary may consider, under 34 CFR 75.217(d)(3), the past performance of the applicant in carrying out a previous award, such as the applicant's use of funds, achievement of project objectives, and compliance with grant conditions. The Secretary may also consider whether the applicant failed to submit a timely performance report or submitted a report of unacceptable quality.

In addition, in making a competitive grant award, the Secretary also requires various assurances including those applicable to Federal civil rights laws that prohibit discrimination in programs or activities receiving Federal financial assistance from the Department of Education (34 CFR 100.4, 104.5, 106.4, 108.8, and 110.23).

3. *Special Conditions:* Under 34 CFR 74.14 and 80.12, the Secretary may impose special conditions on a grant if the applicant or grantee is not financially stable; has a history of unsatisfactory performance; has a financial or other management system that does not meet the standards in 34 CFR parts 74 or 80, as applicable; has not fulfilled the conditions of a prior grant; or is otherwise not responsible.

VI. Award Administration Information

1. *Award Notices:* If your application is successful, we notify your U.S. Representative and U.S. Senators and send you a Grant Award Notification (GAN); or we may send you an email containing a link to access an electronic version of your GAN. We may notify you informally, also.

If your application is not evaluated or not selected for funding, we notify you.

2. *Administrative and National Policy Requirements:* We identify administrative and national policy requirements in the application package and reference these and other requirements in the *Applicable Regulations* section of this notice.

We reference the regulations outlining the terms and conditions of an award in the *Applicable Regulations* section of this notice and include these and other specific conditions in the GAN. The GAN also incorporates your approved application as part of your binding commitments under the grant.

3. *Reporting:* (a) If you apply for a grant under this competition, you must ensure that you have in place the necessary processes and systems to comply with the reporting requirements in 2 CFR part 170 should you receive funding under the competition. This does not apply if you have an exception under 2 CFR 170.110(b).

(b) At the end of your project period, you must submit a final performance report, including financial information, as directed by the Secretary. If you receive a multi-year award, you must submit an annual performance report that provides the most current performance and financial expenditure information as directed by the Secretary under 34 CFR 75.118. The Secretary may also require more frequent performance reports under 34 CFR 75.720(c). For specific requirements on reporting, please go to *www.ed.gov/fund/grant/apply/appforms/appforms.html.*

4. *Performance Measures:* The Government Performance and Results Act of 1993 (GPRA) directs Federal departments and agencies to improve the effectiveness of programs by engaging in strategic planning, setting outcome-related goals for programs, and measuring program results against those goals. The required annual report must include information on two measures: (a) The percentage of individuals with disabilities and their families receiving PTI services who report enhanced knowledge and understanding of VR services; and (b) the percentage of all products and services developed to improve VR service utilization deemed to be useful by individuals with disabilities and their families receiving PTI services. The data needed to support these measures will be collected by grantees via survey, assessed, and reported in the aggregate to RSA. Grantees will negotiate targets with RSA after the first year, which will be used to establish a baseline.

5. *Continuation Awards:* In making a continuation award, the Secretary may consider, under 34 CFR 75.253, the extent to which a grantee has made ''substantial progress toward meeting the objectives in its approved application.'' This consideration includes the review of a grantee's progress in meeting the targets and projected outcomes in its approved application, and whether the grantee has expended funds in a manner that is consistent with its approved application and budget. In making a continuation grant, the Secretary also considers whether the grantee is operating in compliance with the assurances in its approved application, including those applicable to Federal civil rights laws that prohibit discrimination in programs or activities receiving Federal financial assistance from the Department (34 CFR 100.4, 104.5, 106.4, 108.8, and 110.23).

VII. Agency Contact

FOR FURTHER INFORMATION CONTACT: Tara Jordan, U.S. Department of Education, 400 Maryland Avenue SW., Room 5040, PCP, Washington, DC 20202–2800. Telephone: (202) 245–7341 or by email: *tara.jordan@ed.gov.*

If you use a TDD or TTY, call the FRS, toll free, at 1–800–877–8339.

VIII. Other Information

Accessible Format: Individuals with disabilities can obtain this document and a copy of the application package in an accessible format (e.g., braille, large print, audiotape, or compact disc) on request to the program contact person listed under **FOR FURTHER INFORMATION CONTACT** in section VII of this notice.

Electronic Access to This Document: The official version of this document is the document published in the **Federal Register**. Free Internet access to the official edition of the **Federal Register** and the Code of Federal Regulations is available via the Federal Digital System at: *www.gpo.gov/fdsys.* At this site you can view this document, as well as all other documents of this Department published in the **Federal Register**, in text or Adobe Portable Document Format (PDF). To use PDF you must have Adobe Acrobat Reader, which is available free at the site.

You may also access documents of the Department published in the **Federal**

Register by using the article search feature at: *www.federalregister.gov.* Specifically, through the advanced search feature at this site, you can limit your search to documents published by the Department.

Dated: July 3, 2014.

Michael K. Yudin,

Acting Assistant Secretary for Special Education and Rehabilitative Services.

[FR Doc. 2014–16124 Filed 7–9–14; 8:45 am]

BILLING CODE 4000–01–P

DEPARTMENT OF EDUCATION

Applications for New Awards; Parent Information and Training Program—Technical Assistance for Parent Training and Information Centers

AGENCY: Office of Special Education and Rehabilitative Services, Department of Education.

ACTION: Notice.

Overview Information

Rehabilitation Services Administration (RSA)—Parent Information and Training Program—Technical Assistance for Parent Training and Information Centers

Notice inviting applications for new awards for fiscal year (FY) 2014.

Catalog of Federal Domestic Assistance (CFDA) Number: 84.235G.

DATES: Applications Available: July 10, 2014.

Date of Pre-Application Webinar: July 16, 2014.

Deadline for Transmittal of Applications: August 11, 2014.

Full Text of Announcement

I. Funding Opportunity Description

Purpose of Program: The Parent Information and Training Program includes State-level Parent Training and Information (PTI) centers and one national PTI center designed to assist in the establishment, development, and coordination of the PTI centers funded under section 303(c) of the Rehabilitation Act of 1973, as amended (Rehabilitation Act).

Priority: In accordance with 34 CFR 75.105(b)(2)(v), this priority is from allowable activities specified in the statute (see section 303(c)(6) of the Rehabilitation Act, 29 U.S.C. 773(c)(6)).

Absolute Priority: For FY 2014 and any subsequent year in which we make awards from the list of unfunded applicants from this competition, this priority is an absolute priority. Under 34 CFR 75.105(c)(3) we consider only applications that meet this priority.

Background: The purpose of this priority is to fund a national PTI center to provide technical assistance to, and coordination of, the six PTI centers that are funded under section 303(c) of the Rehabilitation Act. The purpose of the technical assistance and coordination provided by the national PTI center is to ensure that the individual State-level centers are providing information and training to individuals with disabilities and the parents, family members, guardians, advocates, and other authorized representatives of such individuals (hereafter referred to as ''individuals with disabilities and their families'') to assist individuals with disabilities, including youth with disabilities who are of transition age, achieve their employment and independent living goals. Through its coordination and technical assistance activities, the national PTI center also will help ensure that the information and training provided by the individual State-level centers is consistent.

In addition, the national PTI center will coordinate, to the extent possible, its technical assistance and the technical assistance provided by the six RSA-funded PTI centers with the technical assistance provided by PTI centers funded under section 671 of the Individuals with Disabilities Education Act (IDEA). This structured coordination is designed to increase the consistency of information provided to individuals with disabilities and their families by the centers funded under the Rehabilitation Act and those funded under IDEA.

The Department has funded PTI centers under IDEA for over 35 years. Research and experience have demonstrated that the education of youth with disabilities can be made more effective by strengthening parents' ability to participate fully in their children's education at school and at home. For example, research has found that trainings and programs, including those provided by the Office of Special Education Programs (OSEP), provide parents with much-needed information about how to monitor their children's progress, be productive members of the Individualized Education Program (IEP) team, and support their children's education at school. Other factors being equal, families who attend OSEP-supported trainings or other types of trainings are more likely to be involved at school and to attend IEP meetings (Newman, 2005).

In addition to the PTI centers funded under IDEA, the Department has funded PTI centers under the Rehabilitation Act since 1993. For individuals with disabilities and their families, particularly for youth of transition age, the need for information about transition, vocational rehabilitation (VR), independent living, and other adult services is very critical. The current Federal approach to assisting students with disabilities in transitioning to postsecondary education or the workforce necessitates that students and their parents navigate multiple programs and service systems to piece together the supports these students need to achieve maximum levels of independence in adulthood. Under this complex structure, information dissemination and service coordination are essential (GAO, 2012).

Also, although families may be familiar with the supports provided while an individual with disabilities is in secondary school, they may find that the options available for postsecondary education and training, including how to obtain financial aid for such options, can often be daunting. Without receiving accurate and timely information about available services, students may miss essential opportunities to access needed services that could mean the difference between achieving an optimal level of self-sufficiency and relying on public assistance to meet their basic needs (GAO, 2012). Finally, while many individuals with disabilities participate in work experiences during their secondary school years, additional career exploration and on-the-job training experiences provided through the VR service programs can introduce them to possibilities that had not been considered previously.

For over the past 20 years, PTI centers funded under the Rehabilitation Act have provided information and training to thousands of individuals with disabilities and their families to help them better understand the varied eligibility requirements for, and the complex array of services provided by, programs that serve adults with disabilities. Having consistent, accurate, and user-friendly information available helps to ensure that individuals with disabilities receive the services that will help them achieve their employment and independent living goals.

The final report submitted by the national PTI center funded from FY 2007 to FY 2011 demonstrated the need for its services. According to the report, the national PTI center: Disseminated to 121,706 individuals a newsletter containing information of national interest to individuals with disabilities and their families; received 43,964 requests for information and assistance and 4,684 requests for technology information and assistance; provided or

coordinated 583 workshops, training sessions, presentations, and in-service trainings for parents and professionals; reached 33,260 parents and professionals through its workshops, trainings, presentations, in-service trainings, webinars, and conferences; received 3,679,713 visitors from the United States and 80 other countries to its Web sites. As these needs continue to exist, we are seeking to fund a new national PTI center.

References

Newman, L. (2005). Family Involvement in the Educational Development of Youth with Disabilities. National Longitudinal Transition Study 2. 28 March 2005. Retrieved from: *www.nlts2.org/reports/2005_03/nlts2_report_2005_03_complete.pdf*.

United States Government Accountability Office (GAO). (2012). Report to the Ranking Member, Committee on Education and the Workforce, House of Representatives. Students with Disabilities, Better Federal Coordination Could Lesson Challenges in the Transition from High School. July 2012. Retrieved from: *www.gao.gov/assets/600/592329.pdf*.

This priority is:

Parent Information and Training Program—Technical Assistance for Parent Training and Information Centers.

Under this priority a grant is awarded for the establishment or continuation of a national Parent Training and Information (PTI) center that provides technical assistance and coordination of the PTI centers funded under section 303(c) of the Rehabilitation Act. Specifically, this national PTI center will coordinate information and training provided by the State-level PTI centers to individuals with disabilities and their parents, family members, guardians, advocates, or authorized representatives (hereafter referred to as ''individuals with disabilities and their families''). To be considered for funding under this priority, an applicant must meet the following application, programmatic, and administrative requirements of this priority:

(a) The national PTI center must coordinate and provide technical assistance to the PTI centers funded by the Rehabilitation Services Administration (RSA) to help these PTI Centers, at a minimum, to:

(1) Assist individuals with disabilities and their families to better understand vocational rehabilitation (VR) and independent living programs and services;

(2) Provide follow-up support for transition and employment programs for individuals with disabilities and their families;

(3) Assist individuals with disabilities and their families to communicate more effectively with transition and rehabilitation personnel and other relevant professionals;

(4) Provide support to individuals with disabilities and their families in the development of the individualized plan for employment;

(5) Provide support and expertise for individuals with disabilities and their families in obtaining information about rehabilitation and independent living programs, services, and resources that are appropriate; and

(6) Assist individuals with disabilities and their families to understand the provisions of the Rehabilitation Act, particularly provisions relating to employment, supported employment, and independent living.

(b) In order to effectively provide coordination and technical assistance to the RSA-funded PTI centers on the activities in paragraph (a), the national PTI center may, among other activities:

(1) Survey all RSA-funded PTI centers to determine collective and individualized technical assistance activities being provided and the gaps in information and training that exist.

(2) Build the capacity of the network of RSA-funded PTI centers by conducting a set of coordinated activities, including opportunities for peer-to-peer information sharing using various strategies such as listservs, newsletters, and other community of practice strategies.

(3) Disseminate information on promising and evidence-based practices that lead to high-quality employment outcomes and independent living for individuals with disabilities.

(4) Share with the RSA-funded PTI centers strategies for communicating effectively with individuals from culturally, ethnically, and linguistically diverse backgrounds.

(5) Foster development of expertise in assisting State-level RSA-funded PTI centers as they work with individuals with disabilities, including youth with disabilities of transition age, and their families to access transition services, VR programs, and career development opportunities, including expertise in the provision of technical assistance on how to coordinate a student's Individualized Education Program with the individualized plan for employment so that the services provided to individuals with disabilities under both plans are more likely to lead to high-quality competitive employment in the integrated labor market.

(6) Create tools to help State-level RSA-funded PTI centers to build their capacity to disseminate information and conduct training activities for individuals with disabilities, including youth with disabilities of transition age, and their families on the transition from school to adult life, available VR program services, career development, and related fields.

(7) Support RSA-funded PTI centers in conducting their annual data collection activities on parent training outcomes and consolidating data into an annual report.

(8) Conduct an annual evaluation survey of RSA-funded PTI centers to determine which products and services were deemed to be useful by PTI centers and the individuals with disabilities and families accessing their products and services, with particular emphasis on the effectiveness of those products and services designed to improve VR service utilization.

(9) Coordinate with the State-level PTI centers and the parent technical assistance centers funded by the Office of Special Education Programs in disseminating information and training materials on transition services, VR, supported employment, independent living, and career development.

Program Authority: 29 U.S.C. 773(c)(6).

Applicable Regulations: (a) The Education Department General Administrative Regulations (EDGAR) in 34 CFR parts 74, 75, 77, 79, 80, 81, 82, 84, 86, 97, and 99. (b) The Education Department suspension and debarment regulations in 2 CFR part 3485.

Note: The regulations in 34 CFR part 79 apply to all applicants except federally recognized Indian tribes.

Note: The regulations in 34 CFR part 86 apply to institutions of higher education only.

II. Award Information

Type of Award: Discretionary grants.

Estimated Available Funds: $250,000.

Contingent upon the availability of funds and the quality of applications, we may make additional awards in FY 2015 from the list of unfunded applicants from this competition.

Maximum Award: We will reject any application that proposes a budget exceeding $250,000 for a single budget period of 12 months. The Assistant Secretary for Special Education and Rehabilitative Services may change the maximum amount through a notice published in the **Federal Register**.

Estimated Number of Awards: 1.

Note: The Department is not bound by any estimates in this notice.

Project Period: Up to 60 months.

III. Eligibility Information

1. *Eligible Applicants:* Private nonprofit organizations that, to the extent practicable, are the parent information and training centers established pursuant to section 671 of the IDEA.

2. *Cost Sharing or Matching:* This program does not require cost sharing or matching.

IV. Application and Submission Information

1. *Address to Request Application Package:* You can obtain an application package via the Internet, from the Education Publications Center (ED Pubs), or from the program office. To obtain a copy via the Internet, use the following address: *www.ed.gov/fund/grant/apply/grantapps/index.html*. To obtain a copy from ED Pubs, write, fax, or call the following: ED Pubs, U.S. Department of Education, P.O. Box 22207, Alexandria, VA 22304. Telephone, toll free: 1–877–433–7827. FAX: (703) 605–6794. If you use a telecommunications device for the deaf (TDD) or a text telephone (TTY), call, toll free: 1–877–576–7734.

You can contact ED Pubs at its Web site, also: *www.EDPubs.gov* or at its email address: *edpubs@inet.ed.gov*.

If you request an application package from ED Pubs, be sure to identify this competition as follows: CFDA number 84.235G.

To obtain a copy from the program office, contact Tara Jordan, U.S. Department of Education, 400 Maryland Avenue SW., Room 5040, Potomac Center Plaza (PCP), Washington, DC 20202–2800. Telephone: (202) 245–7341 or by email: *tara.jordan@ed.gov*. If you use a TDD or a TTY, call the Federal Relay Service (FRS), toll free, at 1–800–877–8339.

Individuals with disabilities can obtain a copy of the application in an accessible format (e.g., braille, large print, audiotape, or compact disc) by contacting the person or team listed under *Accessible Format* in section VIII of this notice.

2. *Content and Form of Application Submission:* Requirements concerning the content of an application, together with the forms you must submit, are in the application package for this competition.

Page Limit: The application narrative (Part III of the application) is where you, the applicant, address the selection criteria that reviewers use to evaluate your application. You must limit the application narrative to the equivalent of no more than 35 pages, using the following standards:

- A ''page'' is 8.5″ x 11″ , on one side only, with 1″ margins at the top, bottom, and both sides.
- Double space (no more than three lines per vertical inch) all text in the application narrative, including titles, headings, footnotes, quotations, references, and captions, as well as all text in charts, tables, figures, and graphs.
- Use a font that is either 12 point or larger or no smaller than 10 pitch (characters per inch).
- Use one of the following fonts: Times New Roman, Courier, Courier New, or Arial. An application submitted in any other font (including Times Roman or Arial Narrow) will not be accepted.
- The page limit does not apply to Part I, the cover sheet; Part II, the budget section, including the narrative budget justification; Part IV, the assurances and certifications; or the one-page abstract.

Note: In addition to the limit of 35 pages described above, all other materials submitted (e.g., resumes, bibliography, or letters of support) cannot exceed 30 additional pages.

We will reject your application if you exceed the page limits.

3. *Submission Dates and Times:* Applications Available: July 10, 2014.

Date of Pre-Application Webinar: Interested parties are invited to participate in a pre-application webinar. The pre-application webinar with staff from the Department will be held on July 16, 2014. The webinar will be recorded. For further information about the pre-application webinar, contact the person listed under **FOR FURTHER INFORMATION CONTACT** in section VII of this notice. Deadline for Transmittal of Applications: August 11, 2014.

Applications for grants under this competition must be submitted electronically using the Grants.gov Apply site (Grants.gov). For information (including dates and times) about how to submit your application electronically, or in paper format by mail or hand delivery if you qualify for an exception to the electronic submission requirement, please refer to section IV. 7. *Other Submission Requirements* of this notice.

We do not consider an application that does not comply with the deadline requirements.

Individuals with disabilities who need an accommodation or auxiliary aid in connection with the application process should contact the person listed under **FOR FURTHER INFORMATION CONTACT** in section VII of this notice. If the Department provides an accommodation or auxiliary aid to an individual with a disability in connection with the application process, the individual's application remains subject to all other requirements and limitations in this notice.

4. *Intergovernmental Review:* This competition is subject to Executive Order 12372 and the regulations in 34 CFR part 79. However, under 34 CFR 79.8(a), we waive the intergovernmental review in order to make an award by the end of FY 2014.

5. *Funding Restrictions:* We reference regulations outlining funding restrictions in the *Applicable Regulations* section of this notice.

6. *Data Universal Numbering System Number, Taxpayer Identification Number, and System for Award Management:* To do business with the Department of Education, you must—

a. Have a Data Universal Numbering System (DUNS) number and a Taxpayer Identification Number (TIN);

b. Register both your DUNS number and TIN with the System for Award Management (SAM) (formerly the Central Contractor Registry (CCR)), the Government's primary registrant database;

c. Provide your DUNS number and TIN on your application; and

d. Maintain an active SAM registration with current information while your application is under review by the Department and, if you are awarded a grant, during the project period.

You can obtain a DUNS number from Dun and Bradstreet. A DUNS number can be created within one to two business days.

If you are a corporate entity, agency, institution, or organization, you can obtain a TIN from the Internal Revenue Service. If you are an individual, you can obtain a TIN from the Internal Revenue Service or the Social Security Administration. If you need a new TIN, please allow two to five weeks for your TIN to become active.

The SAM registration process can take approximately seven business days, but may take upwards of several weeks, depending on the completeness and accuracy of the data entered into the SAM database by an entity. Thus, if you think you might want to apply for Federal financial assistance under a program administered by the Department, please allow sufficient time to obtain and register your DUNS number and TIN. We strongly recommend that you register early.

Note: Once your SAM registration is active, you will need to allow 24 to 48 hours for the

information to be available in Grants.gov and before you can submit an application through Grants.gov.

If you are currently registered with SAM, you may not need to make any changes. However, please make certain that the TIN associated with your DUNS number is correct. Also note that you will need to update your registration annually. This may take three or more business days.

Information about SAM is available at *www.SAM.gov*. To further assist you with obtaining and registering your DUNS number and TIN in SAM or updating your existing SAM account, we have prepared a SAM.gov Tip Sheet, which you can find at: *http://www2.ed.gov/fund/grant/apply/sam-faqs.html*.

In addition, if you are submitting your application via Grants.gov you must (1) be designated by your organization as an Authorized Organization Representative (AOR); and (2) register yourself with Grants.gov as an AOR. Details on these steps are outlined at the following Grants.gov Web page: *www.grants.gov/web/grants/register.html*.

7. *Other Submission Requirements:* Applications for grants under this competition must be submitted electronically unless you qualify for an exception to this requirement in accordance with the instructions in this section.

a. *Electronic Submission of Applications.*

Applications for grants under the Demonstration and Training Programs: Parent Information and Training Program—Technical Assistance for Parent Training and Information Centers competition, CFDA number 84.235G, must be submitted electronically using the Governmentwide Grants.gov Apply site at *www.Grants.gov*. Through this site, you will be able to download a copy of the application package, complete it offline, and then upload and submit your application. You may not email an electronic copy of a grant application to us.

We will reject your application if you submit it in paper format unless, as described elsewhere in this section, you qualify for one of the exceptions to the electronic submission requirement *and* submit, no later than two weeks before the application deadline date, a written statement to the Department that you qualify for one of these exceptions. Further information regarding calculation of the date that is two weeks before the application deadline date is provided later in this section under *Exception to Electronic Submission Requirement*.

You may access the electronic grant application for the Demonstration and Training Programs: Parent Information and Training Program—Technical Assistance for Parent Training and Information Centers competition at *www.Grants.gov*. You must search for the downloadable application package for this competition by the CFDA number. Do not include the CFDA number's alpha suffix in your search (e.g., search for 84.235, not 84.235G).

Please note the following:

- When you enter the Grants.gov site, you will find information about submitting an application electronically through the site, as well as the hours of operation.
- Applications received by Grants.gov are date and time stamped. Your application must be fully uploaded and submitted and must be date and time stamped by the Grants.gov system no later than 4:30:00 p.m., Washington, DC time, on the application deadline date. Except as otherwise noted in this section, we will not accept your application if it is received—that is, date and time stamped by the Grants.gov system—after 4:30:00 p.m., Washington, DC time, on the application deadline date. We do not consider an application that does not comply with the deadline requirements. When we retrieve your application from Grants.gov, we will notify you if we are rejecting your application because it was date and time stamped by the Grants.gov system after 4:30:00 p.m., Washington, DC time, on the application deadline date.
- The amount of time it can take to upload an application will vary depending on a variety of factors, including the size of the application and the speed of your Internet connection. Therefore, we strongly recommend that you do not wait until the application deadline date to begin the submission process through Grants.gov.
- You should review and follow the Education Submission Procedures for submitting an application through Grants.gov that are included in the application package for this competition to ensure that you submit your application in a timely manner to the Grants.gov system. You can also find the Education Submission Procedures pertaining to Grants.gov under News and Events on the Department's G5 system home page at *www.G5.gov*.
- You will not receive additional point value because you submit your application in electronic format, nor will we penalize you if you qualify for an exception to the electronic submission requirement, as described elsewhere in this section, and submit your application in paper format.
- You must submit all documents electronically, including all information you typically provide on the following forms: the Application for Federal Assistance (SF 424), the Department of Education Supplemental Information for SF 424, Budget Information—Non-Construction Programs (ED 524), and all necessary assurances and certifications.
- You must upload any narrative sections and all other attachments to your application as files in a PDF (Portable Document) read-only, non-modifiable format. Do not upload an interactive or fillable PDF file. If you upload a file type other than a read-only, non-modifiable PDF or submit a password-protected file, we will not review that material.
- Your electronic application must comply with any page-limit requirements described in this notice.
- After you electronically submit your application, you will receive from Grants.gov an automatic notification of receipt that contains a Grants.gov tracking number. (This notification indicates receipt by Grants.gov only, not receipt by the Department). The Department then will retrieve your application from Grants.gov and send a second notification to you by email. This second notification indicates that the Department has received your application and has assigned your application a PR/Award number (an ED-specified identifying number unique to your application).
- We may request that you provide us original signatures on forms at a later date.

Application Deadline Date Extension in Case of Technical Issues with the Grants.gov System: If you are experiencing problems submitting your application through Grants.gov, please contact the Grants.gov Support Desk, toll free, at 1–800–518–4726. You must obtain a Grants.gov Support Desk Case Number and must keep a record of it.

If you are prevented from electronically submitting your application on the application deadline date because of technical problems with the Grants.gov system, we will grant you an extension until 4:30:00 p.m., Washington, DC time, the following business day to enable you to transmit your application electronically or by hand delivery. You also may mail your application by following the mailing instructions described elsewhere in this notice.

If you submit an application after 4:30:00 p.m., Washington, DC time, on the application deadline date, please contact the person listed under **FOR FURTHER INFORMATION CONTACT** in section VII of this notice and provide an

explanation of the technical problem you experienced with Grants.gov, along with the Grants.gov Support Desk Case Number. We will accept your application if we can confirm that a technical problem occurred with the Grants.gov system and that that problem affected your ability to submit your application by 4:30:00 p.m., Washington, DC time, on the application deadline date. The Department will contact you after a determination is made on whether your application will be accepted.

Note: The extensions to which we refer in this section apply only to the unavailability of, or technical problems with, the Grants.gov system. We will not grant you an extension if you failed to fully register to submit your application to Grants.gov before the application deadline date and time or if the technical problem you experienced is unrelated to the Grants.gov system.

Exception to Electronic Submission Requirement: You qualify for an exception to the electronic submission requirement, and may submit your application in paper format, if you are unable to submit an application through the Grants.gov system because—

- You do not have access to the Internet; or
- You do not have the capacity to upload large documents to the Grants.gov system; *and*
- No later than two weeks before the application deadline date (14 calendar days or, if the fourteenth calendar day before the application deadline date falls on a Federal holiday, the next business day following the Federal holiday), you mail or fax a written statement to the Department, explaining which of the two grounds for an exception prevents you from using the Internet to submit your application.

If you mail your written statement to the Department, it must be postmarked no later than two weeks before the application deadline date. If you fax your written statement to the Department, we must receive the faxed statement no later than two weeks before the application deadline date.

Address and mail or fax your statement to: Tara Jordan, U.S. Department of Education, 400 Maryland Avenue SW., Room 5040, PCP, Washington, DC 20202–2800. FAX: (202) 245–7591.

Your paper application must be submitted in accordance with the mail or hand delivery instructions described in this notice.

b. *Submission of Paper Applications by Mail.*

If you qualify for an exception to the electronic submission requirement, you may mail (through the U.S. Postal Service or a commercial carrier) your application to the Department. You must mail the original and two copies of your application, on or before the application deadline date, to the Department at the following address: U.S. Department of Education, Application Control Center, Attention: (CFDA Number 84.235G), LBJ Basement Level 1, 400 Maryland Avenue SW., Washington, DC 20202–4260.

You must show proof of mailing consisting of one of the following:

(1) A legibly dated U.S. Postal Service postmark.

(2) A legible mail receipt with the date of mailing stamped by the U.S. Postal Service.

(3) A dated shipping label, invoice, or receipt from a commercial carrier.

(4) Any other proof of mailing acceptable to the Secretary of the U.S. Department of Education.

If you mail your application through the U.S. Postal Service, we do not accept either of the following as proof of mailing:

(1) A private metered postmark.

(2) A mail receipt that is not dated by the U.S. Postal Service.

If your application is postmarked after the application deadline date, we will not consider your application.

Note: The U.S. Postal Service does not uniformly provide a dated postmark. Before relying on this method, you should check with your local post office.

c. *Submission of Paper Applications by Hand Delivery.*

If you qualify for an exception to the electronic submission requirement, you (or a courier service) may deliver your paper application to the Department by hand. You must deliver the original and two copies of your application by hand, on or before the application deadline date, to the Department at the following address:U.S. Department of Education, Application Control Center, Attention: (CFDA Number 84.235G), 550 12th Street SW., Room 7039, Potomac Center Plaza, Washington, DC 20202–4260.

The Application Control Center accepts hand deliveries daily between 8:00 a.m. and 4:30:00 p.m., Washington, DC time, except Saturdays, Sundays, and Federal holidays.

Note for Mail or Hand Delivery of Paper Applications: If you mail or hand deliver your application to the Department—

(1) You must indicate on the envelope and—if not provided by the Department—in Item 11 of the SF 424 the CFDA number, including suffix letter, if any, of the competition under which you are submitting your application; and

(2) The Application Control Center will mail to you a notification of receipt of your grant application. If you do not receive this notification within 15 business days from the application deadline date, you should call the U.S. Department of Education Application Control Center at (202) 245–6288.

V. Application Review Information

1. *Selection Criteria:* The selection criteria for this competition are from 34 CFR 75.210 and 34 CFR 373.10 and are listed in the application package.

2. *Review and Selection Process:* We remind potential applicants that in reviewing applications in any discretionary grant competition, the Secretary may consider, under 34 CFR 75.217(d)(3), the past performance of the applicant in carrying out a previous award, such as the applicant's use of funds, achievement of project objectives, and compliance with grant conditions. The Secretary may also consider whether the applicant failed to submit a timely performance report or submitted a report of unacceptable quality.

In addition, in making a competitive grant award, the Secretary also requires various assurances including those applicable to Federal civil rights laws that prohibit discrimination in programs or activities receiving Federal financial assistance from the Department of Education (34 CFR 100.4, 104.5, 106.4, 108.8, and 110.23).

3. *Special Conditions:* Under 34 CFR 74.14 and 80.12, the Secretary may impose special conditions on a grant if the applicant or grantee is not financially stable; has a history of unsatisfactory performance; has a financial or other management system that does not meet the standards in 34 CFR parts 74 or 80, as applicable; has not fulfilled the conditions of a prior grant; or is otherwise not responsible.

VI. Award Administration Information

1. *Award Notices:* If your application is successful, we notify your U.S. Representative and U.S. Senators and send you a Grant Award Notification (GAN); or we may send you an email containing a link to access an electronic version of your GAN. We may notify you informally, also.

If your application is not evaluated or not selected for funding, we notify you.

2. *Administrative and National Policy Requirements:* We identify administrative and national policy requirements in the application package and reference these and other requirements in the *Applicable Regulations* section of this notice.

We reference the regulations outlining the terms and conditions of an award in the *Applicable Regulations* section of this notice and include these and other specific conditions in the GAN. The GAN also incorporates your approved application as part of your binding commitments under the grant.

3. *Reporting:* (a) If you apply for a grant under this competition, you must ensure that you have in place the necessary processes and systems to comply with the reporting requirements in 2 CFR part 170 should you receive funding under the competition. This does not apply if you have an exception under 2 CFR 170.110(b).

(b) At the end of your project period, you must submit a final performance report, including financial information, as directed by the Secretary. If you receive a multi-year award, you must submit an annual performance report that provides the most current performance and financial expenditure information as directed by the Secretary under 34 CFR 75.118. The Secretary may also require more frequent performance reports under 34 CFR 75.720(c). For specific requirements on reporting, please go to *www.ed.gov/fund/grant/apply/appforms/appforms.html.*

4. *Performance Measures:* The Government Performance and Results Act of 1993 (GPRA) directs Federal departments and agencies to improve the effectiveness of programs by engaging in strategic planning, setting outcome-related goals for programs, and measuring program results against those goals. The required annual report must include information on the following measure: the percentage of all products and services deemed to be useful by parent training and information centers to improve vocational rehabilitation service utilization. The data on this measure will be collected by the grantee via survey, assessed, and reported in the aggregate to RSA. The grantee will negotiate targets with RSA after the first year, which will be used to establish a baseline.

5. *Continuation Awards:* In making a continuation award, the Secretary may consider, under 34 CFR 75.253, the extent to which a grantee has made ''substantial progress toward meeting the objectives in its approved application.'' This consideration includes the review of a grantee's progress in meeting the targets and projected outcomes in its approved application, and whether the grantee has expended funds in a manner that is consistent with its approved application and budget. In making a continuation grant, the Secretary also considers whether the grantee is operating in compliance with the assurances in its approved application, including those applicable to Federal civil rights laws that prohibit discrimination in programs or activities receiving Federal financial assistance from the Department (34 CFR 100.4, 104.5, 106.4, 108.8, and 110.23).

VII. Agency Contact

FOR FURTHER INFORMATION CONTACT: Tara Jordan, U.S. Department of Education, 400 Maryland Avenue SW., room 5040, PCP, Washington, DC 20202–2800. Telephone: (202) 245–7341 or by email: *tara.jordan@ed.gov*.

If you use a TDD or TTY, call the FRS, toll free, at 1–800–877–8339.

VIII. Other Information

Accessible Format: Individuals with disabilities can obtain this document and a copy of the application package in an accessible format (e.g., braille, large print, audiotape, or compact disc) on request to the program contact person listed under **FOR FURTHER INFORMATION CONTACT** in section VII of this notice.

Electronic Access to This Document: The official version of this document is the document published in the **Federal Register**. Free Internet access to the official edition of the **Federal Register** and the Code of Federal Regulations is available via the Federal Digital System at: *www.gpo.gov/fdsys.* At this site you can view this document, as well as all other documents of this Department published in the **Federal Register**, in text or Adobe Portable Document Format (PDF). To use PDF you must have Adobe Acrobat Reader, which is available free at the site.

You may also access documents of the Department published in the **Federal Register** by using the article search feature at: *www.federalregister.gov*. Specifically, through the advanced search feature at this site, you can limit your search to documents published by the Department.

Dated: July 3, 2014.

Michael K. Yudin,

Acting Assistant Secretary for Special Education and Rehabilitative Services.

[FR Doc. 2014–16125 Filed 7–9–14; 8:45 am]

BILLING CODE 4000–01–P

ENVIRONMENTAL PROTECTION AGENCY

[EPA–HQ–OW–2014–0138; FRL–9913–60–OW]

Peer Review of the Draft Health Effects Documents for Perfluorooctanoic Acid and Perfluorooctane Sulfonate—Final List of Peer Reviewers and Notice of the Peer Review Meeting

AGENCY: Environmental Protection Agency (EPA).

ACTION: Notice of final peer reviewer selection and external peer review meeting.

SUMMARY: The Environmental Protection Agency (EPA) is announcing the final peer reviewers assembled by Versar, Inc., an EPA contractor, for external peer review of the draft documents entitled ''Health Effects Document for Perfluorooctanoic Acid'' and ''Health Effects Document for Perfluorooctane Sulfonate.'' The peer reviewers are charged with reviewing the scientific and technical merit of the EPA draft health effect documents. EPA is also announcing that Versar, Inc. will organize and conduct the external peer review meeting for the EPA draft health effects documents on August 21 and 22, 2014 in Arlington, Virginia. The meeting will be devoted to discussion and deliberation of major issues identified by the peer reviewers regarding EPA's draft health documents and will be guided by the charge questions previously provided to the public. Versar, Inc. invites the public to register to attend this two-day meeting as observers, either in-person or via teleconference. Registered observers may attend and observe the peer review deliberations, but will not be allowed to address the peer reviewers or provide oral or written comments at the meeting.

DATES: The public external peer review meeting will be held on August 21 and 22, 2014, beginning and ending at approximately 8:30 a.m. and 5:00 p.m. (EDT) on both days. The registration deadline to attend the meeting in-person or via teleconference is August 18, 2014.

ADDRESSES: The peer review meeting will be held at the Crystal City Marriott at Reagan National Airport, located at 1999 Jefferson Davis Highway, Arlington, VA 22202. The phone number for the teleconference line will be provided to registered observers prior to the meeting.

Registration Instructions: To attend the peer review meeting as an observer, either in-person or via teleconference, register no later than August 18, 2014. Space is limited for in-person

attendance, and registrations will be accepted on a first-come, first-served basis. To register for the meeting, please visit *http://peerreview.versar.com/epa/pfoa/registration.html,* complete the online registration form, and submit the required information. You can also register through U.S. Postal Service or overnight/priority mail by sending the necessary registration information (see Registration Information) to the Versar Meeting Coordinator, Ms. Betzy Colon, Versar, Inc., 6850 Versar Center, Springfield, VA 22151; telephone: (703) 642–6727. Registrations sent via U.S. Postal Service or overnight/priority mail must be received by August 18, 2014.

Registration Information: To register for the meeting online or via mail, please provide your full name, title, organization or affiliation, and contact information. You must also indicate which day(s) you plan to attend the meeting.

FOR FURTHER INFORMATION CONTACT: Questions regarding logistics or registration for the external peer review meeting should be directed to Ms. Betzy Colon, Versar, Inc., 6850 Versar Center, Springfield, VA, 22151; telephone: (703) 642–6727; or via email at *bcolon@versar.com.* For additional information concerning EPA's draft health effects documents, please contact Joyce Donohue at U.S. EPA, Office of Water, Health and Ecological Criteria Division (Mail Code 4304T), 1200 Pennsylvania Avenue NW., Washington, DC 20460; telephone: (202) 566–1098; or email: *donohue.joyce@epa.gov.*

SUPPLEMENTARY INFORMATION:

I. Information on the Draft Health Effects Documents

EPA released the draft health effects documents for Perfluorooctanoic Acid (PFOA) and Perfluorooctane Sulfonate (PFOS) for purposes of public comment (scientific views) and peer review on February 28, 2014 (*http://www.gpo.gov/fdsys/pkg/FR-2014-02-28/pdf/2014-04455.pdf*), 79 FR 11429. The 60-day public comment period ended on April 29, 2014. EPA will consider peer reviewer and public comments when finalizing the documents. Once the health effects documents are finalized, they will be utilized to develop lifetime health advisory values for each chemical. The draft documents, draft charge questions, and public comments submitted during the public comment period may be viewed at *http://www.regulations.gov* (Docket ID No. EPA–HQ–OW–2014–0138). The draft documents and charge questions may also be viewed at *http://peerreview.versar.com/epa/pfoa.*

II. Information About the Peer Reviewers

Consistent with guidelines for the peer review of highly influential scientific assessments, EPA tasked a contractor (Versar, Inc.) to assemble six to seven experts to evaluate the draft documents. Versar, Inc. evaluated 29 candidates who were either nominated during a previous public comment period (February 28, 2014 to March 21, 2014) or were identified by Versar to augment the list of publically-nominated candidates. Versar narrowed the list of potential reviewers to 15 candidates and solicited public comments on the interim list on April 30, 2014 (*http://www.gpo.gov/fdsys/pkg/FR-2014-04-30/pdf/2014-09888.pdf*), 79 FR 24419. Using the selection criteria described in the **Federal Register** dated February 28, 2014 (*http://www.gpo.gov/fdsys/pkg/FR-2014-02-28/pdf/2014-04455.pdf*), 79 FR 11429, Versar selected the final seven peer reviewers who, collectively, best provide expertise spanning the multiple subject matter areas covered by the draft documents and, to the extent feasible, best provide a balance of perspectives. Additional information on the scientific peer reviewer selection process can be found at: *http://peerreview.versar.com/epa/pfoa.*

The final list of seven selected peer reviewers is provided below.

1. Dr. James Bruckner—University of Georgia
2. Dr. Deborah Cory-Slechta—University of Rochester School of Medicine and Dentistry
3. Dr. Jamie DeWitt—East Carolina University
4. Dr. Jeffrey Fisher—U.S. Food & Drug Administration
5. Dr. William Hayton—The Ohio State University (Emeritus)
6. Dr. Matthew Longnecker—National Institute of Environmental Health Sciences
7. Dr. Angela Slitt—University of Rhode Island

EPA requests that no individual or organization contact in any way the contractor (Versar, Inc.) or the peer reviewers regarding the subject of the peer review meeting, send them written materials regarding the subject of the meeting, or make any offers or requests to any of them that appear to be linked to their participation in the peer review. The Contractor (Versar, Inc.) will direct the reviewers to report any such contacts to the Contractor (Versar, Inc), who will take appropriate action in consultation with EPA to ensure the independence and impartiality of the peer review.

III. Information About the Peer Review Meeting

The peer reviewers have been charged with evaluating and preparing written comments on the draft PFOA and PFOS health effects documents. Specifically, reviewers will provide general comments, their overall impressions of the documents, and responses to 12 charge questions. Reviewers will also consider the appropriateness of the quality, accuracy, and relevance of the data in the documents. Comments submitted to EPA's public docket (Docket ID number EPA–HQ–OW–2014–0138) during each document's 60-day public comment period will also be provided to the peer reviewers ahead of the meeting for their consideration.

Peer reviewers will participate in the two-day peer review meeting to discuss the scientific basis supporting EPA's draft health effects documents. Following the peer review meeting, Versar will provide a peer review summary report to EPA containing the comments and recommendations from the peer reviewers. The final peer review report will also be made available to the public. In preparing the final health effects documents, EPA will consider Versar's report of the comments and recommendations from the external peer review meeting, as well as written public comments received through the official public docket.

Dated: July 2, 2014.

Nancy K. Stoner,

Acting Assistant Administrator, Office of Water.

[FR Doc. 2014–16176 Filed 7–9–14; 8:45 am]

BILLING CODE 6560–50–P

FEDERAL RESERVE SYSTEM

Formations of, Acquisitions by, and Mergers of Bank Holding Companies

The companies listed in this notice have applied to the Board for approval, pursuant to the Bank Holding Company Act of 1956 (12 U.S.C. 1841 *et seq.*) (BHC Act), Regulation Y (12 CFR part 225), and all other applicable statutes and regulations to become a bank holding company and/or to acquire the assets or the ownership of, control of, or the power to vote shares of a bank or bank holding company and all of the banks and nonbanking companies owned by the bank holding company, including the companies listed below.

The applications listed below, as well as other related filings required by the Board, are available for immediate inspection at the Federal Reserve Bank

indicated. The applications will also be available for inspection at the offices of the Board of Governors. Interested persons may express their views in writing on the standards enumerated in the BHC Act (12 U.S.C. 1842(c)). If the proposal also involves the acquisition of a nonbanking company, the review also includes whether the acquisition of the nonbanking company complies with the standards in section 4 of the BHC Act (12 U.S.C. 1843). Unless otherwise noted, nonbanking activities will be conducted throughout the United States.

Unless otherwise noted, comments regarding each of these applications must be received at the Reserve Bank indicated or the offices of the Board of Governors not later than August 4, 2014.

A. Federal Reserve Bank of Kansas City (Dennis Denney, Assistant Vice President) 1 Memorial Drive, Kansas City, Missouri 64198–0001:

1. *Exchange Company,* Kearney, Nebraska; to acquire 100 percent of the voting shares of JCK, Inc., parent of The First National Bank and Trust Company of Junction City, both in Junction City, Kansas.

Board of Governors of the Federal Reserve System, July 7, 2014.

Michael J. Lewandowski,

Assistant Secretary of the Board.

[FR Doc. 2014–16140 Filed 7–9–14; 8:45 am]

BILLING CODE 6210–01–P

FEDERAL TRADE COMMISSION

[File No. 141 0098]

Actavis plc and Forest Laboratories; Analysis of Proposed Consent Order to Aid Public Comment

AGENCY: Federal Trade Commission.

ACTION: Proposed Consent Agreement.

SUMMARY: The consent agreement in this matter settles alleged violations of federal law prohibiting unfair methods of competition. The attached Analysis of Agreement Containing Consent Order to Aid Public Comment describes both the allegations in the draft complaint and the terms of the consent order—embodied in the consent agreement—that would settle these allegations.

DATES: Comments must be received on or before July 30, 2014.

ADDRESSES: Interested parties may file a comment at *https://ftcpublic.commentworks.com/ftc/actavisdivestapp* online or on paper, by following the instructions in the Request for Comment part of the **SUPPLEMENTARY INFORMATION** section below. Write ''Actavis plc and Forest Laboratories—Consent Agreement; File No. 141 0098'' on your comment and file your comment online at *https://ftcpublic.commentworks.com/ftc/actavisdivestapp* by following the instructions on the web-based form. If you prefer to file your comment on paper, mail your comment to the following address: Federal Trade Commission, Office of the Secretary, 600 Pennsylvania Avenue NW., Suite CC–5610 (Annex D), Washington, DC 20580, or deliver your comment to the following address: Federal Trade Commission, Office of the Secretary, Constitution Center, 400 7th Street SW., 5th Floor, Suite 5610 (Annex D), Washington, DC 20024.

FOR FURTHER INFORMATION CONTACT: Christine Tasso, Bureau of Competition, (202–326–2232), 600 Pennsylvania Avenue NW., Washington, DC 20580.

SUPPLEMENTARY INFORMATION: Pursuant to Section 6(f) of the Federal Trade Commission Act, 15 U.S.C. 46(f), and FTC Rule 2.34, 16 CFR 2.34, notice is hereby given that the above-captioned consent agreement containing consent order to cease and desist, having been filed with and accepted, subject to final approval, by the Commission, has been placed on the public record for a period of thirty (30) days. The following Analysis to Aid Public Comment describes the terms of the consent agreement, and the allegations in the complaint. An electronic copy of the full text of the consent agreement package can be obtained from the FTC Home Page (for June 30, 2014), on the World Wide Web, at *http://www.ftc.gov/os/actions.shtm.*

You can file a comment online or on paper. For the Commission to consider your comment, we must receive it on or before July 30, 2014. Write ''Actavis plc and Forest Laboratories—Consent Agreement; File No. 141 0098'' on your comment. Your comment—including your name and your state—will be placed on the public record of this proceeding, including, to the extent practicable, on the public Commission Web site, at *http://www.ftc.gov/os/publiccomments.shtm.* As a matter of discretion, the Commission tries to remove individuals' home contact information from comments before placing them on the Commission Web site.

Because your comment will be made public, you are solely responsible for making sure that your comment does not include any sensitive personal information, like anyone's Social Security number, date of birth, driver's license number or other state identification number or foreign country equivalent, passport number, financial account number, or credit or debit card number. You are also solely responsible for making sure that your comment does not include any sensitive health information, like medical records or other individually identifiable health information. In addition, do not include any ''[t]rade secret or any commercial or financial information which . . . is privileged or confidential,'' as discussed in Section 6(f) of the FTC Act, 15 U.S.C. 46(f), and FTC Rule 4.10(a)(2), 16 CFR 4.10(a)(2). In particular, do not include competitively sensitive information such as costs, sales statistics, inventories, formulas, patterns, devices, manufacturing processes, or customer names.

If you want the Commission to give your comment confidential treatment, you must file it in paper form, with a request for confidential treatment, and you have to follow the procedure explained in FTC Rule 4.9(c), 16 CFR 4.9(c).[1] Your comment will be kept confidential only if the FTC General Counsel, in his or her sole discretion, grants your request in accordance with the law and the public interest.

Postal mail addressed to the Commission is subject to delay due to heightened security screening. As a result, we encourage you to submit your comments online. To make sure that the Commission considers your online comment, you must file it at *https://ftcpublic.commentworks.com/ftc/actavisdivestapp* by following the instructions on the web-based form. If this Notice appears at *http://www.regulations.gov/#!home*, you also may file a comment through that Web site.

If you file your comment on paper, write ''Actavis plc and Forest Laboratories—Consent Agreement; File No. 141 0098'' on your comment and on the envelope, and mail your comment to the following address: Federal Trade Commission, Office of the Secretary, 600 Pennsylvania Avenue NW., Suite CC–5610 (Annex D), Washington, DC 20580, or deliver your comment to the following address: Federal Trade Commission, Office of the Secretary, Constitution Center, 400 7th Street SW., 5th Floor, Suite 5610 (Annex D), Washington, DC 20024. If possible, submit your paper comment to the Commission by courier or overnight service.

Visit the Commission Web site at *http://www.ftc.gov* to read this Notice

[1] In particular, the written request for confidential treatment that accompanies the comment must include the factual and legal basis for the request, and must identify the specific portions of the comment to be withheld from the public record. *See* FTC Rule 4.9(c), 16 CFR 4.9(c).

and the news release describing it. The FTC Act and other laws that the Commission administers permit the collection of public comments to consider and use in this proceeding as appropriate. The Commission will consider all timely and responsive public comments that it receives on or before July 30, 2014. You can find more information, including routine uses permitted by the Privacy Act, in the Commission's privacy policy, at *http://www.ftc.gov/ftc/privacy.htm.*

Analysis of Proposed Consent Order to Aid Public Comment

The Federal Trade Commission (''Commission'') has accepted, subject to final approval, an Agreement Containing Consent Orders (''Consent Agreement'') from Actavis plc (''Actavis'') that is designed to remedy the anticompetitive effects in three current generic pharmaceutical markets and two future markets resulting from Actavis' acquisition of Forest Laboratories, Inc. (''Forest''). Under the terms of the proposed Consent Agreement, the parties are required to: (1) Return all of Forest's rights and assets related to generic diltiazem hydrochloride (AB4) to Valeant Pharmaceuticals International, Inc. (''Valeant''), (2) divest all of Actavis' rights and assets to generic ursodiol and generic lamotrigine ODT to Impax Laboratories, Inc. (''Impax''), and (3) divest all of Forest's rights and assets to generic propranolol hydrochloride to Catalent Pharma Solutions, Inc. (''Catalent'').

The proposed Consent Agreement has been placed on the public record for thirty days for receipt of comments from interested persons. Comments received during this period will become part of the public record. After thirty days, the Commission will again evaluate the proposed Consent Agreement, along with the comments received, in order to make a final decision as to whether it should withdraw from the proposed Consent Agreement, or make final the Decision and Order (''Order'').

Pursuant to an Agreement and Plan of Merger dated February 17, 2014, Actavis plans to acquire, 100% of the voting securities of Forest for a total value of approximately $25 billion (the ''Proposed Acquisition''). The Commission alleges in its Complaint that the Proposed Acquisition, if consummated, would violate Section 7 of the Clayton Act, as amended, 15 U.S.C. 18, and Section 5 of the Federal Trade Commission Act, as amended, 15 U.S.C. 45, by lessening competition in three current relevant product markets: (1) Generic diltiazem hydrochloride extended release capsules (AB4) (generic Tiazac) (''generic diltiazem hydrochloride (AB4)''; (2) generic ursodiol tablets (''generic ursodiol''); and (3) generic propranolol hydrochloride extended release capsules (''generic propranolol hydrochloride''), and the future relevant market of lamotrigine orally disintegrating tablets (''ODT'') and its generic equivalent. The proposed Consent Agreement will remedy the alleged violations by preserving the competition that would otherwise be eliminated by the Proposed Acquisition.

The Products and Structure of the Markets

The Proposed Acquisition would reduce the number of suppliers in three current relevant markets, each of which has only a limited number of market participants. It would also likely delay the introduction of generic competition against Lamictal ODT, the branded lamotrigine orally disintegrating tablets marketed by Forest.

Generic versions of drugs are usually launched after a branded product's patents expire, or a generic supplier successfully challenges such patents in court or reaches a legal settlement with the branded manufacturer. When only one generic product is available, the price for the 2 branded product acts as a ceiling above which the generic manufacturer cannot price its product. During this period, the branded product competes directly with the generic. Once multiple generic suppliers enter a market, the branded drug manufacturer usually ceases to provide any competitive constraint on the prices for generic versions of the drug. Rather, the generic suppliers compete only against each other. In generic pharmaceutical product markets, price generally decreases as the number of generic competitors increases. Accordingly, the reduction in the number of suppliers within each relevant market would likely have a direct and substantial anticompetitive effect on pricing.

The Proposed Acquisition would reduce current competition in markets for three currently marketed generic prescription drugs—generic diltiazem hydrochloride (AB4), which is used to treat hypertension and chronic stable angina, generic ursodiol, which is used to treat primary biliary cirrhosis of the liver, and generic propranolol hydrochloride, an extended release drug indicated for the treatment of hypertension. The structure of these markets is as follows:

- The generic diltiazem hydrochloride (AB4) market currently has three suppliers: Actavis, Forest, and Sun Pharmaceutical Industries, Ltd. The Proposed Acquisition would reduce the number of suppliers in this market from three to two.
- The generic ursodiol market currently has four suppliers: Actavis, Forest, which distributes its product through Prasco Laboratories, Glenmark Pharmaceuticals, Ltd., and Par Pharmaceutical Companies. The Proposed Acquisition would reduce the number of suppliers in this market from four to three.
- The generic propranolol hydrochloride market currently has four suppliers: Actavis, Forest, which distributes its product through Breckenridge Pharmaceutical, LLC, Rouses Point Pharmaceuticals, and Upsher-Smith Laboratories. The Proposed Acquisition would reduce the number of suppliers in this market from four to three.

In addition to reducing current competition in three generic prescription markets, the proposed transaction would significantly reduce competition in the future market of lamotrigine orally disintegrating tablets:

- Lamictal ODT is a lamotrigine orally disintegrating tablet indicated for seizures. Forest currently manufactures Lamictal ODT for GlaxoSmithKline plc (''GSK''). GSK owns the New Drug Application for Lamictal ODT and markets the product. Actavis holds the only approved Abbreviated New Drug Application to market generic lamotrigine ODT. Thus, Actavis appears likely to be the first generic entrant and would be the sole competitor to Forest/GSK's branded Lamictal ODT product for a significant period of time. The Acquisition would likely delay or preclude the entry of Actavis' generic product.

Entry

Entry into the markets for the Products would not be timely, likely, or sufficient in magnitude, character, and scope to deter or counteract the anticompetitive effects of the acquisition. The combination of drug development times and regulatory requirements, including U.S. Food and Drug Administration (''FDA'') approval, is costly and lengthy. Industry participants also note that expertise and facilities associated with manufacturing extended release products and orally disintegrating tablets is sufficiently specialized that a relatively small number of firms participate in such markets.

Effects

The Proposed Acquisition would likely cause significant anticompetitive

harm to consumers in the relevant generic pharmaceutical markets by eliminating current and/or future competition in concentrated existing generic markets or in future generic markets. In generic pharmaceuticals markets, price is heavily influenced by the number of participants with sufficient supply. Market participants consistently characterize generic drug markets as commodity markets in which the number of generic suppliers has a direct impact on pricing. Customers and competitors alike have confirmed that the prices of the generic pharmaceutical products at issue continue to decrease with new entry even after a number of suppliers have entered these generic markets. Further, customers generally believe that having at least four suppliers in a generic pharmaceutical market produces more competitive prices than if fewer suppliers are available to them.

The evidence shows that anticompetitive effects are likely to result from the Proposed Acquisition due to a decrease in the number of independent competitors in the markets at issue. In each of the current generic prescription markets, industry participants have indicated that the presence of Forest as a competitor has allowed them to negotiate lower prices from other suppliers, including Actavis, and has allowed them to locate additional supply in times of product shortages from their existing suppliers.

The evidence also shows that the Proposed Acquisition would eliminate significant future competition between Actavis and Forest in the market for lamotrigine orally disintegrating tablets because, absent the Proposed Acquisition, Actavis likely would have been the first generic supplier to enter the market.

By eliminating the significant current and future competition between the parties, the Proposed Acquisition will likely cause U.S. consumers to pay significantly higher prices for these generic drugs, absent a remedy.

The Consent Agreement

The proposed Consent Agreement effectively remedies the Proposed Acquisition's anticompetitive effects in each of the relevant product markets. Pursuant to the Consent Agreement, the parties are required to return all of Forest's rights and assets related to generic diltiazem hydrochloride (AB4) to Valeant, divest all of Actavis' rights and assets to generic ursodiol and generic lamotrigine ODT to Impax, and provide all of Forest's rights and assets to 4 generic propranolol hydrochloride to Catalent. The parties must accomplish these divestitures and relinquish their rights no later than ten days after the Proposed Acquisition is consummated.

The Commission's goal in evaluating possible purchasers of divested assets is to maintain the competitive environment that existed prior to the Proposed Acquisition. If the Commission determines that Valeant, Impax, or Catalent is not an acceptable acquirer, or that the manner of the divestiture is not acceptable, the proposed D&O requires the parties to unwind the sale and then divest the products within six months of the date the D&O becomes final to another Commission-approved acquirer or acquirers. The proposed D&O further allows the Commission to appoint a trustee in the event the parties fail to divest the products.

The proposed Consent Agreement contains several provisions to help ensure that the divestitures are successful. With regard to generic diltiazem hydrochloride (AB4), the proposed Consent Agreement requires that Forest transfer to Valeant all confidential business information and requires that Actavis and Forest take all actions that are necessary to maintain the full viability and marketability of the product until Valeant commences the distribution, marketing, and sale of the product. With regard to generic ursodiol, generic lamotrigine ODT, and generic propranolol hydrochloride (termed ''Contract Manufacture Products'' in the Consent Agreement), the proposed Consent Agreement requires Actavis and Forest to manufacture and supply generic ursodiol and generic lamotrigine ODT to Impax and generic propranolol to Catalent following the divestiture while they seek the necessary FDA approval.

The Commission has agreed to appoint Frank Civille to act as an interim monitor to assure that Actavis and Forest expeditiously comply with all of their obligations and perform all of their responsibilities pursuant to the Consent Agreement. In order to ensure that the Commission remains informed about the status of the transfer of rights and assets, the Consent Agreement requires Actavis and Forest to file reports with the interim monitor who will report in writing to the Commission concerning performance by the parties of their obligations under the Consent Agreement.

The purpose of this analysis is to facilitate public comment on the proposed Consent Agreement, and it is not intended to constitute an official interpretation of the proposed Order or to modify its terms in any way.

By direction of the Commission.

Donald S. Clark,

Secretary.

[FR Doc. 2014–16147 Filed 7–9–14; 8:45 am]

BILLING CODE 6750–01–P

FEDERAL TRADE COMMISSION

[File No. 122 3016]

L'Oréal USA, Inc.; Analysis of Proposed Consent Order To Aid Public Comment

AGENCY: Federal Trade Commission.

ACTION: Proposed Consent Agreement.

SUMMARY: The consent agreement in this matter settles alleged violations of federal law prohibiting unfair or deceptive acts or practices. The attached Analysis of Proposed Consent Order to Aid Public Comment describes both the allegations in the draft complaint and the terms of the consent order—embodied in the consent agreement—that would settle these allegations.

DATES: Comments must be received on or before July 30, 2014.

ADDRESSES: Interested parties may file a comment at *https://ftcpublic.commentworks.com/ftc/l'orealconsent* online or on paper, by following the instructions in the Request for Comment part of the **SUPPLEMENTARY INFORMATION** section below. Write ''L'Oréal USA, Inc.—Consent Agreement; File No. 122 3016'' on your comment and file your comment online at *https://ftcpublic.commentworks.com/ftc/l'orealconsent* by following the instructions on the web-based form. If you prefer to file your comment on paper, mail your comment to the following address: Federal Trade Commission, Office of the Secretary, 600 Pennsylvania Avenue NW., Suite CC–5610 (Annex D), Washington, DC 20580, or deliver your comment to the following address: Federal Trade Commission, Office of the Secretary, Constitution Center, 400 7th Street SW., 5th Floor, Suite 5610 (Annex D), Washington, DC 20024.

FOR FURTHER INFORMATION CONTACT: Elizabeth Nach, Bureau of Consumer Protection, (202–326–2611), 600 Pennsylvania Avenue NW., Washington, DC 20580.

SUPPLEMENTARY INFORMATION: Pursuant to Section 6(f) of the Federal Trade Commission Act, 15 U.S.C. 46(f), and FTC Rule 2.34, 16 CFR 2.34, notice is hereby given that the above-captioned consent agreement containing consent order to cease and desist, having been filed with and accepted, subject to final approval, by the Commission, has been

placed on the public record for a period of thirty (30) days. The following Analysis to Aid Public Comment describes the terms of the consent agreement, and the allegations in the complaint. An electronic copy of the full text of the consent agreement package can be obtained from the FTC Home Page (for June 30, 2014), on the World Wide Web, at *http://www.ftc.gov/os/actions.shtm.*

You can file a comment online or on paper. For the Commission to consider your comment, we must receive it on or before July 30, 2014. Write ''L'Oréal USA, Inc.—Consent Agreement; File No. 122 3016'' on your comment. Your comment—including your name and your state—will be placed on the public record of this proceeding, including, to the extent practicable, on the public Commission Web site, at *http://www.ftc.gov/os/publiccomments.shtm.* As a matter of discretion, the Commission tries to remove individuals' home contact information from comments before placing them on the Commission Web site.

Because your comment will be made public, you are solely responsible for making sure that your comment does not include any sensitive personal information, like anyone's Social Security number, date of birth, driver's license number or other state identification number or foreign country equivalent, passport number, financial account number, or credit or debit card number. You are also solely responsible for making sure that your comment does not include any sensitive health information, like medical records or other individually identifiable health information. In addition, do not include any ''[t]rade secret or any commercial or financial information which . . . is privileged or confidential,'' as discussed in Section 6(f) of the FTC Act, 15 U.S.C. 46(f), and FTC Rule 4.10(a)(2), 16 CFR 4.10(a)(2). In particular, do not include competitively sensitive information such as costs, sales statistics, inventories, formulas, patterns, devices, manufacturing processes, or customer names.

If you want the Commission to give your comment confidential treatment, you must file it in paper form, with a request for confidential treatment, and you have to follow the procedure explained in FTC Rule 4.9(c), 16 CFR 4.9(c).[1] Your comment will be kept confidential only if the FTC General Counsel, in his or her sole discretion, grants your request in accordance with the law and the public interest.

Postal mail addressed to the Commission is subject to delay due to heightened security screening. As a result, we encourage you to submit your comments online. To make sure that the Commission considers your online comment, you must file it at *https://ftcpublic.commentworks.com/ftc/l'orealconsent* by following the instructions on the web-based form. If this Notice appears at *http://www.regulations.gov/#!home,* you also may file a comment through that Web site.

If you file your comment on paper, write ''L'Oréal USA, Inc.—Consent Agreement; File No. 122 3016'' on your comment and on the envelope, and mail your comment to the following address: Federal Trade Commission, Office of the Secretary, 600 Pennsylvania Avenue NW., Suite CC–5610 (Annex D), Washington, DC 20580, or deliver your comment to the following address: Federal Trade Commission, Office of the Secretary, Constitution Center, 400 7th Street SW., 5th Floor, Suite 5610 (Annex D), Washington, DC 20024. If possible, submit your paper comment to the Commission by courier or overnight service.

Visit the Commission Web site at *http://www.ftc.gov* to read this Notice and the news release describing it. The FTC Act and other laws that the Commission administers permit the collection of public comments to consider and use in this proceeding as appropriate. The Commission will consider all timely and responsive public comments that it receives on or before July 30, 2014. You can find more information, including routine uses permitted by the Privacy Act, in the Commission's privacy policy, at *http://www.ftc.gov/ftc/privacy.htm.*

Analysis of Proposed Consent Order To Aid Public Comment

The Federal Trade Commission (''FTC'' or ''Commission'') has accepted, subject to final approval, an agreement containing a consent order from L'Oréal USA, Inc. (''L'Oréal'').

The proposed consent order (''proposed order'') has been placed on the public record for thirty (30) days for receipt of comments by interested persons. Comments received during this period will become part of the public record. After thirty (30) days, the Commission will again review the agreement and the comments received, and will decide whether it should withdraw from the agreement or make final the agreement's proposed order.

This matter involves L'Oréal's advertising for its Lancôme Génifique (''Génifique'') and L'Oréal Paris Youth Code (''Youth Code'') facial skincare product lines. The Commission's complaint alleges that L'Oréal advertised that Génifique and Youth Code provided anti-aging benefits by targeting users' genes, and that Génifique provided results to particular percentages of users.

The complaint alleges that the company violated Sections 5(a) and 12 of the Federal Trade Commission Act by making unsubstantiated representations that Génifique boosts the activity of genes, thereby resulting in visibly younger skin in seven days, and that Youth Code targets specific genes to make skin look younger, act younger, and respond five times faster to aggressors such as stress, fatigue, and aging. The complaint also alleges that L'Oréal violated Sections 5(a) and 12 by making false representations that scientific studies prove these claims.

The complaint further alleges that L'Oréal violated Sections 5(a) and 12 by falsely representing that Génifique is clinically proven to produce specific results for particular percentages of users, including perfectly luminous skin in 85% of women, astonishingly even skin in 82% of women, and cushiony soft skin in 91% of women, in seven days. These purported results were presented in a bar graph under the words ''clinically proven.''

The proposed order includes injunctive relief that prohibits these alleged violations and fences in similar and related violations. For purposes of the order, ''Covered Product'' means any Lancôme brand or L'Oréal Paris brand cosmetic, excluding hair, nail, fragrance, mascara, and sunscreen products.

Part I of the proposed order prohibits L'Oréal from making claims that any Lancôme brand or L'Oréal Paris brand facial skincare product targets or boosts the activity of genes, thereby resulting in skin that looks or acts younger, or skin that responds five times faster to aggressors, without competent and reliable scientific evidence for these claims. ''Competent and reliable scientific evidence'' is defined to mean ''evidence, consisting of tests, analyses, research, or studies that have been conducted and evaluated in an objective manner by qualified persons and are generally accepted in the profession to yield accurate and reliable results.''

Part II of the proposed order is a fencing-in provision that prohibits L'Oréal from representing that any Covered Product affects genes. The fencing-in provision provides broader product and claims coverage than Part

[1] In particular, the written request for confidential treatment that accompanies the comment must include the factual and legal basis for the request, and must identify the specific portions of the comment to be withheld from the public record. *See* FTC Rule 4.9(c), 16 CFR 4.9(c).

I of the proposed order. It extends to products other than ''facial skincare products,'' such as lip products and makeup, and covers any gene claims.

Part III of the proposed order prohibits L'Oréal from misrepresenting the existence, contents, validity, results, conclusions, or interpretations of any test, study, or research in connection with the manufacturing, labeling, advertising, promotion, offering for sale, and sale or distribution of any Covered Product.

Part IV contains recordkeeping requirements for advertisements and substantiation relevant to representations covered by Parts I through III of the order.

Parts V through VII of the proposed order require L'Oréal to: Deliver a copy of the order to principals, officers, and employees having responsibilities with respect to the subject matter of the order; notify the Commission of changes in corporate structure that might affect compliance obligations under the order; and file compliance reports with the Commission.

Part VIII provides that the order will terminate after twenty (20) years, with certain exceptions.

The purpose of this analysis is to facilitate public comment on the proposed order, and it is not intended to constitute an official interpretation of the complaint or proposed order, or to modify the proposed order's terms in any way.

By direction of the Commission.

Donald S. Clark,

Secretary.

[FR Doc. 2014–16146 Filed 7–9–14; 8:45 am]

BILLING CODE 6750–01–P

FEDERAL TRADE COMMISSION

Granting of Request for Early Termination of the Waiting Period Under the Premerger Notification Rules

Section 7A of the Clayton Act, 15 U.S.C. 18a, as added by Title II of the Hart-Scott-Rodin Antitrust Improvements Act of 1976, requires persons contemplating certain mergers or acquisitions to give the Federal Trade Commission and the Assistant Attorney General advance notice and to wait designated periods before consummation of such plans. Section 7A(b)(2) of the Act permits the agencies, in individual cases, to terminate this waiting period prior to its expiration and requires that notice of this action be published in the **Federal Register**.

The following transactions were granted early termination—on the dates indicated—of the waiting period provided by law and the premerger notification rules. The listing for each transaction includes the transaction number and the parties to the transaction. The grants were made by the Federal Trade Commission and the Assistant Attorney General for the Antitrust Division of the Department of Justice. Neither agency intends to take any action with respect to these proposed acquisitions during the applicable waiting period.

EARLY TERMINATIONS GRANTED JUNE 1, 2014 THRU JUNE 30, 2014

06/02/2014		
20140916	G	Ares Owners Holdings, L.P.; Keltic Financial Partners II, LP; Ares Owners Holdings, L.P.
20140926	G	The Guardian Life Insurance Company of America; Reza Abbaszadeh, DDS; The Guardian Life Insurance Company of America.
06/03/2014		
20140903	G	JANA Offshore Partners, Ltd.; Walgreen Co.; JANA Offshore Partners, Ltd.
20140904	G	JANA Nirvana Offshore Fund, Ltd.; Walgreen Co.; JANA Nirvana Offshore Fund, Ltd.
20140954	G	GI Partners Fund IV L.P.; Welsh Carson Anderson & Stowe XI, LP; GI Partners Fund IV L.P.
20140961	G	Gannett Co., Inc.; SunTX LBC Holdings, L.P.; Gannett Co., Inc.
20140964	G	CCMP Capital Investors III, L.P.; Oak Hill Capital Partners III, L.P.; CCMP Capital Investors III, L.P.
20140965	G	Gilles Martin; ViraCor-IBT Laboratories, Inc.; Gilles Martin.
20140966	G	Acxiom Corporation; LiveRamp, Inc.; Acxiom Corporation.
20140967	G	PAR Investment Partners, L.P.; Global Eagle Entertainment Inc.; PAR Investment Partners, L.P.
20140969	G	ShawCor Ltd.; SCP IV Desert AIV L.P.; ShawCor Ltd.
20140975	G	GHD Group Pty Ltd; CRA Holdings Inc.; GHD Group Pty Ltd.
06/04/2014		
20140390	G	Meredith Corporation; Gannett Co., Inc.; Meredith Corporation.
06/05/2014		
20140843	G	Cadence Design Systems, Inc.; Jasper Design Automation, Inc.; Cadence Design Systems, Inc.
20140941	G	David A. Siegel; The Goldman Sachs Group, Inc.; David A. Siegel.
20140955	G	Permira V L.P. 2; GFI Software S.A.; Permira V L.P. 2.
20140960	G	Shire plc; Lumena Pharmaceuticals, Inc.; Shire plc.
20140968	G	Golden Gate Capital Opportunity Fund, L.P.; Darden Restaurants, Inc.; Golden Gate Capital Opportunity Fund, L.P.
20140972	G	TAC Holding Company; Global T&M Holdings LLC; TAC Holding Company.
20140982	G	First Reserve Fund XI, L.P.; Forest Oil Corporation; First Reserve Fund XI, L.P.
06/06/2014		
20140943	G	Radian Group Inc.; Greenfield Acquisition Partners V. L.P.; Radian Group Inc.
20140981	G	Levine Leichtman Capital Partners V, L.P.; Transportation Resource Partners, L.P. Levine Leichtman Capital Partners V, L.P.
20140987	G	Triton Fund IV L.P.; GEA Group Aktiengesellschaft; Triton Fund IV L.P.
20141032	G	Daniel Gilbert; Destination Media, Inc.; Daniel Gilbert.

EARLY TERMINATIONS GRANTED JUNE 1, 2014 THRU JUNE 30, 2014—Continued

		06/10/2014
20140988	G	Applied Industrial Technologies, Inc.; Alex Dan Knox; Applied Industrial Technologies, Inc.
20140992	G	The Babcock & Wilcox Company; MEGTEC Partners, L.P.; The Babcock & Wilcox Company.
20141002	G	2409962 Ontario Limited; Sharon and Ronnie Matthews; 2409962 Ontario Limited.
20141006	G	Clayton, Dubilier & Rice Fund IX, L.P.; Metalmark Capital Partners, L.P.; Clayton, Dubilier & Rice Fund IX, L.P.
20141007	G	Intuit Inc.; Check Inc.; Intuit Inc.
20141009	G	Sentinel Capital Partners V, L.P.; The Marilyn Carlson Nelson 1998 GST Family Trust; Sentinel Capital Partners V, L.P.
20141010	G	Sentinel Capital Partners V, L.P.; The Barbara Carlson Gage 1998 GST Family Trust; Sentinel Capital Partners V. L.P.
20141015	G	New Source Energy Partners, L.P. Mark Snodgrass; New Source Energy Partners, L.P.
20141016	G	New Source Energy Partners, L.P.; Brian Austin; New Source Energy Partners, L.P.
20141017	G	Warburg Pincus Private Equity XI, L.P.; Odyssey Investment Partners Fund IV, L.P.; Warburg Pincus Private Equity XI, L.P.
20141018	G	Clayton, Dubilier & Rice Fund IX, L.P.; Dubai Holding LLC; Clayton, Dubilier & Rice Fund IX, L.P.
20141023	G	Novacap Industries III, L.P.; Leonard J. Mendel; Novacap Industries III, L.P.
20141027	G	Teva Pharmaceutical Industries Limited; The Procter & Gamble Company; Teva Pharmaceutical Industries Limited.
20141028	G	The Procter & Gamble Company; Teva Pharmaceuticals Industries Limited; The Procter & Gamble Company.
20141031	G	Henry Schein, Inc.; SmartPak Equine, LLC; Henry Schein, Inc.
		06/11/2014
20140938	G	Blue Harbour Active Ownership Partners, L.P.; Investors Bancorp, Inc.; Blue Harbour Active Ownership Partners, L.P.
20140974	G	KKR North America Fund XI, L.P.; Michael S. Dell; KKR North America Fund XI, L.P.
20141021	G	GDF SUEZ S.A.; Avista Corporation; GDF SUEZ S.A.
20141025	G	Lindsay Goldberg III L.P.; MBWS Ultimate Holdco Inc.; Lindsay Goldberg III L.P.
		06/12/2014
20140952	G	Blue Harbour Strategic Value Partners Offshore, Ltd.; Investors Bancorp, Inc.; Blue Harbour Strategic Value Partners Offshore, Ltd.
		06/13/2014
20140798	G	US Ecology, Inc.; EQ Group, LLC; US Ecology, Inc.
20141020	G	UNS Energy Corporation; Entegra Power Group LLC; UNS Energy Corporation.
20141033	G	Fortis Inc.; UNS Energy Corporation; Fortis Inc.
20141034	G	KKR North America Fund XI, UP.; Hellman & Friedman Capital Partners VI, L.P.; KKR North America Fund XI, L.P.
20141038	G	Mitsubishi UFJ Lease & Finance Company Limited; Mitsubishi UFJ Financial Group, Inc.; Mitsubishi UFJ Lease & Finance Company Limited.
20141041	G	The Energy & Minerals Group Fund III, LP; Terrence M. Pegula; The Energy & Minerals Group Fund III, LP.
20141047	G	BRE Spade Parent LLC; Deutsche Bank AG; BRE Spade Parent LLC.
20141056	G	Bridgestone Corporation; Masthead Industries, Inc.; Bridgestone Corporation.
		06/17/2014
20140855	G	Mars, Incorporated; The Procter & Gamble Company; Mars, Incorporated.
20140971	G	Marcato International Ltd.; Life Time Fitness, Inc.; Marcato International Ltd.
20140980	G	The Hillshire Brands Company; Pinnacle Foods Inc.; The Hillshire Brands Company.
20140984	G	Blackstone Capital Partners V, L.P.; The Hillshire Brands Company; Blackstone Capital Partners V, L.P.
20140985	G	BCPV Pinnacle Holdings LLC; The Hillshire Brands Company; BCPV Pinnacle Holdings LLC.
20141044	G	Element Financial Corporation; PHH Corporation; Element Financial Corporation.
20141048	G	TrueBlue, Inc.; Leeds Equity Partners IV, L.P.; TrueBlue, Inc.
20141062	G	Rosneft Oil Company; Morgan Stanley; Rosneft Oil Company.
		06/19/2014
20140973	G	Telephone and Data Systems Inc. Voting Trust; Donald and Rilda Tykeson; Telephone and Data Systems Inc. Voting Trust.
20140997	G	Reckitt Benckiser Group plc; Xenoport, Inc.; Reckitt Benckiser Group plc.
20141030	G	QUALCOMM Incorporated; Wilocity Ltd.; QUALCOMM Incorporated.
20141069	G	Danaher Corporation; ANGI Energy Systems, Inc.; Danaher Corporation.
		06/20/2014
20141045	G	Danaher Corporation; Paul D. Porteous; Danaher Corporation.
20141054	G	Marcato International Ltd.; InterContinental Hotels Group PLC; Marcato International Ltd.
20141055	G	Marcato, L.P.; InterContinental Hotels Group PLC; Marcato, L.P.
20141067	G	Henkel AG & Co. KGaA; TSG5 L.P.; Henkel AG & Co. KGaA.
20141071	G	Albany Molecular Research, Inc.; Altaris Health Partners II, L.P.; Albany Molecular Research, Inc.
20141075	G	TransForce Inc.; Marathon Fund Limited Partnership V; TransForce Inc.
20141076	G	NRG Energy, Inc.; Terra-Gen Power Holdings, LLC; NRG Energy, Inc.
20141086	G	Google Inc.; Skybox Imaging, Inc.; Google Inc.
20141089	G	Quartet Merger Corp.; Pangaea Logistics Solutions Ltd.; Quartet Merger Corp.
20141090	G	NGL Energy Partners LP; Morgan Stanley; NGL Energy Partners LP.
20141091	G	Steven A. Ballmer; Rochelle H. & Donald T. Sterling; Steven A. Ballmer.

EARLY TERMINATIONS GRANTED JUNE 1, 2014 THRU JUNE 30, 2014—Continued

20141095	G	Phillips 66; Chevron Corporation; Phillips 66.
20141101	G	Riverstone Global Energy and Power Fund V (FT), L.P.; RJS Power Holdings LLC; Riverstone Global Energy and Power Fund V (FT), L.P.
20141107	G	Linden Capital Partners II, LP; Kersdale Holdings, LLC; Linden Capital Partners II, LP.
20141113	G	Avista Capital Partners II, L.P.; Avista Capital Partners II, L.P.; Avista Capital Partners II, L.P.
		06/23/2014
20141084	G	Audax Private Equity Fund IV, L.P.; Aztec Holding Corporation; Audax Private Equity Fund IV, L.P.
20141096	G	Marathon Petroleum Corporation; Hess Corporation; Marathon Petroleum Corporation.
		06/24/2014
20141093	G	Green Equity Investors Side VI, L.P.; Nathan Kirsh; Green Equity Investors Side VI, L.P.
20141094	G	Green Equity Investors VI, L.P.; Nathan Kirsh; Green Equity Investors VI, L.P.
20141098	G	Helen of Troy Limited; ASP III Alternative Investments, LP.; Helen of Troy Limited.
20141100	G	Pernod Ricard S.A.; Avion Tequila LLC; Pernod Ricard S.A.
20141122	G	Fresenius Medical Care AG & Co. KGaA; TowerBrook Investors II, L.P. Fresenius Medical Care AG & Co. KGaA.
20141126	G	Jindal SAW Limited; PSL-North America LLC; Jindal SAW Limited.
		06/25/2014
20141111	G	Goodbaby International Holdings Limited; Weston Presidio V, L.P.; Goodbaby International Holdings Limited.
		06/26/2014
20141039	G	Starboard Leaders Fund LP; MeadWestvaco Corporation; Starboard Leaders Fund LP.
20141087	G	Pacific DataVision, Inc.; Softbank Corp.; Pacific DataVision, Inc.
20141092	G	Hikma Pharmaceuticals PLC; C.H. Boehringer Sohn AG & Co. KG; Hikma Pharmaceuticals PLC.
		06/27/2014
20140585	G	Martin Marietta Materials, Inc.; Texas Industries, Inc.; Martin Marietta Materials, Inc.
20141099	G	General Atlantic Partners 96, LP.; tradeMONSTER Group Inc.; General Atlantic Partners 96, L.P.
20141102	G	General Atlantic Partners 96, L.P.; Matthew Hulsizer and Jennifer Just; General Atlantic Partners 96, L.P.
		06/30/2014
20140689	G	Actavis plc; Forest Laboratories, Inc.; Actavis plc.
20141040	G	UnitedHealth Group Incorporated; ProHEALTH Corp.; UnitedHealth Group Incorporated.
20141051	G	Bayer AG; Merck & Co., Inc.; Bayer AG.
20141052	G	Merck & Co., Inc.; Bayer AG; Merck & Co., Inc.
20141070	G	Carl C. Icahn; Family Dollar Stores, Inc.; Carl C. Icahn.
20141109	G	Accel-KKR Capital Partners III, LP; HighJump Acquisition LLC; Accel-KKR Capital Partners III, LP.
20141118	G	United Farmers Cooperative; Central Valley Ag Cooperative Nonstock; United Farmers Cooperative.
20141124	G	The Williams Companies, Inc.; Access Midstream Partners, L.P.; The Williams Companies, Inc.
20141125	G	American Securities Partners VI, L.P.; Sun Capital Partners IV, L.P.; American Securities Partners VI, L.P.
20141128	G	Mr. and Mrs. Peter M. and Marshia Carlino; Gaming and Leisure Properties, Inc.; Mr. and Mrs. Peter M. and Marshia Carlino.
20141133	G	Nicholas Schorsch; Validus Partner Group Limited, LLC; Nicholas Schorsch.
20141134	G	Wolverine Advisors, Inc; The Warranty Group, Inc.; Wolverine Advisors, Inc.
20141135	G	Karman Topco L.P.; AGS Topco Holdings L.P.; Karman Topco L.P.
20141137	G	L'Oreal S.A.; Toni Ko; L'Oreal S.A.
20141138	G	Techne Corporation; ProteinSimple; Techne Corporation.
20141139	G	SolarCity Corporation; Silevo, Inc.; SolarCity Corporation.
20141141	G	FCPR Astorg V, managed by Astorg Partners SAS; Mr. Giorgio Tadolini; FCPR Astorg V. managed by Astorg Partners SAS.
20141142	G	FCPR Astorg V, managed by Astorg Partners SAS; Mr. Marco Tadolini; FCPR Astorg V, managed by Astorg Partners SAS.
20141147	G	Medical Professional Mutual Insurance Company; Preferred Professional Insurance Company; Medical Professional Mutual Insurance Company.

FOR FURTHER INFORMATION CONTACT: Renee Chapman, Contact Representative or Theresa Kingsberry, Legal Assistant, Federal Trade Commission, Premerger Notification Office, Bureau of Competition, Room H–303, Washington, DC 20580, (202) 326–3100.

By Direction of the Commission.

Donald S. Clark,

Secretary.

[FR Doc. 2014–16080 Filed 7–9–14; 8:45 am]

BILLING CODE 6750–01–M

DEPARTMENT OF DEFENSE

GENERAL SERVICES ADMINISTRATION

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

[OMB Control No. 9000–00XX; Docket 2014–0055; Sequence 6]

Federal Acquisition Regulation; Information Collection; Public Voucher for Purchases and Services Other Than Personal

AGENCY: Department of Defense (DOD), General Services Administration (GSA), and National Aeronautics and Space Administration (NASA).

ACTION: Notice of request for public comments regarding a new OMB information collection.

SUMMARY: Under the provisions of the Paperwork Reduction Act (44 U.S.C. chapter 35), the Regulatory Secretariat Division (MVCB) will be submitting to the Office of Management and Budget (OMB) a request to review and approve a new information collection requirement regarding Public Voucher for Purchases and Services other than Personal.

DATES: Submit comments on or before September 8, 2014.

ADDRESSES: Submit comments identified by Information Collection 9000–00XX, Public Voucher for Purchases and Services other than Personal by any of the following methods:

- *Regulations.gov: http://www.regulations.gov.* Submit comments via the Federal eRulemaking portal by searching the OMB control number 9000–00XX. Select the link ''Comment Now'' that corresponds with ''Information Collection 9000–00XX, Public Voucher for Purchases and Services other than Personal. Follow the instructions provided on the screen. Please include your name, company name (if any), and ''Information Collection 9000–00XX, Public Voucher for Purchases and Services other than Personal, on your attached document.
- *Fax:* 202–501–4067.
- *Mail:* General Services Administration, Regulatory Secretariat Division (MVCB), 1800 F Street NW., Washington, DC 20405. ATTN: Ms. Flowers/IC 9000–00XX, Public Voucher for Purchases and Services other than Personal.

Instructions: Please submit comments only and cite Information Collection 9000–00XX, Public Voucher for Purchases and Services other than Personal, in all correspondence related to this collection. All comments received will be posted without change to *http://www.regulations.gov,* including any personal and/or business confidential information provided.

FOR FURTHER INFORMATION CONTACT: Mr. Curtis E. Glover, Sr., Procurement Analyst, Acquistion Policy Division, via telephone 202–501–1448 or via email *curtis.glover@gsa.gov.*

SUPPLEMENTARY INFORMATION:

A. Purpose

Standard Form (SF) 1034, Public Voucher for Purchases and Services Other than Personal, is used by the agencies for regular payments to vendors under cost-reimbursement contracts, and for terminations.

Cost type contracts provide for interim payment for costs vouchered on SF 1034. This is applicable to all cost-reimbursement type contracts, including cost-reimbursement portions of fixed price contracts, letter contracts which provide for reimbursement of costs, time and materials contracts and labor-hour contracts. Vouchers may be submitted at the beginning of each billing period for costs incurred during the preceding billing period. Vouchers should not be submitted more than once a month unless such arrangements are made with the Contracting Officer.

Termination clauses for cost-reimbursement contracts (see FAR 49.503(a)) provide for the settlement of costs and fee, if any, in cases of termination by convenience. The contract clauses governing costs shall determine what costs are allowable. When the contract has been completely terminated, the contractor shall not use SF 1034 after the last day of the sixth month following the month in which the termination is effective. The contractor may elect to stop using vouchers at any time during the 6-month period. When the contractor has vouchered out all costs within the 6-month period, a proposal for fee, if any, may be submitted on the SF 1437, Settlement Proposal for Cost-Reimbursement Type Contracts, (see FAR 49.602–1) or by letter appropriately certified. The contractor must submit a substantiated proposal for fee to the Termination Contracting Officer (TCO) within 1 year from the effective date of termination, unless the period is extended by the TCO. When the use of vouchers is discontinued, the contractor shall submit all unvouchered costs and the proposed fee, if any, as specified in FAR 49.303. When the contract is partially terminated, FAR 49.304 shall apply.

In consultation with subject matter experts at the Department of Defense, the number of responses per year was verified as being within an acceptable range, as was the average time required to read and prepare information which was estimated at 1 hour per response.

B. Annual Reporting Burden

Respondents: 75,636.

Responses per Respondent: 12.

Total Responses: 907,632.

Hours per Response: 1.

Total Burden Hours: 907,632.

C. Public Comments

Public comments are particularly invited on: Whether this collection of information is necessary for the proper performance of functions of the FAR, and whether it will have practical utility; whether our estimate of the public burden of this collection of information is accurate, and based on valid assumptions and methodology; ways to enhance the quality, utility, and clarity of the information to be collected; and ways in which we can minimize the burden of the collection of information on those who are to respond, through the use of appropriate technological collection techniques or other forms of information technology.

Obtaining Copies of Proposals: Requesters may obtain a copy of the information collection documents from the General Services Administration, Regulatory Secretariat Division (MVCB), 1800 F Street NW., Washington, DC 20405, telephone 202–501–4755. Please cite OMB Control No. 9000–00XX, in all correspondence.

Dated: July 2, 2014.

Karlos Morgan,

Acting Director, Office of Government-wide Acquisition Policy, Office of Acquisition Policy, Office of Government-wide Policy.

[FR Doc. 2014–16082 Filed 7–9–14; 8:45 am]

BILLING CODE P

DEPARTMENT OF HEALTH AND HUMAN SERVICES

Meeting of the National Advisory Committee on Children and Disasters

AGENCY: Department of Health and Human Services, Office of the Secretary.

ACTION: Notice.

SUMMARY: As stipulated by the Federal Advisory Committee Act, the Department of Health and Human Services is hereby giving notice that the National Advisory Committee on Children and Disasters (NACCD) will be holding its inaugural meeting on August 8, 2014. The meeting is open to the public.

DATES: The August 8, 2014, NACCD public meeting is tentatively scheduled from 9:00 a.m. to 12:30 p.m. EST. The agenda is subject to change as priorities dictate. Please check the NACCD Web site located at *www.phe.gov/naccd* for the most up-to-date information on the meeting.

ADDRESSES: Thomas P. O'Neil Federal Office Building, 200 C Street SW., Washington, DC 20024. To attend via teleconference, call toll-free 1–877–891–6979, international Dial-in 1–312–470–7151 pass-code 8233167. Please call 15 minutes prior to the beginning of the conference call to facilitate attendance. Pre-registration is required for public attendance. Individuals who wish to attend the meeting in person should submit an inquiry via the NACCD Contact Form located at *www.phe.gov/NACCDComments.*

FOR FURTHER INFORMATION CONTACT: Please submit an inquiry via the NACCD Contact Form located at *www.phe.gov/NACCDComments.*

SUPPLEMENTARY INFORMATION: Pursuant to the Federal Advisory Committee Act (FACA) of 1972 (5 U.S.C., Appendix, as amended), and section 2811A of the Public Health Service (PHS) Act (42 U.S.C. 300hh–10a), as added by section 103 of the Pandemic and All Hazards Preparedness Reauthorization Act of 2013 (Pub. L. 113–5), the HHS Secretary, in consultation with the Secretary of the U.S. Department of Homeland Security, established the National Advisory Committee on Children and Disasters (NACCD). The purpose of the NACCD is to provide advice and consultation to the HHS Secretary with respect to the medical and public health needs of children in relation to disasters. The Office of the Assistant Secretary for Preparedness and Response (ASPR) provides management and administrative oversight to support the activities of the NACCD.

Background: This public meeting will be dedicated to swearing in fifteen new voting members. Subsequent agenda topics will be added as priorities dictate.

Availability of Materials: The meeting agenda and materials will be posted on the NACCD Web site at *www.phe.gov/naccd* prior to the meeting.

Procedures for Providing Public Input: All written comments must be received prior to August 8, 2014. Please submit comments via the NACCD Contact Form located at *www.phe.gov/NACCDComments.* Individuals who plan to attend and need special assistance, such as sign language interpretation or other reasonable accommodations, should submit a request via the NACCD Contact Form located at *www.phe.gov/NACCDcomments.*

Dated: July 3, 2014.

Nicole Lurie,

Assistant Secretary for Preparedness and Response.

[FR Doc. 2014–16128 Filed 7–9–14; 8:45 am]

BILLING CODE 4150–37–P

DEPARTMENT OF HEALTH AND HUMAN SERVICES

Meeting of the President's Council on Fitness, Sports, and Nutrition

AGENCY: Office of the Secretary, Office of the Assistant Secretary for Health, Office of the President's Council on Fitness, Sports, and Nutrition, Department of Health and Human Services.

ACTION: Notice of meeting.

SUMMARY: As stipulated by the Federal Advisory Committee Act, the U.S. Department of Health and Human Services (HHS) is hereby giving notice that the President's Council on Fitness, Sports, and Nutrition (PCFSN) will hold its annual meeting. The meeting will be open to the public.

DATES: The meeting will be held on September 16, 2014, from 8:30 a.m. to 1:00 p.m.

ADDRESSES: Hubert H. Humphrey Building, 200 Independence Avenue SW., Great Hall, Washington, DC 20201.

FOR FURTHER INFORMATION CONTACT: Ms. Shellie Pfohl, Executive Director, President's Council on Fitness, Sports, and Nutrition, Tower Building, 1101 Wootton Parkway, Suite 560, Rockville, MD 20852, (240) 276–9567. Information about PCFSN, including details about the upcoming meeting, can be obtained at *www.fitness.gov.*

SUPPLEMENTARY INFORMATION: The primary functions of the PCFSN include (1) advising the President, through the Secretary, concerning progress made in carrying out the provisions of Executive Order 13545 and shall recommend to the President, through the Secretary, actions to accelerate progress; (2) advising the Secretary on ways to promote regular physical activity, fitness, sports participation, and good nutrition. Recommendations may address, but are not necessarily limited to, public awareness campaigns; federal, state, and local physical activity; fitness, sports participation, and nutrition initiatives; and partnership opportunities between public- and private-sector health promotion entities; (3) functioning as a liaison to relevant state, local, and private entities in order to advise the Secretary regarding opportunities to extend and improve physical activity, fitness, sports, and nutrition programs and services at the local, state, and national levels; and (4) monitoring the need to enhance programs and educational and promotional materials sponsored, overseen, or disseminated by the Council, and shall advise the Secretary, as necessary, concerning such need. In performing its functions, the Council shall take into account the Federal Dietary Guidelines for Americans and the Physical Activity Guidelines for Americans.

The PCFSN will hold, at a minimum, one meeting in a calendar year. The meeting will be held to (1) assess ongoing Council activities; and, (2) discuss and plan future projects and programs. The agenda for the planned meeting is being developed and will be posted at *www.fitness.gov* when it has been finalized.

The meeting that is scheduled to be held on September 16, 2014, is open to the public. Every effort will be made to provide reasonable accommodations for persons with disabilities and/or special needs who wish to attend the meeting. Persons with disabilities and/or special needs should call (240) 276–9567 no later than close of business on September 2, 2014, to request accommodations. Members of the public who wish to attend the meeting are asked to pre-register by sending an email to *rsvp.fitness@hhs.gov* or by calling (240) 276–9567. Registration for public attendance must be completed before close of business on September 9, 2014.

Dated: July 1, 2014.

Shellie Y. Pfohl,

Executive Director, President's Council on Fitness, Sports, and Nutrition, U.S. Department of Health and Human Services.

[FR Doc. 2014–16131 Filed 7–9–14; 8:45 am]

BILLING CODE 4150–35–P

DEPARTMENT OF HEALTH AND HUMAN SERVICES

Announcement of Replacement Funding for Title X Family Planning Service Grant to the Massachusetts Department of Public Health

AGENCY: Office of Population Affairs, Office of the Assistant Secretary for Health, Office of the Secretary, Department of Health and Human Services.

ACTION: Notice.

SUMMARY: The Office of Population Affairs (OPA) announces that $714,000 in fiscal year 2014 funds are being awarded for a replacement family planning service grant to the Massachusetts Department of Public Health for Berkshire, Franklin, Hampshire, and Hampden counties. This grant will establish and operate voluntary family planning service projects, which shall provide family planning services to all persons desiring such services, with priority for services to persons from low-income families.

DATES: The replacement grant will be for the current period: July 1, 2014–March 31, 2015.

ADDRESSES: Inquiries may be directed to: Office of Population Affairs, Office of the Assistant Secretary for Health, Department of Health and Human Services, 1101 Wootton Parkway, Suite 700, Rockville, MD 20852.

FOR FURTHER INFORMATION CONTACT: For programmatic questions, please contact Susan Moskosky, MS, WHNP–BC, Acting Director, Office of Population Affairs, Office of the Assistant Secretary for Health, 1101 Wootton Parkway, Suite 700, Rockville, MD 20852. Phone: (240) 453–2888.

For administrative requirements, please contact Alice Bettencourt, Director, Office of Grants Management, Office of the Assistant Secretary for Health, 1101 Wootton Parkway, Suite 550, Rockville, MD 20852. Phone: (240) 453–8822.

SUPPLEMENTARY INFORMATION:

I. Background

Title X of the Public Health Service Act authorizes the Secretary of Health and Human Services (HHS) to award grants for projects to provide family planning services to any person desiring such services, with priority given to individuals from low-income families. Section 1001 of the Act, as amended, authorizes grants ''to assist in the establishment and operation of voluntary family planning projects which shall offer a broad range of acceptable and effective family planning methods and services (including natural family planning methods, infertility services, and services for adolescents).'' Title X regulations further specify ''these projects shall consist of the educational, comprehensive medical, and social services necessary to aid individuals to determine freely the number and spacing of their children'' (42 CFR 59.1). Family planning services include clinical family planning and related preventive health services; information, education, and counseling related to family planning; and, referral services as indicated. In addition, section 1001 of the statute requires that, to the extent practicable, Title X service providers shall encourage family participation in family planning services projects. Section 1008 of the Act, as amended, stipulates that ''None of the funds appropriated under this title shall be used in programs where abortion is a method of family planning.''

II. Title X Statute and Regulations

Requirements regarding the provision of family planning services under Title X can be found in the statute (Title X of the Public Health Service Act, 42 U.S.C. 300 *et seq.*) and in the implementing regulations which govern project grants for family planning services (42 CFR part 59, subpart A). In addition, sterilization of clients as part of the Title X program must be consistent with 42 CFR part 50, subpart B (''Sterilization of Persons in Federally Assisted Family Planning Projects''). Title X of the Public Health Service Act authorizes the Secretary of Health and Human Services (HHS) to award grants for projects to provide family planning services to any person desiring such services, with priority given to individuals from low-income families. Authority: Section 1001 of the Public Health Service (PHS) Act. The administrative and funding instrument to be used for this program will be a grant. The replacement grant will be funded with a nine-month project period. Only one award in the amount of $714,000 will be made with the anticipated start date of July 1, 2014.

III. Justification for the Exception to Competition

The replacement grant award is for the maintenance and continuity of Title X services for residents of Hampden, Berkshire, Franklin, and Hampshire counties in Western Massachusetts. Due to the termination and subsequent relinquishment of the grant to Tapestry Health, resulting in the absence of Title X services in a particularly vulnerable part of the state, there was a critical need to ensure these services would continue to be offered. The State of Massachusetts Department of Public Health's (MDPH) experience in administering a federal grant, familiarity with the requirements of the Title X program and the ability to provide services quickly and with minimal interruption identified it as the optimal candidate to provide these services under the current constraints.

Dated: July 2, 2014.

Susan B. Moskosky,

Acting Director, Office of Population Affairs.

[FR Doc. 2014–16109 Filed 7–9–14; 8:45 am]

BILLING CODE 4150–34–P

DEPARTMENT OF HEALTH AND HUMAN SERVICES

Extension of Solicitation for Nominations for Membership on the National Vaccine Advisory Committee

AGENCY: Department of Health and Human Services, Office of the Secretary, Office of the Assistant Secretary for Health, National Vaccine Program Office.

ACTION: Notice.

Authority: 42 U.S.C. 300aa-5, Section 2105 of the Public Health Service (PHS) Act, as amended. The National Vaccine Advisory Committee is governed by the provisions of Public Law 92–463, as amended (5 U.S.C. Appendix 2), which sets forth standards for the formation and use of advisory committees.

SUMMARY: The National Vaccine Program Office (NVPO), a program office within the Office of the Assistant Secretary for Health, Department of Health and Human Services (HHS), is extending the solicitation period for nominations of qualified candidates to be considered for appointment as public members to the National Vaccine Advisory Committee (NVAC). NVPO is taking this action to allow more time for qualified candidates to be identified to be considered for appointment as public members of the NVAC. NVPO is seeking additional candidates that meet the expertise and qualifications needed to constitute a balanced membership as

outlined in the Committee's charter and to ensure that the membership will be fairly balanced in terms of the points of view represented and the Committee's function. Management and support of the NVAC and its activities are the responsibility of the NVPO.

The NVAC serves an advisory role, providing peer review, consultation, advice, and recommendations to the Assistant Secretary for Health, in his capacity as Director of the National Vaccine Program, on matters related to the Program's responsibilities. Specifically, the Committee studies and recommends ways to encourage the availability of an adequate supply of safe and effective vaccination products in the United States; recommends research priorities and other measures to enhance the safety and efficacy of vaccines. The Committee also advises the Assistant Secretary for Health in the implementation of Sections 2102 and 2103 of the PHS Act; and identifies annually the most important areas of government and non-government cooperation that should be considered in implementing Sections 2102 and 2103 of the PHS Act.

DATES: All nominations for membership on the Committee must be received no later than 5:00 p.m. EDT on August 11, 2014, to the address listed below.

ADDRESSES: All nominations should be mailed or delivered to: Bruce Gellin, M.D., M.P.H., Executive Secretary, NVAC, Office of the Assistant Secretary for Health, Department of Health and Human Services, 200 Independence Avenue SW., Room 715H, Washington, DC 20201.

FOR FURTHER INFORMATION CONTACT: Jennifer Gordon, Ph.D., Public Health Analyst, National Vaccine Program Office, Department of Health and Human Services, 200 Independence Avenue SW., Room 715H, Washington, DC 20201; (202) 260–6619; *Jennifer.Gordon@hhs.gov.*

A copy of the Committee charter, which includes the NVAC's structure and functions as well as a list of the current membership, can be obtained by contacting Dr. Gordon or by accessing the NVAC Web site at: *www.hhs.gov/nvpo/nvac.*

SUPPLEMENTARY INFORMATION:

Committee Function, Qualifications, and Information Required: Individuals selected for appointment to the NVAC will serve as voting members. The NVAC consists of 17 voting members: 15 public members, including the Chair, and two representative members. Individuals selected for appointment to the NVAC can be invited to serve terms of up to four years. Selection of members is based on candidates' qualifications to contribute to the accomplishment of NVAC's objectives. Interested candidates should demonstrate a willingness to commit time to NVAC activities and the ability to work constructively and effectively on committees. This announcement is to solicit nominations of qualified candidates to fill positions in the public member category of the NVAC that are scheduled to be vacated during the 2015 calendar year.

Expertise sought for NVAC: NVPO is extending the solicitation period for nominations to the Committee to allow for additional nominations of candidates that meet the expertise and qualifications needed to constitute a balanced membership as outlined in the Committee's charter and to ensure that the membership will be fairly balanced in terms of the points of view represented and the Committee's function. NVPO is seeking nominations of individuals to serve on the NVAC as public members in the following disciplines/topic areas:

- Members of parent organizations concerned with immunizations
- Individuals engaged in vaccine research and development, vaccine clinical trials, and vaccine regulatory science

How to submit nominations: Nominations should be typewritten. Submitted nominations must include all required information. Nominations that do not include all of the required information will be considered ineligible and will not be processed for consideration. The following information should be included in the package of material submitted for each individual being nominated for consideration:

(1) A letter of nomination that clearly states the name and affiliation of the nominee and the basis for the nomination (i.e., specific attributes which qualify the nominee for service in this capacity);

(2) a signed statement from the nominee that the nominee is willing and able to serve as a member of the Committee;

(3) the nominator's name, address and daytime telephone number, home and/or work address, telephone number, and email address; and

(4) a current copy of the nominee's curriculum vitae.

The letter from the nominator and the letter certifying availability from the nominated individual must both bear original signatures. Digital signatures or reproduced copies of signatures are not acceptable and will cause a nomination to be considered ineligible. Individuals can nominate themselves for consideration of appointment to the Committee. Applications cannot be submitted by facsimile or via email. The names of federal employees should not be nominated for consideration of appointment to this Committee.

The Department makes every effort to ensure that the membership of HHS federal advisory committees is fairly balanced in terms of points of view represented and the committee's function. Every effort is made to ensure that a broad representation of geographic areas, gender, ethnic and minority groups, and the disabled are given consideration for membership on HHS federal advisory committees. Appointment to this Committee shall be made without discrimination on the basis of age, race, ethnicity, gender, sexual orientation, disability, and cultural, religious, or socioeconomic status.

Definitions

- Public Members: Public members are individuals who are appointed to the NVAC to exercise their own independent best judgment on behalf of the government. It is expected that public members will discuss and deliberate in a manner that is free from conflicts of interest. Public members to the NVAC shall be selected from individuals who are engaged in vaccine research or the manufacture of vaccines, or who are physicians, members of parent organizations concerned with immunizations, representatives of state or local health agencies, or public health organizations.
- Representative Members: Representative members are individuals who are appointed to the NVAC to provide the views of the vaccine industry. While they may be experts in various topic areas discussed by the Committee, they should not present their own viewpoints, but rather those of the industry they represent. NVAC representative members shall serve specifically to represent the viewpoints or perspectives of the vaccine manufacturing industry or groups engaged in vaccine research or the manufacture of vaccines.

Travel reimbursement and compensation for services provided to the Committee: All NVAC members are authorized to receive the prescribed per diem allowance and reimbursement for travel expenses that are incurred to attend meetings and conduct authorized NVAC-related business, in accordance with standard government travel regulations. Members appointed to the NVAC as public members (see

definition above) also are authorized to receive a stipend for services provided at public meetings of the Committee. All other services that are performed by the public members outside the Committee meetings shall be provided without compensation. Representative members (see definition above) will serve without compensation.

The Standards of Ethical Conduct for Employees of the Executive Branch (*www.oge.gov/Laws-and-Regulations/Employee-Standards-of-Conduct/Employee-Standards-of-Conduct*) are applicable to individuals who are appointed as public members of federal advisory committees. Individuals appointed to serve as public members of federal advisory committees are classified as special government employees (SGEs). SGEs are government employees for purposes of the conflict of interest laws. Therefore, individuals appointed to serve as public members of NVAC are subject to an annual ethics review to determine if the individual has any interests and/or activities in the private sector that may conflict with performance of their official duties as a member of the NVAC. Individuals appointed to serve as public members of the NVAC will be required to disclose information regarding financial holdings, consultancies, research grants and/or contracts, and the absence of an appearance of a loss of impartiality.

Dated: July 1, 2014.

Jennifer L. Gordon,

Alternate Designated Federal Official, National Vaccine Advisory Committee, Public Health Analyst, National Vaccine Program Office.

[FR Doc. 2014–16132 Filed 7–9–14; 8:45 am]

BILLING CODE 4150–44–P

DEPARTMENT OF HEALTH AND HUMAN SERVICES

Centers for Disease Control and Prevention

[60Day–14–0891]

Proposed Data Collections Submitted for Public Comment and Recommendations

The Centers for Disease Control and Prevention (CDC), as part of its continuing effort to reduce public burden, invites the general public and other Federal agencies to take this opportunity to comment on proposed and/or continuing information collections, as required by the Paperwork Reduction Act of 1995. To request more information on the below proposed project or to obtain a copy of the information collection plan and instruments, call 404–639–7570 or send comments to Leroy Richardson, 1600 Clifton Road, MS–D74, Atlanta, GA 30333 or send an email to *omb@cdc.gov.*

Comments submitted in response to this notice will be summarized and/or included in the request for Office of Management and Budget (OMB) approval. Comments are invited on: (a) Whether the proposed collection of information is necessary for the proper performance of the functions of the agency, including whether the information shall have practical utility; (b) the accuracy of the agency's estimate of the burden of the proposed collection of information; (c) ways to enhance the quality, utility, and clarity of the information to be collected; (d) ways to minimize the burden of the collection of information on respondents, including through the use of automated collection techniques or other forms of information technology; and (e) estimates of capital or start-up costs and costs of operation, maintenance, and purchase of services to provide information. Burden means the total time, effort, or financial resources expended by persons to generate, maintain, retain, disclose or provide information to or for a Federal agency. This includes the time needed to review instructions; to develop, acquire, install and utilize technology and systems for the purpose of collecting, validating and verifying information, processing and maintaining information, and disclosing and providing information; to train personnel and to be able to respond to a collection of information, to search data sources, to complete and review the collection of information; and to transmit or otherwise disclose the information. Written comments should be received within 60 days of this notice.

Proposed Project

World Trade Center Health Program Enrollment, Appeals & Reimbursement (OMB No. 0920–0891, expires 12/31/2014)—Revision—National Institute for Occupational Safety and Health (NIOSH), Centers for Disease Control and Prevention (CDC).

Background and Brief Description

Title XXXIII of the PHS Act as amended establishes the WTC Health Program within the Department of Health and Human Services (HHS). The Program provides medical monitoring and treatment benefits to responders to the September 11, 2001, terrorist attacks in New York City, at the Pentagon, and in Shanksville, Pennsylvania, and to survivors of the terrorist attacks in New York City. Title XXXIII requires that various Program provisions be established by regulation, including eligibility criteria for responders and volunteers at the Pentagon and in Shanksville, Pennsylvania.

This submission will incorporate the World Trade Center Health Program Enrollment, Appeals & Reimbursement (0920–0891, expiration date 12/31/2014), and the World Trade Center Enrollment & Appeals—Pentagon & Shanksville (0920–1001, expiration date 12/31/2016) into one complete package which will be called the World Trade Center Health Program Enrollment, Appeals & Reimbursement. Upon OMB approval, 0920–1001 will be discontinued. The provisions in the interim final rule that contain data collection requirements are:

§ 88.5 Application process—status as a WTC responder. This section informs applicants who believe they meet the eligibility criteria for a WTC responder how to apply for enrollment in the WTC Health Program, and describes the types of documentation the WTC Program Administrator will accept as proof of eligibility. We expect that to receive approximately 4,500 applications per year. The burden table reflects the annualized total burden broken into the four separate applicant groups: We estimate that 45 Fire Department of New York (FDNY) responders (1% of applicants); 2,475 general responders (55%); 630 Pentagon/Shanksville responders (14%); and 1,350 survivors (30%) will submit applications. The burden estimates for these three different forms are: FDNY = 23 hours; general responders = 1,238 hours; Pentagon/Shanksville responders = 315 hours; survivors = 405 hours.

§ 88.11 Appeals regarding eligibility determination—responders and survivors. This section establishes the process for appeals regarding eligibility determinations. Of the 4,500 applications we expect to receive per year, we expect that 10% will fail due to ineligibility. We further assume that 10% of those individuals, or 45 respondents, will appeal the decision. The burden estimate is 23 hours.

§ 88.15 Appeals regarding treatment. This section establishes the timeline and process to appeal the Administrator's determinations regarding treatment decisions. HHS estimates that Program participants will request certification for 20,000 health conditions each year. Of those 20,000, we expect that .01 percent (200) will be denied certification by the WTC Program Administrator. We further expect that such a denial will be appealed 30 percent of the time. Of the projected 451,472 enrollees who will

receive medical care, it is estimated that .05% percent (26) will appeal decisions of unnecessary treatment. We estimate that the appeals letter will take no more than 30 minutes.

§ 88.16 Reimbursement for travel expenses. This section established the process for members of the Nationwide Provider Network (NPN) who travel more than 250 miles to a nationwide network provider for medically necessary treatment may be provided necessary and reasonable transportation and other expenses. These individuals may submit a travel refund request form, which should take respondents 10 minutes. HHS expects no more than 10 claims per year.

The reporting and record keeping requirements contained in these regulations are used by NIOSH to carry out its responsibilities related to the implementation of the WTC Health Program as required by law. The burdens imposed have been reduced to the absolute minimum considered necessary to permit NIOSH to carry out the purpose of the legislation, i.e., to implement the WTC Health Program. This emergency data collection is warranted because it is essential that individuals who wish to be enrolled, apply to the WTC Health Program, appeal a determination made by the WTC Program Administrator, or submit a claim for reimbursement have the opportunity to do so as soon as the eligibility criteria are established with the publication of this interim final rule. There are no costs to respondents other than their time.

ESTIMATED ANNUALIZED BURDEN HOURS

Type of respondent	Form name	Number of respondents	Number of responses per respondent	Average burden per response (in hours)	Total burden hours
FDNY Responder	World Trade Center Health Program FDNY Responder Eligibility Application.	45	1	30/60	23
General Responder	World Trade Center Health Program Responder Eligibility Application (Other than FDNY).	2,475	1	30/60	1,238
Pentagon/Shanksville Responder	World Trade Center Health Program Pentagon/Shanksville Responder.	630	1	30/60	315
WTC Survivor	World Trade Center Health Program Survivor Eligibility Application.	1,350	1	30/60	675
Responder (FDNY and General Responder)/Survivor.	Denial Letter and Appeal Notification—Eligibility.	45	1	30/60	23
Responder (FDNY and General Responder)/Survivor.	Denial Letter and Appeal Notification—Health Conditions.	60	1	30/60	30
Responder (FDNY and General Responder)/Survivor.	Denial Letter and Appeal Notification—Treatment.	26	1	30/60	13
Responder (FDNY and General Responder)/Survivor.	WTC Health Program Medical Travel Refund Request.	10	1	10/60	2
Total					2,319

Leroy Richardson,

Chief, Information Collection Review Office, Office of Scientific Integrity, Office of the Associate Director for Science, Office of the Director, Centers for Disease Control and Prevention.

[FR Doc. 2014–16121 Filed 7–9–14; 8:45 am]

BILLING CODE 4163–18–P

DEPARTMENT OF HEALTH AND HUMAN SERVICES

Centers for Disease Control and Prevention

[30Day–14–14UQ]

Agency Forms Undergoing Paperwork Reduction Act Review

The Centers for Disease Control and Prevention (CDC) has submitted the following information collection request to the Office of Management and Budget (OMB) for review and approval in accordance with the Paperwork Reduction Act of 1995. The notice for the proposed information collection is published to obtain comments from the public and affected agencies.

Written comments and suggestions from the public and affected agencies concerning the proposed collection of information are encouraged. Your comments should address any of the following: (a) Evaluate whether the proposed collection of information is necessary for the proper performance of the functions of the agency, including whether the information will have practical utility; (b) Evaluate the accuracy of the agencies estimate of the burden of the proposed collection of information, including the validity of the methodology and assumptions used; (c) Enhance the quality, utility, and clarity of the information to be collected; (d) Minimize the burden of the collection of information on those who are to respond, including through the use of appropriate automated, electronic, mechanical, or other technological collection techniques or other forms of information technology, e.g., permitting electronic submission of responses; and (e) Assess information collection costs.

To request additional information on the proposed project or to obtain a copy of the information collection plan and instruments, call (404) 639–7570 or send an email to *omb@cdc.gov.* Written comments and/or suggestions regarding the items contained in this notice should be directed to the Attention: CDC Desk Officer, Office of Management and Budget, Washington, DC 20503 or by fax to (202) 395–5806. Written comments should be received within 30 days of this notice.

Proposed Project

Generic Clearance for the Collection of Qualitative Feedback on Agency Service Delivery—NEW—Centers for Disease Control and Prevention (CDC), National Center for Immunization and Respiratory Diseases (NCIRD).

As part of a Federal Government-wide effort to streamline the process to seek feedback from the public on service delivery, the CDC has submitted a

Generic Information Collection Request (Generic ICR): ''Generic Clearance for the Collection of Qualitative Feedback on Agency Service Delivery'' to OMB for approval under the Paperwork Reduction Act (PRA) (44 U.S.C. 3501 et. seq.).

Background and Brief Description

The information collection activity will garner qualitative customer and stakeholder feedback in an efficient, timely manner, in accordance with the Administration's commitment to improving service delivery. By qualitative feedback we mean information that provides useful insights on perceptions and opinions, but are not statistical surveys that yield quantitative results that can be generalized to the population of study. This feedback will provide insights into customer or stakeholder perceptions, experiences and expectations, provide an early warning of issues with service, or focus attention on areas where communication, training or changes in operations might improve delivery of products or services. These collections will allow for ongoing, collaborative and actionable communications between the Agency and its customers and stakeholders. It will also allow feedback to contribute directly to the improvement of program management.

Feedback collected under this generic clearance will provide useful information, but it will not yield data that can be generalized to the overall population. This type of generic clearance for qualitative information will not be used for quantitative information collections that are designed to yield reliably actionable results, such as monitoring trends over time or documenting program performance. Such data uses require more rigorous designs that address: The target population to which generalizations will be made, the sampling frame, the sample design (including stratification and clustering), the precision requirements or power calculations that justify the proposed sample size, the expected response rate, methods for assessing potential non-response bias, the protocols for data collection, and any testing procedures that were or will be undertaken prior to fielding the study. Depending on the degree of influence the results are likely to have, such collections may still be eligible for submission for other generic mechanisms that are designed to yield quantitative results.

In accordance with 5 CFR 1320.8(d), Vol. 79, No. 83/Wednesday, April 30, 2014, a 60-day notice for public comment was published in the **Federal Register**. No public comments were received in response to this notice.

This is a new collection of information. Respondents will take online surveys or participate in Web site usability testing, interviews, discussion groups, or focus groups. Below is Centers for Disease Control and Prevention (CDC), National Center for Immunization and Respiratory Diseases (NCIRD) projected annualized estimate for the next three years. There is no cost to respondents other than their time. The estimated annualized burden hours for this data collection activity are 6,588.

ESTIMATED ANNUAL REPORTING BURDEN

Type of collection	Number of respondents	Annual frequency per response	Hours per response	Total hours
Online surveys	8,500	1	30/60	4,250
Discussion groups	150	1	2	300
Focus groups	700	1	2	1,400
Website/app usability testing	250	1	45/60	188
Interviews	300	1	1.5	450

Leroy Richardson,

Chief, Information Collection Review Office, Office of Scientific Integrity, Office of the Associate Director for Science, Office of the Director, Centers for Disease Control and Prevention.

[FR Doc. 2014–16119 Filed 7–9–14; 8:45 am]

BILLING CODE 4163–18–P

DEPARTMENT OF HEALTH AND HUMAN SERVICES

Centers for Disease Control and Prevention

[60-Day–14–14AMY]

Proposed Data Collections Submitted for Public Comment and Recommendations

The Centers for Disease Control and Prevention (CDC), as part of its continuing effort to reduce public burden, invites the general public and other Federal agencies to take this opportunity to comment on proposed and/or continuing information collections, as required by the Paperwork Reduction Act of 1995. To request more information on the below proposed project or to obtain a copy of the information collection plan and instruments, call 404–639–7570 or send comments to Leroy Richardson, 1600 Clifton Road, MS–D74, Atlanta, GA 30333 or send an email to *omb@cdc.gov.*

Comments submitted in response to this notice will be summarized and/or included in the request for Office of Management and Budget (OMB) approval. Comments are invited on: (a) Whether the proposed collection of information is necessary for the proper performance of the functions of the agency, including whether the information shall have practical utility; (b) the accuracy of the agency's estimate of the burden of the proposed collection of information; (c) ways to enhance the quality, utility, and clarity of the information to be collected; (d) ways to minimize the burden of the collection of information on respondents, including through the use of automated collection techniques or other forms of information technology; and (e) estimates of capital or start-up costs and costs of operation, maintenance, and purchase of services to provide information. Burden means the total time, effort, or financial resources expended by persons to generate, maintain, retain, disclose or provide information to or for a Federal agency. This includes the time needed to review instructions; to develop, acquire, install and utilize technology and systems for the purpose of collecting, validating and verifying information, processing and maintaining information, and disclosing and providing information; to train personnel and to be able to respond to a collection of information, to search data sources, to complete and review the collection of information; and to transmit or otherwise disclose the information. Written comments should

be received within 60 days of this notice.

Proposed Project

Registration of Closed-Circuit Escape Respirator (CCER) units upon purchase—42 CFR part 84—Regulation—New—National Institute for Occupational Safety and Health (NIOSH), of the Centers for Disease Control and Prevention (CDC).

Background and Brief Description

This project partially satisfies the requirement created by 42 CFR 84.311, Registration of CCER Units upon purchase. Applicants for approval of closed-circuit escape respirator (CCER) units must request respirator purchasers register their respirators with the National Institute for Occupational Safety and Health (NIOSH). The purpose of the information collection, is given in § 84.311c: ''The National Institute for Occupational Safety and Health (NIOSH) requests, but does not require, that purchasers of this respirator register each unit with NIOSH. Registration will enable NIOSH, which approved this model of respirator, to attempt to notify you if a problem is discovered that might affect the safety or performance of this respirator. Registration will also assist NIOSH in locating deployed units to periodically evaluate whether this respirator model is remaining effective under field conditions of storage and use.''

CCER units are respirators designed for escape from certain hazardous atmospheres, notably atmospheres that may be encountered during mining incidents. Subpart O, Closed-Circuit Escape Respirators, (§§ 84.300—84.311) was added to 42 CFR Part 84, Approval of Respiratory Protective Devices, describing requirements for a new class of NIOSH-approved respirators in response to issues with deployed Self-Contained Self-Rescuers (SCSR) respirators. Purchaser data collection was added to enable direct communication about potentially hazardous issues that may arise with approved CCER units, and to facilitate collection of CCER units from the field for evaluation.

In support of these goals, the collection will request the name and postal address of the company that purchased the respirators, a contact email address and position title, the respirator manufacturer, model, serial number or numbers, and date of manufacture, and the company industry and worksite regulation body (i.e. Mining Safety and Health Administration (MSHA), Occupational Safety and Health Administration (OSHA), or Other). Data collection will be through a structured email created using a NIOSH-hosted web form. Data collection is expected to take approximately five minutes per submission.

While the Federal Government is expected to purchase approximately 40,000 CCER units annually, these purchases will not be included in the burden estimate as MSHA will require the collection of this data for mine safety checks. Purchasers covered by MSHA regulations will be advised that MSHA reporting requirements will include all expected benefits of this CCER registration, and therefore registration is not recommended. The private sector is expected to purchase approximately 4,000 CCER units annually and a conservative estimate purchase lot size of ten (400 units).

We estimate an 80% response rate, for an estimated 320 responses. The estimated overall burden is 27 hours. There are no costs to the respondents other than their time.

ESTIMATED ANNUALIZED BURDEN HOURS

Type of respondent	Form name	Number of respondents	Responses per respondent	Average burden per response (in hours)	Total burden hours
Purchaser of CCER units	CCER Registration Form	320	1	5/60	27
Total					27

Leroy Richardson,

Chief, Information Collection Review Office, Office of Scientific Integrity, Office of the Associate Director for Science, Office of the Director, Centers for Disease Control and Prevention.

[FR Doc. 2014–16120 Filed 7–9–14; 8:45 am]

BILLING CODE 4163–18–P

DEPARTMENT OF HEALTH AND HUMAN SERVICES

Centers for Disease Control and Prevention

[30Day–14–14AMW]

Agency Forms Undergoing Paperwork Reduction Act Review

The Centers for Disease Control and Prevention (CDC) has submitted the following information collection request to the Office of Management and Budget (OMB) for review and approval in accordance with the Paperwork Reduction Act of 1995. The notice for the proposed information collection is published to obtain comments from the public and affected agencies.

Written comments and suggestions from the public and affected agencies concerning the proposed collection of information are encouraged. Your comments should address any of the following: (a) Evaluate whether the proposed collection of information is necessary for the proper performance of the functions of the agency, including whether the information will have practical utility; (b) Evaluate the accuracy of the agencies estimate of the burden of the proposed collection of information, including the validity of the methodology and assumptions used; (c) Enhance the quality, utility, and clarity of the information to be collected; (d) Minimize the burden of the collection of information on those who are to respond, including through the use of appropriate automated, electronic, mechanical, or other technological collection techniques or other forms of information technology, e.g., permitting electronic submission of responses; and (e) Assess information collection costs.

To request additional information on the proposed project or to obtain a copy of the information collection plan and instruments, call (404) 639–7570 or send an email to *omb@cdc.gov.* Written comments and/or suggestions regarding the items contained in this notice should be directed to the Attention: CDC Desk Officer, Office of Management and Budget, Washington, DC 20503 or by fax to (202) 395–5806. Written comments should be received within 30 days of this notice.

Proposed Project

Generic Clearance for the Collection of Qualitative Feedback on Agency Service Delivery—NEW—Centers for Disease Control and Prevention (CDC), National Center for HIV/AIDS, Viral Hepatitis, STD, and TB Prevention (NCHHSTP).

As part of a Federal Government-wide effort to streamline the process to seek feedback from the public on service delivery, the CDC has submitted a Generic Information Collection Request (Generic ICR): ''Generic Clearance for the Collection of Qualitative Feedback on Agency Service Delivery'' to OMB for approval under the Paperwork Reduction Act (PRA) (44 U.S.C. 3501 et. seq.).

SUPPLEMENTARY INFORMATION:

Title: Generic Clearance for the Collection of Qualitative Feedback on Agency Service Delivery.

Abstract: The information collection activity will garner qualitative customer and stakeholder feedback in an efficient, timely manner, in accordance with the Administration's commitment to improving service delivery. By qualitative feedback we mean information that provides useful insights on perceptions and opinions, but are not statistical surveys that yield quantitative results that can be generalized to the population of study. This feedback will provide insights into customer or stakeholder perceptions, experiences and expectations, provide an early warning of issues with service, or focus attention on areas where communication, training, or changes in operations might improve delivery of products or services. These collections will allow for ongoing, collaborative, and actionable communications between the Agency and its customers and stakeholders. It will also allow feedback to contribute directly to the improvement of program management.

Feedback collected under this generic clearance will provide useful information, but it will not yield data that can be generalized to the overall population. This type of generic clearance for qualitative information will not be used for quantitative information collections that are designed to yield reliably actionable results, such as monitoring trends over time or documenting program performance. Such data uses require more rigorous designs that address: The target population to which generalizations will be made, the sampling frame, the sample design (including stratification and clustering), the precision requirements or power calculations that justify the proposed sample size, the expected response rate, methods for assessing potential non-response bias, the protocols for data collection, and any testing procedures that were or will be undertaken prior to fielding the study. Depending on the degree of influence the results are likely to have, such collections may still be eligible for submission for other generic mechanisms that are designed to yield quantitative results.

In accordance with 5 CFR 1320.8(d), Vol. 79, No. 83/Wednesday, April 30, 2014, a 60-day notice for public comment was published in the **Federal Register**. No public comments were received in response to this notice.

This is a new collection of information. Respondents will be screened and selected from Individuals and Households, Businesses, Organizations, and/or State, Local or Tribal Government. Below we provide CDC's projected annualized estimate for the next three years. There is no cost to respondents other than their time. The estimated annualized burden hours for this data collection activity are 12,400.

ESTIMATED BURDEN HOURS

Type of collection	Number of respondents	Annual frequency per response	Hours per response	Total hours
Online, telephone surveys	15,000	1	30/60	7,500
Discussion groups	350	1	2	700
Focus groups	800	1	2	1,600
Website/app usability testing	2,000	1	30/60	1,000
Interviews	800	1	2	1,600

Leroy Richardson,

Chief, Information Collection Review Office, Office of Scientific Integrity, Office of the Associate Director for Science, Office of the Director, Centers for Disease Control and Prevention.

[FR Doc. 2014–16118 Filed 7–9–14; 8:45 am]

BILLING CODE 4163–18–P

DEPARTMENT OF HEALTH AND HUMAN SERVICES

Centers for Disease Control and Prevention

Safety and Occupational Health Study Section: Notice of Charter Renewal

This gives notice under the Federal Advisory Committee Act (Pub. L. 92–463) of October 6, 1972, that the Safety and Occupational Health Study Section, Centers for Disease Control and Prevention, Department of Health and Human Services, has been renewed for a 2-year period through June 30, 2016.

For more information contact: Price Connor, Ph.D., Executive Secretary, Safety and Occupational Health Study Section, Department of Health and Human Services, 1600 Clifton Road, NE., Mailstop E74, Atlanta, Georgia 30333, telephone 404/498–2511 or fax 404/498–2571.

The Director, Management Analysis and Services Office, has been delegated the authority to sign **Federal Register** notices pertaining to announcements of meetings and other committee management activities, for both the Centers for Disease Control and Prevention and the Agency for Toxic Substances and Disease Registry.

Gary Johnson,

Acting Director, Management Analysis and Services Office, Centers for Disease Control and Prevention.

[FR Doc. 2014–16070 Filed 7–9–14; 8:45 am]

BILLING CODE 4163–18–P

DEPARTMENT OF HEALTH AND HUMAN SERVICES

Centers for Disease Control and Prevention

Issuance and Enforcement Guidance for Dog Confinement Agreements

AGENCY: Centers for Disease Control and Prevention (CDC), Department of Health and Human Services (HHS).

ACTION: Notice of Agency Guidance.

SUMMARY: The Centers for Disease Control and Prevention (CDC) in the Department of Health and Human Services (HHS) is publishing this issuance and enforcement guidance for dog confinement agreements under 42 CFR 71.51. Under 42 CFR 71.51(c)(2), the CDC Director may authorize admission into the United States of a dog that has not been vaccinated for rabies or that is inadequately immunized if the owner agrees to subsequently vaccinate and properly confine the dog. This guidance describes the factors that HHS/CDC will consider in determining whether it will issue a dog confinement agreement allowing entry of a dog that has not been adequately immunized against rabies, or whether the dog(s) will be denied entry. The notice also describes the steps that an importer may take if his/her imported dog is denied entry.

DATES: This guidance is effective on August 11, 2014.

FOR FURTHER INFORMATION CONTACT: Ashley A. Marrone, J.D., Division of Global Migration and Quarantine, Centers for Disease Control and Prevention, 1600 Clifton Road NE., MS–E03, Atlanta, GA 30329; Telephone, 404–498–1600.

SUPPLEMENTARY INFORMATION:

I. Background

Rabies is caused by a virus that is fatal in humans and animals. In September 2007, at the Inaugural World Rabies Day Symposium, HHS/CDC declared the United States to be free of the canine variant of the rabies virus. However, this rabies virus variant remains a serious public health threat in many other countries where laboratory and epidemiologic surveillance for canine variant rabies virus is not as strong as in the United States. Many other countries also do not maintain a robust rabies vaccination program for dogs. Preventing the entry of animals infected with the canine variant of rabies into the United States is a public health priority. Globally, canine variant rabies viruses are responsible for 98% of the estimated 55,000 human rabies deaths worldwide each year (WHO, 2004 [Page 116]).

II. Authority and Operations

Under section 361 of the Public Health Service Act (PHS Act) (42 U.S.C. 264), the Secretary of Health and Human Services, has the authority to make and enforce such regulations as in his or her judgment are necessary to prevent the introduction, transmission, or spread of communicable diseases from foreign countries into the States or possessions of the United States and from one State or possession into any other State or possession. For purposes of carrying out and enforcing such regulations, the Secretary may authorize a variety of public health measures, including inspection, fumigation, disinfection, sanitation, pest extermination, destruction of animals or articles found to be sources of dangerous infection to human beings, and other measures.

Regulations that implement Federal public health authority with respect to the importation of certain animals are currently published in 42 CFR part 71. The Secretary has delegated to the Director of the CDC the authority for implementing these regulations. Authority for carrying out most of these functions has been delegated to HHS/CDC's Division of Global Migration and Quarantine (DGMQ). To carry out its mission of protecting public health, CDC/DGMQ implements its regulations through already established and extensive partnerships with local, national, and international health authorities. DGMQ maintains quarantine stations at major U.S. ports of entry that fulfill a primary purpose in reducing the risk of introduction of communicable diseases into the United States.

Since 1956, Federal quarantine regulations have controlled the entry of dogs into the United States. *See* 21 FR 9870, Dec. 12, 1956. Currently, HHS/CDC regulates imports of dogs into the United States under regulations found at 42 CFR 71.51. Among the principal concerns for regulating the import of dogs is to prevent introduction and spread of rabies.

Upon arrival to the United States, dogs are subject to inspection and may be denied entry if they show signs of infection with a communicable disease or if they have not been adequately immunized against rabies. If a dog appears to be ill, further examination by a licensed veterinarian, at the owner's expense, may be required before the dog is admitted into the United States. Currently, licensed rabies vaccines have not been shown to be effective when administered to dogs aged less than 3 months. Additionally, full immune response to the vaccine in dogs that have never been previously vaccinated does not occur until approximately 30 days after vaccination. Therefore, under HHS/CDC's current regulations, puppies may not be vaccinated against rabies earlier than 3 months of age and previously unvaccinated dogs are only considered adequately immunized 30 days post-vaccination. Adult dogs that have previously been adequately immunized against rabies, but whose rabies vaccination certificates have expired, are considered adequately immunized immediately following administration of a booster vaccination.

III. Confinement Agreements

Under § 71.51, HHS/CDC currently requires each imported dog to be accompanied by a valid rabies vaccination certificate indicating that the animal has been vaccinated against rabies prior to entry into the United States. The exceptions to this requirement are for dogs from rabies-free countries and dogs imported for scientific research purposes when rabies vaccination would interfere with the purpose of the research. This provision defines a valid rabies vaccination certificate as a certificate which was issued for a dog not less than 3 months of age at the time of vaccination and which:

(1) Identifies a dog on the basis of breed, sex, age, color, markings, and other identifying information.

(2) Specifies a date of rabies vaccination at least 30 days before the date of arrival of the dog at a U.S. port.

(3) Specifies a date of expiration which is after the date of arrival of the dog at a U.S. port. If no date of expiration is specified, then the date of vaccination shall be no more than 12 months before the date of arrival at a U.S. port.

(4) Bears the signature of a licensed veterinarian.

However, subsection 71.51(c)(2) indicates that ''the [CDC] Director may authorize admission'' of dogs that have not been adequately immunized against rabies provided that the dogs are confined under conditions that restrict their contact with humans and other animals until they have been immunized. Generally, the use of the term ''shall'' in a regulation indicates a regulatory requirement, while the use of the term ''may'' indicates that the agency has discretion regarding the manner in which it chooses to enforce this particular aspect of its regulations. Through this notice, and as discussed in more detail below, HHS/CDC is informing the public of the manner in which it applies its discretion in the issuance and enforcement of confinement agreements.

HHS/CDC reviews rabies vaccination certificates to determine whether they may be expired, invalid or suspect e.g. dog appears younger than is stated or does not match the breed, sex, color, or markings described) in its assessment of whether a dog is ''adequately immunized.'' Following physical inspection of the dog and documentation, if HHS/CDC determines

that a dog has not been adequately immunized, HHS/CDC may enter into a confinement agreement with the importer.

Section 71.51 defines *Confinement* as the ''restriction of a dog or cat to a building or other enclosure at a U.S. port, en route to destination and at destination, in isolation from other animals and from persons except for contact necessary for its care or, if the dog is allowed out of the enclosure, muzzling and keeping it on a leash.'' HHS/CDC Form 75.37 ''Notice to Owners and Importers of Dogs'' explains the confinement requirements and serves as a binding ''confinement agreement'' with the importer. This form is approved under OMB# 0920–0134 Foreign Quarantine Regulations (expiration 07/31/15). Under 42 CFR 71.51(c)(3), HHS/CDC shares the confinement agreement with the state agency ''having jurisdiction at the point of destination . . . to facilitate surveillance and other appropriate action.'' Confinement agreements are intended to ensure that travelers seeking to enter the United States with their personal pet dogs have an alternative to their dogs being denied entry to the United States if they were not adequately immunized against rabies.

The intent of the confinement agreements between HHS/CDC and the importer is to ensure that inadequately immunized dogs will be confined in such a way as to minimize the risk of exposing persons and other animals especially dogs to rabies until the dogs are considered adequately immunized against rabies. HHS/CDC considers confinement agreements to constitute an exception to the general rule that, unless coming from a rabies-free country or intended for use in scientific research where rabies vaccination would interfere with that research, all imported dogs must be properly vaccinated against rabies. HHS/CDC issued two dog confinement agreements to individuals in 2006 and 10 agreements in 2007. This number has continued to multiply and as of June 27, 2014, 853 confinement agreements have been issued in 2014 (See Table 1 below).

TABLE 1

Year	Dog confinement agreements issued by HHS/CDC
2006	2
2007	10
2008	41
2009	179
2010	412
2011	1814
2012	2131
2013	1733
2014*	853
Total	7175

*As of June 27, 2014.

HHS/CDC along with state and local agencies with jurisdiction has discovered that, in some circumstances, the terms of confinement agreements are not carried out by the importer. State and local public health agencies who have jurisdiction to enforce confinement agreements have reported to HHS/CDC that some importers have either knowingly or unknowingly provided inaccurate information on the agreement regarding confinement location. In other circumstances, upon follow up on the confinement of the dogs, state and local authorities have reported that the dogs were not properly confined per the terms of the confinement agreement (i.e., the dog was not kept in isolation from other animals and from persons except for contact necessary for its care or, if the dog was allowed out of the enclosure, was not muzzled and kept on a leash).

With the substantial increase in recent years in the number of confinement agreements being requested by importers of dogs, supervision of confinement agreements to identify and address violations as described above has become administratively burdensome. The investigations conducted have revealed that in many cases where importers have violated their confinement agreements, these confinement agreements were issued to persons who import dogs for commercial purposes or for reasons other than as personal pets, which is contrary to the intent of the confinement agreement provisions.

When state and local public health authorities follow up on the confinement agreement notifications and determine that the importer is in violation of the agreement, these authorities inform HHS/CDC. In 2009, HHS/CDC began issuing warning letters to known violators of dog confinement agreements. Warning letters inform importers that they have violated the legally binding confinement agreement, remind them of their obligations under federal law, and warn them that further violations might result in referral of the matter to the United States Attorney for criminal prosecution. During fiscal year 2013, over 20 dog importers, including those who import more than 1–2 shipments of dogs per year into the United States, received warning letters from HHS/CDC for failure to comply with the confinement agreement.

IV. Provisions of This Notice

Because of the risk that inadequately immunized dogs pose to public health, HHS/CDC is issuing this guidance describing how it will use its discretion in issuing confinement agreements to dog importers. In determining whether a confinement agreement will be issued, HHS/CDC will take several factors into account to ensure that the terms of the confinement agreement will not be violated or that an inadequately immunized dog does not pose a threat to public health. Non-issuance of a confinement agreement will usually result in denial of entry of the dog(s). ''Denial of entry'' usually entails the immediate return of the dog(s) to the country of origin at the importer's expense. The care of the dog(s) until their final disposition is also at the importer's expense.

Among other important factors which may pose a risk to public health, below are circumstances that HHS/CDC will consider in determining whether it will issue a dog confinement agreement:

(1) The number of dogs presented for import must be consistent with the purposes of the dog confinement agreement;

(2) The frequency of dog imports must be consistent with the purposes of the dog confinement agreement;

(3) History of non-compliance with HHS/CDC-issued confinement agreements;

(4) Prevalence of rabies in country of origin (country where the dog has lived during the 6 months prior to arrival, or since birth if the dog is less than 6 months of age); and

(5) Other risk factors as determined by the CDC Director. HHS/CDC will evaluate each import based on the totality of the circumstances.

If an importer is denied the opportunity to receive a confinement agreement, the denial will be issued in writing. The letter of denial received will include reasons for denial as well as detailed instructions on whom to contact for questions, including name, address, and telephone number, as well as how to submit an appeal. Persons who wish to contest HHS/CDC's determination will have five business days after receiving the letter of denial. The importer must submit the appeal in writing to the CDC Director, stating the reasons for the appeal and showing that there is a genuine and substantial issue of fact in dispute. HHS/CDC will issue a written response, which shall

constitute final agency action. The appeal will be reviewed and decided upon by an HHS/CDC senior management official who will be senior to the employee who issued the initial letter of denial.

Since animals denied entry to the United States will be re-exported immediately under standard operating procedures at U.S. ports of entry, any successful appeal of a denial of entry after the dog(s) has already been re-exported would only permit the importer to reimport the dog(s) into the United States under the requirements of the confinement agreement. The appeal would not entitle the importer to recover any costs related to the re-export and reimport of the dog(s). The policy and program operations described above will become effective on August 11, 2014.

Dated: July 7, 2014.

Ron A. Otten,

Acting Deputy Associate Director for Science, Centers for Disease Control and Prevention.

[FR Doc. 2014–16130 Filed 7–9–14; 8:45 am]

BILLING CODE 4163–18–P

DEPARTMENT OF HEALTH AND HUMAN SERVICES

Health Resources and Services Administration

Agency Information Collection Activities: Submission to OMB for Review and Approval; Public Comment Request

AGENCY: Health Resources and Services Administration, HHS.

ACTION: Notice.

SUMMARY: In compliance with Section 3507(a)(1)(D) of the Paperwork Reduction Act of 1995, the Health Resources and Services Administration (HRSA) has submitted an Information Collection Request (ICR) to the Office of Management and Budget (OMB) for review and approval. Comments submitted during the first public review of this ICR will be provided to OMB. OMB will accept further comments from the public during the review and approval period.

DATES: Comments on this ICR should be received no later than August 11, 2014.

ADDRESSES: Submit your comments, including the Information Collection Request Title, to the desk officer for HRSA, either by email to *OIRA_submission@omb.eop.gov* or by fax to 202–395–5806.

FOR FURTHER INFORMATION CONTACT: To request a copy of the clearance requests submitted to OMB for review, email the HRSA Information Collection Clearance Officer at *paperwork@hrsa.gov* or call (301) 443–1984.

SUPPLEMENTARY INFORMATION:

Information Collection Request Title: National Health Service Corps Site Application and Site Recertification Application.

OMB No. 0915–0230—Revision.

Abstract: The National Health Service Corps (NHSC) of the Bureau of Health Workforce, HRSA, is committed to improving the health of the nation's underserved by uniting communities in need with caring health professionals, and by supporting their efforts to build better systems of care. NHSC-approved sites are health care facilities that provide comprehensive outpatient, ambulatory, primary health care services to populations residing in Health Professional Shortage Areas (HPSAs). Related inpatient services may be provided by NHSC-approved Critical Access Hospitals (CAHs). In order to become an NHSC-approved site, new sites must submit a Site Application for review and approval. Existing NHSC-approved sites are required to complete a Site Recertification Application in order to maintain their status as an approved site. Both the NHSC Site Application and Site Recertification Application request information on the clinical service site, sponsoring agency, recruitment contact, staffing levels, service users, charges for services, employment policies, and fiscal management capabilities. Assistance in completing these applications may be obtained through the appropriate State Primary Care Offices and the NHSC. The information collected on the applications is used for determining the eligibility of sites for the assignment of NHSC health professionals and to verify the need for NHSC clinicians. Approval as an NHSC service site is valid for 3 years. Sites wishing to remain eligible for the assignment of NHSC providers, must submit a Site Recertification Application every 3 years.

Need and Proposed Use of the Information: The need and purpose of this information collection is to obtain information for NHSC Site applicants. The information obtained from the NHSC Site Application and Site Recertification Application will be utilized to determine the eligibility of sites to participate in the NHSC as an approved service site.

Likely Respondents: Health care facilities interested in participating in the NHSC and becoming an approved service site and existing NHSC-approved sites completing their Site Recertification Application.

Burden Statement: Burden in this context means the time expended by persons to generate, maintain, retain, disclose or provide the information requested. This includes the time needed to review instructions; to develop, acquire, install and utilize technology and systems for the purpose of collecting, validating and verifying information, processing and maintaining information, and disclosing and providing information; to train personnel and to be able to respond to a collection of information; to search data sources; to complete and review the collection of information; and to transmit or otherwise disclose the information.

The total annual burden hours estimated for this Information Collection Request are summarized in the table below.

TOTAL ESTIMATED ANNUALIZED BURDEN HOURS

Form name	Number of respondents	Number of responses per respondent	Total responses	Average burden per response (in hours)	Total burden hours
NHSC New Site Application	2,000	1	2,000	0.5	1,000
NHSC Site Recertification Application	1,000	1	1,000	0.5	500
Total	3,000		3,000		1,500

HRSA specifically requests comments on (1) the necessity and utility of the proposed information collection for the proper performance of the agency's functions, (2) the accuracy of the estimated burden, (3) ways to enhance

the quality, utility, and clarity of the information to be collected, and (4) the use of automated collection techniques or other forms of information technology to minimize the information collection burden.

Dated: July 1, 2014.

Jackie Painter,

Acting Director, Division of Policy and Information Coordination.

[FR Doc. 2014–16075 Filed 7–9–14; 8:45 am]

BILLING CODE 4165–15–P

DEPARTMENT OF HOMELAND SECURITY

[Docket number DHS–2014–0027]

Meetings: Homeland Security Information Network Advisory Committee (HSINAC)

AGENCY: Operation Coordination and Planning/Office of Chief Information Officer (OPS/OCIO), DHS.

ACTION: Committee Management; Notice of Federal Advisory Committee Meeting.

SUMMARY: The Homeland Security Information Network Advisory Council (HSINAC) will meet August 6, 2014 from 1 p.m.–3 p.m. EDT virtually through HSIN Connect, an online web-conferencing tool, and via teleconference. The meeting will be open to the public.

DATES: The HSINAC will meet Wednesday, August 6, 2014 from 1 p.m.–3 p.m. EDT virtually through HSIN Connect, an online web-conferencing tool, and via teleconference, both of which will be made available to members of the general public. Please note that the meeting may end early if the committee has completed its business.

ADDRESSES: The meeting will be held virtually via HSIN Connect, an online web-conferencing tool at *https://share.dhs.gov/hsinac,* and available via teleconference at 1–800–593–7197 Conference Pin: 7321936. To access the web conferencing tool go to *https://share.dhs.gov/hsinac,* click on ''enter as a guest,'' type in your name as a guest and click ''submit.'' The teleconference lines will be open for the public and the meeting materials will be posted beforehand on the **Federal Register** site (*https://www.federalregister.gov/*). Type ''HSIN Advisory Committee'' in the search field of the Web site's home page. If the Federal government is closed, the meeting will be rescheduled.

For information on facilities or services for individuals with disabilities or to request special assistance during the meeting, contact Ray Ragone at *ray.ragone@hq.dhs.gov* or 202–343–4213 as soon as possible.

To facilitate public participation, we are inviting public comment on the issues to be considered by the committee. Comments will be accepted in writing until August 1, 2014 and must be identified by the docket number—DHS–2014–0027—and may be submitted by one of the following methods:

- *Federal eRulemaking Portal: http://www.regulations.gov.* Follow the instructions for submitting comments.
- *Email:* Ray Ragone, *ray.ragone@hq.dhs.gov.* Also include the docket number in the subject line of the message.
- *Fax:* 202–343–4294.
- *Mail:* Ray Ragone, Department of Homeland Security, OPS CIO, Stop 0426, 245 Murray Lane SW., BLDG 410, Washington, DC 20528–0426.

Instructions: All submissions received must include the words ''Department of Homeland Security'' and the docket number (DHS–2014–0027) for this action. Comments received will be posted without alteration at *http://www.regulations.com* including any personal information provided.

Docket: For access to the docket to read background documents or comments received by the HSINAC go to *http://www.regulations.gov* and type the docket number of DHS–2014–XXXX into the ''search'' field at the top right of the Web site.

A public comment period will be held during the meeting on Wednesday, August 6, 2014 from 2:45 p.m. to 3 p.m., and speakers are requested to limit their comments to 3 minutes. Please note that the public comment period may end before the time indicated, following the last call for comments. Contact one of the individuals listed below to register as a speaker.

FOR FURTHER INFORMATION CONTACT: Designated Federal Officer, Michael Brody, *Michael.brody@hq.dhs.gov,* Phone: 202–282–9464, Fax: 202–343–4294, or Alternate Designated Federal Officer, Ray Ragone, *ray.ragone@hq.dhs.gov* 202–343–4213.

SUPPLEMENTARY INFORMATION: The Homeland Security Information Network Advisory Committee (HSINAC) is an advisory body to the Homeland Security Information Network (HSIN) Program Office. This committee provides advice and recommendations to the U.S. Department of Homeland Security (DHS) on matters relating to HSIN. These matters include system requirements, operating policies, community organization, knowledge management, interoperability and federation with other systems, and any other aspect of HSIN that supports the operations of DHS and its Federal, state, territorial, local, tribal, international, and private sector mission partners. Notice of this meeting is given under the Federal Advisory Committee Act, 5 U.S.C. Appendix. The HSINAC provides advice and recommendations to DHS on matters relating to HSIN.

Agenda

- HSIN Program Management Office Update (PMO) Update.
  - Development—Review the latest updates from the HSIN Development Manager who will outline the Program's development plan for the remainder of the fiscal year.
  - Project Update—Discuss the large development tasks at-hand, specifically aligned with Interoperability and Federation.
  - Communications—Review and discuss the HSIN Messaging Strategy questionnaire that was conducted with primary points of contact across the HSIN PMO.
  - Adobe Connect—Provide the Advisory Committee with an update on the advancements with Adobe Connect licensing and the future of Telephony and Single Sign-On.
  - Outreach—A summary of recent activities that the Mission Advocates are supporting and a future calendar of activities for the remainder of the fiscal year.
- Overview of the new HSINAC site—Provide a brief demonstration and description of the HSIN site created for the HSINAC members.
- Subcommittees.
  - Tools and Features—Discuss the kick-off of this subcommittee and the initial topic at-hand: mobility.
  - Federation and Interoperability—Discuss the kick-off and initial topics of discussion for the subcommittee.
  - Outreach Coordination—Discuss the kick-off and initial topics of discussion for the subcommittee.
- Public Comment Period.
- Closing remarks.
- Adjournment of the meeting.

James Lanoue,

HSIN Acting Program Manager.

[FR Doc. 2014–16113 Filed 7–9–14; 8:45 am]

BILLING CODE 9110–9B–P

DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT

[Docket No. FR–5735–N–03]

Home Equity Conversion Mortgage (HECM) Program: Limit on Insurability of Fixed Interest Rate Products Under the HECM Program—Solicitation of Comment

AGENCY: Office of the Assistant Secretary for Housing-Federal Housing Commissioner, HUD.

ACTION: Notice.

SUMMARY: On June 18, 2014, the Federal Housing Administration (FHA) issued Mortgagee Letter 2014–11, announcing a limit on the insurability of fixed interest rate mortgages under the HECM program to mortgages with the Single Disbursement Lump Sum payment option. FHA issued this Mortgagee Letter pursuant to the authority granted to it in subsections 202(a) and 255(c) of the National Housing Act and in the Reverse Mortgage Stabilization Act of 2013 to make this change to the HECM program. The limitation on the eligibility for insurance of fixed interest rate mortgages is necessary in order to ensure the financial viability of the HECM program and the Mutual Mortgage Insurance Fund (Fund). These changes took effect for case numbers assigned on or after June 25, 2014. This notice solicits comment for a period of 30 days on the new requirements announced in Mortgagee Letter 2014–11.

DATES: *Comment Due Date:* August 11, 2014.

ADDRESSES: Interested persons are invited to submit comments regarding this notice to the Regulations Division, Office of General Counsel, Department of Housing and Urban Development, 451 7th Street SW., Room 10276, Washington, DC 20410–0500. Communications must refer to the above docket number and title. There are two methods for submitting public comments. All submissions must refer to the above docket number and title.

1. *Submission of Comments by Mail.* Comments may be submitted by mail to the Regulations Division, Office of General Counsel, Department of Housing and Urban Development, 451 7th Street SW., Room 10276, Washington, DC 20410–0500.

2. *Electronic Submission of Comments.* Interested persons may submit comments electronically through the Federal eRulemaking Portal at *www.regulations.gov.* HUD strongly encourages commenters to submit comments electronically. Electronic submission of comments allows the commenter maximum time to prepare and submit a comment, ensures timely receipt by HUD, and enables HUD to make them immediately available to the public. Comments submitted electronically through the *www.regulations.gov* Web site can be viewed by other commenters and interested members of the public. Commenters should follow the instructions provided on that site to submit comments electronically.

Note: To receive consideration as public comments, comments must be submitted through one of the two methods specified above. Again, all submissions must refer to the docket number and title of the notice.

No Facsimile Comments. Facsimile (FAX) comments are not acceptable.

Public Inspection of Public Comments. All properly submitted comments and communications submitted to HUD will be available for public inspection and copying between 8 a.m. and 5 p.m. weekdays at the above address. Due to security measures at the HUD Headquarters building, an appointment to review the public comments must be scheduled in advance by calling the Regulations Division at 202–708–3055 (this is not a toll-free number). Individuals with speech or hearing impairments may access this number via TTY by calling the Federal Relay Service at 1–800–877–8339 (this is a toll-free number). Copies of all comments submitted are available for inspection and downloading at *www.regulations.gov.*

FOR FURTHER INFORMATION CONTACT: Karin Hill, Senior Advisor, Single Family Program Development, Office of Housing, Department of Housing and Urban Development, 451 7th Street SW., Room 9280, Washington, DC 20410–9000, telephone number 202–708–4308 (this is not a toll-free number). Hearing or speech impaired individuals may access this number via TTY by calling the Federal Relay Service during business hours at 1–800–877–8337 (this is a toll-free number).

SUPPLEMENTARY INFORMATION: On April 1, 2014, Ginnie Mae issued an *All Participants Memorandum* (*APM*) announcing that fixed interest rate HECM loans with future draws will be ineligible for securitization through Ginnie Mae programs on or after June 1, 2014. The only fixed interest rate HECM product that will be eligible for securitization through Ginnie Mae programs will be mortgages with the Single Disbursement Lump Sum payment option selected at closing, which was the option that was introduced with the September 30, 2013, program changes. As a result of this change, risk to FHA and the Fund would be increased if FHA were to allow for these other fixed rate products to continue to be eligible for insurance.

The Secretary has a responsibility to ensure that the Fund remains financially sound under subsection 202(a)(3) of the National Housing Act (12 U.S.C. 1708) and the authority to insure HECMs upon such terms and conditions as he may prescribe to the extent that he determines such mortgages have potential for acceptance in the mortgage market under subsection 255(c)(3) of the National Housing Act (12 U.S.C. 1715z–20). Therefore, to address the increased risk that would be borne by FHA and the Fund as a result of Ginnie Mae's *APM,* HUD issued Mortgagee Letter 2014–11,[1] which requires all fixed interest rate HECMs to have the Single Disbursement Lump Sum payment option and prevents future draws to the mortgagor after closing. The Reverse Mortgage Stabilization Act of 2013 (Pub. L. 113–29), which amended section 255 of the National Housing Act by adding a new subsection (h)(3), gives FHA the authority to establish, by notice or mortgagee letter, any additional or alternative requirements that the Secretary, in the Secretary's discretion, determines are necessary to improve the fiscal safety and soundness of the HECM program authorized by section 255 of the National Housing Act.

Comments on the changes announced in Mortgagee Letter 2014–11 will be accepted for a period of 30 days.[2]

Dated: July 1, 2014.

Carol J. Galante,

Assistant Secretary for Housing-Federal Housing Commissioner.

[FR Doc. 2014–16154 Filed 7–9–14; 8:45 am]

BILLING CODE 4210–67–P

DEPARTMENT OF THE INTERIOR

Fish and Wildlife Service

[FWS–HQ–IA–2014–N142; FXIA16710900000–145–FF09A30000]

Endangered Species; Issuance of Permits

AGENCY: Fish and Wildlife Service, Interior.

ACTION: Notice of issuance of permits.

[1] The Mortgagee Letter can be found at *http://portal.hud.gov/hudportal/documents/huddoc?id=14-11ml.pdf.*

[2] HUD will carefully consider the public comments received through this solicitation in the development of a final rule.

SUMMARY: We, the U.S. Fish and Wildlife Service (Service), have issued the following permits to conduct certain activities with endangered species. We issue these permits under the Endangered Species Act (ESA).

ADDRESSES: Brenda Tapia, Division of Management Authority, U.S. Fish and Wildlife Service, 4401 North Fairfax Drive, Room 212, Arlington, VA 22203; fax (703) 358–2280; or email *DMAFR@fws.gov.*

FOR FURTHER INFORMATION CONTACT: Brenda Tapia, (703) 358–2104 (telephone); (703) 358–2280 (fax); *DMAFR@fws.gov* (email).

SUPPLEMENTARY INFORMATION: On the dates below, as authorized by the provisions of the ESA (16 U.S.C. 1531 *et seq.*), as amended, and/or the MMPA, as amended (16 U.S.C. 1361 *et seq.*), we issued requested permits subject to certain conditions set forth therein. For each permit for an endangered species, we found that (1) The application was filed in good faith, (2) The granted permit would not operate to the disadvantage of the endangered species, and (3) The granted permit would be consistent with the purposes and policy set forth in section 2 of the ESA.

ENDANGERED SPECIES

Permit No.	Applicant	Receipt of application **Federal Register** notice	Permit issuance date
14237B	Houston Zoo	78 FR 67389; November 12, 2013	March 11, 2014.
18975B	Wildlife Conservation Society	78 FR 73877; December 9, 2013	February 25, 2014.
677648	University of Kansas Biodiversity Institute	78 FR 76171; December 16, 2013	May 30, 2014.
25430B	Edward Stehmeyer	79 FR 8203; February 11, 2014	April 11, 2014.
28374B	Villanova University	79 FR 10547; February 25, 2014	April16, 2014.
24137B	Minnesota Zoological Gardens	79 FR 10547; February 25, 2014	May 30, 2014.
26837B	JoAnn Holland	79 FR 10457; February 25, 2014	June 23, 2014.
28148B	Doyle Graham	79 FR 12215; March 4, 2014	June 23, 2014.
22125B	Los Angeles Zoo	79 FR 14528; March 14, 2014	June 26, 2014.
17469B	Zoological Society of San Diego	79 FR 14528; March 14, 2014	May 29, 2014.
22194B, 21674B, 21676B, 21677B, 21679B, and 21680B.	Feld Entertainment	79 FR 15768; March 21, 2014	June 3, 2014.
29286B	Wesley Reeves	79 FR 15768; March 21, 2014	May 2, 2014.
29013B	Colin Cooper	79 FR 18575; April 2, 2014	May 12, 2014.
31023B	Paul Jackson	79 FR 24445; April 30, 2014	June 2, 2014.
31433B	Zeev Nederman	79 FR 24445; April 30, 2014	June 2, 2014.
32376B	Dallas Zoo	79 FR 24445; April 30, 2014	June 16, 2014.
717994	City of San Jose dba Happy Hollow Zoo	79 FR 24445; April 30, 2014	June 20, 2014.
738517	Roger Williams Park Zoo	79 FR 24445; April 30, 2014	June 20, 2014.
171815	Jeffrey Kengor	79 FR 24445; April 30, 2014	June 20, 2014.
28506B	University of Hawaii at Manoa	79 FR 24445; April 30, 2014	June 26, 2014.
230437	Virginia Institute of Marine Science	79 FR 24445; April 30, 2014	June 30, 2014.
34875B	Roger Oerter	79 FR 26452; May 8, 2014	June 23, 2014.
35981B	Phillip White	79 FR 28941; May 20, 2014	June 23, 2014.

Availability of Documents

Documents and other information submitted with these applications are available for review, subject to the requirements of the Privacy Act and Freedom of Information Act, by any party who submits a written request for a copy of such documents to: Division of Management Authority, U.S. Fish and Wildlife Service, 4401 North Fairfax Drive, Room 212, Arlington, VA 22203; fax (703) 358–2280.

Brenda Tapia,

Program Analyst/Data Administrator, Branch of Permits, Division of Management Authority.

[FR Doc. 2014–16134 Filed 7–9–14; 8:45 am]

BILLING CODE 4310–55–P

DEPARTMENT OF THE INTERIOR

Fish and Wildlife Service

[FWS–HQ–IA–2014–N143; FXIA16710900000–145–FF09A30000]

Endangered Species; Receipt of Applications for Permit

AGENCY: Fish and Wildlife Service, Interior.

ACTION: Notice of receipt of applications for permit.

SUMMARY: We, the U.S. Fish and Wildlife Service, invite the public to comment on the following applications to conduct certain activities with endangered species. With some exceptions, the Endangered Species Act (ESA) prohibits activities with listed species unless Federal authorization is acquired that allows such activities.

DATES: We must receive comments or requests for documents on or before August 11, 2014.

ADDRESSES: Brenda Tapia, Division of Management Authority, U.S. Fish and Wildlife Service, 4401 North Fairfax Drive, Room 212, Arlington, VA 22203; fax (703) 358–2280; or email *DMAFR@fws.gov.*

FOR FURTHER INFORMATION CONTACT: Brenda Tapia, (703) 358–2104 (telephone); (703) 358–2280 (fax); *DMAFR@fws.gov* (email).

SUPPLEMENTARY INFORMATION:

I. Public Comment Procedures

A. How do I request copies of applications or comment on submitted applications?

Send your request for copies of applications or comments and materials concerning any of the applications to the contact listed under **ADDRESSES**. Please include the **Federal Register** notice publication date, the PRT-number, and the name of the applicant in your request or submission. We will not consider requests or comments sent to an email or address not listed under

ADDRESSES. If you provide an email address in your request for copies of applications, we will attempt to respond to your request electronically.

Please make your requests or comments as specific as possible. Please confine your comments to issues for which we seek comments in this notice, and explain the basis for your comments. Include sufficient information with your comments to allow us to authenticate any scientific or commercial data you include.

The comments and recommendations that will be most useful and likely to influence agency decisions are: (1) Those supported by quantitative information or studies; and (2) Those that include citations to, and analyses of, the applicable laws and regulations. We will not consider or include in our administrative record comments we receive after the close of the comment period (see **DATES**) or comments delivered to an address other than those listed above (see **ADDRESSES**).

B. May I review comments submitted by others?

Comments, including names and street addresses of respondents, will be available for public review at the street address listed under **ADDRESSES**. The public may review documents and other information applicants have sent in support of the application unless our allowing viewing would violate the Privacy Act or Freedom of Information Act. Before including your address, phone number, email address, or other personal identifying information in your comment, you should be aware that your entire comment—including your personal identifying information—may be made publicly available at any time. While you can ask us in your comment to withhold your personal identifying information from public review, we cannot guarantee that we will be able to do so.

II. Background

To help us carry out our conservation responsibilities for affected species, and in consideration of section 10(a)(1)(A) of the Endangered Species Act of 1973, as amended (16 U.S.C. 1531 *et seq.*), along with Executive Order 13576, ''Delivering an Efficient, Effective, and Accountable Government,'' and the President's Memorandum for the Heads of Executive Departments and Agencies of January 21, 2009—Transparency and Open Government (74 FR 4685; January 26, 2009), which call on all Federal agencies to promote openness and transparency in Government by disclosing information to the public, we invite public comment on these permit applications before final action is taken.

III. Permit Applications

A. Endangered Species

Applicant: Camden Aquarium, LLC, Camden, NJ; PRT–35436A

The applicant requests a renewal of a captive-bred wildlife registration under 50 CFR 17.21(g) for the following species, jackass penguin (*Spheniscus demersus*) to enhance the species' propagation or survival. This notification covers activities to be conducted by the applicant over a 5-year period.

Applicant: Daniel Darby, Topeka, KS; PRT–082541

The applicant requests a renewal of a captive-bred wildlife registration under 50 CFR 17.21(g) for the following species, radiated tortoise (*Astrochelys radiata*) to enhance the species' propagation or survival. This notification covers activities to be conducted by the applicant over a 5-year period.

Applicant: Janet Lilienthal, Boston, MA; PRT- 735952

The applicant requests a renewal of a captive-bred wildlife registration under 50 CFR 17.21(g) for the Vinaceous Amazon (*Amazona vinacea)* and red-browed Amazon (*Amazona rhodocorytha)* (formerly *Amazona dufresniana rhodocorytha*), to enhance the species' propagation or survival. This notification covers activities to be conducted by the applicant over a 5-year period.

Applicant: Mark Jackson, Silverado, NJ; PRT–34571A

The applicant requests a renewal of a captive-bred wildlife registration under 50 CFR 17.21(g) for the following species: Cuban parrot (*Amazona leucocephala*), golden parakeet (*Guarouba guarouba*), Galapagos tortoise (*Chelonoidis nigra*), and radiated tortoise (*Astrochelys radiata*). The purpose of the permit is to enhance the species' propagation or survival. This notification covers activities to be conducted by the applicant over a 5-year period.

Applicant: Stephen Hall, Grapevine, TX; PRT–796988

The applicant requests a renewal of a captive-bred wildlife registration under 50 CFR 17.21(g) for the radiated tortoise (*Geochelone radiata*) to enhance the species' propagation or survival. This notification covers activities to be conducted by the applicant over a 5-year period.

Applicant: 4 J Conservation Center, Inc., Dade City, FL; PRT–673338

The applicant requests a renewal of a captive-bred wildlife registration under 50 CFR 17.21(g) for the following species: Ring-tailed lemur (*Lemur catta*), black and white ruffed lemur (*Varecia variegata*), red ruffed lemur (*Varecia rubra*), Galapagos tortoise (*Chelonoidis nigra*), and radiated tortoise (*Astrochelys radiata*). The purpose of the permit is to enhance the species' propagation or survival. This notification covers activities to be conducted by the applicant over a 5-year period.

Applicant: Ryder Scientific, R.L.L.L.P, Sag Harbor, NY; PRT–33738B

The applicant requests a renewal of a captive-bred wildlife registration under 50 CFR 17.21(g) for the following species: Indian python (*Python molurus molurus*), American crocodile (*Crocodylus acutus*), Cuban crocodile (*Crocodylus rhombifer*), and Nile crocodile (*Crocodylus niloticus*). The purpose of the permit is to enhance the species' propagation or survival. This notification covers activities to be conducted by the applicant over a 5-year period.

Applicant: Capron Park Zoo, Attleboro, MA; PRT–123493

The applicant requests a renewal of a captive-bred wildlife registration under 50 CFR 17.21(g) for the following species, Manchurian crane (*Grus japonensis*), Black and White Ruffed Lemur (*Varecia v. variegata*), Lesser Slow Loris (*Nycticebus pygmaeus*), and Japanese macaque (*Macaca fuscata*) to enhance the species' propagation or survival. This notification covers activities to be conducted by the applicant over a 5-year period.

Multiple Applicants

The following applicants each request a permit to import the sport-hunted trophy of one male bontebok (*Damaliscus pygargus pygargus*) culled from a captive herd maintained under the management program of the Republic of South Africa, for the purpose of enhancement of the survival of the species.

Applicant: Byron Wates, Clifton VA; PRT–37543B

Applicant: Arthur Erickson, Wayzata, MN; PRT–38540B

Brenda Tapia,

Program Analyst/Data Administrator, Branch of Permits, Division of Management Authority.

[FR Doc. 2014–16133 Filed 7–9–14; 8:45 am]

BILLING CODE 4310–55–P

INTERNATIONAL TRADE COMMISSION

[Investigation Nos. 731–TA–986–987 (Second Review)]

Ferrovanadium From China and South Africa; Scheduling of Full Five-Year Reviews

AGENCY: United States International Trade Commission.

ACTION: Notice.

SUMMARY: The Commission hereby gives notice of the scheduling of full reviews pursuant to section 751(c)(5) of the Tariff Act of 1930 (19 U.S.C. 1675(c)(5)) (the Act) to determine whether revocation of the antidumping duty orders on ferrovanadium from China and South Africa would be likely to lead to continuation or recurrence of material injury within a reasonably foreseeable time. The Commission has determined to exercise its authority to extend the review period by up to 90 days pursuant to 19 U.S.C. 1675(c)(5)(B).[1] For further information concerning the conduct of these reviews and rules of general application, consult the Commission's Rules of Practice and Procedure, part 201, subparts A through E (19 CFR part 201), and part 207, subparts A, D, E, and F (19 CFR part 207).

DATES: *Effective Date:* June 24, 2014.

FOR FURTHER INFORMATION CONTACT: Angela M.W. Newell (202–708–5409), Office of Investigations, U.S. International Trade Commission, 500 E Street SW., Washington, DC 20436. Hearing-impaired persons can obtain information on this matter by contacting the Commission's TDD terminal on 202–205–1810. Persons with mobility impairments who will need special assistance in gaining access to the Commission should contact the Office of the Secretary at 202–205–2000.

[1] In addition, the Commission has the authority to toll statutory deadlines during a period when the government is closed. Because the Commission was closed on December 10, 2013, and on January 21, February 13, March 3, and March 17, 2014 due to inclement weather in Washington, DC, the statutory deadline may be tolled by up to five days.

General information concerning the Commission may also be obtained by accessing its internet server *(http://www.usitc.gov).* The public record for these reviews may be viewed on the Commission's electronic docket (EDIS) at *http://edis.usitc.gov.*

SUPPLEMENTARY INFORMATION:

Background.—On February 4, 2014, the Commission determined that responses to its notice of institution of the subject five-year reviews were such that full reviews pursuant to section 751(c)(5) of the Act should proceed (79 FR 9000, February 14, 2014). A record of the Commissioners' votes, the Commission's statement on adequacy, and any individual Commissioner's statements are available from the Office of the Secretary and at the Commission's Web site.

Participation in the reviews and public service list.—Persons, including industrial users of the subject merchandise and, if the merchandise is sold at the retail level, representative consumer organizations, wishing to participate in these reviews as parties must file an entry of appearance with the Secretary to the Commission, as provided in section 201.11 of the Commission's rules, by 45 days after publication of this notice. A party that filed a notice of appearance following publication of the Commission's notice of institution of the reviews need not file an additional notice of appearance. The Secretary will maintain a public service list containing the names and addresses of all persons, or their representatives, who are parties to the reviews.

Limited disclosure of business proprietary information (BPI) under an administrative protective order (APO) and BPI service list.—Pursuant to section 207.7(a) of the Commission's rules, the Secretary will make BPI gathered in these reviews available to authorized applicants under the APO issued in the reviews, provided that the application is made by 45 days after publication of this notice. Authorized applicants must represent interested parties, as defined by 19 U.S.C. 1677(9), who are parties to the reviews. A party granted access to BPI following publication of the Commission's notice of institution of the reviews need not reapply for such access. A separate service list will be maintained by the Secretary for those parties authorized to receive BPI under the APO.

Staff report.—The prehearing staff report in the reviews will be placed in the nonpublic record on Monday, November 3, 2014, and a public version will be issued thereafter, pursuant to section 207.64 of the Commission's rules.

Hearing.—The Commission will hold a hearing in connection with the reviews beginning at 9:30 a.m. on Thursday, November 20, 2014, at the U.S. International Trade Commission Building. Requests to appear at the hearing should be filed in writing with the Secretary to the Commission on or before Thursday, November 13, 2014. A nonparty who has testimony that may aid the Commission's deliberations may request permission to present a short statement at the hearing. All parties and nonparties desiring to appear at the hearing and make oral presentations should attend a prehearing conference to be held on Tuesday, November 18, 2014 (if deemed necessary). Oral testimony and written materials to be submitted at the public hearing are governed by sections 201.6(b)(2), 201.13(f), 207.24, and 207.66 of the Commission's rules. Parties must submit any request to present a portion of their hearing testimony *in camera* no later than 7 business days prior to the date of the hearing.

Written submissions.—Each party to the reviews may submit a prehearing brief to the Commission. Prehearing briefs must conform with the provisions of section 207.65 of the Commission's rules; the deadline for filing is Wednesday, November 12, 2014. Parties may also file written testimony in connection with their presentation at the hearing, as provided in section 207.24 of the Commission's rules, and posthearing briefs, which must conform with the provisions of section 207.67 of the Commission's rules. The deadline for filing posthearing briefs is Tuesday, December 2, 2014. In addition, any person who has not entered an appearance as a party to the reviews may submit a written statement of information pertinent to the subject of the reviews on or before Tuesday, December 2, 2014. On Friday, December 19, 2014, the Commission will make available to parties all information on which they have not had an opportunity to comment. Parties may submit final comments on this information on or before Monday, January 5, 2015, but such final comments must not contain new factual information and must otherwise comply with section 207.68 of the Commission's rules. All written submissions must conform with the provisions of section 201.8 of the Commission's rules; any submissions that contain BPI must also conform with the requirements of sections 201.6, 207.3, and 207.7 of the Commission's rules. The Commission's Handbook on E-Filing, available on the Commission's

Web site at *http://edis.usitc.gov*, elaborates upon the Commission's rules with respect to electronic filing.

Additional written submissions to the Commission, including requests pursuant to section 201.12 of the Commission's rules, shall not be accepted unless good cause is shown for accepting such submissions, or unless the submission is pursuant to a specific request by a Commissioner or Commission staff.

In accordance with sections 201.16(c) and 207.3 of the Commission's rules, each document filed by a party to the reviews must be served on all other parties to the reviews (as identified by either the public or BPI service list), and a certificate of service must be timely filed. The Secretary will not accept a document for filing without a certificate of service.

Authority: These reviews are being conducted under authority of title VII of the Tariff Act of 1930; this notice is published pursuant to section 207.62 of the Commission's rules.

By order of the Commission.

Issued: June 27, 2014.

William R. Bishop,

Supervisory Hearings and Information Officer.

[FR Doc. 2014–16122 Filed 7–9–14; 8:45 am]

BILLING CODE 7020–02–P

DEPARTMENT OF LABOR

Occupational Safety and Health Administration

[Docket No. OSHA–2011–0027]

Respiratory Protection Standard; Extension of the Office of Management and Budget's (OMB) Approval of Information Collection (Paperwork) Requirements

AGENCY: Occupational Safety and Health Administration (OSHA), Labor.

ACTION: Request for public comments.

SUMMARY: OSHA solicits public comments concerning its proposal to extend OMB approval of the information collection requirements specified by the Respiratory Protection Standard (29 CFR 1910.134).

DATES: Comments must be submitted (postmarked, sent, or received) by September 8, 2014.

ADDRESSES:

Electronically: You may submit comments and attachments electronically at *http://www.regulations.gov*, which is the Federal eRulemaking Portal. Follow the instructions online for submitting comments.

Facsimile: If your comments, including attachments, are not longer than 10 pages you may fax them to the OSHA Docket Office at (202) 693–1648.

Mail, hand delivery, express mail, messenger, or courier service: When using this method, you must submit a copy of your comments and attachments to the OSHA Docket Office, Docket No. OSHA–2011–0027, U.S. Department of Labor, Occupational Safety and Health Administration, Room N–2625, 200 Constitution Avenue NW., Washington, DC 20210. Deliveries (hand, express mail, messenger, and courier service) are accepted during the Department of Labor's and Docket Office's normal business hours, 8:15 a.m. to 4:45 p.m., e.t.

Instructions: All submissions must include the Agency name and the OSHA docket number (OSHA–2011–0027) for the Information Collection Request (ICR). All comments, including any personal information you provide, are placed in the public docket without change, and may be made available online at *http://www.regulations.gov.* For further information on submitting comments see the ''Public Participation'' heading in the section of this notice titled **SUPPLEMENTARY INFORMATION.**

Docket: To read or download comments or other material in the docket, go to *http://www.regulations.gov* or the OSHA Docket Office at the address above. All documents in the docket (including this **Federal Register** notice) are listed in the *http://www.regulations.gov* index; however, some information (e.g., copyrighted material) is not publicly available to read or download from the Web site. All submissions, including copyrighted material, are available for inspection and copying at the OSHA Docket Office. You may also contact Theda Kenney at the address below to obtain a copy of the ICR.

FOR FURTHER INFORMATION CONTACT: Theda Kenney or Todd Owen, Directorate of Standards and Guidance, OSHA, U.S. Department of Labor, Room N–3609, 200 Constitution Avenue NW., Washington, DC 20210; telephone (202) 693–2222.

SUPPLEMENTARY INFORMATION:

I. Background

The Department of Labor, as part of its continuing effort to reduce paperwork and respondent (i.e., employer) burden, conducts a preclearance consultation program to provide the public with an opportunity to comment on proposed and continuing information collection requirements in accord with the Paperwork Reduction Act of 1995 (PRA–95) (44 U.S.C. 3506(c)(2)(A)). This program ensures that information is in the desired format, reporting burden (time and costs) is minimal, collection instruments are clearly understood, and OSHA's estimate of the information collection burden is accurate. The Occupational Safety and Health Act of 1970 (the OSH Act) (29 U.S.C. 651 et seq.) authorizes information collection by employers as necessary or appropriate for enforcement of the Act or for developing information regarding the causes and prevention of occupational injuries, illnesses, and accidents (29 U.S.C. 657). The OSH Act also requires that OSHA obtain such information with minimum burden upon employers, especially those operating small businesses, and to reduce to the maximum extent feasible unnecessary duplication of efforts in obtaining information (29 U.S.C. 657).

The Respiratory Protection Standard (29 CFR 1910.134; hereafter, ''the Standard'') contains information collection requirements that require employers to: develop a written respirator program; conduct worker medical evaluations and provide follow-up medical evaluations to determine the worker's ability to use a respirator; provide the physician or other licensed healthcare professional with information about the worker's respirator and the conditions under which the worker will use the respirator; and administer fit tests for workers who will use negative- or positive-pressure, tight-fitting facepieces. In addition, employers must ensure that workers store emergency-use respirators in compartments clearly marked as containing emergency-use respirators. For respirators maintained for emergency use, employers must label or tag the respirator with a certificate stating the date of the inspection, the name of the individual who did the inspection, the findings of the inspection, required remedial action, and the identity of the respirator.

The Standard also requires employers to ensure that cylinders used to supply breathing air to respirators have a certificate of analysis from the supplier stating that the breathing air meets the requirements for Type 1—Grade D breathing air; such certification assures employers that the purchased breathing air is safe. Compressors used to supply breathing air to respirators must have a tag containing the most recent change date and the signature of the individual authorized by the employer to perform the change. Employers must maintain

this tag at the compressor. These tags provide assurance that the compressors are functioning properly.

II. Special Issues for Comment

OSHA has a particular interest in comments on the following issues:

- Whether the proposed information collection requirements are necessary for the proper performance of the Agency's functions, including whether the information is useful;
- The accuracy of OSHA's estimate of the burden (time and costs) of the information collection requirements, including the validity of the methodology and assumptions used;
- The quality, utility, and clarity of the information collected; and
- Ways to minimize the burden on employers who must comply; for example, by using automated or other technological information collection and transmission techniques.

III. Proposed Actions

OSHA is requesting that OMB extend its approval of the information collection requirements contained in the Respiratory Protection Standard (29 CFR 1910.134). The Agency is requesting an adjustment decrease in the number of burden hours from 6,801,711 hours to 6,643,220 hours, a total decrease of 158,491 burden hours. This decrease is based on updated data showing a decrease in the number of covered establishments. In addition, OSHA is requesting an adjustment increase of $3,265,756 in operation and maintenance costs (from $185,578,935 to $188,844,691) associated with increased estimated costs for employee medical exams, fit-testing materials and fit-tests. The Agency will summarize the comments submitted in response to this notice and will include this summary in the request to OMB.

Type of Review: Extension of a currently approved collection.

Title: Respiratory Protection Standard (29 CFR 1910.134).

OMB Control Number: 1218–0099.

Affected Public: Business or other for-profits.

Number of Respondents: 610,213.

Frequency of Responses: Initially; annually; on occasion.

Total Responses: 21,447,539.

Average Time per Response: Varies from 5 minutes (.08 hour) to mark a storage compartment or protective cover to 8 hours for large employers to gather and prepare information to develop a written plan.

Estimated Total Burden Hours: 6,643,220.

Estimated Cost (*Operation and Maintenance*): $188,844,691.

IV. Public Participation—Submission of Comments on this Notice and Internet Access to Comments and Submissions

You may submit comments in response to this document as follows: (1) Electronically at *http://www.regulations.gov,* which is the Federal eRulemaking Portal; (2) by facsimile (fax); or (3) by hard copy. All comments, attachments, and other material must identify the Agency name and the OSHA docket number (Docket No. OSHA–2011–0027) for the ICR. You may supplement electronic submissions by uploading document files electronically. If you wish to mail additional materials in reference to an electronic or facsimile submission, you must submit them to the OSHA Docket Office (see the section of this notice titled **ADDRESSES**). The additional materials must clearly identify your electronic comments by your name, date, and the docket number so the Agency can attach them to your comments.

Because of security procedures, the use of regular mail may cause a significant delay in the receipt of comments. For information about security procedures concerning the delivery of materials by hand, express delivery, messenger, or courier service, please contact the OSHA Docket Office at (202) 693–2350, (TTY (877) 889–5627).

Comments and submissions are posted without change at *http://www.regulations.gov.* Therefore, OSHA cautions commenters about submitting personal information such as social security numbers and date of birth. Although all submissions are listed in the *http://www.regulations.gov* index, some information (e.g., copyrighted material) is not publicly available to read or download from this Web site. All submissions, including copyrighted material, are available for inspection and copying at the OSHA Docket Office. Information on using the *http://www.regulations.gov* Web site to submit comments and access the docket is available at the Web site's ''User Tips'' link. Contact the OSHA Docket Office for information about materials not available from the Web site, and for assistance in using the Internet to locate docket submissions.

V. Authority and Signature

David Michaels, Ph.D., MPH, Assistant Secretary of Labor for Occupational Safety and Health, directed the preparation of this notice. The authority for this notice is the Paperwork Reduction Act of 1995 (44 U.S.C. 3506 *et seq.*) and Secretary of Labor's Order No. 1–2012 (77 FR 3912).

Signed at Washington, DC on July 7, 2014.

David Michaels,

Assistant Secretary of Labor for Occupational Safety and Health.

[FR Doc. 2014–16144 Filed 7–9–14; 8:45 am]

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NUCLEAR REGULATORY COMMISSION

Atomic Safety and Licensing Board Hearing

[Docket No. 40–9075–MLA; ASLBP No. 10–898–02–MLA–BD01]

In The Matter of Powertech USA, INC. (Dewey-Burdock In Situ Uranium Recovery Facility)

July 3, 2014.

Before Administrative Judges: William J. Froehlich, Chairman, Dr. Richard F. Cole, Dr. Mark O. Barnett.

Notice of Opportunity To Make Oral and Written Limited Appearance Statements

This Atomic Safety and Licensing Board hereby gives notice that it will accept oral and written limited appearance statements from members of the public regarding the application of Powertech, USA, Inc. (Powertech) to the United States Nuclear Regulatory Commission (NRC) for a license to construct and operate an in-situ leach uranium recovery facility in Custer and Fall River Counties, South Dakota. Two sessions to hear oral limited appearance statements will be held on August 18, 2014, in Hot Springs, South Dakota.

I. Background and Scope of Proceeding

On January 5, 2010, the NRC published a notice in the **Federal Register** that any interested person could file a challenge to Powertech's application to construct and operate an in-situ leach uranium recovery facility and could request an adjudicatory hearing thereon.[1] In response to that Notice, two groups, the Oglala Sioux Tribe and the Consolidated Intervenors, challenged Powertech's application and requested a hearing.[2] On March 12, 2010, this Board was established to handle the matter and to preside over

[1] 75 FR 467 (January 5, 2010) (ADAMS Accession No. ML100060051).

[2] Consolidated Request for Hearing and Petition for Leave to Intervene (March 8, 2010) (ADAMS Accession No. ML100680010); Petition to Intervene and Request for Hearing of the Oglala Sioux Tribe (Apr. 6, 2010) (ADAMS Accession No. ML100960645).

any contested adjudicatory proceeding relating to the Powertech application.[3] On August 5, 2010, this Board granted the Intervenors' requests, ruling that they had shown standing and had raised at least one admissible contention.[4] The scope of this contested adjudicatory proceeding, and thus the appropriate scope of any limited appearance statements, is defined by the contentions that have been raised by the Intervenors and that have been admitted, i.e., have been ruled to satisfy the requirements set forth in the relevant NRC regulation, 10 CFR 2.309(f)(1).

II. Matters To Be Considered

Contentions 1A, 1B, 2, 3, 4, 6, 9, 14A, and 14B have been admitted and will be at issue in the evidentiary hearing. These contentions generally concern the adequacy of (1) the project's protection of historical and cultural resources, and (2) the agency's Final Supplemental Environmental Impact Statement (FSEIS) analysis of the project's impacts on the water and ecosystem of the surrounding area. The Board seeks public input on these issues, specifically:

Contention 1A: Failure to Meet Applicable Legal Requirements Regarding Protection of Historical and Cultural Resources.

Contention 1B: Failure to Involve or Consult All Interested Tribes as Required by Federal Law.

Contention 2: The FSEIS Fails to Include Necessary Information for Adequate Determination of Baseline Ground Water Quality.

Contention 3: The FSEIS Fails to Include Adequate Hydrogeological Information to Demonstrate Ability to Contain Fluid Migration and Assess Potential Impacts to Groundwater.

Contention 4: The FSEIS Fails to Adequately Analyze Ground Water Quantity Impacts.

Contention 6: The FSEIS Fails to Adequately Describe or Analyze Proposed Mitigation Measures.

Contention 9: The FSEIS Fails to Consider Connected Actions.

Contention 14A: Whether an appropriate consultation was conducted pursuant to the Endangered Species Act and implementing regulations.

Contention 14B: Whether the FSEIS's impact analyses relevant to the greater sage grouse, the whooping crane, and the black-footed ferret are sufficient.

As specified below, members of the public are invited to submit oral or written statements, referred to as ''limited appearance statements'' related to the contentions listed above.[5]

III. Date, Time, and Location of Oral Limited Appearance Statement Sessions

The purpose of limited appearance statements is to allow members of the public who are not parties to the adjudication to provide the Board with statements setting forth their positions on matters related to the admitted contentions. Such statements may be presented orally during the limited appearance sessions or may be submitted in writing. As suggested by the parties,[6] two oral limited appearance statement sessions will be held. Both will take place on Monday, August 18, 2014 at the Mueller Civic Center, 801 S. 6th Street, Hot Springs, South Dakota. The first limited appearance session will be held from 11:00 a.m. to 2:00 p.m. MDT and the second limited appearance session will be held from 5:00 p.m. to 8:00 p.m. MDT.

IV. Participation Guidelines for Oral Limited Appearance Statements

Any person not a party, representative of a party, counsel to a party or witness who has filed testimony in this evidentiary hearing will be permitted to make a brief oral statement of his or her position on a matter of concern relating to the proceeding. Speakers should be aware, however, that the jurisdiction of this Board and the scope of this proceeding are limited to the Powertech application, and, more particularly, to the admitted contentions.[7]

Limited appearance statements enable members of the public to alert the Board to areas relating to the Powertech application and the admitted contentions where evidence may need to be adduced, and to assist the Board in its consideration of these issues. Oral limited appearance statements will be transcribed but are not under oath or affirmation and do not constitute formal testimony or evidence. Though these statements do not constitute testimony or evidence, they nonetheless may aid the Board and the parties in their consideration of the issues involved in this evidentiary hearing.

Oral limited appearance statements will be entertained during the hours specified above. In the event that all scheduled and unscheduled speakers present at the session have made a presentation, the Board reserves the right to terminate a session prior to the ending time listed above. The Board also reserves the right to extend a session if it determines this is required by the number of speakers present.

The time allotted for each limited appearance statement will be five minutes, but may be further limited depending on the number of written requests to make an oral statement or the number of persons present at the designated time, in order to ensure that everyone will have an opportunity to speak.

V. Submitting a Request To Make an Oral Limited Appearance Statement

A request to make an oral limited appearance statement may be submitted either prior to or at the limited appearance sessions. Those who have submitted timely written requests prior to the limited appearance sessions will be given priority over those who have not filed such requests. To be considered timely, a written request to make an oral limited appearance statement must be mailed, faxed or sent by email so as to be received before 5:00 p.m. EDT on Friday, August 8, 2014. The request should specify the session (afternoon or evening) during which the requester wishes to make an oral statement.

Written requests to make an oral statement should be submitted by one of the following methods:

Mail: Office of the Secretary, Rulemakings and Adjudications Staff, U.S. Nuclear Regulatory Commission, Washington, DC 20555–0001.

Fax: (301) 415–1101 (verification (301) 415–1966).

Email: hearingdocket@nrc.gov.

In addition, using the same method of service, a copy of the written request to make an oral statement should be sent to the Chairman of this Licensing Board as follows:

Mail: Administrative Judge William J. Froehlich, Chairman, c/o Nicholas Sciretta, Law Clerk, Atomic Safety and Licensing Board Panel, Mail Stop T–3F23, U.S. Nuclear Regulatory Commission, Washington, DC 20555–0001.

Fax: (301) 415–5599 (verification (301) 415–4128).

Email: Nicholas.Sciretta@nrc.gov and *Twana.Ellis@nrc.gov.*

[3] Establishment of Atomic Safety and Licensing Board (March 12, 2010) (unpublished) ADAMS Accession No. ML100710413); *see also* Powertech (USA) Inc.; Establishment of Atomic Safety and Licensing Board, 75 FR 13141 (March 18, 2010).

[4] See LBP–10–16, 72 NRC 361 (2010) (ADAMS Accession No. ML102170300).

[5] 10 CFR 2.315(a).

[6] Joint Report on Limited Appearance Statement Sessions (June 11, 2014) at 1.

[7] The scope of this proceeding is the admitted contentions. The admitted contentions are attached to this order as Appendix A.

VI. Submitting Written Limited Appearance Statements

As provided in 10 CFR 2.315(a), any person not a party, or a representative of a party, to the proceeding may submit a written statement setting forth his or her position on matters of concern related to this proceeding. Although these statements do not constitute testimony or evidence, they nonetheless may assist the Board or the parties in their consideration of the issues in this proceeding. The Board encourages early submission of written limited appearance statements so that the Board members will be able to consider issues raised in such statements while addressing the issues in the evidentiary proceeding.

Written limited appearance statements may be submitted at any time, and should be sent by mail, fax, or email both to the Chairman of this Licensing Board and also to the Office of the Secretary. This contact information is listed above.

VII. Availability of Documentary Information Regarding the Proceeding

Documents relating to Powertech's application are available on the NRC Web site at *http://www.nrc.gov/info-finder/materials/uranium/licensed-facilities/dewey-burdock.html* (last visited July 2, 2014). These documents are also available for public inspection at the Commission's Public Document Room (PDR), located in One White Flint North, 11555 Rockville Pike, Rockville, Maryland 20852 and electronically on the publicly available records component of the NRC's document system (ADAMS). ADAMS is accessible from the NRC Web site at *http://www.nrc.gov/reading-rm/adams.html* (last visited July 2, 2014).[8] Persons who do not have access to ADAMS or who encounter problems in accessing the documents located in ADAMS should contact the NRC PDR reference staff by telephone between 8:00 a.m. and 4:00 p.m. Eastern Time, Monday through Friday except federal holidays at (800) 397–4209 or (301) 415–4737 or by sending an email to *pdr.resource@nrc.gov.*

VIII. Potential Updated/Revised Information

Any updated/revised information regarding the limited appearance sessions can be found on the NRC Web site at *http://www.nrc.gov/reading-rm/doc-collections/aslbp/proceedings/2014/* (last visited July 2, 2014) or by calling the NRC's Public Affairs Office at (301) 415–8200.

It is so *ordered.*

Dated: July 3, 2014.

For the Atomic Safety and Licensing Board. Rockville, Maryland.

William J. Froehlich,

Chair, Administrative Judge.

Appendix A

Contention 1A: Failure to Meet Applicable Legal Requirements Regarding Protection of Historical and Cultural Resources.

Contention 1B: Failure to Involve or Consult All Interested Tribes as Required by Federal Law.

Contention 2: The FSEIS Fails to Include Necessary Information for Adequate Determination of Baseline Ground Water Quality.

Contention 3: The FSEIS Fails to Include Adequate Hydrogeological Information to Demonstrate Ability to Contain Fluid Migration and Assess Potential Impacts to Groundwater.

Contention 4: The FSEIS Fails to Adequately Analyze Ground Water Quantity Impacts.

Contention 6: The FSEIS Fails to Adequately Describe or Analyze Proposed Mitigation Measures.

Contention 9: The FSEIS Fails to Consider Connected Actions.

Contention 14A: Whether an appropriate consultation was conducted pursuant to the Endangered Species Act and implementing regulations.

Contention 14B: Whether the FSEIS's impact analyses relevant to the greater sage grouse, the whooping crane, and the black-footed ferret are sufficient.

[FR Doc. 2014–16171 Filed 7–9–14; 8:45 am]

BILLING CODE 7590–01–P

[8] Documents which are determined to contain sensitive or proprietary information may only be available in redacted form. All non-sensitive documents are available in their complete form.

NUCLEAR REGULATORY COMMISSION

[NRC–2014–0112]

Nuclear Regulatory Commission International Policy Statement

AGENCY: Nuclear Regulatory Commission.

ACTION: Policy statement; issuance.

SUMMARY: The U.S. Nuclear Regulatory Commission (NRC) is issuing an International Policy Statement. The International Policy Statement captures a brief history of almost 40 years of involvement in international activities and how this has impacted the NRC. The International Policy Statement also outlines how international activities directly support the NRC's goals and mission, and enumerates specific elements in which the NRC will proactively engage.

DATES: The International Policy Statement is effective July 10, 2014.

ADDRESSES: Please refer to Docket ID NRC–2014–0112 when contacting the NRC about the availability of information for this policy statement. You may access publicly-available information related to this policy statement by any of the following methods:

- Federal Rulemaking Web site: Go to *http://www.regulations.gov* and search for Docket ID NRC–2014–0112. Address questions about NRC dockets to Carol Gallagher; telephone: 301–287–3422; email: *Carol.Gallagher@nrc.gov.* For technical questions, contact the individual listed in the **FOR FURTHER INFORMATION CONTACT** section of this document.

- NRC's Agencywide Documents Access and Management System (ADAMS): You may obtain publicly-available documents online in the ADAMS Public Documents collection at *http://www.nrc.gov/reading-rm/adams.html.* To begin the search, select ''*ADAMS Public Documents*'' and then select ''Begin Web-based ADAMS Search.'' For problems with ADAMS, please contact the NRC's Public Document Room (PDR) reference staff at 1–800–397–4209, 301–415–4737, or by email to *pdr.resource@nrc.gov.* The International Policy Statement is available in ADAMS under Accession No. ML14132A317.

- NRC's PDR: You may examine and purchase copies of public documents at the NRC's PDR, Room O1–F21, One White Flint North, 11555 Rockville Pike, Rockville, Maryland 20852.

FOR FURTHER INFORMATION CONTACT: Jack Ramsey, Office of International Programs, U.S. Nuclear Regulatory Commission, Washington, DC 20555–0001; telephone: 301–415–2744; email: *Jack.Ramsey@nrc.gov.*

SUPPLEMENTARY INFORMATION:

I. Background

The NRC's participation in international activities has evolved since the establishment of the agency in 1975. The NRC's international activities are wide-ranging, encompassing treaty implementation, nuclear nonproliferation, export-import licensing for nuclear materials and equipment, international safeguards support and assistance, international safety and security cooperation and assistance, international safety and security information exchange, and cooperative safety research. These activities support the NRC's domestic mission, as well as broader U.S. domestic and international interests.

II. Discussion

The purpose of this International Policy Statement is to acknowledge the well-established Commission position that international activities are integral to the NRC's core mission to ensure adequate protection of public health and safety, to promote the common defense and security, and to protect the environment. The International Policy Statement captures a brief history of almost 40 years of involvement in international activities and how this has impacted the NRC. The International Policy Statement also outlines how international activities directly support the NRC's goals and mission, and enumerates specific elements in which the NRC will proactively engage. Finally, the International Policy Statement provides the context of policy elements, including their interrelationships, and establishes Commission expectations for the consideration, prioritization, and conduct of international activities. The NRC's International Policy Statement is published in its entirety in the attachment to this document, and is also available in ADAMS under Accession No. ML14132A317.

III. Procedural Requirements

Paperwork Reduction Act Statement

This policy statement does not contain new information collection requirements subject to the Paperwork Reduction Act of 1995 (44 U.S.C. 3501 et seq.).

Public Protection Notification

The NRC may not conduct or sponsor, and a person is not required to respond to, a request for information or an information collection requirement unless the requesting document displays a currently valid Office of Management and Budget control number.

Congressional Review Act

This action is not a rule as defined in the Congressional Review Act (5 U.S.C. 801–808).

Dated at Rockville, Maryland, this 2nd day July, 2014.

For the Nuclear Regulatory Commission.

Annette L. Vietti-Cook,

Secretary of the Commission.

Nuclear Regulatory Commission International Policy Statement

I. Background

The Nuclear Regulatory Commission's (NRC's) international activities are wide-ranging, encompassing treaty implementation, nuclear nonproliferation, export-import licensing for nuclear materials and equipment, international safeguards support and assistance, international safety cooperation and assistance, international regulatory/safety information exchange, and cooperative safety research. These activities support the NRC's domestic mission, as well as broader U.S. domestic and international interests.

The NRC's participation in international activities has evolved since the establishment of the agency in 1975. By statutory mandate, Congress made the NRC the export-import licensing agent for the U.S. Government for nuclear materials and equipment. As authorized under U.S. Government-negotiated agreements pursuant to Section 123 of the Atomic Energy Act of 1954, as amended, or through its own statutory authority, the NRC issued, and continues to issue, licenses authorizing export of U.S. nuclear power technology and nuclear material globally. This, in turn, resulted in many countries' nuclear power programs being based on or derived from U.S. technology or being dependent on supplies of U.S.-origin fuel, equipment, maintenance, technical expertise, and other support services. This exporting of U.S. nuclear technology created a much larger operational experience base for U.S. technology than existed in the U.S. alone. These developments directly supported and influenced the NRC's domestic activities. For example, the NRC sought close engagement, primarily through conduct of joint research and exchange of operational experience information, with foreign regulatory counterparts that had oversight of nuclear power technology comparable to that in the U.S. This cooperative relationship included both short-term and long-term working assignments at the NRC for international regulatory counterparts.

Since its inception, the NRC has also maintained extensive engagement with international organizations such as the International Atomic Energy Agency (IAEA) and the Nuclear Energy Agency (NEA) of the Organisation for Economic Cooperation and Development. In 1981, the NRC and IAEA signed their first Memorandum of Understanding (MOU). This MOU allowed the NRC's regulatory and safety expertise to be shared with the IAEA and, subsequently, the world. Further, the agreement between the United States and the IAEA covering application of safeguards in the United States, consistent with the Nuclear Nonproliferation Treaty, entered into force in late 1980. This agreement granted the IAEA permission to apply safeguards to many NRC-regulated nuclear facilities and activities. Internationally, the Convention on Physical Protection of Nuclear Material was adopted.

Starting in the late 1980s, in recognition of changes in the U.S. domestic nuclear power program and the international nuclear community occurring as a result of both the Three Mile Island and the Chernobyl accidents and significant foreign policy events such as the dissolution of the Soviet Union, the NRC's international engagements significantly expanded. The NRC, in close coordination with other parts of the U.S. Government, established a nuclear safety cooperative effort with its (then) Soviet regulatory counterpart. This effort later evolved to include providing information, knowledge, and training to international regulatory counterparts with oversight of Soviet-designed reactors to assist them as they developed their national regulatory infrastructure and programs. Internally, NRC Management Directive 9.14, ''Organization and Functions, Office of International Programs,'' was developed to reflect the NRC's steadily increasing and continually evolving international activities and to establish roles and responsibilities for international activities among the various NRC offices. Internationally, the NRC, as a U.S. Government lead agency, actively supported both the Convention on Assistance in the Case of a Nuclear Accident or Radiological Emergency and the Convention on Early Notification of a Nuclear Accident or Radiological Emergency.

Also, beginning in the late 1980s, as the NRC's cooperation activities with other mature nuclear regulatory programs continued to grow, the agency added a broad program of safety and, after 2001, security assistance activities. These activities are focused on providing information, knowledge, and training to other countries to assist them as they develop their national nuclear regulatory infrastructure and programs. These resources are expended without the expectation that the exchange will provide immediate benefits to an NRC regulatory program area. However, such exchanges are viewed by the Commission, the larger U.S. Government, and the international community as invaluable tools for establishing multilateral coalitions, enhancing global nuclear safety and security, and strengthening regulatory programs for nuclear power plants, research reactors, and radioactive materials.

In the 1990s, the breadth and scope of the NRC's cooperative efforts continued

to expand. Regulatory counterparts in countries to which U.S. nuclear technology had been exported had now gained ten-plus years of experience in oversight of the design, construction, and operation of this technology. The NRC also gained knowledge and operating experience information from other countries and applied this knowledge and information directly to its domestic regulatory program. Internationally, both the Convention on Nuclear Safety and the Joint Convention on the Safety of Spent Fuel Management and on the Safety of Radioactive Waste Management were negotiated and entered into force.

The 1990s also saw the foreign nuclear safety, security, and nonproliferation policies of the broader U.S. Government directly impact the NRC. A key nuclear security and non-proliferation foreign policy objective of the U.S., for example, was elimination of stocks of excess highly enriched uranium (HEU) from defense programs of the Russian Federation, also known as the Megatons to Megawatts Program. Achieving this policy goal entailed downblending this HEU into low enriched uranium (LEU), transporting the resulting LEU to facilities in the U.S. for conversion and processing, and eventually utilizing the resulting LEU as fuel in commercial nuclear power plants. This activity impacted the NRC's export-import licensing functions as well as the NRC's safety, security, and safeguards responsibilities covering transport of nuclear materials, fuel cycle facilities, and commercial nuclear power plants. In addition, the Commission supported greater controls over HEU exports to eliminate possible stockpiling of this weapons-usable material in other countries while recognizing that the manufacture of medical radioisotopes in existing research reactors would require ongoing HEU exports as these essential medical supplies no longer were manufactured in the United States. The NRC also shared its regulatory expertise with foreign counterparts as research reactors around the world are retooled to use LEU fuel, further promoting U.S. nonproliferation goals.

Finally, in the last two decades, several momentous events have significantly changed the landscape within which the NRC conducts its domestic and international activities. These events include the terrorist attacks of September 11, 2001, and the subsequent increased focus on securing radioactive materials of concern. In response to the latter, countries made political commitments to implement the IAEA's Code of Conduct on the Safety and Security of Radioactive Sources beginning in 2004. The Energy Policy Act of 2005 ensured the United States adopted the Code in its entirety, which resulted in extensive revisions to NRC's export-import requirements. Further, there has been a resurgence of new build for commercial power reactors in the U.S. and abroad, including the significant number of ''new entrant'' countries seeking nuclear power programs. As a result, the manufacture of nuclear parts and the provision of nuclear services have been significantly reduced in the U.S. for domestic nuclear power reactor construction, which has created dependence on the global marketplace among U.S. nuclear power plant owners/operators. Also, first-of-a-kind construction of new nuclear power plants, including technologies under consideration for use in the U.S., is now occurring outside of the U.S. and sensitive nuclear technology (including enrichment technology) has been imported into the U.S. Finally, the March 2011 Fukushima-Daiichi accident following the Great East Japan Earthquake and Tsunami had a deep impact on the international community which is still absorbing the ''lessons learned'' from those events. All of these trends have sharply increased the visibility of international standards and international peer reviews, the need for strengthening and harmonizing the international export-import regime, and the need for strong, independent regulatory authorities.

II. Statement of Policy on International Activities

International activities are integral to the NRC's public health and safety and common defense and security mission and directly support U.S. foreign policy objectives. Specific elements in which the NRC will engage include:

- Implementing obligations pursuant to international treaties and conventions and, with U.S. Government partners, supporting development and adoption of those pertaining to the NRC;
- Providing international assistance to foreign regulatory counterparts for improving safety and security of civilian uses of radioactive materials;
- Fostering international technical cooperation, sharing regulatory and operational experience, and supporting collaborative research for the mutual benefit of NRC programs and those of our international counterparts;
- Enhancing development of global nuclear safety, security, and safeguards regulatory partnerships; and
- Demonstrating leadership on regulatory issues, both within the international community and the U.S. Government.

III. Discussion

The policy statement provides four key, inter-related elements within which international activities are examined, prioritized, and conducted as an integral component of the NRC's mission. These components must be balanced in effective agency programs that reflect current Commission and U.S. Government priorities and the range of organizational and technical priorities and objectives. As used in this policy, the term ''radioactive materials'' is intended to cover all aspects of use, including the fuel cycle, nuclear power generation, and medical and industrial applications.

International activities are best conducted in an ongoing, collegial manner in which the NRC is proactively engaged to provide information and learn from others for the mutual benefit of all participants. In certain cases, the NRC is requested to, and frequently does, provide leadership for activities that reflect a high degree of technical expertise or a focus upon process and solutions that are of mutual benefit and a clear understanding of the cultural, political, and technical needs and solutions.

The policy elements are not a specific priority ranking of activities, although obligations mandated by law, treaties, and conventions will be given the highest priority. Implementation of this policy requires consistent dialogue and consultation across organizational lines to ensure that the NRC's response to issues and requests reflects both internal NRC and broader U.S. Government priorities.

International activities is a very general term that includes a variety of activities and program elements. Some of these elements represent the changing marketplace and the globalization of the supply chain. For example, regulatory activities that were previously conducted exclusively within the United States, such as activities in support of licensing and inspection, are now being conducted internationally. Likewise, research on various issues is being conducted both within the United States and internationally, and the most effective leverage of resources and expertise will dictate a particular approach for any given situation. All of the above are international activities but are intertwined with domestic activities.

Other activities are more obviously identified as ''international,'' where the specific focus involves cooperation and assistance activities with international counterparts and organizations. These

may be both bilateral and multilateral in nature and may, in any particular circumstance, reflect several of the international policy elements.

Because of the breath of its programs, resources, and expertise, the NRC is often looked to for leadership in a wide variety of venues. The NRC should, when it is appropriate to do so, provide such leadership in a cooperative and collegial manner. The NRC should continue to build partnerships with our international counterparts, and should propose approaches to our counterparts that ensure equal partnerships so as to be a positive influence in creating workable technical and policy alternatives.

NRC participation in international activities should clearly reflect our role and responsibilities as an independent regulatory agency. Thus, our focus should be upon safety and security.

Satisfying international treaty and convention obligations, as well as statutory mandates, is a significant priority for both the NRC and the broader U.S. Government. For example, the NRC is a lead agency within the U.S. Government for implementation of the Convention on Nuclear Safety. The NRC has significant responsibilities supporting broader U.S. Government commitments made through the Nuclear Nonproliferation Treaty, the Convention on Physical Protection of Nuclear Material, the Convention on Assistance in Case of a Nuclear Accident or Radiological Emergency, the Convention on Early Notification of a Nuclear Accident or Radiological Emergency, and the Joint Convention on the Safety of Spent Fuel Management and on the Safety of Radioactive Waste Management. The NRC also has a lead role in domestic implementation of the Code of Conduct on the Safety and Security of Radioactive Sources and the Code of Conduct on the Safety of Research Reactors. By statutory mandate, Congress made the NRC the export-import licensing agent for nuclear materials and equipment for the U.S. Government. As such, the NRC has upheld, and will continue, to uphold obligations pursuant to international treaties and conventions. Further, the NRC proactively engages with its U.S. Government partners on the development and adoption of proposed international treaties and conventions that are relevant to its mandate.

International guides, standards, and recommendations document internationally-accepted benchmarks and best practices. Such documents are relied upon by the international nuclear safety and security community. The NRC participates in the development, adoption, and implementation of many such documents. Specifically, the NRC participates in the Commission on Safety Standards; the Nuclear Security Guidance Committee; and the Nuclear, Radiation, Transport, and Waste Safety Standards Committees of the IAEA. The NRC also participates in the work of the International Commission on Radiological Protection and the United Nations Scientific Committee on the Effects of Atomic Radiation. This participation allows the NRC to share its experience broadly with the international standard-setting community and to learn from others' experiences. As such, the Commission believes that the NRC should support such efforts, as appropriate. The Commission also expects the NRC's regulatory programs to be appropriately informed by such international guides, standards, and recommendations.

The NRC's international activities benefit, both directly and indirectly, the NRC and its stakeholders. The NRC shares its regulatory knowledge and experience with international regulatory counterparts. Likewise, the NRC also seeks knowledge and experience from international regulatory counterparts. The NRC continuously assesses, and where relevant incorporates, international operating experience and research insights into NRC's domestic regulatory program. The NRC also routinely shares international operating experience and research insights with the international community. The NRC provides opportunities for assignment to the NRC of staff from international regulatory counterparts. Likewise, the NRC seeks opportunities for assignment of NRC staff to international regulatory counterparts to broaden staff experience and perspectives. The NRC participates in international cooperative research, through the NEA and others, effectively leveraging resources and international expertise. The NRC also provides assistance to international regulatory counterparts looking to enhance their regulatory programs. Regulatory counterparts of countries considering nuclear power, for example, request advice and support for establishing their regulatory programs. Other counterparts seek NRC's advice and assistance for enhancing oversight of their existing nuclear power and research reactor programs. In addition, NRC's advice and assistance for enhancing oversight of the use of radioactive sources is often sought after globally. The Commission believes that the partnerships created by the NRC's cooperation and assistance efforts benefit the regulatory programs of the NRC and of international counterparts, as well as the global nuclear safety and security community. The Commission also supports broader U.S. Government interests within the context of a strong, independent regulatory agency.

The international community is united in its endorsement of the need for open, transparent, and effective regulatory oversight of the use of nuclear and radioactive materials. For almost 40 years, the NRC has had regulatory safety and security oversight of one of the most extensive civilian nuclear programs in the world. This includes power and research reactors, fuel cycle facilities, waste facilities, and radioactive sources. From this, the NRC has gained extensive and diverse regulatory experience. The NRC's international activities also align with broader U.S. Government foreign policy initiatives. Assisting regulatory counterparts in enhancing oversight of radioactive sources, for example, supports broader U.S. Government nuclear security initiatives by reducing the likelihood that malevolent actors could obtain such material for use in a radiological dispersal or exposure device. As such, the Commission believes that the NRC should demonstrate leadership on regulatory issues, both within the international community and the U.S. Government.

[FR Doc. 2014–16173 Filed 7–9–14; 8:45 am]

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SECURITIES AND EXCHANGE COMMISSION

[Investment Company Act Release No. 31148; 812–14222]

American Capital, Ltd., *et al.;* Notice of Application

July 3, 2014.

AGENCY: Securities and Exchange Commission (''Commission'').

ACTIONS: Notice of application to amend a prior order under section 6(c) of the Investment Company Act of 1940 (the ''1940 Act'') granting an exemption from section 12(d)(3) of the 1940 Act.

APPLICANTS: American Capital, Ltd. (the ''Company''), American Capital Asset Management, LLC (''AC LLC''), American Capital Mortgage Management, LLC (''ACMM''), European Capital Asset Management Limited (''ECAM''), and American Capital Leveraged Finance Management, LLC (''ACLFM''; and together with the other applicants, ''Applicants'').

SUMMARY OF APPLICATION: Applicants request an order to amend a prior order

(''Amended Order'') to permit: AC LLC to hold up to 100% of the outstanding membership interests of American Capital Energy & Infrastructure I Management, LLC (''AC Energy''); AC LLC to hold up to 100% of the outstanding membership interests of American Capital Equity Management III, LLC (''ACEM3''); AC LLC to hold up to 100% of the outstanding membership interests of ACLFM; ACLFM to hold up to 100% of the outstanding membership interests of American Capital CLO Management, LLC (''ACAM''); and ACLFM to hold up to 100% of the outstanding membership interests of American Capital ACSF Management, LLC (''AC Debt'').

DATES: *Filing Dates:* The application was filed on August 15, 2013, and amended on October 2, 2013, February 18, 2014, and June 6, 2014.

HEARING OR NOTIFICATION OF HEARING: An order granting the requested relief will be issued unless the Commission orders a hearing. Interested persons may request a hearing by writing to the Commission's Secretary and serving applicants with a copy of the request, personally or by mail. Hearing requests should be received by the Commission by 5:30 p.m. on July 28, 2014, and should be accompanied by proof of service on applicants, in the form of an affidavit or, for lawyers, a certificate of service. Hearing requests should state the nature of the writer's interest, the reason for the request, and the issues contested. Persons who wish to be notified of a hearing may request notification by writing to the Commission's Secretary.

ADDRESSES: Secretary, U.S. Securities and Exchange Commission, 100 F Street NE., Washington, DC 20549–1090. Applicants: 2 Bethesda Metro Center, 14th Floor, Bethesda, Maryland 20814.

FOR FURTHER INFORMATION CONTACT: Jill Ehrlich, Senior Counsel, at (202) 551–6819, or David P. Bartels, Branch Chief, at (202) 551–6821 (Division of Investment Management, Chief Counsel's Office).

SUPPLEMENTARY INFORMATION: The following is a summary of the application. The complete application may be obtained via the Commission's Web site by searching for the file number, or for an applicant using the ''Company'' name box, at *http://www.sec.gov/search/search.htm* or by calling (202) 551–8090.

Applicants' Representations

1. On March 27, 2012, the Company, AC LLC,[1] ACMM, and ECAM[2] obtained an order under section 6(c) of the 1940 Act for an exemption from section 12(d)(3) of the 1940 Act (the ''Prior Order'').[3] Subsequently, the Company and AC LLC formed several additional directly or indirectly wholly-owned entities that intend to register or have registered as investment advisers under the Investment Advisers Act of 1940 (the ''Advisers Act''): AC Energy, ACEM3, and AC Debt.[4] AC LLC owns 100% of the membership interests of AC Energy and ACEM3. AC LLC owns 100% of the membership interests of ACLFM, which in turn owns 100% of the membership interests of AC Debt.[5]

2. Applicants are seeking the Amended Order to extend the relief granted in the Prior Order to the ownership of these new advisory entities, as described above.[6] In addition, the Amended Order would amend: (i) The Definition of ''AC Subs'' in the Prior Order to include AC Energy, ACEM3 and AC Debt and (ii) the definition of ''Applicants'' in the Prior Order to include ACLFM.

3. Applicants state that, because of the potential for the Company to expand its asset management business by having AC LLC, through the new AC Subs, advise additional funds, it would be beneficial to the Company and the Company's stockholders for the Company to be permitted to continue to hold, indirectly, AC Energy, AC Debt and ACEM3. Applicants represent that the legal analysis applicable to the request for the Amended Order is virtually identical to the analysis in the application for the Prior Order and that it applies to the new AC Subs to the same extent as it applies to the previously registered AC Subs. Applicants believe the requested relief is in the public interest and consistent with the protection of investors and the purposes fairly intended by the policy and provisions of the 1940 Act.

4. Applicants further represent that, except as expressly stated in the application for the Amended Order, all representations to the Prior Order will remain in effect and will apply to the new entities relying on the Amended Order and to the new AC Subs, and the terms and conditions of the Prior Order will apply equally to the Amended Order.

For the Commission, by the Division of Investment Management, under delegated authority.

Jill M. Peterson,

Assistant Secretary.

[FR Doc. 2014–16103 Filed 7–9–14; 8:45 am]

BILLING CODE 8011–01–P

[1] Effective January 30, 2013, the entity referred to as American Capital, LLC in the Prior Order (as defined below) changed its name to American Capital Asset Management, LLC.

[2] Effective September 5, 2013, the entity referred to as European Capital Financial Services (Guernsey) Limited in the Prior Order changed its name to European Capital Asset Management Limited.

[3] American Capital, Ltd., et al., Investment Company Act Release Nos. 29973 (March 1, 2012) (notice) and 30010 (March 27, 2012) (order).

[4] Applicants state that AC Energy and ACEM3 will be registered as investment advisers under the Advisers Act upon obtaining the Amended Order and that AC Debt registered as an investment adviser under the Advisers Act effective September 25, 2013.

[5] ACLFM also owns ACAM. Effective January 30, 2013, the entity referred to as American Capital Asset Management, LLC in the Prior Order changed its name to American Capital Leveraged Finance Management, LLC. Effective August 1, 2013, it then changed its name again to American Capital CLO Management, LLC. When the Prior Order was issued, AC LLC directly owned 100% of the outstanding membership interests of ACAM. On August 14, 2013, AC LLC executed a Contribution Agreement contributing its interests in ACAM to ACLFM.

[6] The Company will only rely on the Amended Order with respect to its investments in AC LLC and the AC Subs; AC LLC will only rely on /he Amended Order with respect to the AC Subs; ACMM will only rely on the Amended Order with respect to American Capital AGNC Management, LLC and American Capital MTGE Management, LLC; ECAM will only rely on the Amended Order with respect to European Capital Financial Services Limited; and ACLFM will only rely on the Amended Order with respect to AC Debt and ACAM.

SECURITIES AND EXCHANGE COMMISSION

[Release No. 34–72542; File No. SR–NYSEArca–2014–73]

Self-Regulatory Organizations; NYSE Arca, Inc.; Notice of Filing and Immediate Effectiveness of Proposed Rule Change Amending the NYSE Arca Equities Schedule of Fees and Charges for Exchange Services to Exclude the Date of the Annual Reconstitution of the Russell Investments Indexes for Billing Purposes When Calculating ETP Holder Average Daily Volume of Trade Activity and Consolidated ADV

July 3, 2014.

Pursuant to Section 19(b)(1)[1] of the Securities Exchange Act of 1934 (the ''Act'')[2] and Rule 19b–4 thereunder,[3] notice is hereby given that, on June 24, 2014, NYSE Arca, Inc. (the ''Exchange'' or ''NYSE Arca'') filed with the Securities and Exchange Commission (the ''Commission'') the proposed rule

[1] 15 U.S.C. 78s(b)(1).

[2] 15 U.S.C. 78a.

[3] 17 CFR 240.19b–4.

change as described in Items I, II, and III below, which Items have been prepared by the self-regulatory organization. The Commission is publishing this notice to solicit comments on the proposed rule change from interested persons.

I. Self-Regulatory Organization's Statement of the Terms of the Substance of the Proposed Rule Change

The Exchange proposes to amend the NYSE Arca Equities Schedule of Fees and Charges for Exchange Services (''Fee Schedule'') to exclude the date of the annual reconstitution of the Russell Investments Indexes (the ''Russell Reconstitution Date'') for billing purposes when calculating ETP Holder average daily volume (''ADV'') of trade activity and consolidated ADV (''CADV''). The Exchange proposes to implement the fee change effective immediately. The text of the proposed rule change is available on the Exchange's Web site at *www.nyse.com,* at the principal office of the Exchange, and at the Commission's Public Reference Room.

II. Self-Regulatory Organization's Statement of the Purpose of, and Statutory Basis for, the Proposed Rule Change

In its filing with the Commission, the self-regulatory organization included statements concerning the purpose of, and basis for, the proposed rule change and discussed any comments it received on the proposed rule change. The text of those statements may be examined at the places specified in Item IV below. The Exchange has prepared summaries, set forth in sections A, B, and C below, of the most significant parts of such statements.

A. Self-Regulatory Organization's Statement of the Purpose of, and Statutory Basis for, the Proposed Rule Change

1. Purpose

The Exchange proposes to amend the Fee Schedule to exclude the Russell Reconstitution Date for billing purposes when calculating ETP Holder ADV of trade activity and CADV.[4] The Exchange proposes to implement the fee change effective immediately.

Various fees and credits in the Fee Schedule are based on an ETP Holder's ADV of trade activity during the billing month, taken as a percentage of CADV. CADV means U.S. CADV for transactions reported to the Consolidated Tape. Trade activity across all markets on the Russell Reconstitution Date typically exceeds levels on other days during the month, thereby resulting in an unusually higher CADV for the billing month. The Exchange therefore proposes to exclude the Russell Reconstitution Date when calculating ETP Holder ADV of trade activity and CADV. The Exchange would amend Footnotes 1 and 3 in the Fee Schedule to specify that trade activity and CADV, respectively, do not include the Russell Reconstitution Date. ETP Holder transactions on the Russell Reconstitution Date would continue to be subject to the fees and credits in the Fee Schedule. The 2014 Russell Reconstitution Date is June 27, 2014.

The proposed change is not otherwise intended to address any other issues, and the Exchange is not aware of any problems that ETP Holders would have in complying with the proposed change.

2. Statutory Basis

The Exchange believes that the proposed rule change is consistent with Section 6(b) of the Act,[5] in general, and furthers the objectives of Sections 6(b)(4) and 6(b)(5) of the Act,[6] in particular, because it provides for the equitable allocation of reasonable dues, fees, and other charges among its members, issuers and other persons using its facilities and does not unfairly discriminate between customers, issuers, brokers or dealers.

The Exchange believes that the proposed change is reasonable because trade activity across all markets on the Russell Reconstitution Date typically exceeds levels on other days during the month, thereby resulting in an artificially higher CADV for the billing month. Trade activity of a particular ETP Holder, taken as a percentage of CADV, could therefore be lower on the Russell Reconstitution Date than during the rest of the billing month. This could prevent an ETP Holder from qualifying for the pricing tiers in the Fee Schedule, despite such ETP Holder's trade activity during the rest of the billing month being sufficient to qualify. The proposed change would therefore eliminate the potential for the increased trade activity that typically occurs on the Russell Reconstitution Date to cause an ETP Holder to fail to qualify for the pricing tiers in the Fee Schedule during that month.

The proposed change is equitable and not unfairly discriminatory because the Russell Reconstitution Date would be excluded when determining trade activity for all ETP Holders and when determining CADV for billing purposes for all ETP Holders. The proposed change would eliminate a particular day of trade activity that is likely to be an outlier compared to the rest of the trading month, both with respect to a particular ETP Holder's trade activity as well as CADV for the month. While the proposed change is primarily designed so that an ETP Holder that would otherwise qualify for a pricing tier is not negatively impacted by the higher trade activity on the Russell Reconstitution Date, the proposed change would also eliminate the potential for an ETP Holder whose trade activity is artificially higher on the Russell Reconstitution Date to qualify for the pricing tiers when such ETP Holder's activity during the rest of the month is not representative of the levels required by the pricing tiers.

The proposed change is also reasonable because it is similar to the manner in which Footnotes 1 and 3 in the Fee Schedule currently specify that trade activity and CADV exclude trade activity on days when the market closes early. Without this existing exclusion, and in contrast to the artificially higher CADV for the month caused by the Russell Reconstitution Date, CADV for a billing month during which the market closes early on a particular day or days would be artificially low. The current exclusion eliminates the potential for the decreased trade activity that typically occurs on an early close day to make it more likely for an ETP Holder to qualify for the pricing tiers in the Fee Schedule. As with the existing exclusion for early close days, the proposed exclusion of the Russell Reconstitution Date is consistent with the Act because it would address a somewhat predictable variance in typical trade activity resulting from a known, future event (i.e., an early close day or, as discussed herein, the Russell Reconstitution Date).

The Exchange also believes that it is reasonable to exclude the Russell Reconstitution Date as proposed herein because the Nasdaq Stock Market LLC (''Nasdaq'') treats the Russell Reconstitution Date in the same manner.[7]

Finally, the Exchange believes that it is subject to significant competitive forces, as described below in the Exchange's statement regarding the burden on competition.

[4] Questions and answers related to the Russell Reconstitution Date are available at *http://www.russell.com/indexes/americas/tools-resources/reconstitution/frequently-asked-questions.page.*

[5] 15 U.S.C. 78f(b).

[6] 15 U.S.C. 78f(b)(4) and (5).

[7] *See, e.g.,* Nasdaq Rule 7018(a). *See also* Securities Exchange Act Release No. 69758 (June 13, 2013), 78 FR 36801 (June 19, 2013) (SR–NASDAQ–2013–081).

For these reasons, the Exchange believes that the proposal is consistent with the Act.

B. Self-Regulatory Organization's Statement on Burden on Competition

In accordance with Section 6(b)(8) of the Act,[8] the Exchange believes that the proposed rule change would not impose any burden on competition that is not necessary or appropriate in furtherance of the purposes of the Act. The proposed change would eliminate a particular trading day from consideration when calculating trade activity of ETP Holders and CADV for billing purposes, given that trade activity across all markets on the Russell Reconstitution Date typically exceeds levels on other days during the month, thereby resulting in an artificially higher CADV for the billing month. This proposed change would therefore provide all ETP Holders with a clearer picture of the level of trade activity required of them in order to qualify for the pricing tiers in the Fee Schedule. The Russell Reconstitution Date occurs toward the end of the billing month—June 27, 2014 for the next reconstitution. Only one trading day would remain in the month. Without this proposed exclusion, it would be difficult for an ETP Holder to modify its trade activity on the Exchange during the remainder of the month in order to make up for any shortfall with respect to the pricing tiers caused by the increased trade activity on the Russell Reconstitution Date.

Also, the Exchange does not believe that the proposed change will impair the ability of ETP Holders or competing order execution venues to maintain their competitive standing in the financial markets. In this regard, the Exchange notes that pricing on other exchanges treats the Russell Reconstitution Date in the same manner.[9]

Finally, the Exchange notes that it operates in a highly competitive market in which market participants can readily favor competing venues if they deem fee levels at a particular venue to be excessive or rebate opportunities available at other venues to be more favorable. In such an environment, the Exchange must continually adjust its fees and rebates to remain competitive with other exchanges and with alternative trading systems that have been exempted from compliance with the statutory standards applicable to exchanges. Because competitors are free to modify their own fees and credits in response, and because market participants may readily adjust their order routing practices, the Exchange believes that the degree to which fee changes in this market may impose any burden on competition is extremely limited. As a result of all of these considerations, the Exchange does not believe that the proposed changes will impair the ability of member organizations or competing order execution venues to maintain their competitive standing in the financial markets.

C. Self-Regulatory Organization's Statement on Comments on the Proposed Rule Change Received From Members, Participants, or Others

No written comments were solicited or received with respect to the proposed rule change.

III. Date of Effectiveness of the Proposed Rule Change and Timing for Commission Action

The foregoing rule change is effective upon filing pursuant to Section 19(b)(3)(A)[10] of the Act and subparagraph (f)(2) of Rule 19b–4[11] thereunder, because it establishes a due, fee, or other charge imposed by the Exchange.

At any time within 60 days of the filing of such proposed rule change, the Commission summarily may temporarily suspend such rule change if it appears to the Commission that such action is necessary or appropriate in the public interest, for the protection of investors, or otherwise in furtherance of the purposes of the Act. If the Commission takes such action, the Commission shall institute proceedings under Section 19(b)(2)(B)[12] of the Act to determine whether the proposed rule change should be approved or disapproved.

IV. Solicitation of Comments

Interested persons are invited to submit written data, views, and arguments concerning the foregoing, including whether the proposed rule change is consistent with the Act. Comments may be submitted by any of the following methods:

Electronic Comments

- Use the Commission's Internet comment form (*http://www.sec.gov/rules/sro.shtml*); or
- Send an email to *rule–comments@sec.gov.* Please include File Number SR–NYSEArca–2014–73 on the subject line.

Paper Comments

- Send paper comments in triplicate to Secretary, Securities and Exchange Commission, 100 F Street NE., Washington, DC 20549–1090.

All submissions should refer to File Number SR–NYSEArca–2014–73. This file number should be included on the subject line if email is used. To help the Commission process and review your comments more efficiently, please use only one method. The Commission will post all comments on the Commission's Internet Web site (*http://www.sec.gov/rules/sro.shtml*). Copies of the submission, all subsequent amendments, all written statements with respect to the proposed rule change that are filed with the Commission, and all written communications relating to the proposed rule change between the Commission and any person, other than those that may be withheld from the public in accordance with the provisions of 5 U.S.C. 552, will be available for Web site viewing and printing in the Commission's Public Reference Room, 100 F Street NE., Washington, DC 20549 on official business days between the hours of 10:00 a.m. and 3:00 p.m. Copies of such filing also will be available for inspection and copying at the principal office of the Exchange. All comments received will be posted without change; the Commission does not edit personal identifying information from submissions. You should submit only information that you wish to make available publicly. All submissions should refer to File Number SR–NYSEArca–2014–73, and should be submitted on or before July 31, 2014.

For the Commission, by the Division of Trading and Markets, pursuant to delegated authority.[13]

Jill M. Peterson,

Assistant Secretary.

[FR Doc. 2014–16100 Filed 7–9–14; 8:45 am]

BILLING CODE 8011–01–P

[8] 15 U.S.C. 78f(b)(8).

[9] *See supra* note 7.

[10] 15 U.S.C. 78s(b)(3)(A).

[11] 17 CFR 240.19b–4(f)(2).

[12] 15 U.S.C. 78s(b)(2)(B).

[13] 17 CFR 200.30–3(a)(12).

SECURITIES AND EXCHANGE COMMISSION

[Release No. 34–72544; File No. SR–ICEEU–2014–10]

Self-Regulatory Organizations; ICE Clear Europe Limited; Notice of Filing of Proposed Rule Change to CDS Policies Relating to EMIR

July 3, 2014.

Pursuant to Section 19(b)(1) of the Securities Exchange Act of 1934

(''Act''),[1] and Rule 19b–4 thereunder,[2] notice is hereby given that on June 30, 2014, ICE Clear Europe Limited (''ICE Clear Europe'') filed with the Securities and Exchange Commission (''Commission'') the proposed rule change described in Items I, II and III below, which Items have been prepared primarily by ICE Clear Europe. The Commission is publishing this notice to solicit comments on the proposed rule change from interested persons.

I. Self-Regulatory Organization's Statement of the Terms of Substance of the Proposed Rule Change

The principal purpose of the proposed change is to amend certain of the ICE Clear Europe credit default swaps (CDS) risk policies (''Risk Policy Amendments'') in order to facilitate compliance with requirements under the European Market Infrastructure Regulation (including regulations thereunder, ''EMIR'')[3] that will apply to ICE Clear Europe as an authorized central counterparty.

II. Self-Regulatory Organization's Statement of the Purpose of, and Statutory Basis for, the Proposed Rule Change

In its filing with the Commission, ICE Clear Europe included statements concerning the purpose of and basis for the proposed rule change and discussed any comments it received on the proposed rule change. The text of these statements may be examined at the places specified in Item IV below. ICE Clear Europe has prepared summaries, set forth in sections A, B, and C below, of the most significant aspects of these statements.

A. Self-Regulatory Organization's Statement of the Purpose of, and Statutory Basis for, the Proposed Rule Change

ICE Clear Europe submitted proposed amendments to its risk policies relating to the CDS business to facilitate compliance with requirements under EMIR, which will apply to ICE Clear Europe as an authorized central counterparty. ICE Clear Europe will be required to be in compliance with EMIR as of the time it receives authorization from the European Securities and Markets Authority. The relevant policies being modified are (i) the CDS Risk Policy (''Risk Policy''); (ii) the Risk Model Description (''Model Description''); (iii) the CDS Clearing Back-Testing Framework (''Back-Testing Framework''); (iv) the CDS Clearing Stress-Testing Framework (''Stress-Testing Framework''); and (v) the CDS Default Management Framework (''Default Management Framework'').

The changes to the Risk Policy amend the calculation of CDS initial margin requirements to comply with margin requirements under EMIR Article 41 and Article 24 of the implementing Regulatory Technical Standards.[4] As revised, the initial margin methodology is designed to provide portfolio risk coverage against at least 5-day market realizations that would occur with probability 99.5% (previously 99.0%). In other words, the estimated requirements provide risk protection equivalent to, at least, a 5-day 99.5% Value-at-Risk measure. In addition, in order to address requirements under EMIR related to procyclicality (Article 28 of the Regulatory Technical Standards) changes were made to the maximum scale used for the initial margin approach by adding a volatility scale that assigns a 25% weight to stressed period observations during the lookback period from April 2007 to the present (consistent with Article 28(b) of the Regulatory Technical Standards). The revised initial margin requirement, including certain portfolio benefit assumptions, is expected to result in more conservative initial margin requirements than under the previous approach.

Similar amendments to those described above were also made to the Model Description. Under the revised Model Description, the overall initial margin methodology, post portfolio benefits and other risk components (e.g. jump-to-default and wrong way risk), are intended to provide portfolio risk coverage against at least 5-day market realizations that would occur with probability 99.5% or higher. Conforming changes with respect to the 99.5% confidence interval were also made in the Model Description. The revised Model Description also reflects the use of stressed observations described above to limit procyclicality. The Model Description has also been revised to include the clearing house's Monte Carlo Approach for Risk Management (''MC''), which has previously been applied to Western European sovereign CDS and is proposed to be extended to all CDS.

The CDS MC approach aims to model the spread risk component of initial margin by combining individual risk factors (''RFs''), i.e., single name or index family of instruments, into a copula. Marginal distributions for individual RFs are joined together under a Student-t copula. In this way, the model preserves historical behavior of RFS and their dependencies. The value-at risk (VaR) for the profit and loss distribution can be estimated by sampling from this copula.

The MC method offers a number of advantages over the existing scenario-based spread response method (the ''Decomp SR''). The dependence structure of RFs is encoded into the copula, as opposed to the long-short offsets algorithm used to determine portfolio benefits under the Decomp SR. The copula can also capture tail dependence, such that various extreme scenarios can be easily simulated.

The scenario-based approach of the spread risk component with its portfolio benefit assumptions is generally expected to result in a more conservative requirement when compared to the MC VaR approach for the same coverage level. In order to ensure compliance with the 99.5 confidence interval requirement for OTC derivatives under EMIR, the final spread response charge will be determined as the more conservative of the Decomp SR and the MC VaR calculated at a 99.5% confidence interval.

The CDS pricing model, used by ICE Clear Europe since the inception of clearing, has also been attached to the Risk Model Description as an annex for completeness.

With respect to the Back-Testing Framework, changes were made to implement the 99.5% confidence interval. The historical volatility calculation uses data from at the minimum the most recent year (or, if shorter, the period in which the relevant contract has been cleared). In addition, per the amendments, on at least a monthly basis, the CDS Risk Department will report the CDS back testing results and analysis to the CDS Risk Committee in order to seek their review and, if needed, their recommendations of the CDS margin model. In addition, CDS back testing results and analyses are made available to all CDS Clearing Members and clients (where known to ICE Clear Europe) for their own portfolios. Disclosed information is aggregated in a form that does not breach confidentiality. The policy also provides a framework for monitoring

[1] 15 U.S.C. 78s(b)(1).

[2] 17 CFR 240.19b–4.

[3] Regulation (EU) No 648/2012 of the European Parliament and of the Council of 4 July 2012 on OTC derivatives, central counterparties and trade repositories.

[4] Commission Delegated Regulation (EU) No. 153/2013 of 19 December 2012 Supplementing Regulation (EU) No. 648/2012 of the European Parliament and of the Council with regard to Regulatory Technical Standards on Requirements for Central Counterparties (the ''Regulatory Technical Standards'').

and remediating breaches that arise during back-testing, based on the so-called ''Basel Traffic Light System'', depending on the number and magnitude of the exceedances. The Back-Testing Framework is reviewed and approved by the CDS Risk Committee and ICE Clear Europe Board at least annually.

The Stress-Testing Framework is amended to provide further detail as to its use of daily stress testing, which allows ICE Clear Europe to discover any potential weaknesses in the risk methodologies as well as to exercise short-term measures if the tests reveal that any counterparties are inadequately collateralized. A detailed analysis of the stress testing and sensitivity testing results is performed by the CDS Risk Department at least on a monthly basis, or more frequently in stressed market conditions, to ensure the adequacy of the existing stress test scenarios and framework. The Stress-Testing Framework amendments would also add pure historical scenarios, as required under EMIR. Pure historical scenarios are applied at the single name level, using the same date across all instruments. Single-name specific stress scenarios are based on the same 5-day period when the on-the-run indices had the greatest observed related spread increases or decreases. The guaranty fund stress scenario has also been clarified, and is designed to account for: (i) The occurrence of credit events for two clearing members and three reference entities on which the defaulted clearing members sold protection, (ii) adverse contracting or widening credit spread scenarios, (iii) adverse widening of Index-single name ''basis'', and (iv) adverse changes of the default-free discount terms structure. CDS stress testing results and analyses are made available to all CDS Clearing Members and clients (where known to ICE Clear Europe) for their own portfolios. Disclosed information is aggregated in a form that does not breach confidentiality. The CDS Stress Testing framework is reviewed and approved by the CDS Risk Committee and ICE Clear Europe Board at least annually.

Minor improvements have been made to the Default Management Framework. First, ICE Clear Europe will conduct a quarterly (rather than annual) review of its Default Management Framework. Also, ICE Clear Europe will perform a mock clearing member default test at least annually.

ICE Clear Europe believes that the proposed rule change is consistent with the requirements of Section 17A of the Act[5] and the regulations thereunder applicable to it, including the standards under Rule 17Ad–22.[6] Section 17A(b)(3)(F) of the Act[7] requires, among other things, that the rules of a clearing agency be designed to promote the prompt and accurate clearance and settlement of securities transactions and, to the extent applicable, derivative agreements, contracts, and transactions. The proposed rule change, which is intended to ensure compliance by the clearing house with the margin and risk management requirements of EMIR, principally enhance relevant risk policies and impose more conservative initial margin requirements. As a result, ICE Clear Europe believes that the proposed rule change will contribute to the safeguarding of funds and securities associated with derivative transactions that are in the custody or control of the clearing house, as well as more generally facilitate the prompt and accurate settlement of such transactions, within the meaning of Section 17(A)(b)(3)(F).[8] ICE Clear Europe further believes that the proposed rule change will enhance the stability of the clearing system, by reducing the risk to market participants of a default by a clearing member or other customer. In addition, the proposed change to the Risk Policy Amendments is consistent with the relevant requirements of Rule 17Ad–22.[9] In particular, the amendments to the Risk Policy and Model Description will enhance the financial resources available to the clearing house by imposing more conservative initial margin requirements for CDS, as required by EMIR and consistent with the requirements of Rule 17Ad–22(b)(2–3).[10] The changes in the Default Management Policy are intended to improve on default management procedures and therefore are consistent with Rule 17Ad–22(d)(11).[11]

For the reasons noted above, ICE Clear Europe believes that the proposed Risk Policy Amendments are consistent with the requirements of Section 17A of the Act and regulations thereunder applicable to it.

B. Self-Regulatory Organization's Statement on Burden on Competition

ICE Clear Europe does not believe the Risk Policy Amendments would have any impact, or impose any burden, on competition not necessary or appropriate in furtherance of the purposes of the Act. Although the Risk Policy Amendments may increase the costs of clearing CDS for clearing members and their customers, as a result of more conservative initial margin requirements, this change is required in order to comply with Article 41 of EMIR and implementing regulations. In addition, ICE Clear Europe believes that the revisions to the model strengthen its risk management capability and financial resources, and are therefore appropriate in furtherance of the purposes of the Act. Because these changes will apply to all clearing members that clear CDS, ICE Clear Europe does not believe the amendments will adversely affect competition among clearing members. Furthermore, since the EMIR requirements will apply to European clearing houses generally, ICE Clear Europe does not anticipate that the changes will adversely affect the ability of market participants to clear CDS transactions generally, reduce access to clearing generally, or limit market participants' choices for clearing derivatives. As a result, ICE Clear Europe believes that any impact on competition is appropriate in furtherance of the purposes of the Act.

C. Self-Regulatory Organization's Statement on Comments on the Proposed Rule Change Received From Members, Participants or Others

Written comments relating to the proposed change to the rules have not been solicited or received. ICE Clear Europe will notify the Commission of any written comments received by ICE Clear Europe.

III. Date of Effectiveness of the Proposed Rule Change and Timing for Commission Action

Within 45 days of the date of publication of this notice in the **Federal Register** or within such longer period up to 90 days (i) as the Commission may designate if it finds such longer period to be appropriate and publishes its reasons for so finding or (ii) as to which the self-regulatory organization consents, the Commission will:

(A) By order approve or disapprove the proposed rule change or

(B) institute proceedings to determine whether the proposed rule change should be disapproved.

IV. Solicitation of Comments

Interested persons are invited to submit written data, views, and arguments concerning the foregoing, including whether the proposed rule change is consistent with the Act.

[5] 15 U.S.C. 78q–1.

[6] 17 CFR 240.17Ad–22.

[7] 15 U.S.C. 78q–1(b)(3)(F).

[8] 15 U.S.C. 78q–1(b)(3)(F).

[9] 17 CFR 240.17Ad–22.

[10] 17 CFR 240.17Ad–22(b)(2–3).

[11] 17 CFR 240.17Ad–22(d)(11).

Comments may be submitted by any of the following methods:

Electronic Comments

- Use the Commission's Internet comment form (*http://www.sec.gov/rules/sro.shtml*) or
- Send an email to *rule-comments@sec.gov.* Please include File Number SR–ICEEU–2014–10 on the subject line.

Paper Comments

- Send paper comments in triplicate to Secretary, Securities and Exchange Commission, 100 F Street NE., Washington, DC 20549–1060.

All submissions should refer to File Number SR–ICEEU–2014–10. This file number should be included on the subject line if email is used. To help the Commission process and review your comments more efficiently, please use only one method. The Commission will post all comments on the Commission's Internet Web site (*http://www.sec.gov/rules/sro.shtml*). Copies of the submission, all subsequent amendments, all written statements with respect to the proposed rule change that are filed with the Commission, and all written communications relating to the proposed rule change between the Commission and any person, other than those that may be withheld from the public in accordance with the provisions of 5 U.S.C. 552, will be available for Web site viewing and printing in the Commission's Public Reference Room, 100 F Street NE., Washington, DC 20549, on official business days between the hours of 10:00 a.m. and 3:00 p.m. Copies of such filings will also be available for inspection and copying at the principal office of ICE Clear Europe and on ICE Clear Europe's Web site at *https://www.theice.com/notices/Notices.shtml?regulatoryFilings.*

All comments received will be posted without change; the Commission does not edit personal identifying information from submissions. You should submit only information that you wish to make available publicly. All submissions should refer to File Number SR–ICEEU–2014–10 and should be submitted on or before July 31, 2014.

For the Commission, by the Division of Trading and Markets, pursuant to delegated authority.[12]

Jill M. Peterson,

Assistant Secretary.

[FR Doc. 2014–16102 Filed 7–9–14; 8:45 am]

BILLING CODE 8011–01–P

[12] 17 CFR 200.30–3(a)(12).

SECURITIES AND EXCHANGE COMMISSION

[Release No. 34–72532; File No. SR–EDGX–2014–17]

Self-Regulatory Organizations; EDGX Exchange, Inc.; Notice of Filing and Immediate Effectiveness of Proposed Rule Change Relating to Amendments to the EDGX Exchange, Inc. Fee Schedule

July 3, 2014.

Pursuant to Section 19(b)(1) of the Securities Exchange Act of 1934 (the ''Act''),[1] and Rule 19b–4 thereunder,[2] notice is hereby given that on June 30, 2014, EDGX Exchange, Inc. (the ''Exchange'' or ''EDGX'') filed with the Securities and Exchange Commission (''Commission'') the proposed rule change as described in Items I, II and III below, which items have been prepared by the self-regulatory organization. The Commission is publishing this notice to solicit comments on the proposed rule change from interested persons.

I. Self-Regulatory Organization's Statement of the Terms of Substance of the Proposed Rule Change

The Exchange proposes to amend its fees and rebates applicable to Members [3] of the Exchange pursuant to EDGX Rule 15.1(a) and (c) (''Fee Schedule'') to decrease the fee for orders yielding Flag K, which routes to NASDAQ OMX PSX (''PSX'') using ROUC or ROUE routing strategies. The text of the proposed rule change is available on the Exchange's Internet Web site at *www.directedge.com*, at the Exchange's principal office, and at the Public Reference Room of the Commission.

II. Self-Regulatory Organization's Statement of the Purpose of, and Statutory Basis for, the Proposed Rule Change

In its filing with the Commission, the self-regulatory organization included statements concerning the purpose of, and basis for, the proposed rule change and discussed any comments it received on the proposed rule change. The text of these statements may be examined at the places specified in Item IV below. The self-regulatory organization has prepared summaries, set forth in sections A, B and C below, of the most significant aspects of such statements.

A. Self-Regulatory Organization's Statement of the Purpose of, and the Statutory Basis for, the Proposed Rule Change

1. Purpose

The Exchange proposes to amend its Fee Schedule to decrease the fee for orders yielding Flag K, which routes to PSX using ROUC or ROUE routing strategies. In securities priced at or above $1.00, the Exchange currently assesses a fee of $0.0030 per share for Members' orders that yield Flag K. The Exchange proposes to amend its Fee Schedule to decrease this fee to $0.0026 per share from $0.0030 per share. The proposed change represents a pass through of the rate that Direct Edge ECN LLC (d/b/a DE Route) (''DE Route''), the Exchange's affiliated routing broker-dealer, is charged for routing orders to PSX when it does not qualify for a volume tiered reduced fee. The proposed change is in response to PSX's July 2014 fee change where PSX decreased the fee to remove liquidity via routable order types it charges its customers, from a fee of $0.0030 per share to a fee of $0.0026 per share.[4] When DE Route routes to PSX, it will now be charged a standard rate of $0.0026 per share.[5] DE Route will pass through this rate on PSX to the Exchange and the Exchange, in turn, will pass through this rate to its Members. The Exchange proposes to implement this amendment to its Fee Schedule on July 1, 2014.

2. Statutory Basis

The Exchange believes that the proposed rule change is consistent with the objectives of Section 6 of the Act,[6] in general, and furthers the objectives of Section 6(b)(4),[7] in particular, as it is designed to provide for the equitable allocation of reasonable dues, fees and other charges among its Members and other persons using its facilities. The Exchange believes that its proposal to decrease the pass through fee for Members' orders that yield Flag K from $0.0030 per share to $0.0026 per share represents an equitable allocation of reasonable dues, fees, and other charges among Members and other persons

[1] 15 U.S.C. 78s(b)(1).

[2] 17 CFR 240.19b–4.

[3] The term ''Member'' is defined as ''any registered broker or dealer, or any person associated with a registered broker or dealer, that has been admitted to membership in the Exchange. A Member will have the status of a ''member'' of the Exchange as that term is defined in Section 3(a)(3) of the Act.'' *See* Exchange Rule 1.5(n).

[4] *See* PSX, Equity Trader Alert 2014–45, Modifications to PSX Pricing Effective July 1, 2014, dated June 26, 2014, *available at http://www.nasdaqtrader.com/TraderNews.aspx?id=ETA2014-45.*

[5] The Exchange notes that to the extent DE Route does or does not achieve any volume tiered reduced fee on PSX, its rate for Flag K will not change.

[6] 15 U.S.C. 78f.

[7] 15 U.S.C. 78f(b)(4).

using its facilities because the Exchange does not levy additional fees or offer additional rebates for orders that it routes to PSX through DE Route. Prior to PSX's July 2014 fee change, PSX charged its members, which includes DE Route, a fee of $0.0030 per share to remove liquidity using non-routable order types, which DE Route passed through to the Exchange and the Exchange charged to its Members. In July 2014, PSX decreased this fee from $0.0030 per share to $0.0026 per share.[8] Therefore, the Exchange believes that its proposal to pass through a fee of $0.0026 per share for orders that yield Flag K is equitable and reasonable because it accounts for the pricing changes on PSX. In addition, the proposal allows the Exchange to charge its Members a pass-through rate for orders that are routed to PSX. Furthermore, the Exchange notes that routing through DE Route is voluntary. Lastly, the Exchange also believes that the proposed amendment is non-discriminatory because it applies uniformly to all Members.

B. Self-Regulatory Organization's Statement on Burden on Competition

These proposed rule changes do not impose any burden on competition that is not necessary or appropriate in furtherance of the purposes of the Act. The Exchange does not believe that any of these changes represent a significant departure from previous pricing offered by the Exchange or pricing offered by the Exchange's competitors. Additionally, Members may opt to disfavor EDGX's pricing if they believe that alternatives offer them better value. Accordingly, the Exchange does not believe that the proposed changes will impair the ability of Members or competing venues to maintain their competitive standing in the financial markets. The Exchange believes that its proposal to pass through a fee of $0.0026 per share for Members' orders that yield Flag K would increase intermarket competition because it offers customers an alternative means to route to PSX for the same price as entering orders on PSX directly. The Exchange believes that its proposal would not burden intramarket competition because the proposed rate would apply uniformly to all Members.

[8] *See* PSX, Equity Trader Alert 2014–45, Modifications to PSX Pricing Effective July 1, 2014, dated June 26, 2014, *available at http://www.nasdaqtrader.com/TraderNews.aspx?id=ETA2014-45.*

C. Self-Regulatory Organization's Statement on Comments on the Proposed Rule Change Received From Members, Participants, or Others

The Exchange has not solicited, and does not intend to solicit, comments on this proposed rule change. The Exchange has not received any unsolicited written comments from Members or other interested parties.

III. Date of Effectiveness of the Proposed Rule Change and Timing for Commission Action

The foregoing rule change has become effective pursuant to Section 19(b)(3)(A) of the Act [9] and Rule 19b–4(f)(2) [10] thereunder. At any time within 60 days of the filing of such proposed rule change, the Commission summarily may temporarily suspend such rule change if it appears to the Commission that such action is necessary or appropriate in the public interest, for the protection of investors, or otherwise in furtherance of the purposes of the Act.

IV. Solicitation of Comments

Interested persons are invited to submit written data, views, and arguments concerning the foregoing, including whether the proposed rule change is consistent with the Act. Comments may be submitted by any of the following methods:

Electronic Comments

- Use the Commission's Internet comment form (*http://www.sec.gov/rules/sro.shtml*); or
- Send an email to *rule-comments@sec.gov.* Please include File Number SR–EDGX–2014–17 on the subject line.

Paper Comments

- Send paper comments in triplicate to Secretary, Securities and Exchange Commission, 100 F Street NE., Washington, DC 20549–1090.

All submissions should refer to File Number SR–EDGX–2014–17. This file number should be included on the subject line if email is used. To help the Commission process and review your comments more efficiently, please use only one method. The Commission will post all comments on the Commission's Internet Web site (*http://www.sec.gov/rules/sro.shtml*). Copies of the submission, all subsequent amendments, all written statements with respect to the proposed rule change that are filed with the Commission, and all written communications relating to the proposed rule change between the Commission and any person, other than those that may be withheld from the public in accordance with the provisions of 5 U.S.C. 552, will be available for Web site viewing and printing in the Commission's Public Reference Room, 100 F Street NE., Washington, DC 20549, on official business days between the hours of 10:00 a.m. and 3:00 p.m. Copies of the filing also will be available for inspection and copying at the principal office of the Exchange. All comments received will be posted without change; the Commission does not edit personal identifying information from submissions. You should submit only information that you wish to make available publicly. All submissions should refer to File Number SR–EDGX–2014–17, and should be submitted on or before July 31, 2014.

For the Commission, by the Division of Trading and Markets, pursuant to delegated authority.[11]

Jill M. Peterson,

Assistant Secretary.

[FR Doc. 2014–16093 Filed 7–9–14; 8:45 am]

BILLING CODE 8011–01–P

[9] 15 U.S.C. 78s(b)(3)(A).

[10] 17 CFR 240.19b–4(f)(2).

[11] 17 CFR 200.30–3(a)(12).

SECURITIES AND EXCHANGE COMMISSION

[Release No. 34–72536; File No. SR–NYSEMKT–2014–21]

Self-Regulatory Organizations; NYSE MKT LLC; Notice of Filing of Amendment No. 1 and Order Granting Accelerated Approval of Proposed Rule Change, as Modified by Amendment No. 1, To Make Permanent Its Pilot Program Regarding Minimum Value Sizes for Opening Transactions in New Series of Flexible Exchange Options and Establish New Minimum Value Sizes Applicable to Other FLEX Transactions and FLEX Quotes

July 3, 2014.

I. Introduction

On March 18, 2014, NYSE MKT LLC (the ''Exchange'' or ''NYSE MKT'') filed with the Securities and Exchange Commission (''Commission''), pursuant to Section 19(b)(1) of the Securities Exchange Act of 1934 (''Act'') [1] and Rule 19b–4 thereunder,[2] a proposed rule change to make permanent its pilot program regarding minimum value sizes for opening transactions in new series of flexible exchange options (''FLEX Options'' or ''FLEX'') and establish new minimum value sizes applicable to

[1] 15 U.S.C. 78s(b)(1).

[2] 17 CFR 240.19b–4.

other FLEX transactions and FLEX Quotes. The proposed rule change was published for comment in the **Federal Register** on April 7, 2014.[3] The Commission received no comments on the proposal. The Exchange consented to an extension of the time period for the Commission to approve the proposed rule change, disapprove the proposed rule change, or institute proceedings to determine whether the proposed rule change should be disapproved, to July 6, 2014. The Exchange filed Amendment No. 1 to the proposed rule change on May 22, 2014, in order to transmit a revised pilot report that replaces the original Exhibit 3 to the filing.[4] The Commission is publishing this notice to solicit comments on Amendment No. 1 from interested persons and is approving the proposed rule change, as modified by Amendment No. 1, on an accelerated basis.

II. Description of the Amended Proposal

FLEX Options, unlike traditional standardized options, allow investors to customize basic option terms, including size, expiration date, exercise style, and certain exercise prices.[5] Pursuant to Commentary .01 to Rule 903G, the Exchange currently has in place a pilot program under which the minimum size requirements set forth in Rule 903G(a)(4)(ii), which apply to opening transactions in new series of FLEX Options, are replaced with a one-contract minimum size (''Pilot Program'').[6] Prior to the Pilot Program, pursuant to Rule 903G(a)(4)(ii), the minimum value size for an opening transaction in any FLEX series in which there was no open interest at the time the request for quotes was submitted was: (i) For FLEX Equity Options, the lesser of 250 contracts or the number of contracts overlying $1 million in the underlying securities; and (ii) for FLEX Index Options, $10 million Underlying Equivalent Value in the case of Broad Stock Index Group FLEX Index Options and $5 million Underlying Equivalent Value in the case of Stock Index Industry Group FLEX Index Options.[7] The Exchange's proposal will make the Pilot Program permanent by eliminating the minimum value size requirements set forth in Rule 903G(a)(4)(ii) for opening transactions in new FLEX Option series and by eliminating the Pilot Program rule text set forth in Commentary .01 to Rule 903G. In connection with its proposal to make the Pilot Program permanent, and as required by its filing establishing the Pilot Program,[8] the Exchange submitted to the Commission an annual Pilot Report summarizing Pilot Program data collected for year 2013, the most recent complete year of the Pilot Program.[9]

In its filing, the Exchange also has proposed to make some other changes to its FLEX Option minimum value size rules, in addition to requesting that the Pilot Program be made permanent. Rules 903G(a)(4)(iii)–(iv), which are not part of the Pilot Program, set forth minimum value sizes for other FLEX Option transactions and for FLEX Quotes. Specifically, pursuant to Rule 903G(a)(4)(iii), for a transaction in any currently-opened FLEX series, the minimum value size is: (i) For FLEX Equity Options, the lesser of 100 contracts or the number of contracts overlying $1 million in the underlying securities in the case of opening transactions, and 25 contracts in the case of closing transactions; and (ii) for FLEX Index Options, $1 million Underlying Equivalent Value in the case of both opening and closing transactions; or (iii) for either case, the remaining underlying size or Underlying Equivalent Value on a closing transaction, whichever is less. Pursuant to Rule 903G(a)(4)(iv), the minimum value size for FLEX Quotes responsive to a Request for Quotes is 25 contracts in the case of FLEX Equity Options and $1 million Underlying Equivalent Value in the case of FLEX Index Options or for either case the remaining underlying size or Underlying Equivalent Value on a closing transaction, whichever is less. Even though these minimum value size requirements set forth in Rules 903G(a)(4)(iii)–(iv) are not part of the Pilot Program, the Exchange has proposed to eliminate them as well, in conjunction with making the Pilot Program permanent. In its proposal the Exchange noted that adopting the same minimum value sizes for existing and new series, in addition to quotes, will allow market participants to tailor their FLEX Option transactions to meet their investment objectives.

By proposing to make permanent the Pilot Program one-contract minimum for opening transactions in new series of FLEX Options and by also proposing to eliminate the minimum value size requirements for FLEX Option transactions in currently-opened series and FLEX Quotes responsive to a Request for Quotes, the Exchange is seeking to establish a one-contract minimum size for all FLEX Option transactions and FLEX Quotes. This one-contract minimum size would be codified in new Rule 903G(a)(2)(vii). The Exchange states that its proposal for a one-contract minimum value size for all FLEX Option transactions and FLEX Quotes is based on similar rules governing minimum value size for FLEX Options approved for the CBOE.[10]

In addition, as a technical, non-substantive change, the Exchange has proposed to relocate from current Rule 903G(a)(4)(i) to new Rule 903G(a)(2)(vi) rule text stating that the maximum term for both Equity and Index FLEX Options shall be fifteen years, and make other non-substantive changes to the rule.

III. Discussion and Commission Findings

After careful review, the Commission finds that the proposed rule change, as amended, is consistent with the requirements of the Act and the rules and regulations thereunder applicable to

[3] *See* Securities Exchange Act Release No. 71840 (April 1, 2014), 79 FR 19162 (''Notice'').

[4] The Exchange attached an Exhibit 3 to its proposed rule change that contained an annual report summarizing pilot data collected for the year 2013, the most recent complete year of the pilot program (''Pilot Report''). Specifically, the Pilot Report summarizes the trading volume and underlying value of opening transactions in new series of FLEX Options during the year 2013 with a size below the minimum value thresholds in force before the pilot, as well as the types of customers initiating such transactions. In Amendment No. 1, the Exchange submitted a revised Pilot Report as a new Exhibit 3 that replaces the original Exhibit 3 in its entirety. The revised Pilot Report corrects errors in the total FLEX Equity Option contract trading volume under the pilot, total FLEX Index Option contract trading volume under the pilot, and total number of FLEX Index Option trades under the pilot reported in the original Pilot Report. The revised Pilot Report also makes corresponding adjustments to other figures reported in the Pilot Report, as well as non-substantive changes to certain descriptive language in the Pilot Report.

[5] *See* Notice, 79 FR at 19162 n.4; *see also* NYSE MKT Options Rule (''Rule'') 903G. FLEX Options can be FLEX Index Options or FLEX Equity Options. *See* Rules 900G(b)(10) and (b)(11) (defining, respectively, the terms ''FLEX Equity Option'' and ''FLEX Index Option'').

[6] *See* Commentary .01 to Rule 903G; *see also* Securities Exchange Act Release No. 62084 (May 12, 2010), 75 FR 28091 (May 19, 2010) (SR–NYSEAmex–2010–40) (establishing Pilot Program); and 71844 (April 1, 2014), 79 FR 19160 (April 7, 2014) (SR–NYSEMKT–2014–26) (extending Pilot Program until the earlier of July 31, 2014 or approval of the Pilot Program on a permanent basis).

[7] *See* Rule 903G(a)(4)(ii); *see also* Rule 900G(b)(9) (defining the term ''Underlying Equivalent Value'').

[8] *See supra* note 6.

[9] Specifically, the Pilot Report contains data and analysis of underlying equivalent values, open interest and trading volume, and analysis of the types of investors that initiated opening FLEX Equity and Index Options transactions (*i.e.,* institutional, high net worth, or retail) in new FLEX Option series. *See* Amendment No. 1, *supra* note 4.

[10] *See* Notice, 79 FR at 19164 and n.15 (citing Securities Exchange Act Release No. 67624 (August 8, 2012), 77 FR 48580 (August 14, 2012) (order approving CBOE's proposal to make permanent its pilot program eliminating minimum value sizes for FLEX Options)).

a national securities exchange.[11] In particular, the Commission finds that the proposed rule change is consistent with Section 6(b)(5) of the Act,[12] which requires, among other things, that the rules of a national securities exchange be designed to prevent fraudulent and manipulative acts and practices, to promote just and equitable principles of trade, to foster cooperation and coordination with persons engaged in regulating, clearing, settling, processing information with respect to, and facilitating transactions in securities, to remove impediments to and perfect the mechanism of a free and open market and a national market system, and, in general, to protect investors and the public interest; and not be designed to permit unfair discrimination between customers, issuers, brokers or dealers.

FLEX Options were originally designed for use by institutional and high net worth customers, rather than retail investors.[13] In approving CBOE's pilot eliminating minimum value sizes for FLEX Options, which was the first such pilot to go into effect, the Commission noted that it had received several comment letters stating that the proposal would assist institutional customers, but it also noted that the elimination of the minimum value size requirements raised the possibility that retail customers would access the FLEX Options market.[14] One of the risks to retail investors outlined in the ODD [15] is that, because of the customized nature of FLEX Options and lack of continuous quotes, trading in FLEX Options is often less deep and liquid than trading in standardized options on the same underlying interest.[16] Additionally, the Commission observed that reducing the minimum value size for opening FLEX Option transactions increases the potential for the FLEX Options market to act as a surrogate for the standardized options market, and expressed concern in this regard because the standardized market contains certain protections for investors not present in the FLEX Options market.[17] The Commission stated that, in the event CBOE proposed making its pilot program permanent, information regarding the types of customers initiating opening FLEX Options transactions during the pilot would enable the Commission to evaluate how market participants have responded to CBOE's pilot program and what types of customers are using the FLEX Options market.[18] For these same reasons, at the Commission's request, the Exchange included in its Pilot Report information regarding the types of customers that initiated opening FLEX Option transactions under its Pilot Program.[19]

The Commission believes that these considerations and concerns that informed its analysis of whether to permanently approve CBOE's pilot are equally germane to its analysis here. As such, the Commission has carefully reviewed the Pilot Report that the Exchange provided to the Commission.[20] The Pilot Report reflects that, in 2013, 315 opening transactions in new series of FLEX Equity Options were initiated on the Exchange with small minimum value sizes made possible by the Pilot Program, 286 of which were initiated by retail customers, 25 of which were initiated by institutional customers, and 4 of which were initiated by high net worth customers.[21] Moreover, the Pilot Report indicates that these 315 FLEX Equity Option transactions covered by the Pilot Program accounted for approximately 3% of the total volume and approximately 5% of the total value of all opening FLEX Equity Option transactions in new series—*i.e.,* opening transactions covered by the Pilot Program as well as opening transactions with value sizes above the pre-pilot minimum—during 2013.

The Exchange notes that the Pilot Report includes data specific to opening transactions in new series of FLEX Options pursuant to current Rule 903G(a)(4)(ii), and does not include data for transactions in currently-opened FLEX Options series or FLEX Quotes responsive to a request for quotes pursuant to Rules 903G(a)(4)(iii)–(iv), as such transactions and FLEX Quotes were not part of the Pilot Program.[22] The Exchange represents, however, that based on its internal review, if Rules 903G(a)(4)(iii)–(iv) had been part of the Pilot Program, transactions in currently-opened FLEX Options series or FLEX Quotes with small value sizes made permissible by the Pilot Program would have been *de minimis,* and would not have materially altered the data in the Pilot Report.[23]

On balance, the Commission believes that it is consistent with the Act to make the Pilot Program permanent and thus eliminate, on a permanent basis, the minimum value size requirements set forth in Rule 903G(a)(4)(ii) for opening transactions in new series of FLEX Options. The protections noted below, including heightened options suitability requirements, should help to address any concerns about retail participation in the Exchange's FLEX Options market. Moreover, the Commission is not aware of any data or analysis to date suggesting that the trading of FLEX Options has acted as a surrogate for the trading of standardized options on the Exchange as a result of the Pilot Program. Indeed, the Commission understands that FLEX Option trading accounts for less than 1% of the combined trading volume of the standardized and FLEX Option markets.[24] In addition, the Pilot Report indicates that Pilot Program FLEX Option trades account for a very small proportion of the total volume and total value of all FLEX Option trades. Thus, it appears that the Pilot Program has not caused significant trading interest to migrate from the standardized options market to the FLEX Options market, nor caused, to the best of our knowledge, a

[11] In approving this proposed rule change, the Commission has considered the proposed rule's impact on efficiency, competition, and capital formation. *See* 15 U.S.C. 78c(f).

[12] 15 U.S.C. 78f(b)(5).

[13] *See* Notice, 79 FR at 19163; *see also* Securities Exchange Act Release No. 37336 (June 19, 1996), 61 FR 33558 (June 27, 1996) (order approving SR–Amex–95–57). As noted in the Options Disclosure Document (''ODD''), which explains the characteristics and risks of exchange-traded options, flexibly structured options may be useful to sophisticated investors seeking to manage particular portfolio and trading risks. Rule 9b–1 under the Act requires that broker-dealers furnish the ODD to a customer before accepting an order from the customer to purchase or sell an option contract relating to an options class that is the subject of the ODD, or approving the customer's account for the trading of such option. *See* 17 CFR 240.9b–1(d).

[14] *See* Securities Exchange Act Release No. 61439 (January 28, 2010), 75 FR 5831 (February 4, 2010) (order approving SR–CBOE–2009–087) (''CBOE Pilot Approval Order'').

[15] *See supra* note 13.

[16] In particular, the ODD states that because many of the terms of FLEX Options are not standardized, it is less likely that there will be an active secondary market in which holders and writers of such options will be able to close out their positions by offsetting sales and purchases. Also, the ODD states that certain margin requirements for positions in flexibly structured options may be significantly greater than the margin requirements applicable to similar positions in other options on the same underlying interest.

[17] *See* CBOE Pilot Approval Order, *supra* note 14. In particular, the Commission noted that continuous quotes may not always be available in the FLEX Options market and that FLEX Options do not have trading rotations at either the opening or closing of trading. *Id.*

[18] *Id.* The Exchange has submitted a Pilot Report to the Commission as Exhibit 3 to its filing, as well as other, confidential reports of data collected during the Pilot Program. *See* Amendment No. 1, *supra* note 4.

[19] *See* Amendment No. 1, *supra* note 4.

[20] *Id.*

[21] *Id.* The Pilot Report indicates that there were no opening transactions in new series of FLEX Index Options during 2013 that were initiated below the pre-pilot minimum size requirement.

[22] *See* Notice, 79 FR at 19164.

[23] *Id.*

[24] *See* email dated June 19, 2014 from Glenn H. Gsell, Managing Director, Intercontinental Exchange, NYSE Regulation, Inc. to Michael Bradley and David Michehl, Special Counsels, Division of Trading and Markets, Commission.

large number of investors to use FLEX Options to avoid certain requirements in the standardized market. Based on the current data and size of the FLEX Options market, and the lack of any evidence to the contrary, it would appear that investors are using the FLEX Options market for its intended purpose—to be able to customize certain terms not available in the standardized options market.

The Commission also believes that a logical corollary to making the Pilot Program permanent is to eliminate the minimum value size requirements set forth in Rules 903G(a)(4)(iii)–(iv) for transactions in currently-opened FLEX Options series and FLEX Quotes responsive to a request for quotes. In this regard, the Commission notes that the Exchange does not believe that the difference between effecting a transaction in an existing FLEX Option series and effecting a FLEX transaction in a new series is material to the extent that there should be different minimum value sizes for the two types of transactions.[25] In addition, the Exchange believes it would be consistent to apply the same minimum value size to closing transactions so that investors may elect to close just a portion of their FLEX position, without being subject to a minimum value size that may be greater than the equivalent value size necessary to meet their investment objectives.[26] Further, the Exchange believes that it would be consistent to apply the same minimum value size to FLEX Quotes so that market participants may respond to a request for quotes with the precise number of contracts or underlying equivalent value needed to trade with the OTP Holder that submitted the request. The Commission finds no basis under the Act at this time for maintaining a minimum value size requirement for transactions in currently-opened FLEX Option series or FLEX Quotes responsive to a request for quotes, and believes that these changes should be approved for reasons similar to those supporting permanent approval of the Pilot Program. The Commission notes that it is not aware of any problems resulting from the permanent approval of CBOE's pilot eliminating FLEX Option minimum value sizes, which included currently-opened series and FLEX Quotes responsive to a request for quotes. As a result, the Commission believes that it is appropriate under the Act, and would promote just and equitable principles of trade, as well as remove impediments to and perfect the mechanism of a free and open market and a national market system, to replace the current minimum value size requirements for all FLEX Option transactions and FLEX Quotes on the Exchange with a one-contract minimum size.

Existing safeguards—such as position reporting requirements and margin requirements—will continue to apply to FLEX Options.[27] Further, as noted above, under Rule 9b–1 under the Act,[28] all customers of a broker-dealer with options accounts approved to trade FLEX Options must receive the ODD, which contains specific disclosures about the characteristics and special risks of trading FLEX Options.[29] In addition, similar to other options, FLEX Options are subject to Trading Permit Holder supervision and suitability requirements, such as in Rules 922 and 923, respectively.[30] In addition to ensuring that FLEX Options are suitable for their customers, broker-dealers also must take into account the characteristics of the FLEX market, as compared to the standardized market, when satisfying their best execution obligations. The Commission believes that the safeguards in place are reasonably designed to help mitigate potential risks for retail investors and other market participants investing in FLEX Options.

The Exchange believes that permanently removing the minimum value size requirements for FLEX Options will give investors a more viable, exchange-traded alternative to customized options in the OTC market, which are not subject to minimum value size requirements.[31] Furthermore, the Exchange has represented that broker-dealers have indicated to the Exchange that the minimum value size requirements have prevented them from bringing transactions on the Exchange that are already taking place in the OTC market.[32] Therefore, it appears possible that eliminating the minimum value sizes for all FLEX Options transactions and FLEX Quotes could further incent trading interest in customized options to move from the OTC market to the Exchange. To the extent investors choose to trade FLEX Options on the Exchange in lieu of the OTC market as a result of the permanent removal of the minimum value size requirements, such action should benefit investors. As the Commission has previously noted, there are certain benefits to trading on an exchange, such as enhanced efficiency in initiating and closing out positions, increased market transparency, and heightened contra-party creditworthiness due to the role of the Options Clearing Corporation as issuer and guarantor of FLEX Options.[33]

IV. Solicitation of Comments on Amendment No. 1

Interested persons are invited to submit written data, views, and arguments concerning the foregoing, including whether Amendment No. 1 to the proposed rule change is consistent with the Act. Comments may be submitted by any of the following methods:

Electronic Comments

- Use the Commission's Internet comment form (*http://www.sec.gov/rules/sro.shtml*); or
- Send an email to *rule-comments@sec.gov*. Please include File Number SR–NYSEMKT–2014–21 on the subject line.

Paper Comments

- Send paper comments in triplicate to Secretary, Securities and Exchange Commission, 100 F Street NE., Washington, DC 20549–1090.

All submissions should refer to File Number SR–NYSEMKT–2014–21. This file number should be included on the subject line if email is used. To help the Commission process and review your comments more efficiently, please use only one method. The Commission will post all comments on the Commission's Internet Web site (*http://www.sec.gov/rules/sro.shtml*). Copies of the submission, all subsequent amendments, all written statements with respect to the proposed rule change that are filed with the Commission, and all written communications relating to the proposed rule change between the Commission and any person, other than those that may be withheld from the public in accordance with the provisions of 5 U.S.C. 552, will be available for Web site viewing and

[25] *See* Notice, 79 FR at 19164.

[26] *Id.* Currently, the minimum value size for closing transactions is 25 contracts in the case of FLEX Equity Options and $1 million Underlying Equivalent Value in the case of FLEX Index Options, or in either case the remaining underlying size or Underlying Equivalent Value on a closing transaction, whichever is less. *See* Rules 903G(a)(4)(iii)–(iv).

[27] Certain position limit, aggregation and exercise limit requirements continue to apply to FLEX Options in accordance with Rule 906G (Position Limits) and Rule 907G (Exercise Limits). But the Commission notes that certain FLEX Options do not have position or exercise limits.

[28] 17 CFR 240.9b–1.

[29] *See supra* notes 13 and 16.

[30] *See* Notice, 79 FR at 19163.

[31] *Id.*

[32] *Id.*

[33] *See* Securities Exchange Act Release No. 57429 (March 4, 2008), 73 FR 13058 (March 11, 2008) (order approving SR–CBOE–2006–36).

printing in the Commission's Public Reference Room, 100 F Street NE., Washington, DC 20549, on official business days between the hours of 10:00 a.m. and 3:00 p.m. Copies of the filing also will be available for inspection and copying at the principal office of the Exchange. All comments received will be posted without change; the Commission does not edit personal identifying information from submissions. You should submit only information that you wish to make available publicly. All submissions should refer to File Number SR–NYSEMKT–2014–21 and should be submitted on or before July 31, 2014.

V. Accelerated Approval of Proposal, as Modified by Amendment No. 1

In Amendment No. 1, the Exchange submitted a revised Pilot Report that corrects errors in the total FLEX Equity Option contract trading volume under the pilot, total FLEX Index Option contract trading volume under the pilot, and total number of FLEX Index Option trades under the pilot reported in the original Pilot Report. The revised Pilot Report also makes corresponding adjustments to other figures reported in the Pilot Report, as well non-substantive changes to certain descriptive language in the Pilot Report. The Commission believes that these corrections to the Pilot Report do not substantively alter the findings in the Pilot Report or diminish their support for approval of the pilot on a permanent basis. Accordingly, the Commission also finds good cause, pursuant to Section 19(b)(2) of the Act,[34] for approving the proposed rule change, as modified by Amendment No. 1, prior to the thirtieth day after the date of publication of notice in the **Federal Register**.

VI. Conclusion

In summary, the Commission believes, for the reasons noted above, that the proposed rule change to permanently approve the Pilot Program as well as remove the minimum size requirements for currently-opened FLEX Option series and FLEX Quotes, thereby permanently removing the minimum size requirements for all FLEX Options on the Exchange, is consistent with the Act and Section 6(b)(5) thereunder in particular, and should be approved, as amended. The Exchange has committed, and the Commission expects the Exchange, to continue to monitor the usage of FLEX Options, whether changes need to be made to its rules or the ODD to address any changes in retail FLEX Option participation, and for any other issues that may occur as a result of the elimination of the minimum value sizes on a permanent basis, including whether FLEX Option trades are being used as a surrogate for trading options in the standardized market.[35]

It is therefore ordered, pursuant to Section 19(b)(2) of the Act,[36] that the proposed rule change (SR–NYSEMKT–2014–21) be, and it hereby is, approved, on an accelerated basis, as amended.

For the Commission, by the Division of Trading and Markets, pursuant to delegated authority.[37]

Jill M. Peterson,

Assistant Secretary.

[FR Doc. 2014–16095 Filed 7–9–14; 8:45 am]

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[34] 15 U.S.C. 78s(b)(2).

[35] *See* Notice, 79 FR at 19164 (Exchange representing that it will continue to monitor the usage of FLEX Options and whether any changes to its rules or the ODD are necessary).

[36] 15 U.S.C. 78s(b)(2).

[37] 17 CFR 200.30–3(a)(12).

SECURITIES AND EXCHANGE COMMISSION

[Release No. 34–72540; File No. SR–ICEEU–2014–09]

Self-Regulatory Organizations; ICE Clear Europe Limited; Notice of Filing of Proposed Rule Change Relating To EMIR Requirements

July 3, 2014.

Pursuant to Section 19(b)(1) of the Securities Exchange Act of 1934 (''Act''),[1] and Rule 19b–4 thereunder,[2] notice is hereby given that on June 30, 2014, ICE Clear Europe Limited (''ICE Clear Europe'') filed with the Securities and Exchange Commission (''Commission'') the proposed rule changes described in Items I, II and III below, which Items have been prepared by ICE Clear Europe. The Commission is publishing this notice to solicit comments on the proposed rule change from interested persons.

I. Self-Regulatory Organization's Statement of the Terms of Substance of the Proposed Rule Change

The principal purpose of the proposed changes is to amend the ICE Clear Europe Clearing Rules in order to comply with requirements under the European Market Infrastructure Regulation (including regulations and implementing technical standards thereunder, ''EMIR'') [3] that will apply to ICE Clear Europe as an authorized central counterparty.[4] Among other changes, the proposed rules would implement a framework under which Clearing Members may offer to their clients the ability to have their positions and margin assets segregated from those of other clients of the Clearing Member (''Individual Client Segregation'').[5] The proposed rule changes include various other amendments to comply with EMIR, as discussed herein. In addition, certain other aspects of the proposed amendments are not specifically intended to comply with EMIR, but are designed to harmonize various rule provisions across different products and to make various other improvements to the rules. ICE Clear Europe will be required to be in compliance with EMIR as of the time it receives authorization as a central counterparty from the European Securities and Markets Authority (''ESMA'').

II. Self-Regulatory Organization's Statement of the Purpose of, and Statutory Basis for, the Proposed Rule Change

In its filing with the Commission, ICE Clear Europe included statements concerning the purpose of and basis for the proposed rule change and discussed any comments it received on the proposed rule change. The text of these statements may be examined at the places specified in Item IV below. ICE Clear Europe has prepared summaries, set forth in sections A, B, and C below, of the most significant aspects of these statements.

A. Self-Regulatory Organization's Statement of the Purpose of, and Statutory Basis for, the Proposed Rule Change

a. Purpose

ICE Clear Europe submitted proposed amendments to its Rules in order to comply with requirements under EMIR that will apply to ICE Clear Europe upon its authorization as a central counterparty under EMIR, and to make certain other improvements to its rules. The principal change will be to implement changes to the structure of customer accounts for cleared transactions to enhance segregation

[1] 15 U.S.C. 78s(b)(1).

[2] 17 CFR 240.19b–4.

[3] Regulation (EU) No 648/2012 of the European Parliament and of the Council of 4 July 2012 on OTC derivatives, central counterparties and trade repositories, as well as various implementing regulations and technical standards.

[4] ICE Clear Europe will separately file certain related changes to its policies and procedures, including risk management policies.

[5] As discussed herein, the Individual Client Segregation model is not being offered at this time to U.S. clearing members or U.S. person clients, and certain provisions of the proposed rules are therefore not applicable to such persons. ICE Clear Europe will make a subsequent rule filing if it subsequently determines to offer such model to U.S. clearing members or U.S. persons.

options for customers of Clearing Members. This includes the adoption of the Individual Client Segregation framework as well as certain modifications relating to the existing, omnibus client segregation model for Non-FCM/BD Clearing Members. (The existing account structure and segregation framework applicable to FCM/BD Clearing Members will remain in effect for such clearing members.) The customer clearing model and commitments being offered by ICE Clear Europe in compliance with EMIR are being made available for all product categories, subject to applicable local law.

Pursuant to Article 39(1) to (3) of EMIR, ICE Clear Europe is required to keep separate records and accounts that will enable it to distinguish the assets and positions of: (i) One Clearing Member from those of any other Clearing Member and (ii) either (A) a Clearing Member from those of its clients (''omnibus segregation'') or (B) a client of a Clearing Member from any other client of that Clearing Member (''individual segregation''). In addition, each of ICE Clear Europe's Clearing Members is required (i) to keep separate records and accounts that enable them to distinguish in both accounts held with the clearing house and their own accounts Clearing Member assets and positions from those of its clients; and (ii) to offer clients a choice of individual or omnibus segregation at the clearing house. ICE Clear Europe has revised its segregation models to implement this requirement, as described herein, to provide both individual segregation and omnibus segregation options.

The proposed rules would establish two new types of individually segregated accounts for Non-FCM/BD Clearing Members, Individually Segregated Margin-flow Co-mingled Accounts and Individually Segregated Sponsored Accounts. The proposed rules will also establish multiple new types of omnibus accounts, Segregated Customer Omnibus Accounts (separately for each product: FX, F&O and CDS) and Segregated TTFCA Customer Omnibus Accounts (separately for each product: FX, F&O and CDS) as well as Omnibus Margin-flow Co-mingled Accounts. These new individually segregated and omnibus accounts will be available only to non-FCM/BD Clearing Members and their customers. For FCM/BD Clearing Members and their customers, individual client segregation is not being offered at this time, and the existing account types and segregation requirements for client assets (which are required under applicable law) would be maintained.[6]

Each Margin-flow Co-mingled Account constitutes a separate account, referencing a single client (in the case of an Individually Segregated Margin-flow Co-mingled Account) or group of clients (in the case of an Omnibus Margin-flow Co-mingled Account) for which separate records are kept of both margin and positions. However, margin flows are aggregated across all Margin-flow Co-mingled Accounts. These accounts are broadly similar to an LSOC account under CFTC rules in operational terms for position-keeping but differ in that assets are also tracked per individual Customer, rather than constituting a shared pool with deemed interests, allowing Customers to decide (subject to agreeing this with their Clearing Member) what sort of assets should be used to cover their individual positions, as is required under EMIR. The Rules provide for two types of Margin-flow Co-mingled Accounts: Individually segregated and omnibus segregated. Each Individually Segregated Margin-flow Co-mingled Account records the margin and positions of a single customer. An Omnibus Margin-flow Co-mingled Account records the margin and positions of a group of customers (such as a group of affiliated customers or funds under common management). In either case, margin flows are aggregated across all Margin-flow Co-mingled Accounts of a Clearing Member.

Individually Segregated Sponsored Accounts, from a position-keeping and margin accounting operational perspective treat a client (''Sponsored Principal'') in effect as if it were a Clearing Member, with fully segregated margin, positions and margin flows. The Individually Segregated Sponsored Account requires the Sponsored Principal to appoint a Sponsor from among the Clearing Membership to be fully jointly liable on the account.

Under the revised rules, ICE Clear Europe will also offer several types of omnibus segregation accounts for customers of non-FCM/BD Clearing Members, including a segregated customer omnibus account for each product category (F&O, CDS and FX) (each a ''Segregated Customer Omnibus Account'') and a segregated title transfer financial collateral arrangement (''TTFCA'') account for each product category (each, a ''Segregated TTFCA Customer Omnibus Account''). In accordance with the FSA policy statement on client money and client assets,[7] Segregated Customer Omnibus Accounts will be used for customers of non-FCM/BD Clearing Members who provide assets to their Clearing Members that are subject to the FCA's client money and client assets regime (or another legal requirement to segregate which goes beyond that required under EMIR). In contrast, Segregated TTFCA Customer Omnibus Accounts will be used for customers of non-FCM/BD Clearing Members who use title transfer financial collateral arrangements to provide margin to their Clearing Members (or which are otherwise subjected only to the requirement to segregate assets under EMIR, and not under any applicable law, trust or property law based regime). Within each category, ICE Clear Europe has chosen to set up separate accounts for each of the different product types cleared by ICE Clear Europe (F&O, FX and CDS), for purposes of ease of administration and maintaining the separation of product categories as otherwise provided in the rules. Consistent with EMIR,[8] Clearing Members may use multiple different types of individually segregated and omnibus segregated accounts for their various customers.

In terms of individual segregation, as discussed herein, the proposed rules establish the framework for the relevant new account structures for Non-FCM/BD Clearing Members. For Individually Segregated Margin-flow Co-mingled Accounts, new provisions require separate record keeping and reporting for the account and permit the aggregation of margin flows across accounts in this class. As discussed in further detail below, the amendments for Individually Segregated Sponsored Principal Accounts, among other matters, (i) introduce the concepts of a ''Sponsored Principal'' (the client whose positions and margin are being segregated under the Individually

[6] The Bank of England has advised ICE Clear Europe that the requirement under EMIR for the Clearing House to offer an individual segregation model to Clearing Members (and in turn for Clearing Members to offer individual segregation to their customers) may be satisfied, in the case of an FCM/BD Clearing Member, if the Clearing Member introduces such customers to another Clearing Member (including an affiliate) that can offer an individually segregated account, to the extent permitted by applicable law. ICE Clear Europe is not at this time offering its Sponsored Principal Model to U.S. Clearing Members or potential U.S. Sponsored Principals, and therefore Rule 1905 and other references in the Rules to U.S. Sponsored Principals will not apply at this time. ICE Clear Europe will submit another rule filing if it determines to offer the Sponsored Principal Model to U.S. Clearing Members or U.S. Sponsored Principals.

[7] FSA Policy Statement PS12/23: Client Assets Regime: Changes Following EMIR (Dec. 2012).

[8] EMIR Article 39.

Segregated Sponsored Account) and a ''Sponsor'' (the Clearing Member responsible to the clearing house for the Sponsored Principal's performance in an Individually Segregated Sponsored Account); (ii) set forth the relationship among the clearing house, Sponsored Principal and Sponsor; (iii) establish procedures under which ICE Clear Europe may manage a default by either the Sponsor and/or the Sponsored Principal under the Rules, (iv) allocate responsibilities and rights as between a Sponsor and a Sponsored Participant with respect to cleared contracts; and (v) establish documentation requirements for Sponsored Principal arrangements.

The proposed rule amendments are described in detail as follows.

In Part 1 of the Rules, various definitions have been added or modified in order to address the changes required by EMIR in a consistent manner across all products, including: ''CDS Standard Terms'', ''Customer-CM CDS Transaction'', Customer-CM F&O Transaction'', ''Customer-CM FX Transaction'', ''EMIR'', ''Energy'', ''F&O'', ''F&O Standard Terms'', ''FX Standard Terms'', ''FX Trade Particulars'', ''Individually Segregated Customer'', Individually Segregated Margin-flow Co-mingled Account'', ''Individually Segregated Sponsored Account'', ''Margin Account'', ''Position Account'', ''Repository'', ''Segregated Customer Omnibus Account for CDS'', ''Segregated Customer Omnibus Account for F&O'', ''Segregated Customer Omnibus Account for FX'', Segregated TTFCA Customer'', ''Segregated TTFCA Customer Omnibus Account for CDS'', ''Segregated TTFCA Customer Omnibus Account for F&O'', ''Segregated TTFCA Customer Omnibus Account for FX'', ''Sponsor,'' ''Sponsor Agreement'', ''Sponsored Principal'', ''Sponsored Principal Clearing Agreement'', and ''U.S. Sponsored Principal''. In addition, conforming changes have been made to numerous existing definitions in order to incorporate these concepts, including in particular references to Sponsored Principals in addition to existing references to Clearing Members. In light of various changes and expected changes to trade execution requirements in the U.S. and Europe, revised definitions of ''CDS Trade Execution/Processing Platform'' and ''FX Trade Execution/Processing Platform'' have been added, and conforming references have been made throughout the Rules. Certain defined terms relating to ICE OTC commodity contracts and certain other definitions have been removed as they are no longer used. Definitions of the Financial Conduct Authority (''FCA'') and Prudential Regulatory Authority (''PRA'') (and of their rules) have been added following the recent separation of regulators in the UK, and references to the FCA's former name, the Financial Services Authority (the ''FSA''), are deleted. References to the FSA throughout the rules have been modified accordingly.

The hierarchy of documents in Rule 102(f) has been revised to include, in relation to an Individually Segregated Sponsored Account, the Sponsored Principal Clearing Agreement between the Sponsored Principal and ICE Clear Europe and the Sponsor Agreement between the relevant Clearing Member Sponsor and ICE Clear Europe. Reference to the new Standard Terms annexes for FX and F&O customer clearing are also included. Other clarifications and conforming changes have been made to the rest of Rule 102(f). Similar changes have been made in Rule 102(l). New Rule 102(g) requires all Clearing Members providing services to customers to comply with relevant provisions of EMIR.[9] Specifically, Clearing Members must offer customers a choice of individual or omnibus segregation, to the extent they are permitted to do so under applicable law, and provide information as to the costs and levels of protection for various options. Where a Clearing Member is not able under applicable law to offer such an account, it must, to the extent permitted under applicable law, offer to introduce the customer to another Clearing Member that can offer such an account.

Rule 102(j) has been amended to clarify that Sponsors and Sponsored Principals, in addition to Clearing Members, are responsible for the conduct of their employees and agents (in addition to their own conduct) and to reference the new defined terms ''CDS Trade Execution/Processing Platform'' and ''FX Trade Execution/Processing Platform'' to account for the current and expected use of such platforms in light of trade execution requirements under applicable law.

Rule 102(o) clarifies that with respect to a Clearing Member that is also a Sponsor, the Rules, the Sponsor Agreement, and certain other specified documents form a contract between ICE Clear Europe, each Sponsor acting in its capacity as such and each Sponsored Principal for which such Sponsor acts. Similarly, the Rules, the applicable Sponsored Principal Clearing Agreement (if any) and other certain other specified documents also form a contract between ICE Clear Europe, each Sponsored Principal and the Sponsor for that Sponsored Principal. Other conforming changes are made in the rest of Rule 102(o) and Rule 102(p).

Rule 102(q) has been revised to clarify certain segregation requirements with respect to different categories of accounts, including the limitations on setting off one category of proprietary or customer account against another category, or otherwise using one category to cover losses in another category, in light of the additional types of account classes added under the proposed rules.

Rule 102(r) has been revised to refer to certain of the clearing house's obligations under EMIR and address certain related interpretive issues, as well as to add references to Sponsored Principals.

The governing law provision in Rule 102(s) has been revised to clarify that the choice of English law is intended also to govern non-contractual obligations arising out of or in connection with the Rules or any Contract.

New Rule 102(w) addresses a Clearing Member's ability to outsource performance of its obligations, in particular to allow Clearing Members to outsource performance to affiliates or third parties of their obligation with respect to end-of-day settlement price submission, acceptance of forced allocations and participation in default auctions. This approach is consistent with EMIR and also reflects the requirements of CFTC Rule 39.16.

New Rule 102(x) clarifies that persons that are partners of general partnerships will be jointly and severally liable for the partnership's obligations under the Rules, and that dissolution of the partnership will not affect that liability. This provision is not specifically required under EMIR but is intended to clarify the Clearing House's rights and obligations when dealing with Sponsored Principals that may be partnerships, but also is drafted to be applicable in the event that a partnership applies in future for clearing membership.

Rule 104, which addresses the clearing house's ability to ''invoice back'' (in effect, termination of a position through creation by the clearing house of an offsetting contract) or override the price or other terms of contracts has been revised to provide that the clearing house may do so only in the case of a force majeure event, illegality or impossibility and not, as a general matter, as a remedy for a default by a Clearing Member. Although this

[9] Clearing Members would, of course, also need to comply with any other applicable law in providing services to Customers.

change is not specifically intended to comply with EMIR, it results from ongoing discussions with Clearing Members and other market participants, who have asked that the powers under this provision be clarified, circumscribed and made consistent across all products. In so doing, the change has also eliminated uncertainty that these powers could be used in a default management situation, and thus has clarified that the Clearing House's default management powers are as set forth in Part 9 of the Rules. Conforming changes have been made to relevant definitions, including the addition of a new definition of ''Impossibility''.

Rule 105, which addresses a decision by the clearing house to cease acting in that capacity, has been revised to clarify that such an action might be taken if the clearing house loses any regulatory authorization required to continue its business.

The confidentiality provisions of Rule 106 have been extended to apply to Sponsored Principals and Sponsors and modified in various technical respects to ensure compliance with ICE Clear Europe's confidentiality, reporting and disclosure obligations under EMIR. The changes also clarify that that the Clearing House may disclose confidential information in certain circumstances, including in the case of a breach by the Clearing Member or Sponsored Principal of membership criteria and certain other disclosure requirements (clause (a)(ii)), information being provided to a data repository or other entity for purposes of transaction reporting (clause (a)(iii)),[10] information concerning an Individually Segregated Sponsored Account to the relevant Sponsor or Sponsored Principal (clause (a)(xi)) and information concerning a Customer to the relevant Clearing Member carrying its account (clause (a)(xii)).

The record retention requirements under Rule 108 for Clearing Members (and other persons, such as Sponsored Principals) that provide information to the Clearing House has been extended to ten years, consistent with the record retention requirements applicable to the Clearing House itself under Article 29 of EMIR. Various conforming references to Sponsored Principals, Sponsors and other new defined terms, as well as other clarifying changes, have also been added in Rules 107–113. In Rules 111(a)(B) and 111(c)(xviii), ''gross negligence'' is added as an exclusion to exculpatory provisions relating to ICE Clear Europe's liability, in order to address enforceability issues with respect to exculpatory provisions that lack such an exclusion in some continental European jurisdictions, based on legal advice received by the clearing house.

Rule 114(c) allows for outsourcing by the clearing house, subject to its retention of liability, consistent with the requirements of article 35 of EMIR. A clarification has been made to Rule 116 to require notice of changes to Clearing House business days. Finally, new Rules 117(p) and (q) have been added to clarify that the dispute resolution procedures from the Rules apply to disputes in connection with Sponsored Principals, Sponsors, Sponsored Principal Clearing Agreements and Sponsor Agreements in the same way the Rules apply to disputes in connection with Clearing Members and Clearing Membership Agreements.

A statement has been added to the preamble of Part 2 of the Rules to clarify that Part 2 (Clearing Membership) does not apply to Sponsored Principals except to the extent expressly set out in Part 19. Certain updates and drafting improvements and clarifications to the Clearing Membership criteria have been made in Rule 201, including the consolidation into the Rules of various membership criteria previously in paragraph 2 of the CDS Procedures and paragraph 2 of the FX Procedures, and other requirements stemming from EMIR or other applicable law, including requirements as to operational and financial capacity, compliance with sanctions regimes, and having a well-founded legal framework to support clearing operations. Rule 201(a)(v) has been revised to require that a Clearing Member be a user of a designated repository for purposes of swap data reporting. Rule 201(b) includes a requirement that additional conditions imposed on Clearing Membership be proportional to the risk brought by the applicant. Revised Rules 201(c) and (e) contain additional requirements around rejection or denial of applications.

Rule 202(a) contains certain additional obligations on Clearing Members driven by requirements in EMIR, including obligations to make available to the Clearing House certain information for risk management purposes (including as to client activity) and to participate in default management exercises and other testing. Rule 202(b)–(e) (which are based on and replace current Rule 1516(b) for CDS) establish responsibilities of a Non-FCM/BD Clearing Member for the execution and content of customer-facing documentation, including to incorporate the applicable CDS Standard Terms, F&O Standard Terms or FX Standard Terms. These aspects of customer documentation facilitate the portability of customer positions following Clearing Member default, consistent with the requirements of EMIR, among other matters. Provisions concerning controller guarantees of Clearing Members are moved to Rule 202(f) from the CDS Procedures and Rule 1709 (FX) so as to apply to all product categories.

Certain conforming changes relating to Sponsored Principals and the use of the new set of account classes have been added in Rule 207(a) and (d). New Rule 207(e) clarifies the obligations of certain Disclosed Principal Members for which a Clearing Member may act in connection with the energy business, but which are not treated as customers under the Rules and to align this provision with the equivalent requirement for Sponsored Principals.

Rule 301 has been modified to clarify certain matters relating to its payment banking arrangements. (These generally reflect comments of and discussions with Clearing Members, and do not specifically relate to compliance with EMIR.) Rule 301(f), which generally provides that payments from Clearing Members to ICE Clear Europe are not deemed received until they have been transferred to the clearing house concentration account at its concentration bank, has been modified to provide that if an Approved Financial Institution used by the Clearing House fails to pay due to a Clearing Member default or similar event, the Clearing House will first attempt to reinstruct the payment excluding amounts relevant to the defaulter rather than exercising its rights to require use of a different Approved Financial Institution under Rule 301. This accords with the clearing house's existing practices, and ICE Clear Europe believes it is an appropriate clarification on its authority under Rule 301(f). Rules 301(m)–(n) document ICE Clear Europe's existing practice of publishing a list of Approved Financial Institutions and Concentration Banks, and require ICE Clear Europe to ensure there is always at least one Concentration Bank.

Rule 302(a) has been revised to incorporate new rules with respect to the payment mechanics for the various accounts classes (including as to whether payments are made on a net basis or, in certain specified cases, on a gross basis for a particular account). Rules 302(a)(iii) and (iv) have been revised to provide for net payments to and from the clearing house in respect of the F&O product category, for either

[10] Based on Staff's conversation with ICE Clear Europe's counsel on July 2, 2014, ICE Clear Europe's counsel has confirmed that the reference to Rule 106(a)(iii) should instead refer to Rule 106(a)(viii).

Segregated Customer Omnibus Accounts or Segregated TTFCA Customer Omnibus Accounts. Rules 302(a)(v) and (vi) address the need to have consolidated settlement with respect to all of a Clearing Member's Margin-flow Co-mingled Accounts. Rules 302(a)(vii) and (viii) address settlement of margin transfers for other categories of customer account (such as for CDS or FX customers), which are calculated on a gross basis. A conforming change is made in Rule 302(e) for Margin-flow Co-mingled Accounts.

New Rule 304 applies the payment provisions of Part 3 of the Rules in the context of Individually Segregated Sponsored Accounts. Pursuant to Rule 304(a)(ii), Payments are made to and from the clearing house separately on a net basis for each such account, by the relevant Sponsored Principal (or the Sponsor if acting as representative of the Sponsored Principal for making payments). Rule 304(a)(v) clarifies that ICE Clear Europe is not permitted to exercise rights of set off as between any obligation, right or liability arising in connection with an Individually Segregated Sponsored Account and between any obligation, right or liability arising in connection with any Customer Account that is not an Individually Segregated Sponsored Account in respect of which the Sponsored Principal is a Customer. Rule 304 also disapplies a number of provisions in Part 3 of the Rules, including Rules 301(k), 302(a), 302(d) and 302(e), as such provisions are more specifically provided for in Rule 304 in the context of Individually Segregated Sponsored Accounts. Rule 304(a)(vi) provides that if a payment is made by the Sponsor in respect of an Individually Segregated Sponsored Account, that payment discharges the obligation of the Sponsored Principal. Similarly, if the clearing house makes a payment to the Sponsor in respect of the Individually Segregated Sponsored Account, that payment discharges the clearing house's obligation to the Sponsored Principal. As provided in Rule 304(a)(vii), Sponsored Principals are not required to make guaranty fund contributions to the clearing house.

Rule 401, which addresses the formation of a cleared contract, has been amended to incorporate the concept of Sponsored Principals and Individually Segregated Sponsored Accounts, as well as the other categories of customer account and certain other conforming changes (including the removal of obsolete references to ICE OTC markets that have been superseded). Specifically, the amendments clarify the capacity in which the Sponsor or Clearing Member is acting with respect to any such contracts, and the appropriate account in which such contracts are to be recorded. Conforming changes that incorporate the new account classes have also been made. The amendments also include certain non-EMIR related changes, including harmonization of drafting of provisions across different products and use of new defined terms (such as Buying Counterparty and Selling Counterparty, terms introduced due to the existence of Sponsored Principals as a joint counterparty to Contracts, in addition to Clearing Members). New Rule 401(l) provides for the reporting of cleared transactions to a Repository, in accordance with the requirements of EMIR. Rule 401(n) has been revised to address customer-CM transactions arising from FX transactions. Rule 401(o) has been revised to reflect the various capacities in which a Clearing Member or Sponsored Principal may enter into a transaction for the relevant account category. Conforming changes have been made to rule 401(p) to reflect the various account categories.

Conforming changes (including addition of references to Sponsored Principals, use of defined terms for Buying Counterparties and Selling Counterparties and providing for reporting to Repositories) are made in Rules 402–408 and 410. Additional conforming changes are made to Rule 405 to address Disclosed Principal Members and use of CDS Trade Execution/Processing Platforms and FX Trade Execution/Processing Platforms, as well as other drafting clarifications. Rule 406 contains additional conforming changes relating to netting of positions and reporting of net positions to ta Repository. Rule 407 has been amended to include references to Sponsored Principals and to clarify use of defined terms. Rule 408 has been revised to address transfer of positions of a Sponsored Principal as well as a Clearing Member, and to incorporate certain drafting clarifications.

Rule 502 has been amended with various conforming changes and clarifications as to the characterization of margin, generally relating to the additional account classes and revised defined terms. Rule 502(h) has been revised to expand an undertaking on the part of ICE Clear not to change the legal characterization of pledged collateral accounts or assets provided with respect thereto. This change is in response to clearing member requests for additional legal certainty as to account characterization, but reflects existing practices. Rule 502(i) contains certain drafting improvements as to the manner in which the clearing house may use pledged collateral for purposes of the net sum calculation in Part 9 of the Rules and conforms to the rules governing the return of excess margin for the account of customers set forth in Part 9 of the Rules. Rules 503(e) and (f) contain various conforming changes to reflect the use of the new account classes (and removing references to Designated CDS Customer Accounts, which are no longer used), as well as the use of various defined terms.

New Rule 503(k) is the principal new rule relating to the operation of Margin-flow Co-mingled Accounts. In circumstances where the clearing house permits the use of more than one type of permitted cover, the rule mandates reporting by Clearing Members on such accounts to allow the tracking of assets (where more than one account is used and more than one type of margin is provided), such that assets can be allocated to particular Customers. The rule also sets out backstop rules for pro rata allocation across different customers that apply in the event of reporting failures by the Clearing Member.

Rules 504 and 505 contain various conforming changes, including for the addition of Sponsored Principals and Individually Segregated Sponsored Accounts, as well as a clarification of the rights and obligations of Disclosed Principal Members. Rule 506 sets out particular procedures for the transfer of margin in the context of Individually Segregated Sponsored Accounts. As further set out in Rule 1902, the Sponsored Principal may provide margin directly to the clearing house, or the Sponsor may be operationally responsible for providing margin to the clearing house on behalf of the Sponsored Principal. Rule 506 also replaces Rules 504(a), 504(c)(v) and 504(f) with additional provisions more specifically reflecting the particular responsibilities of the Sponsored Principal and Sponsor in connection with the transfer of margin.

Parts 6, 7 and 8 of the Rules contain various conforming changes that reflect the addition of Individually Sponsored Segregated Accounts and other categories of customer accounts. These changes also clarify that the rules in those parts relating to position limits, and settlement of futures and options apply to Sponsored Principals in substantially the same manner as Clearing Members.

The Default Rules in Part 9 have been amended to provide for the management of a default by a Sponsor and/or Sponsored Principal. Certain

conforming changes to defined terms and related drafting improvements and clarifications have also been made, as discussed herein. The preamble to Part 9 has also been updated to refer to relevant sections of EMIR and other applicable law.[11]

Under new Rule 901(d), a Sponsored Principal may be declared in default by the Clearing House in the same way as a Clearing Member if any of the events specified in Rule 901(a) occur, unless, in the case of a default under Rule 901(a)(i)–(iii), the Sponsor cures the default. A Sponsored Principal may also be declared in default if it is in default under any relevant agreement between the Sponsored Principal and its Sponsor (as notified by the Sponsor to ICE Clear Europe). If ICE Clear Europe becomes aware of grounds for declaring a Sponsored Principal to be a Defaulter under Rule 901(a)(i) to (iii) but no Event of Default is declared, ICE Clear Europe will notify the Sponsor of details of such grounds and give the Sponsor an opportunity to perform the obligation prior to declaring a default in respect of the Sponsored Principal. (As discussed above, the Sponsor is jointly and severally liable with the Sponsored Principal with respect to the Sponsored Principal's positions and related obligations in its Individually Segregated Sponsored Account. In the case of a failure to perform by the Sponsored Principal, the Clearing House will direct all liabilities on the Individually Segregated Sponsored Account to be met from the Sponsor's nominated proprietary bank account, and the Sponsor is liable to make such payments.) A Sponsor will not be declared a defaulter solely as a result of a default of a Sponsored Principal, although the Sponsor can be declared a defaulter as a result of its own default, including for failure to perform its own obligations (as jointly and severally liable) with respect to the Individually Segregated Sponsored Account. Finally, new Rule 901(e) provides for notification to regulators of Clearing Member or Sponsored Principal default, as required under article 48(3) of EMIR.

If a Sponsored Principal is declared in default, the clearing house will have the rights and remedies set forth in Part 9 of the Rules, in the same manner as if the Sponsored Principal were a defaulting Clearing Member, as provided in Rule 901(d). Various changes to Rules 902–904 also implement these default rights and remedies. Rules 902 and 903, which address certain remedies following default, adds relevant references to defaulting Sponsored Principals. Revised Rule 903 also contains certain changes to defined terms and reflects reporting requirements to Repositories under applicable law for all relevant product categories.

The amendments to Rule 904 contain the principal new provisions addressing remedies of the clearing house in the event of the default of a Sponsor or a Sponsored Principal. They also make certain other changes to general provisions relating to transfer of positions and use of margin, consistent with EMIR requirements.[12] Rules 904(a) and (b) contain various changes reflecting new defined terms. Rule 904(c) clarifies and specifies additional circumstances in which the clearing house is not obligated to transfer contracts, including where it would cause a default by the clearing house, require the use of guaranty fund contributions of non-defaulting Clearing Members or an assessment on non-defaulting Clearing Members, be contrary to applicable law or lack any required consent or approval. Consistent with the standards in EMIR, transfers are required to be fair to both customers and indirect customers of the defaulter. The provisions in Rule 904 relating to transfers generally apply to all Clearing Members, including FCM/BD Clearing Members, subject to any particular requirements of applicable law or approvals or consents required in order to effect such transfers (as may be required for the customer account of an FCM/BD Clearing Member.)

Rule 904(d)(v) has been amended to create a payment obligation from the Clearing Member that will net out the value of any appropriation of collateral to support porting or direct payments to customers under EMIR. Rule 904(f) has been revised to remove a former provision that the clearing house was not obligated to effect any transfers of margin, which was inconsistent with EMIR Articles 39 and 48. Former Rules 904(j) and (k), which were applicable only to CDS but now apply to all products, have been removed and combined into a new Rule 904(k) and (l). Former Rule 904(l) (now renumbered as Rule 904(j)), which addresses transfers of contracts, has been revised to apply generally to all product categories and types of customer accounts, and to contemplate reliance on consents to transfers by customers provided under standard terms documentation.

Rules 904(m), (p) and (u) include a commitment by ICE Clear Europe to trigger the process for transfers of customer positions and margin, as required under Article 48(5–6) of EMIR. Slightly different wording applies to different types of account, reflecting the requirements of EMIR for that kind of account and the ability of ICE Clear Europe to give additional assurances for different account classes. This wording is supplemented by additional amended provisions around the operational process for porting notices in the Standard Terms annexes. These commitments are subject to various conditions precedent to porting set out in the rules cited above and in Rule 904(c), as discussed above.

Rules 904(n) and (o) address the default of a Sponsor. Under Rule 904(n), upon a default of a Sponsor, the Sponsored Principal must continue to fulfill its payment and margin obligations on the Individually Segregated Sponsored Account to ICE Clear Europe and may be required to pay additional amounts by way of margin (reflecting the fact that Sponsored Principals do not make Guaranty Fund Contributions). Pursuant to Rule 904(o), a Sponsored Principal must within 10 days of a Sponsor default (i) notify ICE Clear Europe of a new Sponsor, (ii) become a Clearing Member itself or (iii) move its positions and margin from the Individually Segregated Sponsored Account to the omnibus Customer Account of another Clearing Member (which would require the Sponsored Principal to have or to put into place a customer relationship with that Clearing Member). If one of the above three steps is not taken within 10 days or such longer time as the Clearing House at its discretion allows, then the Sponsored Principal itself may be declared in default under Rule 904(q).

New Rules 904(r)–(s) address the default of a Sponsored Principal, where the Sponsor is not itself in default.[13] Pursuant to Rule 904(r), in such a case, the Sponsor will be responsible for performance of any obligations on the Individually Segregated Sponsored Account. The Sponsor may manage the default by terminating contracts in the Individually Segregated Sponsored Account within a time period set by the clearing house. The Sponsor may also

[11] References to particular laws in this preamble are not intended to be exclusive; nothing in this provision affects any requirement on ICE Clear Europe to comply with applicable laws not specifically enumerated.

[12] These include the requirement that the central counterparty contractually commit to trigger the procedures for transfer of customer positions and assets of a defaulting clearing member. EMIR Article 48(5–6).

[13] As noted above, the Sponsored Principal model is not being offered at this time to U.S. Clearing Members or potential U.S. Sponsored Principals, and accordingly these provisions will not apply to such persons.

transfer positions (and margin) from the Individually Segregated Sponsored Account to its proprietary account as part of the default management process. The clearing house is also entitled to manage the default, using the same rights, remedies and procedures it has for a Clearing Member default. If the Sponsor elects to manage the default, the clearing house will give the Sponsor such time as the clearing house determines reasonable before managing the default itself. Rule 904(s) clarifies the manner in which guaranty fund contributions and surplus collateral of the Sponsor may be applied to the net sum calculated for an Individually Segregated Sponsored Account of a defaulting Sponsored Principal. Rule 904(s) also provides that if the Sponsor has made payments in respect of the Individually Segregated Sponsored Account under Rule 901(d) or 904(r), and the net sum on the account would otherwise be payable in favor of the Sponsored Principal, it will instead be paid to the Sponsor. Together, Rules 904(r) and (s) are designed to give the Sponsor an incentive to manage the default itself (as would be the case for any other customer default), in light of its ongoing obligations (based on its joint and several liability) with respect to the Individually Segregated Sponsored Account until the default management process is completed. In addition, where the Sponsor manages the default by transferring the relevant positions in the Individually Segregated Sponsored Account to its own account, it is entitled to also receive any margin or balance in the account as well as any net sum payable by the Clearing House on the account in this situation, which it may potentially apply against other (uncleared) liabilities of the defaulted Sponsored Principal. By contrast, if the Clearing House has to manage the default, then any net sum payable by the Clearing House would be delivered to the Sponsored Principal and the Sponsor would have to recoup any separate debts owed to it in other ways.

A new Rule 904(t) addresses the calculation of net sums with respect to Margin-flow Co-mingled Accounts of a defaulting Clearing Member.[14] The Rule sets out a procedure for allocating all assets and liabilities on the Margin-flow Co-mingled Accounts appropriately and fairly to each individual account, based on the positions and reports provided as to permitted cover. (Fallback rules apply if no such reports or records are available, including providing for pro rata allocation of certain initial margin based on margin requirements for each account.) New Rule 904(u) addresses ICE Clear Europe's responsibility to transfer positions in an Individually Segregated Margin-flow Co-mingled Account, subject to certain conditions analogous to those discussed above for Rule 904(c).

Conforming and clarifying changes are made in Rules 905 and 906, including for Individually Segregated Sponsored Accounts and the various other new account classes. In particular, Rule 905 has been amended to include various conforming references to Sponsored Principals and Individually Segregated Sponsored Accounts. Rule 905(b)(ii) has been revised to harmonize the drafting across different product categories. Rules 905(b)(viii) and (ix) have also been amended to clarify the rights of the clearing house over pledged collateral and the realization and/or valuation of pledged collateral in the case of set-off following default. In Rule 906(a), new language expressly clarifies that the respective obligations of the defaulting Clearing Member and the clearing house that would otherwise be due following default are to be reduced to the net sum (as was implicit in the current rule), in order to facilitate close-out netting following default.

Rule 906(b) has been revised to reflect the calculation of separate net sums for each of the new account classes. Guaranty Fund Contributions of the defaulter may be applied to the net sum for any account, but will be applied first to reduce losses on customer accounts, on a pro rata basis. Rule 906(c) similarly provides that where proprietary assets of a defaulter are being used to satisfy losses in the customer accounts, they must be used on a pro rata basis across such accounts. Revised Rule 906(d) incorporates requirements under Article 48 of EMIR as to the payment of net sums owed in respect of various customer accounts, as applicable, including, where permissible under applicable law and the Rules, return of a net sum directly to the relevant customer(s). Certain protections under current rules for the differences between net and gross Customer Account margin (old Rule 906(i) and usages of ''Customer Account Gross-Net Amount'' and ''Gross Margin Shortfall'' here and elsewhere) are being removed in light of the EMIR requirements and the new account classes.

Additional clarifying and conforming changes are made in Rules 907–918, principally to reference Individually Segregated Sponsored Accounts as well as remove references to certain former CDS account concepts that have been deleted as discussed above. Rule 907 incorporates certain default rules for FX contracts. New Rule 907(m) clarifies that positions in a customer account may, at the request of a Clearing Member, be moved to the proprietary account of the Clearing Member in the case of a default of the relevant customer for default management purposes. (This provision applies equally in the absence of the declaration of an Event of Default by the Clearing House, and also applies to a request by a Sponsor to transfer positions of a Sponsored Principal following a breach or default by the Sponsored Principal.)

Former Rule 908(a)(ix), which referenced Designated CDS Customer Accounts (which are no longer offered), has been removed and replaced with a new provision that provides that in case of a Sponsored Principal default, Guaranty Fund and assessment contributions of Clearing Members other than the Sponsor will not be used unless the Sponsor is itself in default. This is consistent with the use of assets of non-defaulting Clearing Members generally, and requires that in the first instance the Sponsor cover losses of its Sponsored Principals.

Rule 908(b)–(d) and (g) simplify and consolidate certain references to the default waterfall by referring to the net sum calculation under 'N' in Rule 906 rather than specific components of that calculation. Rule 908(e) has been revised to remove references to Designated CDS Customer Accounts, which are no longer offered. Conforming and clarifying changes are made to Rules 908(g) and (h) to add the concept of Sponsored Principal. Rule 908(i) (which does not apply to CDS contracts) has been revised to clarify the application of the default auction priority as set forth in the relevant F&O or FX auction procedures.

Rules 909–911, which address the Clearing House's assessment rights with respect to default losses, have been revised to also address losses resulting from Sponsored Principals clearing in the relevant product category, as well as to update certain cross references and defined terms.

In Rule 912, new clause (a)(iv) has been added to address the treatment of Individually Segregated Sponsored Accounts (and the joint liability and entitlement of the Sponsor and Sponsored Principal in respect of such accounts) in the case of a Clearing House default.

Rule 914 (and related definitions in Rule 913) have been modified such that variation margin haircutting for the F&O and FX product categories, if applicable,

[14] As noted above, these accounts are not applicable to FCM/BD Clearing Members or their customers, and accordingly Rule 904(t) and (u) would not apply to such persons.

will also apply to variation margin owed to Sponsored Principals in respect of Individually Segregated Sponsored Accounts. Accordingly, terms such as ''Clearing Member Adjustment Amount'' and ''Contributing Clearing Member'' have been changed to ''Adjustment Amount'' and ''Contributor,'' respectively (to cover both Clearing Members and Sponsored Principals), and references to Sponsored Principals have been added as appropriate throughout the definitions in Rule 913 and the provisions of Rule 914. Similarly, Rule 916 (relating to termination of positions in the F&O and FX product categories) and Rule 917 (relating to cooling-off periods) will apply to Sponsored Principals. Rule 918, in respect of termination of membership (including during a cooling-off period), will also apply to Sponsored Principals in respect of Individually Segregated Sponsored Accounts for F&O and FX contracts.

Pursuant to new Rule 1006, part 10 of the Rules, relating to disciplinary matters, applies to Sponsored Principals to the same extent as Clearing Members acting for their proprietary accounts.

Rule 1101(c) and 1102(b) have been revised to state that the Clearing House would establish minimum parameters for determining the relevant Guaranty Funds for the F&O, CDS and FX businesses to meet the requirements of Article 42 of EMIR. (This statement does not affect the Clearing House's obligation to comply with other financial resources requirements under applicable laws, including the Exchange Act and Commission rules thereunder (including Rule 17Ad–22(b)(3)). Accordingly, the parameters for determining the Guaranty Funds will also take into account such other requirements.) Certain other conforming and clarifying changes have been made to Rule 1102 and 1103. Rule 1103(a) and (b) also have been revised to address the use of Guaranty Fund contributions to support borrowings under liquidity facilities for the purpose of making payments on cleared contracts, in accordance with articles 44–45 of Commission Delegated Regulation 153/2013 under EMIR, subject to certain limitations for each product category. Rule 1103(b) allows the clearing house to pledge or otherwise transfer any guaranty fund contributions to support credit or similar facilities to provide liquidity for clearing house functions. Proceeds of such facilities could only be used for purposes set forth in Rule 1103(a) (that is, paying amounts owed on cleared contracts and managing defaults).

Part 12 of the Rules contains various conforming changes and updates relating to its EU settlement finality system to enhance settlement finality for payment arrangements, including for approved financial institutions used in the payment system, concentration banks and so-called investment agent banks used by the clearing house for holding assets pending investment. The changes also reflect the new set of accounts (including the Individually Segregated Sponsored Accounts) and amended terminology in the Rules generally and reflect certain feedback from its UK regulators.

Part 15 of the Rules, which addresses clearing of CDS, has been modified to reflect Individually Segregated Sponsored Accounts and other categories of customer accounts and to make certain other conforming changes. Rule 1501(kk) has been modified to provide for the recording of CDS recorded in Individually Segregated Sponsored Accounts within the Deriv/SERV ''tripartite representation'' system, which is used by the clearing house, Clearing Members and customers for the recording of the details of CDS contracts as well as for taking certain actions (such as triggering following restructuring credit events) with respect to those contracts. The changes also reflect updates to defined terms and certain drafting clarifications. As discussed above, the provisions in Rules 1516(a)–(b) have been moved to Rule 202(b) et seq. and now apply to all products, with certain minor modifications.

As noted above, the Sponsored Principal model will not be offered at this time to FCM/BD Clearing Members or their customers, and changes to Part 16 of the Rules relating to the Sponsored Principal model will not apply to FCM/BD Clearing Members at this time. Part 16 of the Rules contains certain other conforming changes and drafting improvements that will apply at this time, including in Rules 1604(b), 1604(e), 1605(d), 1605(h), 1607(d), 1608(a) and 1608(c). These largely relate to changes in defined terms and cross-references, references to a Clearing Member having multiple proprietary accounts, and certain clarifications with respect to the CFTC ''Legally Segregated, Operationally Commingled'' model for cleared swaps carried through FCM/BD Clearing Members.

Part 17 of the Rules contains various conforming changes relating to Individually Segregated Sponsored Accounts and other updates to defined terms. As mentioned above, a number of modifications to the Rules for FX contracts (previously in Rules 1701(m), 1706 and 1709) have been made applicable to all products and so are moved from here to other parts of the rules.

New Part 19 of the Rules has been added to address various aspects of the Individually Segregated Sponsored Account framework. As set forth above, this framework is not being offered to U.S. Clearing Members or potential U.S. Sponsored Principals at this time, and ICE Clear Europe will adopt a further rule change if it determines to offer this framework to such persons. Rule 1901 contains the initial and ongoing requirements an entity must meet in order to become a Sponsored Principal, including signing relevant documentation, paying relevant fees, being solvent, meeting operational requirements, being an ''eligible contract participant'' and pre-funding a specified amount of margin to ICE Clear Europe. Rule 1901 (and the requirements set out in it) broadly reflect those set out in Part 2 of the Rules for Clearing Members but have been adapted by ICE Clear Europe for this class of participant, including to reflect the different documentation requirements for Sponsored Principals and the particular banking relationships applicable to Sponsored Principals, as well as the fact that Sponsored Principals are not required to have the same level of credit standing as Clearing Members (given the Clearing House's reliance on the Sponsor). Subject to ICE Clear Europe's discretion, certain criteria for obtaining and maintaining the status of a Sponsored Principal may be met by the Sponsor or (in the case of Sponsored Principals that are funds, the fund manager).

Rule 1902 provides that the relevant Sponsored Principal and Non-FCM/BD Clearing Member Sponsor are each jointly and severally liable, as principal and without limitation, to ICE Clear Europe in respect of all obligations and liabilities arising in connection with the Individually Segregated Sponsored Account and all Contracts recorded in it. A Sponsor may be subject to increased Guaranty Fund Contribution requirements as a result of acting as a Sponsor, on the basis of the Contracts cleared by its Sponsored Principals. Rule 1902 also specifies required arrangements for payments between the clearing house and a Sponsored Principal, and allows the Sponsored Principal and Sponsor to arrange between them that the Sponsor will perform certain responsibilities on behalf of the Sponsored Principal. The goal is to permit the Sponsor and Sponsored Principal flexibility as to the arrangements between them with

respect to the Individually Segregated Sponsored Account. The Rule specifies certain required aspects of the agreement between the Sponsored Principal and Sponsor, in order for obligations to be properly performed as a matter of the applicable contract law by all parties on the account. Various modifications applicable to the back-to-back contract between the Sponsor and Sponsored Principal are set out in Rule 1902(g) so as to ensure that the Sponsor maintains a flat position and that the arrangements can be used in the context of industry standard clearing documentation. The Standard Terms annexes, which govern the terms of back-to-back contracts, are also separately amended for purposes of the Sponsored Principal model, as discussed below.

Rule 1903 sets forth general modifications to the Rules for Sponsored Principals, Sponsors and Individually Segregated Accounts in order to implement the individual segregation model for Sponsors that are Non-FCM/BD Clearing Members and Non-U.S. Sponsored Principals. Sponsored Principals do not make guaranty fund contributions, are not subject to assessment contributions pursuant to the default waterfall and are not responsible for submitting any pricing data to ICE Clear Europe. Sponsored Principals may, but are not required to, participate in default auctions.[15] Rule 1903 also provides that Sponsored Principals are subject to the dispute resolution and complaint and disciplinary procedures otherwise applicable to Clearing Members under the Rules and, if relevant, market or exchange rules.

Rule 1904 addresses termination of a Sponsored Principal relationship with its Sponsor. In general, a Sponsored Principal may terminate its Sponsor on notice or a Sponsor may terminate its Sponsored Principal on notice, in either case only if there are no open Contracts in the relevant Individually Segregated Sponsored Account. Following service of any such notice, neither the Sponsored Principal nor the Sponsor may enter into or cause the entry into of any further Contract for the Individually Segregated Sponsored Account, and the Clearing House shall be entitled to close the Individually Segregated Sponsored Account. A Sponsored Principal may change the Sponsor only if it has established arrangements with a new Sponsor.

[15] Based on Staff's conversation with ICE Clear Europe's counsel on July 2, 2014, ICE Clear Europe's counsel has confirmed that a Sponsored Principal will not be subject to forced allocation of contracts in the event of a failed auction.

As noted above, the Sponsored Principal framework will not be made available to FCM/BD Clearing Members or U.S. persons at this time. It is expected that FCM/BD Clearing Members will satisfy the requirements of EMIR to offer individual segregation to customers by referring such customers seeking individual segregation to a Non-FCM/BD Clearing Member that offers an Individually Segregated Sponsored Account, to the extent permitted by law. As a result, pursuant to the introductory paragraph of Rule 1905, the remainder of that rule, and other references to U.S. Sponsored Principals in the Rules, will be inapplicable at this time. No U.S. person will be permitted to become a Sponsored Principal, Individually Segregated Sponsored Accounts will not be available to U.S. Sponsored Principals, and FCM/BD Clearing Members will not be permitted to act as Sponsors, until such time as ICE Clear Europe adopts a further rule change (and makes a related rule filing) implementing the Sponsored Principal framework for FCM/BD Clearing Members and U.S. persons and receives all necessary regulatory approvals in connection therewith.

Certain changes to the Standard Terms annex, setting out certain mandatory terms of back-to-back contracts between Clearing Members and Customers, have been made for CDS contracts. In addition, new Standard Terms annexes are added for F&O and FX contracts. (The Standard Terms annexes only apply to Non-FCM/BD Clearing Members and their customers.) The CDS Standard Terms annex has been modified to incorporate the Sponsored Principal Model (and distinguish between provisions applicable to an Individually Segregated Sponsored Account and those applicable to other Customer Accounts). References to various other categories of account class have been updated. Certain procedures concerning portability of positions and margin in the case of a Clearing Member default (including related notice and timing requirements) have also been added, consistent with revisions to Rule 904. In addition, certain provisions are made governed by English law rather than the law of any underlying master agreement, as are the Rules and Procedures (which are incorporated here by reference), based on legal advice received by the clearing house. The new annexes for F&O and FX products are based on the Standard Terms annex for CDS (as modified).

Additional changes are made to Exhibit 4 to the Rules, which contains Settlement and Notices Terms applicable to customer transactions in CDS. These provisions generally specify certain requirements for delivery of certain notices as between a customer and its Clearing Member in connection with a CDS contract, including certain notices relating to physical settlement, as well as certain procedures relevant to settling the Clearing Member to customer leg of such a transaction if physical settlement is applicable. The exhibit has been modified to include Sponsored Principals and their Sponsors. The modifications also distinguish between Non-FCM/BD Clearing Members, which have a back-to-back relationship with their customers pursuant to a Customer-CM CDS Transaction, and FCM/BD Clearing Members, which act on behalf of their customers, and do not enter into Customer-CM CDS Transactions. Various conforming changes to defined terms and drafting clarifications have also been made.

b. Statutory Basis

ICE Clear Europe believes that the proposed rule changes are consistent with the requirements of Section 17A of the Act [16] and the regulations thereunder applicable to it, including the standards under Rule 17Ad–22.[17] Section 17A(b)(3)(F) of the Act [18] requires, among other things, that the rules of a clearing agency be designed to promote the prompt and accurate clearance and settlement of securities transactions and, to the extent applicable, derivative agreements, contracts, and transactions. The proposed rule changes, which are intended principally to ensure compliance by the clearing house with the requirements of EMIR, implement new, strengthened options for the segregation and safeguarding of customer funds and property to be available to customers of Non-FCM/BD Clearing Members. The existing, non-individually segregated models will also generally remain available for those customers that want them. In addition, the customer account structures and segregation requirements for FCM/BD Clearing Members are not being changed. Accordingly, the proposed rule changes will enhance, and not reduce, the level of customer protection available under the current ICE Clear Europe rules. As a result, ICE Clear Europe believes that the proposed rule changes will contribute to the safeguarding of funds and securities

[16] 15 U.S.C. 78q–1.

[17] 17 CFR 240.17Ad–22.

[18] 15 U.S.C. 78q–1(b)(3)(F).

associated with derivative transactions that are in the custody or control of the clearing house or for which it is responsible, as set forth herein, within the meaning of Section 17(A)(b)(3)(F).[19]

As discussed above, EMIR requires that the clearing house offer an individual segregation model that Clearing Members may in turn offer to their customers. Under such a model, the clearing house is required to separately account for, and track, the portfolio of positions of a customer of a Clearing Member and specific assets provided to margin such contracts. ICE Clear Europe has developed its Individually Segregated Sponsored Account model to satisfy this requirement of EMIR. The Individually Segregated Sponsored Account provides a separate account for the positions, and margin, of a particular customer, and accordingly should be protected in the event of a default of the sponsoring Clearing Member or other customers of the Clearing Member. It also facilitates the transition to a new Sponsor in the event of a default of the current Sponsor. For market participants that are eligible to use and elect to use the Individually Segregated Sponsored Account model, the approach may provide a higher degree of protection for customer assets than is currently available.[20]

As part of the proposed amendments, ICE Clear Europe is making other enhancements to its omnibus segregation models. As discussed above, EMIR also permits the use of omnibus segregation models. The proposed amendments would, consistent with EMIR and related UK requirements, establish separate customer omnibus account for client money and TTFCA collateral arrangements. These provide broadly equivalent protection that available in ICE Clear Europe's current model. The amendments would also introduce Margin-flow Co-mingled Accounts, which provide an intermediate level of segregation and elimination of certain fellow customer risks through the separate tracking of positions and actual assets provided to cover particular Customer positions, but permits co-mingling of payment flows for operational convenience. This provides another option for market participants that provides a higher level of protection than is available using European omnibus accounts, but may involve less cost and operational complexity than the full Individually Segregated Sponsored Account model. Consistent with EMIR, the proposed rules also contemplate that Clearing Members may use multiple types of these customer accounts, and may maintain multiple accounts within each category, as needed in their business operations. As discussed above, ICE Clear Europe is not proposing to change its account framework (and related customer property protections) for FCM/BD Clearing Members, which are consistent with existing U.S. regulatory requirements (including under the Exchange Act).[21]

As such, ICE Clear Europe believes that the proposed rule changes will enhance the safeguarding of securities and funds associated with derivative transactions that are in the custody or control of ICE Clear Europe or for which it is responsible. ICE Clear Europe also believes that the proposed rule changes will enhance the stability of the clearing system, by reducing the risk to market participants of a default by a Clearing Member or other customer. As a result, the proposed changes are, in the clearing house's view, consistent with the requirements of Section 17A(b)(3)(F) of the Act. The amendments also satisfy the relevant requirements of Rule 17Ad–22,[22] and in particular implicate the following provisions thereof, as discussed in more detail below:

Financial Resources. ICE Clear Europe believes that the amendments are consistent with the requirements of Rule 17Ad–22(b)(2–3).[23] The proposed rule changes do not themselves change ICE Clear Europe's methodology with respect to its margin or Guaranty Fund requirements,[24] although the amendments would require Sponsors to make additional Guaranty Fund deposits in respect of the individually segregated accounts of their Sponsored Principals. The amendments would also require Sponsored Principals to make additional margin payments upon a default of its Sponsor. Accordingly, ICE Clear Europe does not believe that the proposed changes will adversely affect its financial resources that support clearing operations.

Settlement. ICE Clear Europe believes that the rule changes are consistent with the requirements of Rule 17Ad–22(d)(5), (12) and (15)[25] as to the finality and accuracy of its daily settlement process and avoidance of the risk of settlement failures. In the individual segregation model, Sponsored Principals will have the option of direct settlement with the clearing house, which will enhance the finality and accuracy of the settlement process. ICE Clear Europe believes it has sufficient operational infrastructure to support these arrangements. Sponsored Principals who settle through their Sponsor will be treated in the same manner, and with the same level of finality and accuracy, as customers of Clearing Members under current Rules. ICE Clear Europe's existing settlement model will be used for the various omnibus customer accounts. As a result, ICE Clear Europe does not believe that the proposed amendments will adversely affect the settlement process, and believes that the changes are consistent with the relevant requirements of Rule 17Ad–22 in this regard.

Default Procedures. ICE Clear Europe believes that the amendments enhance its default management procedures and its ability to take timely action to contain losses and liquidity pressures and to continue meeting its obligations in the event of insolvencies or defaults, in accordance with Rule 17Ad–22(d)(11).[26] The amendments further protect the assets of customer in the event of a default by a sponsoring Clearing Member. In particular, the

[19] 15 U.S.C. 78q–1(b)(3)(F).

[20] As noted above, ICE Clear Europe is not offering the Sponsored Principal model to FCM/BD Clearing Members and potential U.S. Sponsored Principals at this time. ICE Clear Europe expects to continue to evaluate the demand for such a model by such persons, including in light of evolving commercial, regulatory, capital, insolvency and other considerations applicable to the Clearing House, FCM/BD Clearing Members and other market participants. ICE Clear Europe will submit subsequent rule filings if it determines to offer such a model to FCM/BD Clearing Members and U.S. persons.

[21] As noted above, ICE Clear Europe has been advised that EMIR does not require the Individual Segregation Model to be offered to FCM/BD Clearing Members or U.S. persons, provided that, to the extent permitted by applicable law, such clearing members may refer interested customers to a Non-FCM/BD Clearing Member able to offer such an account. The other modified account frameworks for Non-FCM/BD Clearing Members are not designed to satisfy the specific requirements of U.S. law, including those under the Commodity Exchange Act and CFTC rules as well as the Exchange Act. As a result, ICE Clear Europe believes that maintaining the current account structures for FCM/BD Clearing Members provides the required level of protection for customers of such Clearing Members in light of U.S. legal requirements, and that changes to those structures would not be appropriate at this time as they are not mandated by EMIR.

[22] 17 CFR 240.17Ad–22.

[23] 17 CFR 240.17Ad–22(b)(2)–(3).

[24] ICE Clear Europe has separately made a filing with respect to changes in its CDS risk management and other policies. Based on Staff's conversation with ICE Clear Europe's counsel on July 2, 2014, ICE Clear Europe's counsel has confirmed that notwithstanding the changes made to Rule 1101(c), ICE Clear Europe currently implements risk management methodology that takes into account those parameters required to comply with all applicable laws, including EMIR and Commission Rules 17Ad–22(b)(2–3). For the avoidance of any doubt, ICE Clear Europe intends to continue maintaining risk management methodology with respect to margin and the guaranty fund that will comply with all applicable laws.

[25] 17 CFR 240.17Ad–22(d)(5), (12) and (15).

[26] 17 CFR 240.17Ad–22(d)(11).

amendments provide a mechanism for managing the default of a Sponsor and/or Sponsored Principal, similar to the existing process for Clearing Member default. Consistent with the requirements of EMIR, the proposed amendments, also enhance the clearing house's ability to handle other defaults, and in particular to provide for transfer of positions and margin following default. These changes are thus in furtherance of the goals of Rule 17Ad–22 as well.

Although the amendments establish a number of new categories of accounts in order to comply with EMIR, ICE Clear Europe believes that its default management process is sufficient to address defaults for each relevant category. With respect to the new varieties of omnibus accounts, ICE Clear Europe does not believe that such accounts pose any default management issues different from those presented by its current omnibus account structure. With respect to the individually segregated account structures, ICE Clear Europe has considered default management issues and revised its Rules accordingly to facilitate default management, consistent with the requirements of EMIR and the Exchange Act. In the case of Individually Segregated Sponsored Accounts in particular, the Clearing House has designed its default procedures to permit, and to incentivize, the Sponsor to manage the default of a Sponsored Principal in largely the same manner as it manages other customer defaults. The Clearing House also retains the ability to manage a Sponsored Principal default in the same manner as it manages Clearing Member defaults.

Legal Framework. Consistent with the requirements of EMIR, ICE Clear Europe has obtained advice of legal counsel in relevant jurisdictions as to the enforceability of its Rules and Procedures, including with respect to the Sponsored Principal model and other relevant amendments made in the proposed Rules. Based on this advice, ICE Clear Europe believes that the amendments are consistent with the requirements of Rule 17Ad–22(d)(1) that a clearing agency maintain a well-founded, transparent and enforceable legal framework for its activities, including with respect to default management.

B. Self-Regulatory Organization's Statement on Burden on Competition

ICE Clear Europe does not believe the proposed rule changes would have any adverse impact, or impose any burden, on competition not necessary or appropriate in furtherance of the purposes of the Act. The proposed amendments are principally intended to offer new segregation models, and enhancements to existing segregation models, for customers of Clearing Members in order to comply with EMIR requirements applicable to the clearing house. The amendments are thus expected to increase the segregation choices available to market participants.

In terms of access to the clearing house, ICE Clear Europe is not proposing to materially change its standards for Clearing Membership or financial requirements for Clearing Membership. ICE Clear Europe is permitting a new form of access to the clearing house, for Sponsored Principals, and ICE Clear Europe believes that this development should facilitate, rather than limit, access to the clearing house. Although cost models remain to be developed, use of these accounts may be more expensive than use of omnibus accounts, reflecting the additional operational complexity and segregation available. It is possible that these additional costs may deter some market participants for using the Individually Segregated Sponsored Account. The clearing house retains other, omnibus segregation models, however, that are based on existing models and will be available to market participants that do not elect individual segregation. The clearing house also recognizes that the new segregation models may impose certain additional costs on Clearing Members, including potentially additional guaranty fund contributions, which could raise the cost of customer clearing. However, ICE Clear Europe believes that this is the result of the requirement under EMIR to offer such models and in any event is justified by the benefits provided by such models for those who use them.

ICE Clear Europe also does not believe the proposed amendments are likely to adversely affect competition among Clearing Members. The new segregation models are (and are required to be) made available to all Non-FCM/BD Clearing Members. As noted above, the new models are not being offered to FCM/BD Clearing Members, which will continue to use the account and segregation frameworks provided under applicable U.S. law. The ability for FCM/BD Clearing Members to continue using the existing framework should mitigate any competitive impact of the new models for such Clearing Members. ICE Clear Europe believes that the new options will facilitate competition among Clearing Members as they seek to offer the segregation models to clients, consistent with the commercial requirements of the Clearing Member and their customers and the competitive environment as well as background regulatory requirements. To the extent that the new segregation models impose additional costs and operational complexity, those will fall on all Clearing Members that seek to use the models, and are not designed to favor one type of Clearing Member over another.

In terms of the impact on customers of Clearing Members, the proposed amendments are intended to provide those customers a greater range of choices and protections for margin assets provided by those customers, as required under EMIR. Certain models, such as the individually segregated model, may impose higher costs on customers. ICE Clear Europe believes that such costs are accompanied by the higher protection to customer assets afforded by those models and required under EMIR. In addition, other models, including omnibus segregation models, remain available for customers that prefer such models. As a result, ICE Clear Europe does not believe that the proposed amendments will impose a significant burden on customers seeking access to clearing.

For similar reasons, ICE Clear Europe does not believe that the rule amendments will adversely affect the ability of market participants to continue to clear transactions, or otherwise limit market participants' choices for clearing derivatives. The rule changes implement a range of different models, each with different costs and benefits to customers. ICE Clear Europe is also maintaining a segregation framework analogous to that available today for customers of Clearing Members. Furthermore, the amendments are intended to implement requirements that will apply to European clearing houses generally under EMIR, including the requirement to offer an individual segregation model. As a result, ICE Clear Europe expects that other clearing house will offer a similar range of clearing segregation options, and the changes are not expected to reduce access to clearing or clearing services.

For the foregoing reasons, ICE Clear Europe does not believe that the proposed amendments will impose any burden on competition not appropriate in furtherance of the purposes of the Act.

C. Self-Regulatory Organization's Statement on Comments on the Proposed Rule Change Received From Members, Participants or Others

Written comments relating to the rule changes have been solicited from

Clearing Members through extensive discussions with clearing members and a public consultation. ICE Clear Europe received various comments during this consultation and took such comments into account in making further modifications to the proposed rules. The rule changes also reflect comments received from the Bank of England in connection with ICE Clear Europe's application for EMIR authorization. ICE Clear Europe will notify the Commission of any additional written comments received by ICE Clear Europe.

III. Date of Effectiveness of the Proposed Rule Change and Timing for Commission Action

Within 45 days of the date of publication of this notice in the **Federal Register** or within such longer period up to 90 days (i) as the Commission may designate if it finds such longer period to be appropriate and publishes its reasons for so finding or (ii) as to which the self-regulatory organization consents, the Commission will:

(A) By order approve or disapprove the proposed rule change or

(B) institute proceedings to determine whether the proposed rule change should be disapproved.

IV. Solicitation of Comments

Interested persons are invited to submit written data, views, and arguments concerning the foregoing, including whether the proposed rule change is consistent with the Act. Comments may be submitted by any of the following methods:

Electronic Comments

- Use the Commission's Internet comment form (*http://www.sec.gov/rules/sro.shtml*) or
- Send an email to *rule-comments@sec.gov.* Please include File Number SR–ICEEU–2014–09 on the subject line.

Paper Comments

- Send paper comments in triplicate to Secretary, Securities and Exchange Commission, 100 F Street NE., Washington, DC 20549–1090.

All submissions should refer to File Number SR–ICEEU–2014–09. This file number should be included on the subject line if email is used. To help the Commission process and review your comments more efficiently, please use only one method. The Commission will post all comments on the Commission's Internet Web site (*http://www.sec.gov/rules/sro.shtml*). Copies of the submission, all subsequent amendments, all written statements with respect to the proposed rule change that are filed with the Commission, and all written communications relating to the proposed rule change between the Commission and any person, other than those that may be withheld from the public in accordance with the provisions of 5 U.S.C. 552, will be available for Web site viewing and printing in the Commission's Public Reference Section, 100 F Street NE., Washington, DC 20549, on official business days between the hours of 10:00 a.m. and 3:00 p.m. Copies of such filings will also be available for inspection and copying at the principal office of ICE Clear Europe and on ICE Clear Europe's Web site at *https://www.theice.com/notices/Notices.shtml?regulatoryFilings.*

All comments received will be posted without change; the Commission does not edit personal identifying information from submissions. You should submit only information that you wish to make available publicly. All submissions should refer to File Number SR–ICEEU–2014–09 and should be submitted on or before July 31, 2014.

For the Commission, by the Division of Trading and Markets, pursuant to delegated authority.[27]

Jill M. Peterson,

Assistant Secretary.

[FR Doc. 2014–16099 Filed 7–9–14; 8:45 am]

BILLING CODE 8011–01–P

SECURITIES AND EXCHANGE COMMISSION

[Release No. 34–72543; File No. SR–FINRA–2014–031]

Self-Regulatory Organizations; Financial Industry Regulatory Authority, Inc.; Notice of Filing and Immediate Effectiveness of a Proposed Rule Change To Amend the Definition of Hearing Officer To Include Former FINRA Employees Who Previously Worked as Hearing Officers

July 3, 2014.

Pursuant to Section 19(b)(1) of the Securities Exchange Act of 1934 (''Act'')[1] and Rule 19b–4 thereunder,[2] notice is hereby given that on July 2, 2014, Financial Industry Regulatory Authority, Inc. (''FINRA'') filed with the Securities and Exchange Commission (''SEC'' or ''Commission'') the proposed rule change as described in Items I, II, and III below, which Items have been prepared by FINRA. The Commission is publishing this notice to solicit comments on the proposed rule change from interested persons.

I. Self-Regulatory Organization's Statement of the Terms of Substance of the Proposed Rule Change

FINRA is proposing to amend the definition of ''Hearing Officer'' to include former employees of FINRA who previously worked as FINRA hearing officers.

Below is the text of the proposed rule change. Proposed new language is in italics.

* * * * *

9000. CODE OF PROCEDURE

9100. APPLICATION AND PURPOSE

* * * * *

9120. Definitions

(a) through (q) No Change.

(r) ''Hearing Officer''

The term ''Hearing Officer'' means an employee of FINRA*, or former employee of FINRA who previously acted as a Hearing Officer,* who is an attorney and who is appointed by the Chief Hearing Officer to act in an adjudicative role and fulfill various adjudicative responsibilities and duties described in the Rule 9200 Series regarding disciplinary proceedings, the Rule 9550 Series regarding expedited proceedings, the Rule 9700 Series relating to grievances concerning FINRA automated systems, and the Rule 9800 Series regarding temporary cease and desist proceedings brought against members and associated persons.

(s) through (cc) No Change.

* * * * *

II. Self-Regulatory Organization's Statement of the Purpose of, and Statutory Basis for, the Proposed Rule Change

In its filing with the Commission, FINRA included statements concerning the purpose of and basis for the proposed rule change and discussed any comments it received on the proposed rule change. The text of these statements may be examined at the places specified in Item IV below. FINRA has prepared summaries, set forth in sections A, B, and C below, of the most significant aspects of such statements.

A. Self-Regulatory Organization's Statement of the Purpose of, and Statutory Basis for, the Proposed Rule Change

1. Purpose

FINRA is proposing to amend the definition of Hearing Officer to include a former employee of FINRA who is a licensed attorney and who is appointed

[27] 17 CFR 200.30–3(a)(12).

[1] 15 U.S.C. 78s(b)(1).

[2] 17 CFR 240.19b–4.

by the Chief Hearing Officer. The current rule limits the definition of Hearing Officer to current FINRA employees. The proposed rule would permit the Chief Hearing Officer to appoint a former employee of FINRA who previously acted as a Hearing Officer to act in an adjudicative role and fulfill the various adjudicative responsibilities and duties of a Hearing Officer described in the Code of Procedure.

The former employees appointed by the Chief Hearing Officer would be experienced, licensed attorneys who previously acted in the same adjudicative role and fulfilled the same adjudicative responsibilities and duties for FINRA. As a former employee acting and defined as a Hearing Officer, he or she would be subject to the same FINRA rules that address the impartiality of Hearing Officers and the fairness of disciplinary and expedited proceedings as a current Hearing Officer. These include, but are not limited to, the rules prohibiting a party from making ex parte communications to a Hearing Officer,[3] prohibiting FINRA's enforcement attorneys who are litigating a case, among others, from advising a Hearing Officer,[4] and the requirement that a Hearing Officer not have a conflict of interest or bias.[5]

By permitting former employees of FINRA to act as Hearing Officers, the Chief Hearing Officer would be able to take advantage of the expertise of former Hearing Officers who remain well-versed in the typical securities law violations that are resolved in FINRA disciplinary proceedings. Therefore, the Chief Hearing Officer would be better equipped to fulfill the adjudicative responsibilities and duties described in the Code of Procedure, including appointing Hearing Officers for expedited proceedings, if the need arises. The Chief Hearing Officer also would have greater flexibility to allocate resources to the cases pending before the Office of Hearing Officers.

As noted in Item 2 of this filing, FINRA has filed the proposed rule change for immediate effectiveness and has requested that the SEC waive the requirement that the proposed rule change not become operative for 30 days after the date of the filing so FINRA can implement the proposed rule change immediately.

2. Statutory Basis

FINRA believes that the proposed rule change is consistent with the provisions of Section 15A(b)(6) of the Act,[6] which requires, among other things, that FINRA rules must be designed to prevent fraudulent and manipulative acts and practices, to promote just and equitable principles of trade, and, in general to protect investors and the public interest. FINRA believes that the proposed rule change also will promote efficiency because it would enable the Chief Hearing Officer to rely on experienced, former employees if the need arises. It is in the public interest, and consistent with the Act's purpose, that FINRA disciplinary allegations be timely resolved and that well-timed sanctions be imposed where necessary to redress customer harm and deter future misconduct.

FINRA also believes that the proposed rule change is consistent with the provisions of Section 15A(b)(8) of the Act,[7] which requires, among other things, that FINRA rules provide a fair procedure for the disciplining of members and persons associated with members. FINRA believes that the adjudicative process will remain fair, consistent with the Act, because the former employees appointed by the Chief Hearing Officer will be experienced, licensed attorneys who previously acted in the same adjudicative role and fulfilled the same adjudicative responsibilities and duties for FINRA. The former employees also would be subject to the same rules in the Code of Procedure as current Hearing Officers with respect to prohibited communications, independent advice, conflicts of interest, and bias. These important safeguards of procedural fairness will remain intact under the proposed rule change. By allowing former employees to act as Hearing Officers, the proposed rule change will afford the Chief Hearing Officer additional flexibility to rely on the wealth of experience that former FINRA Hearing Officers accumulated during their tenure as Hearing Officers. Former Hearing Officers are thoroughly familiar with the Code of Procedure and the procedural rules and practices that apply to bringing a case to a hearing. The proposed rule change will allow FINRA to draw on past experience in maintaining fair proceedings in disciplinary matters.

B. Self-Regulatory Organization's Statement on Burden on Competition

FINRA does not believe that the proposed rule change will result in any burden on competition that is not necessary or appropriate in furtherance of the purposes of the Act.

The former employees of FINRA appointed by the Chief Hearing Officer would be experienced, licensed attorneys who previously acted in the same adjudicative role and fulfilled the same adjudicative responsibilities and duties for FINRA. By permitting former employees of FINRA to act as Hearing Officers, the proposed rule change would promote greater efficiency with respect to adjudicatory proceedings and flexibility for the Chief Hearing Officer appointing Hearing Officers for these proceedings.

The proposed rule change would apply to all disciplinary and other adjudicatory proceedings, so all parties in these proceedings after implementation of the proposed rule change would be affected, if at all, in the same way.

C. Self-Regulatory Organization's Statement on Comments on the Proposed Rule Change Received From Members, Participants, or Others

Written comments were neither solicited nor received.

III. Date of Effectiveness of the Proposed Rule Change and Timing for Commission Action

Because the foregoing proposed rule change does not: (i) Significantly affect the protection of investors or the public interest; (ii) impose any significant burden on competition; and (iii) become operative for 30 days from the date on which it was filed, or such shorter time as the Commission may designate, it has become effective pursuant to Section 19(b)(3)(A) of the Act[8] and Rule 19b–4(f)(6) thereunder.[9]

At any time within 60 days of the filing of the proposed rule change, the Commission summarily may temporarily suspend such rule change if it appears to the Commission that such action is necessary or appropriate in the public interest, for the protection of investors, or otherwise in furtherance of the purposes of the Act. If the Commission takes such action, the Commission shall institute proceedings to determine whether the proposed rule should be approved or disapproved.

[3] Rule 9143 (Ex Parte Communications).

[4] Rule 9144 (Separation of Functions).

[5] Rule 9233 (Hearing Panel or Extended Hearing Panel: Recusal and Disqualification of Hearing Officers). For temporary cease-and-desist matters, a former employee appointed as a Hearing Officer would be subject to the provisions on conflict of interest, bias, and motions for disqualification contained in Rule 9820 (Appointment of Hearing Officer and Hearing Panel).

[6] 15 U.S.C. 78*o*–3(b)(6).

[7] 15 U.S.C. 78*o*–3(b)(8).

[8] 15 U.S.C. 78s(b)(3)(A).

[9] 17 CFR 240.19b–4(f)(6).

IV. Solicitation of Comments

Interested persons are invited to submit written data, views and arguments concerning the foregoing, including whether the proposed rule change is consistent with the Act. Comments may be submitted by any of the following methods:

Electronic Comments

- Use the Commission's Internet comment form (*http://www.sec.gov/rules/sro.shtml*); or
- Send an email to *rule-comments@sec.gov.* Please include File Number SR–FINRA–2014–031 on the subject line.

Paper Comments

- Send paper comments in triplicate to Secretary, Securities and Exchange Commission, 100 F Street NE., Washington, DC 20549–1090.

All submissions should refer to File Number SR–FINRA–2014–031. This file number should be included on the subject line if email is used. To help the Commission process and review your comments more efficiently, please use only one method. The Commission will post all comments on the Commission's Internet Web site (*http://www.sec.gov/rules/sro.shtml*). Copies of the submission, all subsequent amendments, all written statements with respect to the proposed rule change that are filed with the Commission, and all written communications relating to the proposed rule change between the Commission and any person, other than those that may be withheld from the public in accordance with the provisions of 5 U.S.C. 552, will be available for Web site viewing and printing in the Commission's Public Reference Room, 100 F Street NE., Washington, DC 20549, on official business days between the hours of 10 a.m. and 3 p.m. Copies of such filing also will be available for inspection and copying at the principal office of FINRA. All comments received will be posted without change; the Commission does not edit personal identifying information from submissions. You should submit only information that you wish to make available publicly. All submissions should refer to File Number SR–FINRA–2014–031 and should be submitted on or before July 31, 2014.

For the Commission, by the Division of Trading and Markets, pursuant to delegated authority.[10]

Jill M. Peterson,

Assistant Secretary.

[FR Doc. 2014–16101 Filed 7–9–14; 8:45 am]

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SECURITIES AND EXCHANGE COMMISSION

[Release No. 34–72537; File No. SR–NYSEArca–2014–25]

Self-Regulatory Organizations; NYSE Arca, Inc.; Notice of Filing of Amendment No. 1 and Order Granting Accelerated Approval of Proposed Rule Change, as Modified by Amendment No. 1, To Make Permanent Its Pilot Program Regarding Minimum Value Sizes for Opening Transactions in New Series of Flexible Exchange Options and Establish New Minimum Value Sizes Applicable to Other FLEX Transactions and FLEX Quotes

July 3, 2014.

I. Introduction

On March 18, 2014, NYSE Arca, Inc. (the ''Exchange'' or ''NYSE Arca'') filed with the Securities and Exchange Commission (''Commission''), pursuant to Section 19(b)(1) of the Securities Exchange Act of 1934 (''Act'')[1] and Rule 19b–4 thereunder,[2] a proposed rule change to make permanent its pilot program regarding minimum value sizes for opening transactions in new series of flexible exchange options (''FLEX Options'' or ''FLEX'') and establish new minimum value sizes applicable to other FLEX transactions and FLEX Quotes. The proposed rule change was published for comment in the **Federal Register** on April 7, 2014.[3] The Commission received no comments on the proposal. The Exchange consented to an extension of the time period for the Commission to approve the proposed rule change, disapprove the proposed rule change, or institute proceedings to determine whether the proposed rule change should be disapproved, to July 6, 2014. The Exchange filed Amendment No. 1 to the proposed rule change on May 22, 2014, in order to transmit a revised pilot report that replaces the original Exhibit 3 to the filing, and to correct an error in the Notice.[4] The Commission is publishing this notice to solicit comments on Amendment No. 1 from interested persons and is approving the proposed rule change, as modified by Amendment No. 1, on an accelerated basis.

II. Description of the Amended Proposal

FLEX Options, unlike traditional standardized options, allow investors to customize basic option terms, including size, expiration date, exercise style, and certain exercise prices.[5] Pursuant to Commentary .02 to Rule 5.32, the Exchange currently has in place a pilot program under which the minimum size requirements set forth in Rule 5.32(d)(2), which apply to opening transactions in new series of FLEX Options, are replaced with a one-contract minimum size (''Pilot Program'').[6] Prior to the Pilot Program, pursuant to Rule 5.32(d)(2), the minimum value size for an opening transaction in any FLEX series in which there was no open interest at the time the request for quotes was submitted was: (i) For FLEX Equity Options, the lesser of 250 contracts or the number of contracts overlying $1 million in the underlying securities; and (ii) for FLEX Index Options, $10 million Underlying Equivalent Value.[7] The Exchange's proposal will make the Pilot Program

[10] 17 CFR 200.30–3(a)(12).

[1] 15 U.S.C. 78s(b)(1).

[2] 17 CFR 240.19b–4.

[3] *See* Securities Exchange Act Release No. 71839 (April 1, 2014), 79 FR 19154 (''Notice'').

[4] The Exchange attached an Exhibit 3 to its proposed rule change that contained an annual report summarizing pilot data collected for the year 2013, the most recent complete year of the pilot program (''Pilot Report''). Specifically, the Pilot Report summarizes the trading volume and underlying value of opening transactions in new series of FLEX Options during the year 2013 with a size below the minimum value thresholds in force before the pilot, as well as the types of customers initiating such transactions. In Amendment No. 1, the Exchange submitted a revised Pilot Report as a new Exhibit 3 that replaces the original Exhibit 3 in its entirety. The revised Pilot Report corrects an error in the total FLEX Equity Option contract trading volume under the pilot reported in the original Pilot Report, and also makes non-substantive changes to certain descriptive language in the Pilot Report. In Amendment No. 1 the Exchange also corrected the purpose section of the Notice to state that all FLEX Index Options are subject to the same Underlying Equivalent Value, and not unique Underlying Equivalent Values applicable to different types of FLEX Index Options as originally stated in the Notice.

[5] *See* Notice, 79 FR 19155 n.4; *see also* NYSE Arca Options Rule (''Rule'') 5.32. FLEX Options can be FLEX Index Options or FLEX Equity Options. *See* Rules 5.30(b)(5) and (b)(6) (defining, respectively, the terms ''FLEX Equity Option'' and ''FLEX Index Option'').

[6] *See* Commentary .02 to Rule 5.32; *see also* Securities Exchange Act Release Nos. 62054 (May 6, 2010), 75 FR 27381 (May 14, 2010) (SR–NYSEArca–2010–34) (establishing Pilot Program); and 71845 (April 1, 2014) 79 FR 19143 (April 7, 2014) (SR–NYSEArca–2014–31) (extending Pilot Program until the earlier of July 31, 2014 or approval of the Pilot Program on a permanent basis).

[7] *See* Rule 5.32(d)(2); *see also* Rule 5.30(b)(17) (defining the term ''Underlying Equivalent Value'').

permanent by eliminating the minimum value size requirements set forth in Rule 5.32(d)(2) for opening transactions in new FLEX Option series and by eliminating the Pilot Program rule text set forth in Commentary .02 to Rule 5.32. In connection with its proposal to make the Pilot Program permanent, and as required by its filing establishing the Pilot Program,[8] the Exchange submitted to the Commission an annual Pilot Report summarizing Pilot Program data collected for year 2013, the most recent complete year of the Pilot Program.[9]

In its filing, the Exchange also has proposed to make some other changes to its FLEX Option minimum value size rules, in addition to requesting that the Pilot Program be made permanent. Rules 5.32(d)(3)–(4), which are not part of the Pilot Program, set forth minimum value sizes for other FLEX Option transactions and for FLEX Quotes. Specifically, pursuant to Rule 5.32(d)(3), for a transaction in any currently-opened FLEX series, the minimum value size is: (i) For FLEX Equity Options, the lesser of 100 contracts or the number of contracts overlying $1 million in the underlying securities in the case of opening transactions, and 25 contracts in the case of closing transactions; and (ii) for FLEX Index Options, $1 million Underlying Equivalent Value in the case of both opening and closing transactions; or (iii) for either case, the remaining underlying size or Underlying Equivalent Value on a closing transaction, whichever is less. Pursuant to Rule 5.32(d)(4), the minimum value size for FLEX Quotes responsive to a Request for Quotes is 25 contracts in the case of FLEX Equity Options and $1 million Underlying Equivalent Value in the case of FLEX Index Options or for either case the remaining underlying size or Underlying Equivalent Value on a closing transaction, whichever is less. Even though these minimum value size requirements set forth in Rules 5.32(d)(3)–(4) are not part of the Pilot Program, the Exchange has proposed to eliminate them as well, in conjunction with making the Pilot Program permanent. In its proposal the Exchange noted that adopting the same minimum value sizes for existing and new series, in addition to quotes, will allow market participants to tailor their FLEX Option transactions to meet their investment objectives.

By proposing to make permanent the Pilot Program one-contract minimum for opening transactions in new series of FLEX Options and by also proposing to eliminate the minimum value size requirements for FLEX Option transactions in currently-opened series and FLEX Quotes responsive to a Request for Quotes, the Exchange is seeking to establish a one-contract minimum size for all FLEX Option transactions and FLEX Quotes. This one-contract minimum size would be codified in new Rule 5.32(b)(7). The Exchange states that its proposal for a one-contract minimum value size for all FLEX Option transactions and FLEX Quotes is based on similar rules governing minimum value size for FLEX Options approved for the CBOE.[10]

In addition, as a technical, non-substantive change, the Exchange has proposed to relocate from current Rule 5.32(d)(1) to new Rule 5.32(b)(6) rule text stating that the maximum term for both Equity and Index FLEX Options shall be fifteen years, and make other non-substantive changes to the rule.

III. Discussion and Commission Findings

After careful review, the Commission finds that the proposed rule change, as amended, is consistent with the requirements of the Act and the rules and regulations thereunder applicable to a national securities exchange.[11] In particular, the Commission finds that the proposed rule change is consistent with Section 6(b)(5) of the Act,[12] which requires, among other things, that the rules of a national securities exchange be designed to prevent fraudulent and manipulative acts and practices, to promote just and equitable principles of trade, to foster cooperation and coordination with persons engaged in regulating, clearing, settling, processing information with respect to, and facilitating transactions in securities, to remove impediments to and perfect the mechanism of a free and open market and a national market system, and, in general, to protect investors and the public interest; and not be designed to permit unfair discrimination between customers, issuers, brokers or dealers.

FLEX Options were originally designed for use by institutional and high net worth customers, rather than retail investors.[13] In approving CBOE's pilot eliminating minimum value sizes for FLEX Options, which was the first such pilot to go into effect, the Commission noted that it had received several comment letters stating that the proposal would assist institutional customers, but it also noted that the elimination of the minimum value size requirements raised the possibility that retail customers would access the FLEX Options market.[14] One of the risks to retail investors outlined in the ODD [15] is that, because of the customized nature of FLEX Options and lack of continuous quotes, trading in FLEX Options is often less deep and liquid than trading in standardized options on the same underlying interest.[16] Additionally, the Commission observed that reducing the minimum value size for opening FLEX Option transactions increases the potential for the FLEX Options market to act as a surrogate for the standardized options market, and expressed concern in this regard because the standardized market contains certain protections for investors not present in the FLEX Options market.[17] The Commission stated that, in the event CBOE proposed making its pilot program permanent, information regarding the types of

[8] *See supra* note 6.

[9] Specifically, the Pilot Report contains data and analysis of underlying equivalent values, open interest and trading volume, and analysis of the types of investors that initiated opening FLEX Equity and Index Options transactions (*i.e.,* institutional, high net worth, or retail) in new FLEX Option series. *See* Amendment No. 1, *supra* note 4.

[10] *See* Notice, 79 FR 19156 and n.13 (citing Securities Exchange Act Release No. 67624 (August 8, 2012), 77 FR 48580 (August 14, 2012) (order approving CBOE's proposal to make permanent its pilot program eliminating minimum value sizes for FLEX Options)).

[11] In approving this proposed rule change, the Commission has considered the proposed rule's impact on efficiency, competition, and capital formation. *See* 15 U.S.C. 78c(f).

[12] 15 U.S.C. 78f(b)(5).

[13] *See* Notice, 79 FR 19156; *see also* Securities Exchange Act Release No. 36841 (February 14, 1996), 61 FR 6666 (February 21, 1996) (order approving SR–PSE–95–24). As noted in the Options Disclosure Document (''ODD''), which explains the characteristics and risks of exchange-traded options, flexibly structured options may be useful to sophisticated investors seeking to manage particular portfolio and trading risks. Rule 9b-1 under the Act requires that broker-dealers furnish the ODD to a customer before accepting an order from the customer to purchase or sell an option contract relating to an options class that is the subject of the ODD, or approving the customer's account for the trading of such option. *See* 17 CFR 240.9b–1(d).

[14] *See* Securities Exchange Act Release No. 61439 (January 28, 2010), 75 FR 5831 (February 4, 2010) (order approving SR–CBOE–2009–087) (''CBOE Pilot Approval Order'').

[15] *See supra* note 13.

[16] In particular, the ODD states that because many of the terms of FLEX Options are not standardized, it is less likely that there will be an active secondary market in which holders and writers of such options will be able to close out their positions by offsetting sales and purchases. Also, the ODD states that certain margin requirements for positions in flexibly structured options may be significantly greater than the margin requirements applicable to similar positions in other options on the same underlying interest.

[17] *See* CBOE Pilot Approval Order, *supra* note 14. In particular, the Commission noted that continuous quotes may not always be available in the FLEX Options market and that FLEX Options do not have trading rotations at either the opening or closing of trading. *Id.*

customers initiating opening FLEX Option transactions during the pilot would enable the Commission to evaluate how market participants have responded to CBOE's pilot program and what types of customers are using the FLEX Options market.[18] For these same reasons, at the Commission's request, the Exchange included in its Pilot Report information regarding the types of customers that initiated opening FLEX Option transactions under its Pilot Program.[19]

The Commission believes that these considerations and concerns that informed its analysis of whether to permanently approve CBOE's pilot are equally germane to its analysis here. As such, the Commission has carefully reviewed the Pilot Report that the Exchange provided to the Commission.[20] The Pilot Report reflects that, in 2013, 84 opening transactions in new series of FLEX Equity Options were initiated on the Exchange with small minimum value sizes made possible by the Pilot Program, 83 of which were initiated by institutional customers.[21] Moreover, the Pilot Report indicates that these 84 FLEX Equity Option transactions covered by the Pilot Program accounted for approximately 1% of the total volume and approximately 3% of the total value of all opening FLEX Equity Option transactions in new series—*i.e.,* opening transactions covered by the Pilot Program as well as opening transactions with value sizes above the pre-pilot minimum—during 2013.

The Exchange notes that the Pilot Report includes data specific to opening transactions in new series of FLEX Options pursuant to current Rule 5.32(d)(2), and does not include data for transactions in currently-opened FLEX Options series or FLEX Quotes responsive to a request for quotes pursuant to Rules 5.32(d)(3)–(4), as such transactions and FLEX Quotes were not part of the Pilot Program.[22] The Exchange represents, however, that based on its internal review, if Rules 5.32(d)(3)–(4) had been part of the Pilot Program, transactions in currently-opened FLEX Options series or FLEX Quotes with small value sizes made permissible by the Pilot Program would have been *de minimis,* and would not have materially altered the data in the Pilot Report.[23]

On balance, the Commission believes that it is consistent with the Act to make the Pilot Program permanent and thus eliminate, on a permanent basis, the minimum value size requirements set forth in Rule 5.32(d)(2) for opening transactions in new series of FLEX Options. The protections noted below, including heightened options suitability requirements, should help to address any concerns about the potential for retail participation in the Exchange's FLEX Options market in the future. Moreover, the Commission is not aware of any data or analysis to date suggesting that the trading of FLEX Options has acted as a surrogate for the trading of standardized options on the Exchange as a result of the Pilot Program. Indeed, the Commission understands that FLEX Option trading accounts for less than 1% of the combined trading volume of the standardized and FLEX Option markets.[24] In addition, the Pilot Report indicates that Pilot Program FLEX Option trades account for a very small proportion of the total volume and total value of all FLEX Option trades. Thus, it appears that the Pilot Program has not caused significant trading interest to migrate from the standardized options market to the FLEX Options market, nor caused, to the best of our knowledge, a large number of investors to use FLEX Options to avoid certain requirements in the standardized market. Based on the current data and size of the FLEX Options market, and the lack of any evidence to the contrary, it would appear that investors are using the FLEX Options market for its intended purpose—to be able to customize certain terms not available in the standardized options market.

The Commission also believes that a logical corollary to making the Pilot Program permanent is to eliminate the minimum value size requirements set forth in Rules 5.32(d)(3)–(4) for transactions in currently-opened FLEX Options series and FLEX Quotes responsive to a request for quotes. In this regard, the Commission notes that the Exchange does not believe that the difference between effecting a transaction in an existing FLEX Option series and effecting a FLEX transaction in a new series is material to the extent that there should be different minimum value sizes for the two types of transactions.[25] In addition, the Exchange believes it would be consistent to apply the same minimum value size to closing transactions so that investors may elect to close just a portion of their FLEX position, without being subject to a minimum value size that may be greater than the equivalent value size necessary to meet their investment objectives.[26] Further, the Exchange believes that it would be consistent to apply the same minimum value size to FLEX Quotes so that market participants may respond to a request for quotes with the precise number of contracts or underlying equivalent value needed to trade with the OTP Holder that submitted the request. The Commission finds no basis under the Act at this time for maintaining a minimum value size requirement for transactions in currently-opened FLEX Option series or FLEX Quotes responsive to a request for quotes, and believes that these changes should be approved for reasons similar to those supporting permanent approval of the Pilot Program. The Commission notes that it is not aware of any problems resulting from the permanent approval of CBOE's pilot eliminating FLEX Option minimum value sizes, which included currently-opened series and FLEX Quotes responsive to a request for quotes. As a result, the Commission believes that it is appropriate under the Act, and would promote just and equitable principles of trade, as well as remove impediments to and perfect the mechanism of a free and open market and a national market system, to replace the current minimum value size requirements for all FLEX Option transactions and FLEX Quotes on the Exchange with a one-contract minimum size.

Existing safeguards—such as position reporting requirements and margin requirements—will continue to apply to

[18] *Id.* The Exchange has submitted a Pilot Report to the Commission as Exhibit 3 to its filing, as well as other, confidential reports of data collected during the Pilot Program. *See* Amendment No. 1, *supra* note 4.

[19] *See* Amendment No. 1, *supra* note 4.

[20] *Id.*

[21] *Id.* The Pilot Report indicates that there were no opening transactions in new series of FLEX Index Options during 2013 that were initiated below the pre-pilot minimum size requirement. The Pilot Report also indicates that no retail or high net worth customers initiated opening transactions on the Exchange in new series of FLEX Options below the pre-pilot minimum value size. The Exchange believes that the lack of participation in the Pilot Program by such customers is due to market structure issues, including but not limited to those surrounding customer priority, and is aware that retail customers initiate FLEX Option transactions at other market centers. *Id.*

[22] *See* Notice, 79 FR 19157.

[23] *Id.*

[24] *See* email dated June 19, 2014 from Glenn H. Gsell, Managing Director, Intercontinental Exchange, NYSE Regulation, Inc. to Michael Bradley and David Michehl, Special Counsels, Division of Trading and Markets, Commission.

[25] *See* Notice, 79 FR 19157.

[26] *Id.* Currently, the minimum value size for closing transactions is 25 contracts in the case of FLEX Equity Options and $1 million Underlying Equivalent Value in the case of FLEX Index Options, or in either case the remaining underlying size or Underlying Equivalent Value on a closing transaction, whichever is less. *See* Rules 5.32(d)(3)–(4).

FLEX Options.[27] Further, as noted above, under Rule 9b–1 under the Act,[28] all customers of a broker-dealer with options accounts approved to trade FLEX Options must receive the ODD, which contains specific disclosures about the characteristics and special risks of trading FLEX Options.[29] In addition, similar to other options, FLEX Options are subject to Trading Permit Holder supervision and suitability requirements, such as in Rules 9.2(b) and 9.18(c), respectively.[30] In addition to ensuring that FLEX Options are suitable for their customers, broker-dealers also must take into account the characteristics of the FLEX market, as compared to the standardized market, when satisfying their best execution obligations. The Commission believes that the safeguards in place are reasonably designed to help mitigate potential risks for retail investors and other market participants investing in FLEX Options.

The Exchange believes that permanently removing the minimum value size requirements for FLEX Options will give investors a more viable, exchange-traded alternative to customized options in the OTC market, which are not subject to minimum value size requirements.[31] Furthermore, the Exchange has represented that broker-dealers have indicated to the Exchange that the minimum value size requirements have prevented them from bringing transactions on the Exchange that are already taking place in the OTC market.[32] Therefore, it appears possible that eliminating the minimum value sizes for all FLEX Options transactions and FLEX Quotes could further incent trading interest in customized options to move from the OTC market to the Exchange. To the extent investors choose to trade FLEX Options on the Exchange in lieu of the OTC market as a result of the permanent removal of the minimum value size requirements, such action should benefit investors. As the Commission has previously noted, there are certain benefits to trading on an exchange, such as enhanced efficiency in initiating and closing out positions, increased market transparency, and heightened contra-party creditworthiness due to the role of the Options Clearing Corporation as issuer and guarantor of FLEX Options.[33]

IV. Solicitation of Comments on Amendment No. 1

Interested persons are invited to submit written data, views, and arguments concerning the foregoing, including whether Amendment No. 1 to the proposed rule change is consistent with the Act. Comments may be submitted by any of the following methods:

Electronic Comments

- Use the Commission's Internet comment form (*http://www.sec.gov/rules/sro.shtml*); or
- Send an email to *rule-comments@sec.gov.* Please include File Number SR–NYSEArca–2014–25 on the subject line.

Paper Comments

- Send paper comments in triplicate to Secretary, Securities and Exchange Commission, 100 F Street NE., Washington, DC 20549–1090.

All submissions should refer to File Number SR–NYSEArca–2014–25. This file number should be included on the subject line if email is used. To help the Commission process and review your comments more efficiently, please use only one method. The Commission will post all comments on the Commission's Internet Web site (*http://www.sec.gov/rules/sro.shtml*). Copies of the submission, all subsequent amendments, all written statements with respect to the proposed rule change that are filed with the Commission, and all written communications relating to the proposed rule change between the Commission and any person, other than those that may be withheld from the public in accordance with the provisions of 5 U.S.C. 552, will be available for Web site viewing and printing in the Commission's Public Reference Room, 100 F Street NE., Washington, DC 20549, on official business days between the hours of 10:00 a.m. and 3:00 p.m. Copies of the filing also will be available for inspection and copying at the principal office of the Exchange. All comments received will be posted without change; the Commission does not edit personal identifying information from submissions. You should submit only information that you wish to make available publicly. All submissions should refer to File Number SR–NYSEArca–2014–25 and should be submitted on or before July 31, 2014.

V. Accelerated Approval of Proposal, as Modified by Amendment No. 1

In Amendment No. 1, the Exchange submitted a revised Pilot Report that corrects an error in the total FLEX Equity Option contract trading volume under the pilot reported in the original Pilot Report, and also makes non-substantive changes to certain descriptive language in the Pilot Report. The Commission believes that these corrections to the Pilot Report do not substantively alter the findings in the Pilot Report or diminish their support for approval of the pilot on a permanent basis. Amendment No. 1 also corrected the purpose section of the Notice to state that all FLEX Index Options are subject to the same Underlying Equivalent Value, and not unique Underlying Equivalent Values applicable to different types of FLEX Index Options as originally stated in the Notice. The Commission believes that this change in Amendment No. 1 is not substantive to the proposal. Accordingly, the Commission also finds good cause, pursuant to Section 19(b)(2) of the Act,[34] for approving the proposed rule change, as modified by Amendment No. 1, prior to the thirtieth day after the date of publication of notice in the **Federal Register.**

VI. Conclusion

In summary, the Commission believes, for the reasons noted above, that the proposed rule change to permanently approve the Pilot Program as well as remove the minimum size requirements for currently-opened FLEX Option series and FLEX Quotes, thereby permanently removing the minimum size requirements for all FLEX Options on the Exchange, is consistent with the Act and Section 6(b)(5) thereunder in particular, and should be approved, as amended. The Exchange has committed, and the Commission expects the Exchange, to continue to monitor the usage of FLEX Options, whether changes need to be made to its rules or the ODD to address any changes in retail FLEX Option participation, and for any other issues that may occur as a result of the elimination of the minimum value sizes on a permanent basis, including whether FLEX Option trades are being used as a surrogate for trading options in the standardized market.[35]

[27] Certain position limit, aggregation and exercise limit requirements continue to apply to FLEX Options in accordance with Rule 5.35 (Position Limits) and Rule 5.36 (Exercise Limits). But the Commission notes that certain FLEX Options do not have position or exercise limits.

[28] 17 CFR 240.9b–1.

[29] *See supra* notes 13 and 16.

[30] *See* Notice, 79 FR 19156.

[31] *Id.*

[32] *Id.*

[33] *See* Securities Exchange Act Release No. 57429 (March 4, 2008), 73 FR 13058 (March 11, 2008) (order approving SR–CBOE–2006–36).

[34] 15 U.S.C. 78s(b)(2).

[35] *See* Notice, 79 FR 19157 (Exchange representing that it will continue to monitor the usage of FLEX Options and whether any changes to its rules or the ODD are necessary).

It is therefore ordered, pursuant to Section 19(b)(2) of the Act,[36] that the proposed rule change (SR–NYSEArca–2014–25) be, and it hereby is, approved, on an accelerated basis, as amended.

For the Commission, by the Division of Trading and Markets, pursuant to delegated authority.[37]

Jill M. Peterson,

Assistant Secretary.

[FR Doc. 2014–16096 Filed 7–9–14; 8:45 am]

BILLING CODE 8011–01–P

SECURITIES AND EXCHANGE COMMISSION

[Release No. 34–72538; File No. SR–NASDAQ–2014–067]

Self-Regulatory Organizations; The NASDAQ Stock Market LLC; Notice of Filing of Proposed Rule Change to Rule 5305 To Eliminate the Automatic Transfer of Companies From The NASDAQ Global Market to The NASDAQ Global Select Market

July 3, 2014.

Pursuant to Section 19(b)(1) of the Securities Exchange Act of 1934 (''Act''),[1] and Rule 19b–4 thereunder,[2] notice is hereby given that on June 25, 2014, The NASDAQ Stock Market LLC (''NASDAQ'' or ''Exchange'') filed with the Securities and Exchange Commission (''Commission'') the proposed rule change as described in Items I, II, and III below, which Items have been prepared by NASDAQ. The Commission is publishing this notice to solicit comments on the proposed rule change from interested persons.

I. Self-Regulatory Organization's Statement of the Terms of Substance of the Proposed Rule Change

NASDAQ proposes to modify Rule 5305 to eliminate the automatic transfer of companies from The NASDAQ Global Market to The NASDAQ Global Select Market.

The text of the proposed rule change is below. Proposed new language is italicized; proposed deletions are bracketed.[3]

* * * * *

5305. General Information for The Nasdaq Global Select Market

(a) No change.

(b) *Reserved.* [Each October, Nasdaq will review the qualifications of all securities listed on the Nasdaq Global Market that are not included in the Nasdaq Global Select Market. Any security that meets the requirements for initial listing on the Nasdaq Global Select Market contained in Rule 5315 at the time of this review will be transferred to the Global Select Market the following January, provided it meets the continued listing criteria at that time. A Company will not owe any application or entry fees in connection with such a transfer.]

(c)–(f) No change.

* * * * *

II. Self-Regulatory Organization's Statement of the Purpose of, and Statutory Basis for, the Proposed Rule Change

In its filing with the Commission, NASDAQ included statements concerning the purpose of and basis for the proposed rule change and discussed any comments it received on the proposed rule change. The text of these statements may be examined at the places specified in Item IV below. NASDAQ has prepared summaries, set forth in Sections A, B, and C below, of the most significant aspects of such statements.

A. Self-Regulatory Organization's Statement of the Purpose of, and Statutory Basis for, the Proposed Rule Change

1. Purpose

NASDAQ consists of three listing tiers: The NASDAQ Global Select Market, The NASDAQ Global Market, and The NASDAQ Capital Market. Each tier has different listing requirements, designed to appeal to companies with different characteristics.

When NASDAQ created the Global Select tier in 2006, it implemented a process whereby NASDAQ conducts an annual review of all Global Market listed companies' qualifications and automatically places qualified Global Market companies in the Global Select segment the following January.[4] While this annual review occurs automatically, a Global Market listed company may also apply to list on the Global Select Market at any time. Companies transferring from the Global Market to the Global Select Market, whether as part of the annual review process or upon their own application, are not assessed entry or application fees.

NASDAQ initiated this automatic review process in 2006 to provide a proactive mechanism to notify companies about their qualification for this new market tier, which was then unfamiliar to companies. NASDAQ believes that companies generally are now familiar with the three tiers of NASDAQ and that the automatic review and transfer to the Global Select Market is no longer necessary. In addition, NASDAQ also believed that the automatic annual review would achieve economies of scale by allowing review of all Global Market companies at the same time, rather than individually. However, in recent years there have been fewer companies that qualify for transfer[5] and, as such, these economies of scale are reduced. Finally, a Global Market company may still seek to transfer to the Global Select tier at any point in the year by submitting a listing application. Accordingly, NASDAQ proposes to eliminate the automatic annual review and will review Global Market companies for transfer to the Global Select Market only upon application by the company. NASDAQ acknowledges that, as a result, companies will have to monitor whether they qualify to transfer rather than rely on NASDAQ's automatic review. But, while a company does not currently have to submit an application, much of the information required for the application is pre-populated for a company, and NASDAQ, therefore, does not believe that the application is burdensome.[6]

NASDAQ proposes to implement this change upon approval. As such, companies transferred in January 2014 would be the last group automatically transferred upon NASDAQ's review under existing Rule 5305(b). NASDAQ will notify Global Market listed companies about this change via an email communication. A company can continue to request transfer at any point during the year, and the review of an application to transfer from the Global Market to the Global Select Market will continue to be conducted without cost to the issuer. Qualified companies also will not owe any entry or other fees in connection with a transfer from the

[36] 15 U.S.C. 78s(b)(2).

[37] 17 CFR 200.30–3(a)(12).

[1] 15 U.S.C. 78s(b)(1).

[2] 17 CFR 240.19b–4.

[3] Changes are marked to the rule text that appears in the electronic manual of Nasdaq found at *http://nasdaqomx.cchwallstreet.com.*

[4] This review is conducted in November and December based on data as of October 31.

[5] Based on NASDAQ's automatic review, 228 securities transferred in January 2011. This number reflected a number of issues that first qualified based on a new listing standard adopted during 2010. In 2012, 2013 and 2014, between 58 and 77 securities transferred each year.

[6] The application to transfer from the Global Market to the Global Select Market is available on the NASDAQ Listing Center (*https://listingcenter.nasdaqomx.com*) and is completed online. Based on a company's symbol and CIK code or CUSIP number, the application is pre-populated with the company's identifying information. The applicant generally will only need to provide contact information, affirm the accuracy of the information in the application and accept the Listing Agreement.

Global Market to the Global Select Market.

2. Statutory Basis

NASDAQ believes that the proposed rule change is consistent with the provisions of Section 6 of the Act,[7] in general and with Section 6(b)(5) of the Act,[8] in particular in that it is designed to prevent fraudulent and manipulative acts and practices, to promote just and equitable principles of trade, to foster cooperation and coordination with persons engaged in regulating, clearing, settling, processing information with respect to, and facilitating transactions in securities, to remove impediments to and perfect the mechanism of a free and open market and a national market system, and, in general, to protect investors and the public interest. The proposed rule change is designed to eliminate the annual review of companies for transfer from the Global Market to the Global Select Market, which NASDAQ believes is an unnecessary process. This would remove an unnecessary burden on NASDAQ staff. However, given the ease of the automated application process, it would continue to be simple for qualified companies to request review at any time, and without cost. Qualified companies that apply could transfer immediately upon confirmation by NASDAQ staff that the company meets the listing requirements. NASDAQ recognizes that companies will have to monitor whether they qualify for transfer, rather than rely upon NASDAQ's automatic review. However, on balance, NASDAQ does not believe that this burden is significant enough to warrant continuing the automatic transfer process.

B. Self-Regulatory Organization's Statement on Burden on Competition

NASDAQ does not believe that the proposed rule change will result in any burden on competition that is not necessary or appropriate in furtherance of the purposes of the Act, as amended. The proposed rule change would simply require an eligible company to initiate the transfer from the Global Market to the Global Select Market, which will result in no additional burden on competition between NASDAQ and other exchanges.

C. Self-Regulatory Organization's Statement on Comments on the Proposed Rule Change Received From Members, Participants, or Others

Written comments were neither solicited nor received.

III. Date of Effectiveness of the Proposed Rule Change and Timing for Commission Action

Within 45 days of the date of publication of this notice in the **Federal Register** or within such longer period (i) as the Commission may designate up to 90 days of such date if it finds such longer period to be appropriate and publishes its reasons for so finding or (ii) as to which the self-regulatory organization consents, the Commission will:

(A) By order approve or disapprove the proposed rule change, or

(B) institute proceedings to determine whether the proposed rule change should be disapproved.

IV. Solicitation of Comments

Interested persons are invited to submit written data, views, and arguments concerning the foregoing, including whether the proposed rule change is consistent with the Act. Comments may be submitted by any of the following methods:

Electronic Comments

- Use the Commission's Internet comment form (*http://www.sec.gov/rules/sro.shtml*); or
- Send an email to *rule-comments@sec.gov*. Please include File Number SR–NASDAQ–2014–067 on the subject line.

Paper Comments

- Send paper comments in triplicate to Secretary, Securities and Exchange Commission, 100 F Street NE., Washington, DC 20549–1090.

All submissions should refer to File Number SR–NASDAQ–2014–067. This file number should be included on the subject line if email is used. To help the Commission process and review your comments more efficiently, please use only one method. The Commission will post all comments on the Commission's Internet Web site (*http://www.sec.gov/rules/sro.shtml*). Copies of the submission, all subsequent amendments, all written statements with respect to the proposed rule change that are filed with the Commission, and all written communications relating to the proposed rule change between the Commission and any person, other than those that may be withheld from the public in accordance with the provisions of 5 U.S.C. 552, will be available for Web site viewing and printing in the Commission's Public Reference Room, 100 F Street NE., Washington, DC 20549, on official business days between the hours of 10:00 a.m. and 3:00 p.m. Copies of the filing also will be available for inspection and copying at the principal office of the Exchange. All comments received will be posted without change; the Commission does not edit personal identifying information from submissions. You should submit only information that you wish to make available publicly. All submissions should refer to File Number SR–NASDAQ–2014–067 and should be submitted on or before July 31, 2014.

For the Commission, by the Division of Trading and Markets, pursuant to delegated authority.[9]

Jill M. Peterson,

Assistant Secretary.

[FR Doc. 2014–16097 Filed 7–9–14; 8:45 am]

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SECURITIES AND EXCHANGE COMMISSION

[Release No. 34–72539; File No. SR–CBOE–2014–052]

Self-Regulatory Organizations; Chicago Board Options Exchange, Incorporated; Notice of Filing and Immediate Effectiveness of a Proposed Rule Change Relating To Amending Rules Governing the Short Term Option Series Program

July 3, 2014.

Pursuant to Section 19(b)(1) of the Securities Exchange Act of 1934 (the ''Act''),[1] and Rule 19b–4 thereunder,[2] notice is hereby given that, on July 2, 2014, Chicago Board Options Exchange, Incorporated (the ''Exchange'' or ''CBOE'') filed with the Securities and Exchange Commission (the ''Commission'') the proposed rule change as described in Items I and II below, which Items have been prepared by the Exchange. The Commission is publishing this notice to solicit comments on the proposed rule change from interested persons.

I. Self-Regulatory Organization's Statement of the Terms of Substance of the Proposed Rule Change

The Exchange proposes to amend its rules governing the Short Term Option Series Program to introduce finer strike price intervals for standard expiration

[7] 15 U.S.C. 78f.

[8] 15 U.S.C. 78f(b)(5).

[9] 17 CFR 200.30–3(a)(12).

[1] 15 U.S.C. 78s(b)(1).

[2] 17 CFR 240.19b–4.

contracts in option classes that also have short term options listed on them (''related non-short term options''). The text of the proposed rule change is available on the Exchange's Web site (*http://www.cboe.com/AboutCBOE/CBOELegalRegulatoryHome.aspx*), at the Exchange's Office of the Secretary, and at the Commission's Public Reference Room.

II. Self-Regulatory Organization's Statement of the Purpose of, and Statutory Basis for, the Proposed Rule Change

In its filing with the Commission, the Exchange included statements concerning the purpose of and basis for the proposed rule change and discussed any comments it received on the proposed rule change. The text of these statements may be examined at the places specified in Item IV below. The Exchange has prepared summaries, set forth in sections A, B, and C below, of the most significant aspects of such statements.

A. Self-Regulatory Organization's Statement of the Purpose of, and Statutory Basis for, the Proposed Rule Change

1. Purpose

The Exchange is proposing to amend its rules governing the Short Term Option Series (''Weeklys'') Program to introduce finer strike price intervals for standard expiration contracts in related non-short term options. In particular, the Exchange is proposing to amend its rules to permit the listing of related non-short term options during the month prior to expiration in the same strike price intervals as allowed for short term option series.

Under CBOE's current rules, the Exchange may list Weeklys in up to fifty option classes,[3] including equity and index option classes,[4] in addition to option classes that are selected by other securities exchanges that employ a similar program under their respective rules. For each of these option classes, the Exchange may list five short term option expiration dates at any given time, not counting monthly or quarterly expirations.[5] Specifically, on any Thursday or Friday that is a business day, the Exchange may list short term option series in designated option classes that expire at the close of business on each of the next five Fridays that are business days and are not Fridays in which monthly or quarterly options expire.[6] These short term option series, which can be several weeks or more from expiration, may be listed in strike price intervals of $0.50, $1, or $2.50, with the finer strike price intervals being offered for lower priced securities, and for options that trade in the Exchange's dollar strike program.[7] More specifically, the Exchange may list Weeklys in $0.50 intervals for strike prices less than $75, or for option classes that trade in one dollar increments in the related non-short term option, $1 intervals for strike prices that are between $75 and $150, and $2.50 intervals for strike prices above $150.[8]

The Exchange may also list standard expiration contracts, which are listed in accordance with the regular monthly expiration cycle. These standard expiration contracts must be listed in wider strike price intervals of $2.50, $5, or $10,[9] though the Exchange also operates strike price programs, such as the dollar strike program mentioned above,[10] that allow the Exchange to list a limited number of option classes in finer strike price intervals. In general, the Exchange must list standard expiration contracts in $2.50 intervals for strike prices of $25 or less, $5 intervals for strike prices greater than $25, and $10 intervals for strike prices greater than $200.[11] During the week prior to expiration only, the Exchange is permitted to list related non-short term option contracts in the narrower strike price intervals available for short term option series.[12] Since this exception to the standard strike price interval is available only during the week prior to expiration, however, standard expiration contracts regularly trade at significantly wider intervals than their weekly counterparts, as illustrated below.

For example, assume ABC is trading at $56.54 and the monthly expiration contract is three weeks to expiration. Assume also that CBOE has listed all available short term option expirations and thus has short term option series listed on ABC for weeks one, two, four, five, and six. Each of the five weekly ABC expiration dates can be listed with strike prices in $0.50 intervals, including, for example, the $56.50 at-the-money strike. Because the monthly expiration contract has three weeks to expiration, however, the near-the-money strikes must be listed in $5 intervals unless those options are eligible for one of the Exchange's other strike price programs. In this instance, that would mean that investors would be limited to choosing, for example, between $55 and $60 strike prices instead of the $56.50 at-the-money strike available for Weeklys. This is the case even though contracts on the same option class that expire both several weeks before and several weeks after the monthly expiration are eligible for finer strike price intervals. Under the proposed rule change, the Exchange would be permitted to list the related non-short term option on ABC, which is less than a month to expiration, in the same strike price intervals as allowed for short term option series. Thus, the Exchange would be able to list, and investors would be able to trade, all expirations described above with the same uniform $0.50 strike price interval.

As proposed, the Exchange would be permitted to begin listing the monthly expiration contract in these narrower intervals at any time during the month prior to expiration, which begins on the first trading day after the prior month's expiration date, subject to the provisions of other Exchange rules. For example, since the April 2014 monthly option expired on Saturday, April 19, the proposed rule change would allow the Exchange to list the May 2014 monthly option in short term option intervals starting Monday, April 21.

CBOE believes that introducing consistent strike price intervals for Weeklys and related non-short term options during the month prior to expiration will benefit investors by giving them more flexibility to closely tailor their investment decisions. The Exchange also believes that the proposed rule change will provide the investing public and other market participants with additional opportunities to hedge their investments, thus allowing these investors to better manage their risk exposure.

2. Statutory Basis

The Exchange believes the proposed rule change is consistent with the Securities Exchange Act of 1934 (the ''Act'') and the rules and regulations

[3] *See* Exchange Rule 5.5(d)(1).

[4] *Id. See also* Exchange Rule 24.9(a)(2)(A)(i).

[5] *See* Exchange Rule 5.5(d); Exchange Rule 24.9(a)(2)(A).

[6] *Id.*

[7] *See* Exchange Rule 5.5(d)(5); Exchange Rule 24.9(a)(2)(A)(v).

[8] *Id.* Strike price intervals of $2.50 are only available for non-index options. Short term index option contracts are subject to the same strike price intervals as non-short term options for strike prices above $150. *See* Securities Exchange Act Release No. 71079 (December 16, 2013), 78 FR 77188 (December 20, 2013) (SR–CBOE–2013–121).

[9] *See* Exchange Rule 5.5.01.

[10] *See* Exchange Rule 5.5(.01)(a), which allows CBOE to designate up to 150 option classes on individual classes on individual stocks to be traded in $1 strike price intervals where the strike price is between $50 and $1. *See* also Exchange Rule 5.5(.01)(b) ($0.50 Strike Program) and Exchange Rule 5.5(.01)(c) ($2.50 Strike Program).

[11] *See* Exchange Rule 5.5.01.

[12] *See* Exchange Rule 5.5(d)(6); Exchange Rule 24.9(a)(2)(A)(vi).

thereunder applicable to the Exchange and, in particular, the requirements of Section 6(b) of the Act.[13] Specifically, the Exchange believes the proposed rule change is consistent with the Section 6(b)(5)[14] requirements that the rules of an exchange be designed to prevent fraudulent and manipulative acts and practices, to promote just and equitable principles of trade, to foster cooperation and coordination with persons engaged in regulating, clearing, settling, processing information with respect to, and facilitating transactions in securities, to remove impediments to and perfect the mechanism of a free and open market and a national market system, and, in general, to protect investors and the public interest. Additionally, the Exchange believes the proposed rule change is consistent with the Section 6(b)(5)[15] requirement that the rules of an exchange not be designed to permit unfair discrimination between customers, issuers, brokers, or dealers.

As noted above, standard expiration options currently trade in wider intervals than their weekly counterparts, except during the week prior to expiration. This creates a situation where contracts on the same option class that expire both several weeks before and several weeks after the standard expiration are eligible to trade in strike price intervals that the standard expiration contract is not. When the Exchange originally filed to list related non-short term options in the same intervals as Weeklys in the same option class during the week prior to expiration,[16] the Exchange was limited to listing one short term option expiration date at a time. Thus, there was no inconsistency between standard expiration contracts, which traded in finer intervals in the week prior to expiration, and Weeklys, which were only listed on the week prior to expiration. The Short Term Option Series Program has since grown in response to customer demand, and the Exchange is now permitted to list up to five short term option expiration dates in addition to standard expiration options.[17] There is continuing strong customer demand to have the ability to execute hedging and trading strategies in the finer strike price intervals available in Weeklys, and the Exchange believes that the proposed rule change will increase market efficiency by harmonizing strike price intervals for contracts that are close to expiration, whether those contracts happen to be listed pursuant to weekly or monthly expiration cycles.

The Exchange notes that, in addition to listing standard expiration contracts in short term option intervals during the expiration week, it already operates several programs that allow for strike price intervals for standard expiration contracts that range from $0.50 to $2.50.[18] The Exchange believes that each of these programs has been successful but notes that limitations on the number of option classes that may be selected for each of these programs means that many standard expiration contracts must still be listed in wider intervals than their short term option counterparts. For example, the $0.50 strike price program, which offers the narrowest strike price interval, only permits the Exchange to designate up to 20 option classes to trade in $0.50 intervals in addition to option classes selected by other exchanges that employ a similar program.[19] Thus, the proposed rules are necessary to fill the gap between strike price intervals allowed for Weeklys and related non-short term options. The Exchange believes that the proposed rule change, like the other strike price programs currently offered by the Exchange, will benefit investors by giving them more flexibility to closely tailor their investment and hedging decisions.

With regard to the impact of this proposal on system capacity, the Exchange has analyzed its capacity and represents that it and the Options Price Reporting Authority (''OPRA'') have the necessary systems capacity to handle any potential additional traffic associated with the proposed rule change. The Exchange believes that its members will not have capacity issues as a result of this proposal. The Exchange also represents that it does not believe that this expansion will cause fragmentation of liquidity.

B. Self-Regulatory Organization's Statement on Burden on Competition

CBOE does not believe that the proposed rule change will impose any burden on competition that is not necessary or appropriate in furtherance of the purposes of the Act. To the contrary, the Exchange believes that the proposed rule change will result in additional investment options and opportunities to achieve the investment objectives of market participants seeking efficient trading and hedging vehicles, to the benefit of investors, market participants, and the marketplace in general. Specifically, the Exchange believes that investors will benefit from the availability of strike price intervals in standard expiration contracts that match the intervals currently permitted for short term options with a similar time to expiration, and from the clarification regarding the listing of additional series during the week of expiration.

C. Self-Regulatory Organization's Statement on Comments on the Proposed Rule Change Received From Members, Participants, or Others

The Exchange neither solicited nor received comments on the proposed rule change.

III. Date of Effectiveness of the Proposed Rule Change and Timing for Commission Action

Because the proposed rule change does not (i) significantly affect the protection of investors or the public interest; (ii) impose any significant burden on competition; and (iii) become operative for 30 days from the date on which it was filed, or such shorter time as the Commission may designate, the proposed rule change has become effective pursuant to Section 19(b)(3)(A) of the Act[20] and Rule 19b–4(f)(6) thereunder.[21]

The Exchange has asked the Commission to waive the 30-day operative delay so that the proposal may become operative immediately upon filing. The Exchange stated that waiver of this requirement would allow the Exchange to compete with other exchanges proposing similar changes without putting the Exchange at a competitive disadvantage. The Exchange also stated that the proposal would foster competition by allowing finer strike price intervals for standard expiration contracts in related non-short term options to occur at more than one exchange. For these reasons, the Commission believes that the proposed rule change presents no novel issues and that waiver of the 30-day operative delay is consistent with the protection of investors and the public interest; and will allow the Exchange to remain competitive with other exchanges.

[13] 15 U.S.C. 78f(b).

[14] 15 U.S.C. 78f(b)(5).

[15] *Id.*

[16] *See* Securities Exchange Act Release No. 68074 (October 19, 2012), 77 FR 65241 (October 25, 2012) (SR–CBOE–2012–092).

[17] *See* Securities Exchange Act Release No. 71005 (December 6, 2013), 78 FR 75395 (December 11, 2013) (SR–CBOE–2013–96).

[18] *See supra* note 8.

[19] *See* Exchange Rule 5.5(.01)(b).

[20] 15 U.S.C. 78s(b)(3)(A).

[21] 17 CFR 240.19b–4(f)(6). As required under Rule 19b–4(f)(6)(iii), the Exchange provided the Commission with written notice of its intent to file the proposed rule change, along with a brief description and the text of the proposed rule change, at least five business days prior to the date of filing of the proposed rule change, or such shorter time as designated by the Commission.

Therefore, the Commission designates the proposed rule change to be operative upon filing.[22]

At any time within 60 days of the filing of the proposed rule change, the Commission summarily may temporarily suspend such rule change if it appears to the Commission that such action is necessary or appropriate in the public interest, for the protection of investors, or otherwise in furtherance of the purposes of the Act. If the Commission takes such action, the Commission shall institute proceedings to determine whether the proposed rule should be approved or disapproved.

IV. Solicitation of Comments

Interested persons are invited to submit written data, views and arguments concerning the foregoing, including whether the proposed rule change is consistent with the Act. Comments may be submitted by any of the following methods:

Electronic Comments

- Use the Commission's Internet comment form (*http://www.sec.gov/rules/sro.shtml*); or
- Send an email to *rule-comments@sec.gov.* Please include File Number SR–CBOE–2014–052 on the subject line.

Paper Comments

- Send paper comments in triplicate to Secretary, Securities and Exchange Commission, 100 F Street, NE., Washington, DC 20549–1090.

All submissions should refer to File Number SR–CBOE–2014–052. This file number should be included on the subject line if email is used. To help the Commission process and review your comments more efficiently, please use only one method. The Commission will post all comments on the Commission's Internet Web site (*http://www.sec.gov/rules/sro.shtml*). Copies of the submission, all subsequent amendments, all written statements with respect to the proposed rule change that are filed with the Commission, and all written communications relating to the proposed rule change between the Commission and any person, other than those that may be withheld from the public in accordance with the provisions of 5 U.S.C. 552, will be available for Web site viewing and printing in the Commission's Public Reference Room, 100 F Street NE., Washington, DC 20549, on official business days between the hours of 10:00 a.m. and 3:00 p.m. Copies of the filing also will be available for inspection and copying at the principal office of the Exchange. All comments received will be posted without change; the Commission does not edit personal identifying information from submissions. You should submit only information that you wish to make available publicly. All submissions should refer to File Number SR–CBOE–2014–052 and should be submitted on or before July 31, 2014.

For the Commission, by the Division of Trading and Markets, pursuant to delegated authority.[23]

Jill M. Peterson,

Assistant Secretary.

[FR Doc. 2014–16098 Filed 7–9–14; 8:45 am]

BILLING CODE 8011–01–P

[22] For purposes only of waiving the 30-day operative delay, the Commission has also considered the proposed rule's impact on efficiency, competition, and capital formation. *See* 15 U.S.C. 78c(f).

[23] 17 CFR 200.30–3(a)(12).

SECURITIES AND EXCHANGE COMMISSION

[Release No. 34–72533; File No. SR–EDGA–2014–15]

Self-Regulatory Organizations; EDGA Exchange, Inc.; Notice of Filing and Immediate Effectiveness of Proposed Rule Change Relating to Amendments To the EDGA Exchange, Inc. Fee Schedule

July 3, 2014.

Pursuant to Section 19(b)(1) of the Securities Exchange Act of 1934 (the ''Act''),[1] and Rule 19b–4 thereunder,[2] notice is hereby given that on June 30, 2014, EDGA Exchange, Inc. (the ''Exchange'' or ''EDGA'') filed with the Securities and Exchange Commission (''Commission'') the proposed rule change as described in Items I, II and III below, which items have been prepared by the self-regulatory organization. The Commission is publishing this notice to solicit comments on the proposed rule change from interested persons.

I. Self-Regulatory Organization's Statement of the Terms of Substance of the Proposed Rule Change

The Exchange proposes to amend its fees and rebates applicable to Members [3] of the Exchange pursuant to EDGA Rule 15.1(a) and (c) (''Fee Schedule'') to decrease the fee for orders yielding Flag K, which routes to NASDAQ OMX PSX (''PSX'') using ROUC or ROUE routing strategies. The text of the proposed rule change is available on the Exchange's Internet Web site at *www.directedge.com*, at the Exchange's principal office, and at the Public Reference Room of the Commission.

II. Self-Regulatory Organization's Statement of the Purpose of, and Statutory Basis for, the Proposed Rule Change

In its filing with the Commission, the self-regulatory organization included statements concerning the purpose of, and basis for, the proposed rule change and discussed any comments it received on the proposed rule change. The text of these statements may be examined at the places specified in Item IV below. The self-regulatory organization has prepared summaries, set forth in sections A, B and C below, of the most significant aspects of such statements.

A. Self-Regulatory Organization's Statement of the Purpose of, and the Statutory Basis for, the Proposed Rule Change

1. Purpose

The Exchange proposes to amend its Fee Schedule to decrease the fee for orders yielding Flag K, which routes to PSX using ROUC or ROUE routing strategies. In securities priced at or above $1.00, the Exchange currently assesses a fee of $0.0030 per share for Members' orders that yield Flag K. The Exchange proposes to amend its Fee Schedule to decrease this fee to $0.0026 per share from $0.0030 per share. The proposed change represents a pass through of the rate that Direct Edge ECN LLC (d/b/a DE Route) (''DE Route''), the Exchange's affiliated routing broker-dealer, is charged for routing orders to PSX when it does not qualify for a volume tiered reduced fee. The proposed change is in response to PSX's July 2014 fee change where PSX decreased the fee to remove liquidity via routable order types it charges its customers, from a fee of $0.0030 per share to a fee of $0.0026 per share.[4] When DE Route routes to PSX, it will now be charged a standard rate of $0.0026 per share.[5] DE Route will pass through this rate on PSX to the Exchange and the Exchange, in turn, will pass through this rate to its

[1] 15 U.S.C. 78s(b)(1).

[2] 17 CFR 240.19b–4.

[3] The term ''Member'' is defined as ''any registered broker or dealer, or any person associated with a registered broker or dealer, that has been admitted to membership in the Exchange. A Member will have the status of a ''member'' of the Exchange as that term is defined in Section 3(a)(3) of the Act.'' *See* Exchange Rule 1.5(n).

[4] *See* PSX, Equity Trader Alert 2014–45, Modifications to PSX Pricing Effective July 1, 2014, dated June 26, 2014, *available at http://www.nasdaqtrader.com/TraderNews.aspx?id=ETA2014–45.*

[5] The Exchange notes that to the extent DE Route does or does not achieve any volume tiered reduced fee on PSX, its rate for Flag K will not change.

Members. The Exchange proposes to implement this amendment to its Fee Schedule on July 1, 2014.

2. Statutory Basis

The Exchange believes that the proposed rule change is consistent with the objectives of Section 6 of the Act,[6] in general, and furthers the objectives of Section 6(b)(4),[7] in particular, as it is designed to provide for the equitable allocation of reasonable dues, fees and other charges among its Members and other persons using its facilities. The Exchange believes that its proposal to decrease the pass through fee for Members' orders that yield Flag K from $0.0030 per share to $0.0026 per share represents an equitable allocation of reasonable dues, fees, and other charges among Members and other persons using its facilities because the Exchange does not levy additional fees or offer additional rebates for orders that it routes to PSX through DE Route. Prior to PSX's July 2014 fee change, PSX charged its members, which includes DE Route, a fee of $0.0030 per share to remove liquidity using non-routable order types, which DE Route passed through to the Exchange and the Exchange charged to its Members. In July 2104, PSX decreased this fee from $0.0030 per share to $0.0026 per share.[8] Therefore, the Exchange believes that its proposal to pass through a fee of $0.0026 per share for orders that yield Flag K is equitable and reasonable because it accounts for the pricing changes on PSX. In addition, the proposal allows the Exchange to charge its Members a pass-through rate for orders that are routed to PSX. Furthermore, the Exchange notes that routing through DE Route is voluntary. Lastly, the Exchange also believes that the proposed amendment is non-discriminatory because it applies uniformly to all Members.

B. Self-Regulatory Organization's Statement on Burden on Competition

These proposed rule changes do not impose any burden on competition that is not necessary or appropriate in furtherance of the purposes of the Act. The Exchange does not believe that any of these changes represent a significant departure from previous pricing offered by the Exchange or pricing offered by the Exchange's competitors. Additionally, Members may opt to disfavor EDGA's pricing if they believe that alternatives offer them better value. Accordingly, the Exchange does not believe that the proposed changes will impair the ability of Members or competing venues to maintain their competitive standing in the financial markets. The Exchange believes that its proposal to pass through a fee of $0.0026 per share for Members' orders that yield Flag K would increase intermarket competition because it offers customers an alternative means to route to PSX for the same price as entering orders on PSX directly. The Exchange believes that its proposal would not burden intramarket competition because the proposed rate would apply uniformly to all Members.

C. Self-Regulatory Organization's Statement on Comments on the Proposed Rule Change Received From Members, Participants, or Others

The Exchange has not solicited, and does not intend to solicit, comments on this proposed rule change. The Exchange has not received any unsolicited written comments from Members or other interested parties.

III. Date of Effectiveness of the Proposed Rule Change and Timing for Commission Action

The foregoing rule change has become effective pursuant to Section 19(b)(3)(A) of the Act[9] and Rule 19b–4(f)(2)[10] thereunder. At any time within 60 days of the filing of such proposed rule change, the Commission summarily may temporarily suspend such rule change if it appears to the Commission that such action is necessary or appropriate in the public interest, for the protection of investors, or otherwise in furtherance of the purposes of the Act.

IV. Solicitation of Comments

Interested persons are invited to submit written data, views, and arguments concerning the foregoing, including whether the proposed rule change is consistent with the Act. Comments may be submitted by any of the following methods:

Electronic Comments

- Use the Commission's Internet comment form (*http://www.sec.gov/rules/sro.shtml*); or
- Send an email to *rule-comments@sec.gov.* Please include File Number SR–EDGA–2014–15 on the subject line.

Paper Comments

- Send paper comments in triplicate to Secretary, Securities and Exchange Commission, 100 F Street NE., Washington, DC 20549–1090.

All submissions should refer to File Number SR–EDGA–2014–15. This file number should be included on the subject line if email is used. To help the Commission process and review your comments more efficiently, please use only one method. The Commission will post all comments on the Commission's Internet Web site (*http://www.sec.gov/rules/sro.shtml*). Copies of the submission, all subsequent amendments, all written statements with respect to the proposed rule change that are filed with the Commission, and all written communications relating to the proposed rule change between the Commission and any person, other than those that may be withheld from the public in accordance with the provisions of 5 U.S.C. 552, will be available for Web site viewing and printing in the Commission's Public Reference Room, 100 F Street NE., Washington, DC 20549, on official business days between the hours of 10:00 a.m. and 3:00 p.m. Copies of the filing also will be available for inspection and copying at the principal office of the Exchange. All comments received will be posted without change; the Commission does not edit personal identifying information from submissions. You should submit only information that you wish to make available publicly. All submissions should refer to File Number SR–EDGA–2014–15, and should be submitted on or before July 31, 2014.

For the Commission, by the Division of Trading and Markets, pursuant to delegated authority.[11]

Jill M. Peterson,

Assistant Secretary.

[FR Doc. 2014–16094 Filed 7–9–14; 8:45 am]

BILLING CODE 8011–01–P

[6] 15 U.S.C. 78f.

[7] 15 U.S.C. 78f(b)(4).

[8] *See* PSX, Equity Trader Alert 2014–45, Modifications to PSX Pricing Effective July 1, 2014, dated June 26, 2014, *available at http://www.nasdaqtrader.com/TraderNews.aspx?id=ETA2014–45.*

[9] 15 U.S.C. 78s(b)(3)(A).

[10] 17 CFR 240.19b–4(f)(2).

[11] 17 CFR 200.30–3(a)(12).

SMALL BUSINESS ADMINISTRATION

Regulatory Fairness Hearing; Region IX—Cupertino, California

AGENCY: U.S. Small Business Administration (SBA).

ACTION: Notice of open Hearing of Region IX Small Business Owners in Cupertino, CA.

SUMMARY: The SBA, Office of the National Ombudsman is issuing this notice to announce the location, date and time of the Cupertino, CA Regulatory Fairness Hearing. This hearing is open to the public.

DATES: The hearing will be held on Thursday, July 31, 2014, from 9:00 a.m. to 1:00 p.m. (PST).

ADDRESSES: The meeting will be at the Cupertino Community Hall, 10350 Torre Avenue, Cupertino, CA 95014.

SUPPLEMENTARY INFORMATION: Pursuant to the Small Business Regulatory Enforcement Fairness Act (Pub. L. 104–121), Sec. 222, SBA announces the meeting for Small Business Owners, Business Organizations, Trade Associations, Chambers of Commerce and related organizations serving small business concerns to report experiences regarding unfair or excessive Federal regulatory enforcement issues affecting their members.

FOR FURTHER INFORMATION CONTACT: The hearing is open to the public; however, advance notice of attendance is requested. Anyone wishing to attend and/or make a presentation at the Cupertino, CA hearing must contact José Méndez by July 24, 2014 in writing, by fax or email in order to be placed on the agenda. For further information, please contact José Méndez, Case Management Specialist, Office of the National Ombudsman, 409 3rd Street SW., Suite 7125, Washington, DC 20416, by phone (202) 205–6178 and fax (202) 481–5719. Additionally, if you need accommodations because of a disability, translation services, or require additional information, please contact José Méndez as well.

For more information on the Office of the National Ombudsman, see our Web site at *www.sba.gov/ombudsman.*

Dated: July 3, 2014.

Diana Doukas,

SBA Committee Management Officer.

[FR Doc. 2014–16143 Filed 7–9–14; 8:45 am]

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SMALL BUSINESS ADMINISTRATION

Small Business Investment Company (SBIC) Program: Update to TechNote 9: Guidance for Obtaining a Regulatory Exemption for Overline Investments

AGENCY: Small Business Administration.

ACTION: Notice; request for comments on updated TechNote 9: Guidance for Obtaining a Regulatory Exemption for Overline Investments.

SUMMARY: The Small Business Administration (SBA) intends to update TechNote 9: Guidance for Obtaining a Regulatory Exemption for Overline Investments (TechNote 9) to conform to changes to the overline regulation that have occurred and explain the process SBICs have to follow to obtain SBA's prior written exemption for an overline investment. The SBA welcomes comments from the public on how to achieve these objectives.

DATES: Comments on TechNote 9 must be submitted within 30 days from the date of this public notice.

ADDRESSES: Submit your comments, identified by Docket ID No. SBA–2014–0010, at *www.regulations.gov.* Comments may only be submitted at this Web address; follow the instructions on the Web site for submitting comments.

All comments received will be included in the public docket without change and will be available online at *www.regulations.gov.* All submissions, including attachments and other supporting materials, will become part of the public record and subject to public disclosure. Sensitive information and information that you consider to be Confidential Business Information or otherwise protected should not be included. Submissions will not be edited to remove any identifying or contact information.

FOR FURTHER INFORMATION CONTACT: Paul Salgado, Office of SBIC Operations, at (202) 205–7605.

SUPPLEMENTARY INFORMATION: The SBIC Program is one of the financial assistance programs available through SBA. The SBIC Program was established under the Small Business Investment Act of 1958, as amended. SBICs are privately owned and managed investment funds, licensed and regulated by SBA, that use their own capital plus funds borrowed with an SBA guarantee to make equity and debt investments in qualifying small businesses.

In April 2002, SBA issued TechNote 9 to establish general guidelines regarding overline investments and to describe the process for obtaining SBA's prior written approval for overline investments pursuant to the SBA regulations governing the SBIC Program (13 CFR part 107). Since that time, significant changes to the overline regulations have occurred. In addition, SBICs must now obtain SBA's prior written exemption to make an overline investment. This TechNote 9 updates and replaces the April 2002 TechNote 9 to describe the general changes to the regulation and explain the process SBICs have to follow to obtain SBA's prior written exemption for an overline investment. SBICs are required to follow the procedures in TechNote 9 to obtain approval for an overline investment. The updated TechNote 9 is available at *http://www.sba.gov/sites/default/files/files/TechNote_9.pdf.* SBA is soliciting comments and recommendations from the public on the updated TechNote 9 and will consider such comments when revising it. The SBA will not issue another notice in the **Federal Register** but will post the final revised version of the updated TechNote 9 on the SBIC Web site at *http://www.sba.gov/sites/default/files/files/SBICTechnote09.pdf.*

Authority: 15 U.S.C. 681.

Dated: July 2, 2014.

Javier E. Saade,

Associate Administrator, Office of Investment and Innovation.

[FR Doc. 2014–16166 Filed 7–9–14; 8:45 am]

BILLING CODE 8025–01–P

SMALL BUSINESS ADMINISTRATION

Surrender of License of Small Business Investment Company

Pursuant to the authority granted to the United States Small Business Administration under the Small Business Investment Act of 1958, as amended, under Section 309 of the Act and Section 107.1900 of the Small Business Administration Rules and Regulations (13 CFR 107.1900) to function as a small business investment company under the Small Business Investment Company License No. 04/04–0183 issued to Western Financial Capital Corporation, said license is hereby declared null and void.

United States Small Business Administration.

Dated: July 2, 2014.

Javier E. Saade,

Associate Administrator for Investment and Innovation.

[FR Doc. 2014–16163 Filed 7–9–14; 8:45 am]

BILLING CODE 8025–01–P

SMALL BUSINESS ADMINSTRATION

Surrender of License of Small Business Investment Company

Pursuant to the authority granted to the United States Small Business Administration under the Small Business Investment Act of 1958, as amended, under Section 309 of the Act and Section 107.1900 of the Small Business Administration Rules and Regulations (13 CFR 107.1900) to function as a small business investment company under the Small Business Investment Company License No. 04/04–5240 issued to PMC Investment Corporation, said license is hereby declared null and void.

Dated: July 2, 2014.

United States Small Business Administration.

Javier E. Saade,

Associate Administrator for Investment and Innovation.

[FR Doc. 2014–16177 Filed 7–9–14; 8:45 am]

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SOCIAL SECURITY ADMINISTRATION

[Docket No. SSA–2014–0024]

Modifications to the Disability Determination Procedures; Extension of Testing of Some Disability Redesign Features

AGENCY: Social Security Administration.

ACTION: Notice of the extension of tests involving modifications to the disability determination procedures.

SUMMARY: We are announcing the extension of tests involving modifications to disability determination procedures authorized by 20 CFR 404.906 and 416.1406. These rules authorize us to test several modifications to the disability determination procedures for adjudicating claims for disability insurance benefits under title II of the Social Security Act (Act) and for supplemental security income payments based on disability under title XVI of the Act.

DATES: We are extending our selection of cases to be included in these tests from September 26, 2014 until no later than September 25, 2015. If we decide to continue selection of cases for these tests beyond this date, we will publish another notice in the **Federal Register**.

FOR FURTHER INFORMATION CONTACT: Byron Haskins, Office of Disability Policy, Social Security Administration, 6401 Security Boulevard, Baltimore, MD 21235–6401, (410) 965–0150, for information about this notice. For information on eligibility or filing for benefits, call our national toll-free number, 1–800–772–1213 or TTY 1–800–325–0778, or visit our Internet site, Social Security Online, at *http://www.socialsecurity.gov.*

SUPPLEMENTARY INFORMATION: Our current rules authorize us to test, individually or in any combination, certain modifications to the disability determination procedures. 20 CFR 404.906 and 416.1406. We conducted several tests under the authority of these rules. In the ''single decisionmaker'' test, a disability examiner may make the initial disability determination in most cases without obtaining the signature of a medical or psychological consultant. 73 FR 12495.

We also conducted a separate test, which we call the ''prototype,'' in 10 States. 64 FR 47218. Currently, the prototype combines the single decisionmaker approach described above with the elimination of the reconsideration level of our administrative review process.

We extended the period for selecting claims for these tests several times. Most recently, we extended the time from September 27, 2013 to September 26, 2014. 78 FR 45010. We are extending case selection for the prototype and the single decisionmaker tests until September 25, 2015. If we decide to continue selection of cases for these tests beyond this date, we will publish another notice in the **Federal Register**.

Dated: July 2, 2014.

Marianna LaCanfora,

Acting Deputy Commissioner for Retirement and Disability Policy.

[FR Doc. 2014–16137 Filed 7–9–14; 8:45 am]

BILLING CODE 4191–02–P

DEPARTMENT OF STATE

[Public Notice 8787]

Culturally Significant Objects Imported for Exhibition Determinations: ''Assyria to Iberia at the Dawn of the Classical Age''

SUMMARY: Notice is hereby given of the following determinations: Pursuant to the authority vested in me by the Act of October 19, 1965 (79 Stat. 985; 22 U.S.C. 2459), Executive Order 12047 of March 27, 1978, the Foreign Affairs Reform and Restructuring Act of 1998 (112 Stat. 2681, *et seq.;* 22 U.S.C. 6501 note, *et seq.*), Delegation of Authority No. 234 of October 1, 1999, and Delegation of Authority No. 236–3 of August 28, 2000 (and, as appropriate, Delegation of Authority No. 257 of April 15, 2003), I hereby determine that the objects to be included in the exhibition ''Assyria to Iberia at the Dawn of the Classical Age,'' imported from abroad for temporary exhibition within the United States, are of cultural significance. The objects are imported pursuant to loan agreements with the foreign owners or custodians. I also determine that the exhibition or display of the exhibit objects at the Metropolitan Museum of Art, New York, New York, from on or about September 16, 2014, until on or about January 4, 2015, and at possible additional exhibitions or venues yet to be determined, is in the national interest. I have ordered that Public Notice of these Determinations be published in the **Federal Register**.

FOR FURTHER INFORMATION CONTACT: For further information, including a list of the imported objects, contact Paul W. Manning, Attorney-Adviser, Office of the Legal Adviser, U.S. Department of State (telephone: 202–632–6469). The mailing address is U.S. Department of State, SA–5, L/PD, Fifth Floor (Suite 5H03), Washington, DC 20522–0505.

Dated: June 27, 2014.

Kelly Keiderling,

Principal Deputy Assistant Secretary, Bureau of Educational and Cultural Affairs, Department of State.

[FR Doc. 2014–16180 Filed 7–9–14; 8:45 am]

BILLING CODE 4710–05–P

OFFICE OF THE UNITED STATES TRADE REPRESENTATIVE

North American Free Trade Agreement; Invitation for Applications for Inclusion on the Chapter 14 Dispute Settlement Roster

AGENCY: Office of the United States Trade Representative.

ACTION: Invitation for applications.

SUMMARY: Chapter Fourteen of the North American Free Trade Agreement (''NAFTA'') provides for the establishment of a roster of individuals who would be willing and able to serve as panelists in dispute settlement proceedings arising under Chapter Fourteen (Financial Services) of the NAFTA. Individuals are appointed for a term of three years. Applications are invited from eligible individuals wishing to be included on the roster.

DATES: Applications should be received no later than August 25, 2014.

ADDRESSES: Applications should be submitted (i) electronically to *www.regulations.gov,* Docket Number USTR–2014–0013. If you are unable to submit an application using *www.regulations.gov*, please contact Sandy McKinzy at (202) 395–9483 to arrange for an alternative method of transmission.

FOR FURTHER INFORMATION CONTACT: Arthur Tsao, Assistant General Counsel, Office of the United States Trade Representative, (202) 395–6987.

SUPPLEMENTARY INFORMATION: USTR is seeking applications from interested persons to serve on the Chapter Fourteen (Financial Services) roster under the NAFTA. The details for how to apply are provided below as is a short description of the roster.

Dispute Settlement Arising Under NAFTA Chapter Fourteen

Procedures under Chapter Twenty of the NAFTA apply (as modified by Chapter Fourteen) to the avoidance or settlement of disputes between the Parties arising under Chapter Fourteen of the NAFTA. If the NAFTA Parties cannot settle a dispute through consultations, a consulting Party may refer the matter to the Free Trade Commission (''Commission'') established under the NAFTA. If the matter is not resolved within a specified time period, the Commission will, upon the request of a consulting Party, establish a dispute settlement panel to consider the matter.

Chapter Fourteen Roster and Composition of Panels

Article 1414.2 of the NAFTA provides for a roster of up to 15 persons who are willing and able to serve as financial services panelists. Financial services roster members shall be appointed by consensus of the Parties for terms of three years, and may be reappointed. A separate five-member panel is formed for each dispute. Where a Party claims that a dispute arises under Chapter Fourteen, Article 2011 (Panel Selection) shall apply, except that: (a) Where the disputing Parties so agree, the panel shall be composed entirely of panelists meeting the qualifications set out in Article 1414.3 (Dispute Settlement); and (b) in any other case, each disputing Party may select panelists meeting the qualifications set out in Article 1414.3 or in Article 2010.1 (Qualifications of Panelists), and if the Party complained against invokes Article 1410 (Exceptions), the chair of the panel shall meet the qualifications set out in Article 1414.3. For each case, roster members under consideration to serve as a panelist will be requested to complete a disclosure form, which is used to identify possible conflicts of interest or appearances thereof. The disclosure form requests information regarding financial interests and affiliations, including information regarding the identity of any clients the roster member may have and, if applicable, clients of the roster member's firm.

Criteria for Eligibility for Inclusion on Chapter Fourteen Roster

Article 1414.3 of the NAFTA provides that roster members shall (1) have expertise or experience in financial services law or practice, which may include the regulation of financial institutions; (2) be chosen strictly on the basis of objectivity, reliability, and sound judgment; (3) be independent of, and not be affiliated with or take instructions from, any Party; and (4) comply with the code of conduct established by the Parties (the ''Code of Conduct for Dispute Settlement Procedures Under Chapters 19 and 20'' *https://www.nafta-sec-alena.org/Default.aspx?tabid=99&language=en-US*).

Procedures for Selection of Chapter Fourteen Roster Members

An interagency committee chaired by the USTR prepares a preliminary list of candidates eligible for inclusion on the roster. After consultation with the Committee on Ways and Means of the House of Representatives and the Committee on Finance of the Senate, the USTR selects the final list of individuals that the United States will nominate for inclusion on the rosters. The members of the rosters are appointed by agreement of the Parties to the NAFTA.

Applications

Eligible individuals who wish to be included on the Chapter Fourteen roster for the next term of three years are invited to submit applications. Applications may be submitted e electronically to *www.regulations.gov,* docket number USTR–2014–0013. However, eligible individuals who have submitted a prior application for one or more lists under the Dominican Republic-Central America-United States Free Trade Agreement (''CAFTA–DR''), chapter 20 of the North American Free Trade Agreement (''NAFTA''), the United States-Peru Trade Promotion Agreement, the United States-Australia Free Trade Agreement (''USAFTA''), the United States-Colombia Trade Promotion Agreement (''USCTPA''), the United States-Korea Free Trade Agreement (''KORUS''), the United States-Morocco Free Trade Agreement (''USMFTA''), or the United States-Singapore Free Trade Agreement (''USSFTA'') in response to the **Federal Register** notices of January 28, 2010 (*75 FR 4607*) or June 25, 2012 (*77 FR 37948*) have the option as explained below of simply indicating that they would like their application also to include the roster under Chapter Fourteen of the NAFTA and submitting updates (if any) to their applications on file.

To submit an application via *www.regulations.gov,* enter docket number USTR–2014–0013 on the home page and click ''search.'' The site will provide a search-results page listing all documents associated with this docket. Find a reference to this notice by selecting ''Notice'' under ''Document Type'' on the left side of the search-results page, and click on the link entitled ''Comment Now!.'' (For further information on using the *www.regulations.gov* Web site, please consult the resources provided on the Web site by clicking on the ''How to Use Regulations.gov'' on the bottom of the page.)

The *www.regulations.gov* site provides the option of providing comments by filling in a ''Type Comment'' field or by attaching a document. USTR prefers applications to be provided in an attached document. If a document is attached, please type ''Application for Inclusion on NAFTA Chapter Fourteen Roster'' in the ''Upload File'' field.

Applications must be typewritten, and should be headed ''Application for Inclusion on NAFTA Chapter Fourteen Roster.'' Applications should include the following information, and each section of the application should be numbered as indicated:

1. Name of the applicant.
2. Business address, telephone number, fax number, and email address.
3. Citizenship(s).
4. Current employment, including title, description of responsibility, and name and address of employer.
5. Relevant education and professional training.
6. Fluency in any relevant language other than English, written and spoken.
7. Post-education employment history, including the dates and addresses of each prior position and a summary of responsibilities.
8. Relevant professional affiliations and certifications, including, if any, current bar memberships in good standing.
9. A list and copies of publications, testimony, and speeches, if any, concerning the relevant areas of expertise. Judges or former judges should list relevant judicial decisions. Only one copy of publications, testimony, speeches, and decisions need be submitted.
10. Summary of any current and past employment by, or consulting or other work for, the Governments of the United States, Canada, or Mexico.
11. The names and nationalities of all foreign principals for whom the applicant is currently or has previously been registered pursuant to the Foreign Agents Registration Act, 22 U.S.C. 611 et seq., and the dates of all registration periods.
12. A list of international trade proceedings or domestic proceedings relating to international trade matters or other relevant matters in which the applicant has provided advice to a party or otherwise participated.

13. A short statement of qualifications and availability for service on dispute settlement panels under NAFTA, including information relevant to the applicant's familiarity with international trade law and willingness and ability to make time commitments necessary for service on panels.

14. On a separate page, the names, addresses, telephone and fax numbers of three individuals willing to provide information concerning the applicant's qualifications for service, including the applicant's character, reputation, reliability, judgment, and familiarity with international trade law.

Prior Applicants

As indicated above, an individual who has submitted an application in response to the **Federal Register** notices of January 28, 2010 (75 FR 4607) or June 25, 2012 (77 FR 37948) need only indicate that the individual is interested in having their application also include the roster under Chapter Fourteen of the NAFTA, specify under which of the two **Federal Register** notices the individual had previously submitted an application, and submit updates (if any) to the individual's application(s) on file.

Public Disclosure

Applications normally will not be subject to public disclosure and will not be posted publicly on *www.regulations.gov.* They may be referred to other federal agencies and Congressional Committees in the course of determining eligibility for the roster, and shared with foreign governments and the NAFTA Secretariat in the course of panel selection.

False Statements

Pursuant to section 402(c)(5) of the NAFTA Implementation Act, false statements by applicants regarding their personal or professional qualifications, or financial or other relevant interests that bear on the applicants' suitability for placement on the Chapter Fourteen roster or for appointment to binational panels, are subject to criminal sanctions under 18 U.S.C. 1001.

Privacy Act

The following statements are made in accordance with the Privacy Act of 1974, as amended (5 U.S.C. 552a). The authority for requesting information to be furnished is section 402 of the NAFTA Implementation Act. Provision of the information requested above is voluntary; however, failure to provide the information will preclude your consideration as a candidate for the NAFTA Chapter Fourteen roster. This information is maintained in a system of records entitled ''Dispute Settlement Panelists Roster.'' Notice regarding this system of records was published in the **Federal Register** on November 30, 2001. The information provided is needed, and will be used by USTR, other federal government trade policy officials concerned with NAFTA dispute settlement, and officials of the other NAFTA Parties to select well-qualified individuals for inclusion on the Chapter Fourteen roster and for service on Chapter Fourteen dispute settlement panels.

Daniel E. Brinza,

Senior Counsel for Dispute Settlement.

[FR Doc. 2014–16108 Filed 7–9–14; 8:45 am]

BILLING CODE 3290–F4–P

OFFICE OF THE UNITED STATES TRADE REPRESENTATIVE

Reallocation of Unused Fiscal Year 2014 Tariff-Rate Quota Volume for Raw Cane Sugar

AGENCY: Office of the United States Trade Representative.

ACTION: Notice.

SUMMARY: The Office of the United States Trade Representative (USTR) is providing notice of country-by-country reallocations of the FY 2014 in-quota quantity of the World Trade Organization (WTO) tariff-rate quota (TRQ) for imported raw cane sugar.

DATES: July 10, 2014.

ADDRESSES: Inquiries may be delivered to Ann Heilman-Dahl, Director of Agricultural Affairs, Office of Agricultural Affairs, Office of the United States Trade Representative, 600 17th Street NW., Washington, DC 20508.

FOR FURTHER INFORMATION CONTACT: Ann Heilman-Dahl, Office of the United States Trade Representative, Office of Agricultural Affairs, telephone: 202–395–6127 or facsimile: 202–395–4579.

SUPPLEMENTARY INFORMATION: Pursuant to Additional U.S. Note 5 to Chapter 17 of the Harmonized Tariff Schedule of the United States (HTS), the United States maintains WTO TRQs for imports of raw cane and refined sugar.

Section 404(d)(3) of the Uruguay Round Agreements Act (19 U.S.C. 3601(d)(3)) authorizes the President to allocate the in-quota quantity of a TRQ for any agricultural product among supplying countries or customs areas. The President delegated this authority to the United States Trade Representative under Presidential Proclamation 6763 (60 FR 1007).

On September 13, 2013, the Secretary of Agriculture established the FY 2014 TRQ for imported raw sugar cane at the minimum to which the United States committed to pursuant to the World Trade Organization (WTO) Uruguay Round Agreements (1,117,195 MTRV). On September 18, 2013, USTR provided notice of country-by-country allocations of the FY 2014 in-quota quantity of the WTO TRQ for imported raw cane sugar. Based on consultation with quota holders, USTR has determined to reallocate 99,290 MTRV of the original WTO TRQ quantity from those countries that have stated they do not plan to fill their FY 2014 allocated raw cane sugar quantities. USTR is allocating the 99,290 MTRV to the following countries in the amounts specified below:

Country	FY 2014 reallocation
Argentina	4,523
Australia	8,730
Belize	1,157
Bolivia	841
Brazil	15,251
Colombia	2,524
Costa Rica	1,578
Dominican Republic	18,512
Ecuador	1,157
El Salvador	2,735
Fiji	947
Guatemala	5,049
Guyana	1,262
Honduras	1,052
India	841
Jamaica	1,157
Mozambique	1,367
Nicaragua	2,209
Panama	3,050
Peru	4,312
Philippines	14,199
South Africa	2,419
Swaziland	1,683
Thailand	1,473
Zimbabwe	1,262

These allocations are based on the countries' historical shipments to the United States. The allocations of the raw cane sugar WTO TRQ to countries that are net importers of sugar are conditioned on receipt of the appropriate verifications of origin. Certificates of quota eligibility must accompany imports from any country for which an allocation has been provided.

Conversion factor: 1 metric ton = 1.10231125 short tons.

Michael Froman,

United States Trade Representative.

[FR Doc. 2014–16105 Filed 7–9–14; 8:45 am]

BILLING CODE 3290–F4–P

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

Notice of Intent to Release Airport Property for Non-Aeronautical Use; Manchester Regional Airport, Manchester, NH

Authority: 49 U.S.C. 47107(h).

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Request for comments on proposal to use airport land for non-aeronautical use.

SUMMARY: The Federal Aviation Administration is considering a proposal to release approximately 1.0 acres of airport property for non-aeronautical use at the Manchester Regional Airport, Manchester, NH. The acre released is currently used as a buffer zone to adjacent wetlands and would be exchanged for approximately 4.3 acres of land that would be used for the same purpose. The FAA invites public comment on this proposal.

DATES: Comments must be received on or before August 11, 2014.

ADDRESSES: You may send comments using any of the following methods:

- *Federal eRulemaking Portal:* Go to *http://www.regulations.gov,* and follow the instructions on providing comments.
- *Fax:* 202–493–2251.
- *Mail:* U.S. Department of Transportation, Docket Operations, M–30, West Building Ground Floor, Room W12–140, 1200 New Jersey Avenue SE., Washington, DC 20590.
- *Hand Delivery:* Deliver to Mail address above between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays.

FOR FURTHER INFORMATION CONTACT: Thomas Vick, Compliance and Land Use Specialist, New England Region Airports Division, 12 New England Executive Park, Burlington, MA 01803. Telephone: 781–238–7618; Fax 781–238–7608.

SUPPLEMENTARY INFORMATION: In accordance with the Wendell H. Ford Aviation Investment and Reform Act for the 21st Century (AIR 21), Public Law 106–181 (Apr. 5, 2000; 114 Stat. 61), this notice must be published in the **Federal Register** not less than 30 days before the Secretary may waive any condition imposed on a federally obligated airport by grant agreements. The FAA invites public comment, in accordance with section 47107(h) of Title 49 of the United States Code, on the request to a land release and exchange at the Manchester-Boston Regional Airport for use as wetland mitigation under the provisions of AIR 21.

The Manchester-Boston Regional Airport has requested to release approximately 1.0 acres of airport land from federal obligations and to exchange that acre with approximately 4.3 acres of land currently owned by the Peter J. King Irrevocable Trust of 1988. The 1.0 acres to be released was purchased by the Airport as part of the Trolley Crossing mitigation site for the Airport's previous extension of Runway 35, and is located in the Town of Londonderry, Rockingham County, NH. The parcel is part of a larger property parcel currently depicted on the Airport Layout Plan of record as Number 64. That larger parcel is identified as Town of Londonderry, Rockingham County, Tax Map 14, Lot 49–1. The 1.0 acres in question is located within the larger parcel, and is considered ''buffer'' to the wetland portion of the Trolley Crossing mitigation site. The approximately 4.3 acres of land that would be exchanged and given to the Airport from the Trust is similar in nature and also serves as buffer to the wetland portion of the Trolley Crossing mitigation site. That 4.3 acre parcel is also located in the Town of Londonderry, NH, within the parcel identified as Tax Map 14, Lot 49.

The Airport has requested this exchange to allow Prologis Management, LLC, to lease and develop approximately 48 acres of the Trust property for a logistics center. The 1.0 acres of airport property is necessary for the development of the center. As part of this proposal, the Federal and State agencies that participated in the environmental study for the Runway 35 extension have reviewed this proposal. All interested agencies have concurred that there would be no adverse environmental impacts as a result of this land exchange and that the proposed release and exchange of 1.0 acres for 4.3 acres of similarly situated land would be beneficial for the Runway 35 extension mitigation site. The Airport also completed a Real Estate Appraisal Report for the parcels. The appraisal was conducted in accordance with the Uniform Standards of Professional Appraisal Practice (USPAP). The appraisal concludes that the Manchester-Boston Regional Airport will receive additional value for the land that it is acquiring in this proposed release and exchange.

Interested persons may inspect the request and supporting documents by contacting the FAA at the address listed under **FOR FURTHER INFORMATION CONTACT**. All comments will be considered by the FAA to the extent practicable.

Issued in Burlington, Massachusetts, July 2, 2014.

Bryon H. Rakoff,

Acting Manager, New England Airports Division.

[FR Doc. 2014–16167 Filed 7–9–14; 8:45 am]

BILLING CODE 4910–13–P

DEPARTMENT OF TRANSPORTATION

Federal Highway Administration

Rescinding the Notice of Intent for an Environmental Impact Statement (EIS): Lancaster County, Pennsylvania

AGENCY: Federal Highway Administration (FHWA), DOT.

ACTION: Rescind Notice of Intent to prepare an EIS.

SUMMARY: This notice rescinds the Notice of Intent for preparing an Environmental Impact Statement (EIS) for a proposed highway in Lancaster County, Pennsylvania. The project study area includes SR 30 Section S01 (US 30) corridor in East Lampeter Township, Salisbury Township, Leacock Township, and Paradise Township, Lancaster County, Pennsylvania. The original Notice of Intent for this EIS process was published in the **Federal Register** on January 22, 2002.

FOR FURTHER INFORMATION CONTACT: Dan Walston, Transportation Planning Specialist, Federal Highway Administration, Pennsylvania Division, 228 Walnut Street, Room 508, Harrisburg, Pennsylvania 17101–1720, Telephone: (717) 221–2290 (email: *Christopher.Walston@dot.gov,*) or Mike Lapano, Project Manager, Pennsylvania Department of Transportation, 2140 Herr Street, Harrisburg, Pennsylvania 17101–1720, Telephone: 717–787–7482 (email: *mlapano@pa.gov.*)

SUPPLEMENTARY INFORMATION: The Federal Highway Administration (FHWA) in cooperation with the Pennsylvania Department of Transportation (PennDOT) and the Lancaster County Planning Commission initiated an Environmental Impact Statement (EIS) with a Notice of Intent, January 22, 2002, to identify and evaluate alternatives to address transportation problems within the SR 30 Section S01 corridor. The proposed project study area runs approximately from the PA 896/U.S. 30 intersection on the west and the PA 897/U.S. 30 intersection on the east, including the intersection with PA 41. Notices of Intent concerning this proposal were previously published in the **Federal**

Register. The original Notice of Intent published on February 27, 1987 described a two-phase approach to identify and evaluate alternatives that would provide a variable means of relieving traffic congestion on Traffic Route (T.R.) 23 and US 30 in Eastern Lancaster County, Pennsylvania. A revised Notice of Intent published on June 16, 1988 announced the separate Environmental Impact Statements to evaluate alternatives for the two projects would be prepared.

Improvements for this corridor were considered necessary to provide for the existing and project traffic demand. A needs study was undertaken and a range of transportation alternatives, including but not limited to No-Build, Transportation Systems Management (TSM), widening the existing three-lane highways to five lanes, bypasses around communities, and constructing a four-lane limited access highway on new location were considered. These alternatives were developed consistently with land use strategies to address the identified transportation needs. The developments of alternatives were based on traffic demands, engineering requirements, environmental and socioeconomic constraints, the county's growth management plan, and public input. Public involvement and inter-agency coordination were maintained throughout the development of the EIS.

Due to funding constraints the Notice of Intent is rescinded.

Issued on: June 30, 2014.

Renee Sigel,

Division Administrator, Federal Highway Administration.

[FR Doc. 2014–16135 Filed 7–9–14; 8:45 am]

BILLING CODE P

DEPARTMENT OF TRANSPORTATION

Federal Highway Administration

Rescinding the Notice of Intent for an Environmental Impact Statement (EIS): Lancaster County, Pennsylvania

AGENCY: Federal Highway Administration (FHWA), DOT.

ACTION: Rescind Notice of Intent to prepare an EIS.

SUMMARY: This notice rescinds the Notice of Intent for preparing an Environmental Impact Statement (EIS) for a proposed highway in Lancaster County, Pennsylvania. The project study area includes PA 23 Sub corridor in Earl Township, East Earl Township, East Lamepeter Township, Manheim Township, Upper Leacock Township, and New Holland Borough, Lancaster County, Pennsylvania. The original Notice of Intent for this EIS process was published in the **Federal Register** on September 22, 1999.

FOR FURTHER INFORMATION CONTACT: Dan Walston, Transportation Planning Specialist, Federal Highway Administration, Pennsylvania Division, 228 Walnut Street, Room 508, Harrisburg, Pennsylvania 17101–1720, Telephone: (717) 221–2290 (email: *Christopher.Walston@dot.gov*), or Mark Malhenzie, Senior Project Manager, District 8 Highway Design Unit, Pennsylvania Department of Transportation, 2140 Herr Street, Harrisburg, Pennsylvania 17101–1720, Telephone: 717–783–5080 (email: *mmalhenzie@pa.gov*.)

SUPPLEMENTARY INFORMATION: The Federal Highway Administration (FHWA) in cooperation with the Pennsylvania Department of Transportation (PennDOT) and the Lancaster County Planning Commission initiated an Environmental Impact Statement (EIS) with a Notice of Intent, September 22, 1999, to identify and evaluate alternatives to address transportation problems within the PA 23 Sub corridor. The proposed project would involve improvements to transportation conditions in the PA 23 Sub corridor from the PA 23/U.S. Route 30 interchange on the west to U.S. route 322 on the east. Notices of Intent concerning this proposal were previously published in the **Federal Register** on February 27, 1987, to advise the public that an EIS would be prepared to identify and evaluate alternatives to provide a viable means of relieving traffic congestion on PA 23 and U.S. Route 30 in Lancaster County. Public concerns redirected the scope of the project and a revised Notice of Intent was published on June 16, 1988. The intent of the second Notice was to advise the public that separate EIS's would be prepared to identify and evaluate alternatives to relieve traffic congestion on PA 23 and U.S. Route 30 independently.

In 1997, the Lancaster County Transportation Coordinating Committee (Lancaster County MPO) was the lead agency for the PA 23 Corridor Major Investment Study (MIS), consistent with the requirements of the Intermodal Surface Transportation Efficiency Act of 1991. The PA 23 Corridor Study MIS gathered various types of data which resulted in the identification of transportation needs and led to the development of alternatives. Typical areas of concern identified by various members of the public and resource agencies during the MIS studies included, but were not limited to, the following: socioeconomic and land use impacts; the unique social sub-groups; effects on cultural, and natural resources; agricultural preservation; roadway safety; business-industry; tourism; and economic stability.

The PA 23 Corridor Study MIS demonstrated present and future transportation problems in the PA 23 Sub corridor from U.S. Route 30 to the U.S. route 322 intersection east of New Holland, a distance of approximately 21.5 km (13.4 miles). Transportation needs in the PA 23 Sub corridor included congestion, decreasing levels of service, traffic diversion from PA 23 to local roads, and a mix of motorized and non-motorized means of travel. Improvements to the corridor were considered necessary to provide for the existing and projected transportation demands.

A range of transportation alternatives, including No-Build, Transportation Systems Management (TSM), Traffic Control Measures (TCM), and Travel Demand Management (TDM), Transit Widening and Relocation alternatives were developed consistently with land use strategies to address the identified transportation needs. The developments of alternatives were based on traffic demands, engineering requirements, environmental and socioeconomic constraints, the country's growth management plan, and public input. Public involvement and inter-agency coordination were maintained throughout the development of the EIS.

Due to funding constraints the Notice of Intent is rescinded.

Issued on: June 30, 2014.

Renee Sigel,

Division Administrator, Federal Highway Administration.

[FR Doc. 2014–16136 Filed 7–9–14; 8:45 am]

BILLING CODE P

DEPARTMENT OF TRANSPORTATION

Federal Motor Carrier Safety Administration

Sunshine Act Meetings; Unified Carrier Registration Plan Board of Directors

AGENCY: Federal Motor Carrier Safety Administration (FMCSA), DOT.

ACTION: Notice of Unified Carrier Registration Plan Board of Directors Meeting.

TIME AND DATE: The meeting will be held on July 31, 2014, from 12:00 Noon to 3:00 p.m., Eastern Daylight Time.

PLACE: This meeting will be open to the public via conference call. Any interested person may call 1–877–422–1931, passcode 2855443940, to listen and participate in this meeting.

STATUS: Open to the public.

MATTERS TO BE CONSIDERED: The Unified Carrier Registration Plan Board of Directors (the Board) will continue its work in developing and implementing the Unified Carrier Registration Plan and Agreement and to that end, may consider matters properly before the Board.

FOR FURTHER INFORMATION CONTACT: Mr. Avelino Gutierrez, Chair, Unified Carrier Registration Board of Directors at (505) 827–4565.

Issued on: July 8, 2014.

Larry W. Minor,

Associate Administrator, Office of Policy, Federal Motor Carrier Safety Administration.

[FR Doc. 2014–16284 Filed 7–8–14; 4:15 pm]

BILLING CODE 4910–EX–P

DEPARTMENT OF TRANSPORTATION

National Highway Traffic Safety Administration

[U.S. DOT Docket Number NHTSA–2014–0040]

Reports, Forms, and Recordkeeping Requirements

AGENCY: National Highway Traffic Safety Administration (NHTSA), U.S. Department of Transportation.

ACTION: Notice.

SUMMARY: In compliance with the Paperwork Reduction Act of 1995 (44 U.S.C. 3501 et seq.), this notice announces that the Information Collection Request (ICR) abstracted below has been forwarded to the Office of Management and Budget (OMB) for review and comment. The ICR describes the nature of the information collections and their expected burden. The **Federal Register** Notice with a 60-day comment period was published on April 11, 2014 (79 FR 20967).

DATES: Comments must be submitted to OMB on or before August 11, 2014.

ADDRESSES: Send comments to the Office of Information and Regulatory Affairs, OMB, 725 17th Street NW., Washington, DC 20503, Attention: Desk Officer.

FOR FURTHER INFORMATION CONTACT: Alex Ansley, Recall Management Division (NVS–215), Room W46–412, NHTSA, 1200 New Jersey Ave., Washington, DC 20590. Telephone: (202) 493–0481.

SUPPLEMENTARY INFORMATION: Under the Paperwork Reduction Act of 1995, before an agency submits a proposed collection of information to OMB for approval, it must first publish a document in the **Federal Register** providing a 60-day comment period and otherwise consult with members of the public and affected agencies concerning each proposed collection of information. The OMB has promulgated regulations describing what must be included in such a document. Under OMB's regulation, *see* 5 CFR 1320.8(d), an agency must ask for public comment on the following:

(i) Whether the proposed collection of information is necessary for the proper performance of the functions of the agency, including whether the information will have practical utility;

(ii) the accuracy of the agency's estimate of the burden of the proposed collection of information, including the validity of the methodology and assumptions used;

(iii) how to enhance the quality, utility, and clarity of the information to be collected; and

(iv) how to minimize the burden of the collection of information on those who are to respond, including the use of appropriate automated, electronic, mechanical, or other technological collection techniques or other forms of information technology, e.g. permitting electronic submission of responses.

In compliance with these requirements, NHTSA asks for public comments on the following collection of information:

Title: Petitions for Hearings on Notification and Remedy of Defects.

Type of Request: Extension of a currently approved information collection.

OMB Control Number: 2127–0039.

Affected Public: Businesses or others for profit.

Abstract: Sections 30118(e) and 30120(e) of Title 49 of the United States Code specify that any interested person may petition NHTSA to hold a hearing to determine whether a manufacturer of motor vehicles or motor vehicle equipment has met its obligation to notify owners, purchasers, and dealers of vehicles or equipment of a safety-related defect or noncompliance with a Federal motor vehicle safety standard in the manufacturer's products and to remedy that defect or noncompliance.

To implement these statutory provisions, NHTSA promulgated 49 CFR part 557, Petitions for Hearings on Notification and Remedy of Defects. Part 557 establishes procedures providing the submission and disposition of petitions for hearings on the issues of whether the manufacturer has met its obligation to notify owners, purchasers, and dealers of safety-related defects or noncompliance, or to remedy such defect or noncompliance free of charge.

Estimated annual burden: During NHTSA's last renewal of this information collection, the agency estimated it would receive one petition a year, with an estimated one hour of preparation for each petition, for a total of one burden hour per year. That estimate remains unchanged with this notice.

Number of respondents: 1.

Comments are invited on: Whether the proposed collection of information is necessary for the proper performance of the functions of the Department, including whether the information will have practical utility; the accuracy of the Departments estimate of the burden of the proposed information collection; ways to enhance the quality, utility and clarity of the information to be collected; and ways to minimize the burden of the collection of information on respondents, including the use of automated collection techniques or other forms of information technology.

A comment to OMB is most effective if OMB receives it within 30 days of publication.

Frank Borris,

Director, Office of Defects Investigation.

[FR Doc. 2014–16152 Filed 7–9–14; 8:45 am]

BILLING CODE 4910–59–P

DEPARTMENT OF THE TREASURY

Submission for OMB Review; Comment Request

July 7, 2014.

The Department of the Treasury will submit the following information collection requests to the Office of Management and Budget (OMB) for review and clearance in accordance with the Paperwork Reduction Act of 1995, Public Law 104–13, on or after the date of publication of this notice.

DATES: Comments should be received on or before August 11, 2014 to be assured of consideration.

ADDRESSES: Send comments regarding the burden estimate, or any other aspect of the information collection, including suggestions for reducing the burden, to (1) Office of Information and Regulatory Affairs, Office of Management and Budget, Attention: Desk Officer for Treasury, New Executive Office Building, Room 10235, Washington, DC 20503, or email at *OIRA_Submission@OMB.EOP.gov* and (2) Treasury PRA Clearance Officer, 1750 Pennsylvania Ave. NW., Suite 8140, Washington, DC 20220, or email at *PRA@treasury.gov.*

FOR FURTHER INFORMATION CONTACT: Copies of the submission(s) may be obtained by calling (202) 927–5331, email at *PRA@treasury.gov,* or the entire information collection request may be found at *www.reginfo.gov.*

Internal Revenue Service (IRS)

OMB Number: 1545–1757.

Type of Review: Extension without change of a currently approved collection.

Title: TD 9036—Disclosure of Returns and Return Information by Other Agencies.

Abstract: In general, under the regulations, the IRS is permitted to authorize agencies with access to returns and return information under section 6103 of the Internal Revenue Code to redisclose returns and return information based on a written request and with the Commissioner's approval, to any authorized recipient set forth in Code section 6103, subject to the same conditions and restrictions, and for the same purposes, as if the recipient had received the information from the IRS directly.

Affected Public: State, Local, and Tribal Governments.

Estimated Annual Burden Hours: 11.

OMB Number: 1545–1912.

Type of Review: Extension without change of a currently approved collection.

Title: Election of Partnership Level Tax Treatment.

Form: 8893.

Abstract: IRC section 6231(a)(1)(B)(ii) allows small partnerships to elect to be treated under the unified audit and litigation procedures. Form 8893 will allow IRS to track these elections by providing a standardized format for this election.

Affected Public: Private Sector: Businesses or other for-profits.

Estimated Annual Burden Hours: 227.

OMB Number: 1545–1915.

Type of Review: Extension without change of a currently approved collection.

Title: Notice 2005–4, Fuel Tax Guidance, as modified.

Abstract: Notice 2005–4 provides guidance on certain excise tax provisions in the Internal Revenue Code that were added or affected by the American Jobs Creation Act of 2004 (Pub. L. 108–357)(Act). These provisions relate to: Alcohol and biodiesel fuels; the definition of off-highway vehicles; aviation-grade kerosene; claims related to diesel fuel used in certain buses; the display of registration on certain vessels; claims related to sales of gasoline to state and local governments and nonprofit educational organizations; two party exchanges of taxable fuel; and the classification of transmix and certain diesel fuel blendstocks as diesel fuel. Subsequent modifications were made to Notice 2005–4, by Notice 2005–24 and 2005–62 to make corrections and provide additional guidance. Notice 2005–80 modifies 2005–4 to provide guidance on certain excise tax provisions added or affected by the Energy Policy Act of 2005 (Pub. L 109–58) and the Safe, Accountable, Flexible, Efficient Transportation Equity Act (Pub. L 109–59).

Affected Public: Private Sector: Businesses or other for-profits.

Estimated Annual Burden Hours: 76,190.

Dawn D. Wolfgang,

Treasury PRA Clearance Officer.

[FR Doc. 2014–16138 Filed 7–9–14; 8:45 am]

BILLING CODE 4830–01–P

DEPARTMENT OF THE TREASURY

Departmental Offices

Debt Management Advisory Committee Meeting

Notice is hereby given, pursuant to 5 U.S.C. App. 2, § 10(a)(2), that a meeting will be held at the Hay-Adams Hotel, 16th Street and Pennsylvania Avenue NW., Washington, DC, on August 5, 2014 at 11:30 a.m. of the following debt management advisory committee: Treasury Borrowing Advisory Committee of The Securities Industry and Financial Markets Association.

The agenda for the meeting provides for a charge by the Secretary of the Treasury or his designate that the Committee discuss particular issues and conduct a working session. Following the working session, the Committee will present a written report of its recommendations. The meeting will be closed to the public, pursuant to 5 U.S.C. App. 2, § 10(d) and Public Law 103–202, § 202(c)(1)(B) (31 U.S.C. 3121 note).

This notice shall constitute my determination, pursuant to the authority placed in heads of agencies by 5 U.S.C. App. 2, § 10(d) and vested in me by Treasury Department Order No. 101–05, that the meeting will consist of discussions and debates of the issues presented to the Committee by the Secretary of the Treasury and the making of recommendations of the Committee to the Secretary, pursuant to Public Law 103–202, § 202(c)(1)(B).

Thus, this information is exempt from disclosure under that provision and 5 U.S.C. 552b(c)(3)(B). In addition, the meeting is concerned with information that is exempt from disclosure under 5 U.S.C. 552b(c)(9)(A). The public interest requires that such meetings be closed to the public because the Treasury Department requires frank and full advice from representatives of the financial community prior to making its final decisions on major financing operations. Historically, this advice has been offered by debt management advisory committees established by the several major segments of the financial community. When so utilized, such a committee is recognized to be an advisory committee under 5 U.S.C. App. 2, § 3.

Although the Treasury's final announcement of financing plans may not reflect the recommendations provided in reports of the Committee, premature disclosure of the Committee's deliberations and reports would be likely to lead to significant financial speculation in the securities market. Thus, this meeting falls within the exemption covered by 5 U.S.C. 552b(c)(9)(A).

Treasury staff will provide a technical briefing to the press on the day before the Committee meeting, following the release of a statement of economic conditions and financing estimates. This briefing will give the press an opportunity to ask questions about financing projections. The day after the Committee meeting, Treasury will release the minutes of the meeting, any charts that were discussed at the meeting, and the Committee's report to the Secretary.

The Office of Debt Management is responsible for maintaining records of debt management advisory committee meetings and for providing annual reports setting forth a summary of Committee activities and such other matters as may be informative to the public consistent with the policy of 5 U.S.C. 552(b). The Designated Federal Officer or other responsible agency official who may be contacted for additional information is Fred Pietrangeli, Director for Office of Debt Management (202) 622–1876.

Dated: July 2, 2014.

Matthew S. Rutherford,

Assistant Secretary, (Financial Markets).

[FR Doc. 2014–15974 Filed 7–9–14; 8:45 am]

BILLING CODE 4810–25–P

DEPARTMENT OF THE TREASURY

Office of Foreign Assets Control

Continuing Collection; Comment Request for Rough Diamonds Reporting Requirements

AGENCY: Office of Foreign Assets Control, Treasury.

ACTION: Notice and request for comments.

SUMMARY: The Department of the Treasury, as part of its continuing effort to reduce paperwork and respondent burden, invites the general public and other federal agencies to comment on proposed and/or continuing information collections, as required by the Paperwork Reduction Act of 1995, Public Law 104–13 (44 U.S.C. 3506(c)(2)(A)). Currently, the Office of Foreign Assets Control (OFAC) within the Department of the Treasury is soliciting comments concerning OFAC's requirements to report information about the shipment of rough diamonds on an ongoing and annual basis.

DATES: Written comments must be submitted on or before September 8, 2014 to be assured of consideration.

ADDRESSES: You may submit comments by any of the following methods:

Federal eRulemaking Portal: www.regulations.gov. Follow the instructions on the Web site for submitting comments.

Fax: Attn: Request for Comments (Rough Diamonds Reporting) 202–622–1657

Mail: Attn: Request for Comments (Rough Diamonds Reporting), Office of Foreign Assets Control, Department of the Treasury, 1500 Pennsylvania Avenue NW., Washington, DC 20220.

Instructions: All submissions received must include the agency name and the **Federal Register** Doc. number that appears at the end of this document. Comments received will be made available to the public via regulations.gov or upon request, without change and including any personal information provided.

FOR FURTHER INFORMATION CONTACT: Assistant Director for Licensing, tel.: 202–622–2480, Assistant Director for Policy, tel.: 202–622–2746, Assistant Director for Regulatory Affairs, tel.: 202–622–4855, Assistant Director for Sanctions Compliance & Evaluation, tel.: 202–622–2490, OFAC, or Chief Counsel (Foreign Assets Control), tel.: 202–622–2410, Office of the General Counsel, Department of the Treasury (not toll free numbers).

SUPPLEMENTARY INFORMATION:

Title: Requirement to report information about the shipment of rough diamonds.

OMB Number: 1505–0198.

Abstract: The ultimate consignee of a rough diamond shipment, identified on Customs Form 7501 Entry Summary, is required to report specified information about the shipment of rough diamonds imported into the United States to the foreign exporting authority within 15 calendar days of the date that the shipment arrived at a U.S. port of entry pursuant to § 592.301(a)(3) of the Rough Diamonds Control Regulations, 31 CFR part 592 (the ''Regulations''). In addition, persons who import rough diamonds into the United States or export rough diamonds from the United States are required to file an annual report identifying total rough diamond import and/or export activity during the reporting year, as well as information on stockpiles of rough diamonds, if any, as of the end of the reporting year, pursuant to § 592.502 of the Regulations. This collection of information is needed to monitor the integrity of international rough diamond shipments, and the information collected will be used to further the compliance, enforcement, and civil penalty programs of the Office of Foreign Assets Control of the Department of the Treasury.

Current Actions: There are no changes being made to the notice at this time.

Type of Review: Extension of a currently approved collection.

Affected Public: Business organizations and individuals engaged in the international diamond trade.

Estimated Number of Respondents: 250 filers filing an annual report once per year and transaction reports 10 to 15 times per year. The total estimated number of responses is 3,250.

Estimated Time per Respondent: 5 hours per annual report and 10 minutes per transaction report, for an estimated 7 hours per respondent per year.

Estimated Total Annual Burden Hours: 1,750.

The following paragraph applies to all of the collections of information covered by this notice:

An agency may not conduct or sponsor, and a person is not required to respond to, a collection of information unless the collection of information displays a valid Office of Management and Budget (OMB) control number. Books or records relating to a collection of information must be retained for five years.

Request for Comments

Comments submitted in response to this notice will be summarized and/or included in the request for OMB approval. All comments will become a matter of public record. Comments are invited on: (a) Whether the collection of information is necessary for the proper performance of the functions of the agency, including whether the information has practical utility; (b) the accuracy of the agency's estimate of the burden of the collection of information, including the validity of the methodology and assumptions used; (c) ways to enhance the quality, utility, and clarity of the information to be collected; (d) ways to minimize the burden of the collection of information on respondents, including through the use of automated collection techniques or other forms of information technology; and (e) estimates of capital or start-up costs and costs of operation, maintenance, and purchase of services to provide information.

Approved: July 1, 2014.

Barbara C. Hammerle,

Acting Director, Office of Foreign Assets Control.

[FR Doc. 2014–16127 Filed 7–9–14; 8:45 am]

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Part II

Department of Transportation

Federal Aviation Administration

14 CFR Part 60

Flight Simulation Training Device Qualification Standards for Extended Envelope and Adverse Weather Event Training Tasks; Proposed Rule

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 60

[Docket No.: FAA–2014–0391; Notice No. 2014–04]

RIN 2120–AK08

Flight Simulation Training Device Qualification Standards for Extended Envelope and Adverse Weather Event Training Tasks

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Notice of proposed rulemaking (NPRM).

SUMMARY: The FAA proposes to amend the Qualification Performance Standards for flight simulation training devices (FSTDs) for the primary purpose of improving existing technical standards and introducing new technical standards for evaluating an FSTD for full stall and stick pusher maneuvers, upset recognition and recovery maneuvers, maneuvers conducted in airborne icing conditions, takeoff and landing maneuvers in gusting crosswinds, and bounced landing recovery maneuvers. These new and improved technical standards are intended to fully define FSTD fidelity requirements for conducting new flight training tasks introduced through recent changes in the air carrier training requirements as well as to address various National Transportation Safety Board and Aviation Rulemaking Committee recommendations. The proposal also updates the FSTD technical standards to better align with the current international FSTD evaluation guidance and introduces a new FSTD level that expands the number of qualified flight training tasks in a fixed-base flight training device. The proposed changes would ensure that the training and testing environment is accurate and realistic, would codify existing practice, and would provide greater harmonization with international guidance for simulation. With the exception of the proposal to codify new FSTD technical standards for specific training tasks through an FSTD Directive, the proposed amendments would not apply to previously qualified FSTDs.

DATES: Send comments on or before October 8, 2014.

ADDRESSES: Send comments identified by docket number FAA–2014–0391 using any of the following methods:

- *Federal eRulemaking Portal:* Go to *http://www.regulations.gov* and follow the online instructions for sending your comments electronically.
- *Mail:* Send comments to Docket Operations, M–30; U.S. Department of Transportation (DOT), 1200 New Jersey Avenue SE., Room W12–140, West Building Ground Floor, Washington, DC 20590–0001.
- *Hand Delivery or Courier:* Take comments to Docket Operations in Room W12–140 of the West Building Ground Floor at 1200 New Jersey Avenue SE., Washington, DC, between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays.
- *Fax:* Fax comments to Docket Operations at 202–493–2251.

Privacy: In accordance with 5 U.S.C. 553(c), DOT solicits comments from the public to better inform its rulemaking process. DOT posts these comments, without edit, including any personal information the commenter provides, to *www.regulations.gov*, as described in the system of records notice (DOT/ALL–14 FDMS), which can be reviewed at *www.dot.gov/privacy.*

Docket: Background documents or comments received may be read at *http://www.regulations.gov* at any time. Follow the online instructions for accessing the docket or go to the Docket Operations in Room W12–140 of the West Building Ground Floor at 1200 New Jersey Avenue SE., Washington, DC, between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays.

FOR FURTHER INFORMATION CONTACT: For technical questions concerning this action, contact Larry McDonald, Air Transportation Division/National Simulator Program Branch, AFS–205, Federal Aviation Administration, P.O. Box 20636, Atlanta, GA 30320; telephone (404) 474–5620; email *larry.e.mcdonald@faa.gov.*

For legal questions concerning this action, contact Robert H. Frenzel, Manager, Operations Law Branch, Office of the Chief Counsel, Regulations Division (AGC–200), Federal Aviation Administration, 800 Independence Avenue SW., Washington, DC 20591; telephone (202) 267–3073; email *Robert.Frenzel@faa.gov.*

SUPPLEMENTARY INFORMATION:

Authority for This Rulemaking

The Federal Aviation Administration's (FAA's) authority to issue rules on aviation safety is found in Title 49 of the United States Code. Subtitle I, Section 106(f) describes the authority of the FAA Administrator. Subtitle VII, Aviation Programs, describes in more detail the scope of the agency's authority.

This rulemaking is promulgated under the authority described in 49 U.S.C. 44701(a)(5), which requires the Administrator to promulgate regulations and minimum standards for other practices, methods, and procedures necessary for safety in air commerce and national security. This amendment to the regulation is within the scope of that authority because it prescribes an accepted method for testing and evaluating flight simulation training devices used to train and evaluate flightcrew members.

In addition, the Airline Safety and Federal Aviation Administration Extension Act of 2010 (Pub. L. 111–216) specifically required the FAA to conduct rulemaking to ensure that all flightcrew members receive flight training in recognizing and avoiding stalls, recovering from stalls, and recognizing and avoiding upset of an aircraft, as well as the proper techniques to recover from upset. This rulemaking is within the scope of the authority in Public Law 111–216 and is necessary to fully implement the training requirements recently adopted in the Qualification, Service, and Use of Crewmembers and Aircraft Dispatchers final rule (Crewmember and Aircraft Dispatcher Training Final Rule), RIN 2120–AJ00. See 78 FR 67800 (Nov. 12, 2013).

List of Abbreviations and Acronyms Frequently Used in This Document

AC—Advisory Circular
ARC—Aviation Rulemaking Committee
AURTA—Airplane Upset Recovery Training Aid
FFS—Full Flight Simulator
FTD—Flight Training Device
FSTD—Flight Simulation Training Device
ICATEE—International Committee on Aviation Training in Extended Envelopes
LOCART—Loss of Control Avoidance and Recovery Training Working Group
NPRM—Notice of Proposed Rulemaking
QPS—Qualification performance standards
SNPRM—Supplemental Notice of Proposed Rulemaking
SPAW ARC—Stick Pusher and Adverse Weather Event Training Aviation Rulemaking Committee

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I. Executive Summary

The primary purpose of this proposal is to define simulator fidelity requirements for new training tasks that were mandated for air carrier training programs by Public Law 111–216. The notice of proposed rulemaking (NPRM) proposes to accomplish this by establishing new or updated Flight Simulation Training Device (FSTD) technical evaluation standards for full stall and upset recognition and recovery training tasks as required in the Crewmember and Aircraft Dispatcher Training Final Rule and as proposed by the Stick Pusher and Adverse Weather Event Training ARC (SPAW ARC).

The Crewmember and Aircraft Dispatcher Training Final Rule added training requirements for pilots that target the prevention of and recovery from stall and upset conditions, recovery from bounced landings, enhanced runway safety training, and enhanced training on crosswind takeoffs and landings with gusts. Stall and upset prevention requires pilot skill in manual handling maneuvers and procedures. Therefore, the manual handling maneuvers most critical to stall and upset prevention (i.e., slow flight, loss of reliable airspeed, and manually controlled departure and arrival) are included as part of the agency's overall stall and upset mitigation strategy. These maneuvers are identified in the Crewmember and Aircraft Dispatcher Training Final Rule within the ''extended envelope'' training provision, which further requires that these maneuvers be completed in an FSTD. As a result, revisions to all part 121 training programs will be necessary and revisions to part 60 will be required to fully implement the extended envelope, bounced landing, and gusty crosswinds flight training required by the Crewmember and Aircraft Dispatcher Training Final Rule.

In addition, this proposal addresses a potential lack of simulator fidelity as identified in several NTSB safety recommendations and Aviation Rulemaking Committee (ARC) recommendations concerning flight training tasks, such as anti-icing, bounced landing, gusty crosswind, and extended envelope training. These changes are necessary to ensure a realistic crew training environment and to prevent incorrect simulator training.

For the purpose of this rulemaking, the term ''extended envelope training tasks'' (such as full stall and aircraft upset recovery) refers to maneuvers and procedures conducted in a FSTD that may extend beyond the limits where typical FSTD performance and handling qualities have been validated with heavy reliance on flight data to represent the actual aircraft. In instances when obtaining such flight data is hazardous or impractical, engineering predictive methods and subject-matter-expert assessment are used to program and validate the aircraft's behavior in the simulator.

The secondary purpose of this NPRM is to align the technical standards for Level C and D (fixed wing) FSTDs that are defined in Title 14 of the Code of Federal Regulations (CFR) Part 60 with the current international FSTD evaluation guidelines published in the International Civil Aviation Organization (ICAO) document 9625 Edition 3, *Manual of Criteria for the Qualification of Flight Simulation Training Devices* (ICAO 9625, Edition 3). These changes would incorporate the technical guidelines for the highest level of ICAO-defined FSTD (Type VII) into the part 60 Level C and Level D FSTD standards, where appropriate. This proposal also introduces a new level of fixed-wing FSTD (a Level 7 flight training device (FTD)) that is based upon the ICAO 9625, Edition 3, Type V FSTD technical guidance. Changes intended to align with the ICAO guidance would address new aircraft and simulation technology introduced since the original issuance of part 60, incorporate general improvements to the FSTD evaluation standards, and provide air carriers and flight training providers with additional options for conducting approved training tasks in an FTD as opposed to a more costly full flight simulator (FFS).

In general, the proposed changes to the technical standards would apply only to those FSTDs that are initially qualified or upgraded in qualification level after the final rule becomes effective. For previously qualified FSTDs used to conduct extended envelope, airborne icing, gusting crosswind, and bounced landing training, the FAA is also seeking comment on a proposed FSTD Directive that would require FSTD Sponsors to retroactively evaluate those FSTDs against certain objective and subjective testing requirements as defined in the QPS appendices and modify them if necessary to meet the proposed requirements. This proposed FSTD Directive would be applicable to any FSTD being used to conduct these training tasks, including those FSTDs being used to conduct such training on a voluntary basis in a non-air carrier flight training program. Those previously qualified devices that would not be used to conduct these specified training tasks would not require modification or evaluation.

For all FSTDs that are initially qualified or upgraded in qualification level after implementation of these regulations, the proposed changes to the

QPS appendices would become effective 30 days after publication of a final rule. However, new FSTDs may still be initially qualified under existing standards after this date, subject to up to a 24 month grace period as currently defined in § 60.15(c). For previously qualified FSTDs that will be used to conduct certain extended envelope and other training tasks described in the Crewmember and Dispatcher Training Final Rule, compliance with the proposed FSTD Directive would be required within three years of the publication date of a final rule implementing these provisions. The FAA is seeking comment on these proposed compliance dates.

A summary of the cost and benefit information is presented below.

		Present Value at a 7% Rate	Present Value at a 3% Rate
Total Cost	$52,378,480	$36,894,514	$44,892,676
Upgrade FSTDs for New Training Requirements			
Cost	$45,215,480	$32,286,867	$39,014,931
Benefits	Justified by the benefits of the training rule.		
Icing provisions			
Cost [1]	$468,000	$334,183	$403,822
Benefits	Only one prevented serious injury valued at $965,724 makes the icing benefits exceed the costs.		
Aligning Standards with ICAO			
Cost	$6,695,000	$4,273,464	$5,473,924
Benefits	Improved safety and cost savings		

[1] Implementing the icing upgrades can be accomplished at the same time as the non-icing upgrades. Therefore these estimates do not include the cost of implementation or FSTD downtime because these costs are included with the costs of the non-icing upgrades.
Note: Details may not add to row or column totals due to rounding

II. Background

A. Statement of the Problem

In order to mitigate aircraft loss of control accidents and to comply with the requirements of Public Law 111–216, the FAA has required new or revised flight training requirements in the Crewmember and Aircraft Dispatcher Training Final Rule for flight maneuvers such as full stall and upset recovery training. Through participation with various industry working groups and recommendations received from the SPAW ARC, the FAA determined that many existing FSTDs used by air carriers to conduct such training may not adequately represent the simulated aircraft to a degree necessary for successful completion of required training tasks. Additionally, the FAA evaluated several recent air carrier accidents and determined that low FSTD fidelity or the lack of ability for an FSTD to adequately conduct certain training tasks may have been a contributing factor in these accidents. A potential lack of simulator fidelity could contribute to inaccurate or incomplete training on new training tasks that are required by the Crewmember and Aircraft Dispatcher Training Final Rule, which could lead to an associated and unnecessary safety risk.

Furthermore, since the initial publication of the part 60 final rule in 2008, the international FSTD qualification guidance published in ICAO 9625, Edition 3 have been updated to incorporate general improvements to new aircraft and simulation technology and the introduction of new FSTD levels that better align FSTD fidelity with required training tasks. The ICAO 9625 document is an internationally recognized set of FSTD evaluation guidelines that was developed by a wide range of government and industry experts on flight simulation training and technology and has been used as a basis for national regulation and guidance material for FSTD evaluation in many countries. Internationally aligned FSTD standards facilitate cost savings for FSTD operators because they effectively reduce the number of different FSTD designs that are required to meet multiple national regulations and standards for FSTD qualification.

The proposals in this NPRM were largely developed using recommendations from the SPAW ARC [1] and the international FSTD qualification guidelines that are published in ICAO Document 9625, Edition 3.[2] These proposals are primarily directed at improving the fidelity of FSTDs that would be used in air carrier pilot training. They would also have an added benefit of improving the fidelity of all FSTDs qualified after the proposed rule becomes effective.

[1] A copy of the SPAW ARC final report has been placed in the docket for this rulemaking.

[2] International Civil Aviation Organization (ICAO) publications can be located on their public internet site at: *http://www.icao.int/.*

B. History

1. Industry Stall and Stick Pusher Working Group

In March 2010, the FAA worked with industry leaders to address concerns arising from the increase in stall and loss of control accidents. The Stall and Stick Pusher Working Group met over a 9 month period and produced many training recommendations to prevent stall events. This working group included members from aircraft manufacturers, simulator manufacturers, training companies, pilot associations, airlines, and the FAA.

In addition to providing best training practices using current simulation, the working group recommended that simulators in use today should not be used for training to or past the aerodynamic stall unless further testing and validation in that flight regime are performed for the specific simulator and approved by the FAA. This working group did not recommend post-stall training because the roll and yaw characteristics and the stall buffet characteristics of the simulator may not be representative of the aircraft.

2. International Committee on Aviation Training in Extended Envelopes (ICATEE)

In 2009, the Royal Aeronautical Society formed the International Committee on Aviation Training in Extended Envelopes (ICATEE) working group to examine aircraft upset recovery training and recommend improvements to both training and simulation devices used to conduct training. This working group was comprised of subject matter experts in many facets of industry and government including airlines, flight training providers, research entities, FSTD manufacturers, airframe manufacturers, regulatory authorities, and airline pilots associations. The ICATEE working methodology was to first conduct a training needs analysis using subject matter experts in the area of pilot training and then determine the training device requirements as a function of the identified training needs. Once the training needs were established, subject matter experts in FSTD technology developed proposed modifications to the FSTD qualification standards to support the recommended training tasks. While the ICATEE final report has not been published yet, several interim recommendations from ICATEE on FSTD technical evaluation standards for stall, upset recovery, and airborne icing maneuvers were provided to the SPAW ARC for consideration in developing its recommendations.

3. Airline Safety and Federal Aviation Administration Extension Act of 2010 (Pub. L. 111–216)

On August 1, 2010, President Obama signed into law Public Law 111–216. In addition to extending the FAA's authorization, Public Law 111–216 included provisions to improve airline safety and pilot training. Specifically, section 208 of Public Law 111–216, Implementation of NTSB Flight Crewmember Training Recommendations, pertains directly to this rulemaking in that stall training and upset recovery training were mandated for part 121 air carrier flightcrew members.

4. Crewmember and Aircraft Dispatcher Training Final Rule

On November 12, 2013, the FAA published the Crewmember and Aircraft Dispatcher Training Final Rule, adding the training tasks required by Public Law 111–216, specifically targeting extended envelope training, recovery from bounced landings, enhanced runway safety training, and enhanced training on crosswind takeoffs and landings with gusts which further requires that these maneuvers be completed in an FSTD. As a result, revisions to all part 121 training programs will be necessary and the revisions to part 60 as proposed in this rule will be required to ensure FSTDs are properly evaluated in order to fully implement the flight training required in the Crewmember and Aircraft Dispatcher Training Final Rule.

In the Crewmember and Aircraft Dispatcher Training Final Rule, the FAA established a 5-year compliance period for air carriers to update their training programs because of the need to revise both the FSTD standards and to allow for FSTD sponsors to have a sufficient amount of time to make any required modifications to their FSTDs as a result of this rulemaking. The FAA recognizes that a significant amount of engineering, testing, and subject matter expert evaluation time will be required to evaluate and modify the numerous FSTDs that will be required to conduct such tasks in part 121 training programs. As a result, the FAA has proposed a 3-year compliance period in the FSTD Directive that would require the evaluation and modification of previously qualified FSTDs that will be used for certain ''extended envelope'' and other training tasks in the Crewmember and Aircraft Dispatcher Training Final Rule. The FAA believes that the 5-year compliance period in the Crewmember and Aircraft Dispatcher Training Final Rule provides sufficient time to complete this rulemaking and also to give FSTD sponsors enough time to comply with the proposed 3-year compliance period in the FSTD Directive. While the FAA recognizes that some sponsors and operators may already have the technology and simulation knowledge necessary to make the changes proposed in the FSTD Directive, we recognize that there is a significant variation in the capability of previously qualified FSTDs as well as the technical expertise available to FSTD sponsors which could require more or less compliance time than what the FAA has anticipated. We request comment on whether the 3-year compliance period in the FSTD Directive is adequate, too short, or too long. The comments should also take into consideration the March 2019 compliance date for the new training task requirements in the Crewmember and Aircraft Dispatcher Training Final Rule and indicate whether that time is adequate, too short, or too long.

5. Stick Pusher and Adverse Weather Event Training Aviation Rulemaking Committee

The formation of the SPAW ARC was mandated by Public Law 111–216, Section 208. It held its first meeting on November 30, 2010, and held its last full group meeting on May 12, 2011. The SPAW ARC included members from aircraft manufacturers, simulator manufacturers, training companies, pilot associations, and airlines.

The final report provided numerous recommendations to the FAA on stall and stick pusher training, upset recovery training, icing training, and microburst and windshear training. In addition to the training recommendations, the ARC made recommendations to the FAA in its final report concerning the potential lack of simulator fidelity and proposed modifications to part 60 to address those deficiencies. The ARC cited several specific areas of improvement to simulation including modeling of flight dynamics and performance changes due to ice accretion, modeling of aircraft response in a stall, and providing flight instructors with improved feedback concerning the validity of the simulation during upset prevention and recovery training maneuvers. A copy of the SPAW ARC's final report has been placed in the docket for this rulemaking.

6. Advisory Circular (AC) 120–109 (Stall and Stick Pusher Training)

In August 2012, the FAA issued AC 120–109 (Stall and Stick Pusher

Training),[3] which provided a series of best practices relating to training, testing, and checking of stall warnings; aerodynamic stalls and stick pusher activations; and recommended recovery procedures. The content of this AC was developed using the recommendations of previous working groups and was intended to provide guidance to training providers and air carriers to ensure correct and consistent responses to unexpected stall warnings and stick pusher activations.

7. Loss of Control Avoidance and Recovery Training (LOCART) Working Group

In March 2012, the FAA reconvened the SPAW ARC to seek more detailed recommendations on academic and flight training programs to support the upset prevention and recovery training that was proposed by the SNPRM on air carrier crewmember training. The ARC was also tasked with examining the training device requirements to support upset prevention and recovery training in an FSTD. The final report from this ARC included technical recommendations to revise the part 60 FSTD standards to include minimum FSTD evaluation requirements for upset prevention and recovery training maneuvers. Some of these recommendations to amend part 60 expanded upon the previous recommendations made in the original SPAW ARC report. A copy of this final report has also been placed in the docket for this rulemaking.

C. Deficiencies in FSTD Evaluation Requirements

1. Full Stall Training Maneuvers

The SPAW ARC examined various issues involving stall training and recommended against any simulator training being conducted beyond the first indication of the stall unless the simulator modeling and fidelity are such that the simulation of the specific airplane is representative in this flight regime. Particular concerns addressed by the SPAW ARC regarding FSTD fidelity in full stall maneuvers were the modeling of aircraft stability and aircraft response to control inputs, improved motion response for acceleration cueing, and improved modeling of the stall buffet to cover a broader range of flight conditions. The SPAW ARC also made recommendations concerning the evaluation of FSTD stall characteristics in flight conditions other than wings-level stalls. These include stall training maneuvers such as high altitude cruise stall, turning flight (accelerated) stall, and the objective validation of stick pusher forces (where equipped in the aircraft).

The exposure of flightcrews to a low fidelity representation of an airplane's stall characteristics in an FSTD can lead to improper recovery techniques being reinforced during training. Such improper recovery techniques can be evidenced in the investigation of the 1996 Airborne Express DC–8 aircraft accident in Narrows, Virginia. In this investigation, the NTSB concluded that the flightcrew had been exposed to a low fidelity reproduction of the DC–8's stall characteristics in the company's flight simulator that likely contributed to their inappropriate response to an actual stall in the aircraft. The NTSB report stated:

The simulator's benign flight characteristics when flown more into the stall provided the flightcrew with a misleading expectation of the handling characteristics of the actual airplane. The [pilot flying (PF)] initial target pitch attitudes during the attempted stall recovery (from 10 degrees to 14 degrees) may have resulted in a successful recovery during his practice and teaching in the simulator. Further, because their experience with stalls in the DC–8 was obtained in a simulator without a stall break, the PF and [pilot not flying (PNF)] could not practice the nose-down control inputs required to recover a stalled airplane that is pitching down or at a nose-low attitude. Moreover, because the PF and PNF were exposed during extensive simulator experience to what they presumed was the stall behavior of the DC–8, the stall break that occurred in the airplane most likely surprised them. The Safety Board concludes that the flightcrew's exposure to a low fidelity reproduction of the DC–8's stall characteristics in the ABX DC–8 flight training simulator was a factor in the PF holding aft (stall-inducing) control column inputs when the airplane began to pitch down and roll, which contributed to the accident.[4]

The FAA notes that because there has never been a requirement for an air carrier to conduct training in a simulator to a full stall,[5] there has been relatively little exposure of flightcrews to such low fidelity stall characteristics in a simulator. However, once full stall training becomes a mandatory training requirement for air carriers, it is imperative that any FSTD being used to conduct such training is properly evaluated to ensure such negative training does not take place as evidenced in the Airborne Express accident. Failing to properly evaluate air carrier FSTDs to deliver this training would potentially expose many crewmembers to incorrect stall characteristics in an FSTD and thereby introducing an associated safety risk.

2. Upset Recognition and Recovery Training Maneuvers

The SPAW ARC recommended that simulator and academic training in upset prevention and recovery should be based on the Airplane Upset Recovery Training Aid (AURTA).[6] The SPAW ARC further stated that instructors do not always have the proper tools to provide adequate feedback to students with respect to control responses and aircraft operating limits during upset prevention and recovery training. Additionally, they noted if part of the training is conducted outside of the simulator's validated envelope,[7] there is an increased risk that the simulator will no longer accurately replicate the aircraft, which could result in negative training. The SPAW ARC recommended improved instructor feedback tools which can display when a training pilot has exceeded either the accepted simulator model envelope or the known aircraft load factor envelope. These instructor feedback tools would allow the instructor to identify and inform the student that he or she is exceeding those limits, thus mitigating potentially negative training. Furthermore, the SPAW ARC recommended employing the AURTA methods in assessing an FSTD's capability to conduct such maneuvers and to provide improved instructor feedback mechanisms to better evaluate both the FSTD's and the student's performance during such training.

When an FSTD is used to conduct upset recovery training, the instructor must be provided with the necessary tools to assess a student's performance when executing the recovery. When an instructor does not have these tools, potentially dangerous or inappropriate control strategies may be learned in the

[3] FAA Advisory Circulars can be located on the FAA's public internet site at: *http://www.airweb.faa.gov/*.

[4] See NTSB aircraft accident report number NTSB/AAR–97/05: Uncontrolled Flight into Terrain; ABX Air (Airborne Express); Douglas DC–8–63, N827AX; Narrows, Virginia (Dec. 22, 1996).

[5] Air carrier flight training is currently only required to train to an ''approach to stall'' flight condition where recovery is initiated at the activation of the stall warning system.

[6] The Airplane Upset Recovery Training Aid can be located on the FAA's public Internet site at: *http://www.faa.gov/other_visit/aviation_industry/airline_operators/training/*.

[7] An FSTD's validation envelope generally consists of those combinations of angle of attack and sideslip where the FSTD's aerodynamic model has been validated using flight test data or reliable predictive methods.

FSTD. In the case of the 2001 American Airlines flight 587 accident, the NTSB determined that an unrealistic portrayal of the aircraft's response to a wake vortex incident in the simulator may have contributed to the flying pilot applying unnecessary and excessive control inputs that ultimately led to the structural failure of the aircraft. Among the deficiencies the NTSB noted in the American Airlines Advanced Aircraft Maneuvering Program, the following were directly related to simulator functionality with regard to training upset recovery maneuvers to flightcrew members: [8]

- This simulator exercise could have caused the first officer of the accident flight to have an ''unrealistic and exaggerated view of the effects of wake turbulence; erroneously associate wake turbulence encounters with the need for aggressive roll upset recovery techniques; and develop control strategies that would produce a much different, and potentially surprising and confusing response if performed during flight.''
- The simulator exercise provided ''unrealistic portrayals of the airplane response to wake turbulence and significantly suppressed control input effectiveness to induce a large rolling potential that was unlikely to occur with an airplane as large as an A300–600.''
- The simulator exercise ''encouraged the use of rudder in a highly dynamic situation without portraying the large buildup in sideslip angle and side load that would accompany such rudder inputs in an actual airplane.''

Because the current FSTD evaluation standards do not contain minimum requirements on the implementation of aircraft upset scenarios, the potential remains for training to occur using such unrealistic upset scenarios. Furthermore, with improved instructor situational awareness available in the simulator (including improved feedback on student flight control inputs and simulator/aircraft operational limitations), it is possible that such aggressive roll upset recovery techniques as evidenced in the American 587 accident may have been identified and corrected during simulator training.

3. Airborne Icing Training Maneuvers

Although the simulation of engine and airframe icing has been an evaluation requirement for all Level C and Level D FSTDs since the early 1980's, the SPAW ARC recommended improving the fidelity of the aerodynamic effects of aircraft icing conditions in FSTDs used in flightcrew member training. The SPAW ARC stated specific aircraft data should be used when available; lacking that, other sources of engineering data may be used. The SPAW ARC further cited specific simulator improvements that the FAA should consider in developing improved standards for ice accretion models, such as the aerodynamic effects of lift, drag, and rotational moments (e.g. pitch, roll, and yaw effects) through means other than weight; the effects of icing on control feel, airframe buffeting, and control effectiveness; the potential to have the aircraft stall before the stall warning systems activate; the simulation of ice protection equipment failures; and the effect on engine performance due to ice ingestion.

Some current FSTD icing models simply employ a weight additive to the aircraft's gross weight in order to simulate more sluggish handling characteristics and higher stall speeds than expected. Although these characteristics may be representative of some effects of icing, the FAA believes the improved icing models that have been proposed would have an appreciable benefit to flightcrew training. FSTD icing models that incorporate the aerodynamic effects of ice accretion on lifting surfaces can provide critical recognition cues of dangerous ice buildup, such as changes in pitching moment, control effectiveness, and buffet characteristics. Furthermore, ice accretion on wing surfaces can disrupt the airflow over a wing, significantly in some cases, leading to an aerodynamic stall. Aerodynamic stall as a result of icing can occur at angles of attack much lower than stall warning systems are designed to activate. The ability to replicate these conditions in a simulator can provide invaluable training to flightcrews on the hazards of wing ice accretion and provide a higher awareness of the potential effects of icing conditions.[9] These proposed improvements would enhance the anti-icing training tasks that are currently required for air carrier training programs.

4. Microburst and Windshear Recovery Maneuvers

While accidents involving windshear and microburst have decreased significantly since the late 1980's, the SPAW ARC recommended improving FSTD evaluation requirements to support the standardization and quality of current training practices. Specific recommendations made by the SPAW ARC to improve FSTD functionality for windshear training included the addition of ''complex'' windshear models (as defined in the Windshear Training Aid) to provide flightcrew members experience in more realistic windshear encounters; employing methods to ensure an FSTD is properly configured for a windshear training profile; and including realistic levels of turbulence with existing windshear profiles.

5. Takeoff and Landing in Gusting Crosswinds

The Crewmember and Aircraft Dispatcher Training Final Rule introduced a new requirement to address an NTSB safety recommendation for the incorporation of ''realistic, gusty crosswind profiles'' into pilot simulator training programs. This recommendation was based on the results of an aircraft accident investigation in which the NTSB determined that a contributing factor of the accident was ''inadequate crosswind training in the airline industry due to deficient simulator wind gust modeling'' (see NTSB report AAR–10/04). During the course of the accident investigation, NTSB found that the airline's simulator did not have the capability to incorporate such realistic gusting crosswind scenarios for use in pilot training. Furthermore, the FAA reviewed the current part 60 FSTD evaluation standards and found that no such minimum requirement exists for the qualification of an FSTD for use in training.

6. Bounced Landing Training Maneuvers

The Crewmember and Aircraft Dispatcher Training Final Rule introduced a new requirement for bounced landing recovery training based on a review of accidents and various NTSB safety recommendations. As a result of public comments received in response to the Crewmember and Aircraft Dispatcher Training SNPRM, the FAA reviewed the part 60 minimum FSTD evaluation requirements to ensure that bounced landing maneuvers are adequately evaluated for crew training. The FAA notes that bounced landing

[8] See NTSB aircraft accident report number NTSB/AAR–04/04: In-Flight Separation of Vertical Stabilizer; American Airlines Flight 587; Airbus Industrie A–300–605R, N14053; Belle Harbor, New York; November 12, 2001.

[9] See NTSB aircraft accident report number NTSB/AAR–96/01: In-Flight Icing Encounter and Loss of Control; Simmons Airlines, d.b.a. American Eagle Flight 4184; Avions de Transport Regional (ATR) Model 72–121, N401AM; Roselawn, Indiana (Oct. 31, 1994).

maneuvers are not specifically included in the current part 60 technical evaluation requirements and, as a result, FSTDs used for this training may not have the required fidelity to properly conduct the training.

D. Related Actions

As a result of information gathered from various working groups, the FAA has taken action on loss of control training and simulator fidelity deficiencies by issuing the following voluntary guidance material:

- FAA Safety Alert for Operators (SAFO 10012)—Possible Misinterpretation of the Practical Test Standards (PTS) Language ''Minimal Loss of Altitude.'' The purpose of this alert bulletin is to clarify the meaning of the approach to stall evaluation criteria as it related to ''minimal loss of altitude'' in the Airline Transport Pilot PTS.
- FAA Information for Operators Bulletin (InFO 10010)—Enhanced Upset Recovery Training. This information bulletin recommends the incorporation of the material in the AURTA into flightcrew training. The AURTA contains guidance for upset recovery training programs for air carrier flightcrews as well as the evaluation guidance for FSTDs used in such training.
- FAA National Simulator Program (NSP) Guidance Bulletin #11–04—FSTD Modeling and Evaluation Recommendations for Engine and Airframe Icing
- FAA National Simulator Program (NSP) Guidance Bulletin #11–05—FSTD Evaluation Recommendations for Upset Recovery Training Maneuvers
- AC 120–109—Stall and Stick Pusher Training
- Airline Transport Pilot Practical Test Standards (Change 4).

Portions of this guidance material provide FSTD operators with recommended evaluation methods to improve FSTD fidelity for selected training tasks. To ensure that all FSTDs used to conduct such training are evaluated and modified to a consistent standard, the applicable part 60 technical requirements must be modified.

E. National Transportation Safety Board (NTSB) Recommendations

This proposal would incorporate changes into part 60 that would either directly or indirectly address the following NTSB Safety Recommendations through improved FSTD evaluation standards to support the outlined training tasks:

- Stall training and/or stick pusher training (Recommendations A–10–22, A–10–23, A–97–47, A–07–03, and A–10–24)
- Upset Recognition and recovery training (Recommendations A–042–62 and A–96–120)
- Engine and airframe icing training (Recommendations A–11–46 and A–11–47)
- Takeoff and landing training in gusting crosswind conditions (Recommendations A–10–110 and A–10–111)
- Bounced landing training (Recommendations A–00–93 and A–11–69).

III. Discussion of the Proposal

A. The FSTD Evaluation Process

For a new FSTD to be used in an FAA approved training program, it must be evaluated in accordance with the technical standards defined in the Qualification Performance Standards (QPS) appendices in part 60 and issued a Statement of Qualification. The QPS appendices in part 60 consist of general requirements, objective testing requirements, and subjective testing requirements that the FSTD must be evaluated against for qualification at a specific level. To validate an FSTD's aerodynamic and ground model programming, objective tests are required that compare the FSTD's performance and handling qualities against flight-test-collected validation data within prescribed tolerances. These objective tests that are required for the qualification of an FSTD are defined in the part 60 QPS appendices. Although part 60 prescribes a minimum number of objective tests required for qualification, FSTD manufacturers and aerodynamic data providers often independently conduct additional tests to fully assess the FSTD's performance beyond the minimum requirements. This additional testing may consist of supplemental validation using flight test data, engineering simulation data, or wind tunnel analysis to expand the validation envelope of an FSTD.

While objective testing using flight test data is generally the preferred method for FSTD validation, many flight training maneuvers cannot be practically validated in such a manner due either to the wide variance that arises in the flight test response due to unsteady aerodynamics and airplane stability, or to the safety risk associated with the flight data collection. These maneuvers include flight at angles of attack beyond stall identification, flight characteristics associated with significant icing, or other maneuvers where significant safety risks exist in the collection of flight test data. For such maneuvers, reliance on engineering and analytical data to extend an FSTD's validation envelope may be both appropriate and acceptable where the flight training objectives can be accomplished.

B. General Rationale for the Proposal

The primary objective of this NPRM is to introduce FSTD technical standards that adequately evaluate an FSTD's ability to replicate the performance and flight handling characteristics of an aircraft during specific new and revised training tasks required as part of an air carrier training program. For many of these new training requirements, the current part 60 and previously grandfathered FSTD evaluation standards do not adequately assess an FSTD's fidelity beyond the normal flight envelope. New FSTD evaluation standards therefore must be developed prior to requiring these enhanced training tasks. An accurate and realistic training environment is necessary to ensure flightcrew members are properly trained in the recognition of a dangerous onset of an upset or a stall condition as well as being able to properly react if the recognition cues are missed. Accident history has shown that unrealistic recognition cues and recovery techniques learned in an FSTD can contribute to an improper recovery technique being attempted in the aircraft.

A secondary objective of this NPRM is to promote harmonization with the current international FSTD qualification guidance to the maximum extent possible. To meet this objective, the FAA is proposing to adopt portions of the ICAO 9625, Edition 3 FSTD evaluation guidance into the appropriate part 60 QPS appendices. This would be limited to revising the part 60 Appendix A standards for Level C and Level D FSTDs with the updated guidelines in ICAO 9625 for a Type VII device. It would also introduce a new FTD level in Appendix B of part 60 using the ICAO 9625 guidelines for a Type V device.

The part 60 technical standards for the evaluation of an FSTD are contained in the QPS appendices of the rule. These QPS appendices are further subdivided into various attachments and tables containing General Simulator Requirements, Objective Testing Requirements, and Subjective Testing Requirements. Due to the extensive reorganization required to align the tables within the part 60 QPS appendices to match the ICAO 9625, Edition 3 structure and numbering

format, the FAA is proposing to reissue both appendix A and appendix B in their entirety. All significant amendments are discussed in the following sections as they relate to the intended objectives.

Under this proposal, the changes to the technical evaluation standards in the QPS appendices would become effective for all FSTDs that are newly qualified or upgraded in qualification level 30 days after publication of a final rule implementing these provisions. However, FSTD sponsors may elect to use the existing part 60 standards to qualify new or upgraded FSTDs for up to 24 months after the effective date of a final rule under the grace period provisions that are currently defined in § 60.15(c). All FSTDs (including previously qualified or grandfathered FSTDs) that would be used conduct certain extended envelope and other training tasks required by the Crewmember and Aircraft Dispatcher Training Final Rule would require evaluation within three years of the effective date of a final rule in accordance with the proposed FSTD Directive. See section III.C. for additional information on the proposed FSTD Directive.

C. Requirements Applicable to Previously Qualified FSTDs—FSTD Directive 2 (Appendix A, Attachment 6)

Previously qualified FSTDs retain ''grandfather rights'' in accordance with the current part 60 rule.[10] As a result, most changes made to the part 60 QPS appendices would not be applicable to previously qualified FSTDs. Because the majority of FSTDs that would be used to conduct the training required by the Crewmember and Dispatcher Training Final Rule would retain grandfather rights and would not require requalification under the new standards, the FAA must issue an FSTD Directive to ensure these previously qualified FSTDs are properly evaluated. The primary purpose of this proposal is to address the potential lack of FSTD fidelity in certain individually identified training tasks that will be required for air carrier training when the Crewmember and Aircraft Dispatcher Training Final Rule becomes effective.

An FSTD Directive is defined in § 60.23 for existing FSTDs and provides the FAA with a mechanism to mandate FSTD modifications where necessary for safety of flight reasons. Some of the training tasks that have been mandated by Public Law 111–216 and required in the Crewmember and Aircraft Dispatcher Training Final Rule have significant potential to introduce either inappropriate or incomplete training to flightcrew members due to a lack of FSTD fidelity. In most of these training tasks, the flight conditions the crews would be exposed to have never been previously experienced in the aircraft, making the accuracy and realism of the FSTD of prime importance. The potential of inadequate fidelity of an FSTD used to conduct such training can lead to a misunderstanding of recognition cues, learning of inappropriate recovery techniques, and an unrealistic understanding, or a lack of understanding of dangerous flight conditions that must be avoided. As a result, the FAA believes that proper evaluation of any FSTD (including those previously qualified FSTDs that hold grandfather rights) used to conduct these training tasks must be accomplished. To keep the cost of evaluating and modifying previously qualified FSTDs to a minimum, the FAA is proposing to apply the requirements of the FSTD Directive only to those FSTDs that would be used to accomplish specific training tasks as described in the FSTD Directive. Under this proposal, FSTD Sponsors may choose to qualify any number of FSTDs to conduct any of the individual tasks as required to meet the needs of their training programs. FSTDs that have been evaluated and modified in accordance with the FSTD Directive would have their Statements of Qualification modified to indicate the FSTD has been evaluated and qualified for the tasks.

The QPS requirements for the qualification of full stall maneuvers and upset recognition and recovery maneuvers are generally applicably to Level C and Level D FSTDs that have minimum requirements for both six degree of freedom motions cues and motion special effects (stall buffet) cues. Particularly for full stall maneuvers that involve significant roll and yaw deviations as well as high bank angle upset recovery maneuvers, motion cues in all six degrees of freedom are critical to provide the pilot with the cues necessary to learn effective recovery techniques. Additionally, motion vibration (buffet) cueing is necessary for the qualification of full stall maneuvers in order to provide the pilot with the proper recognition cues of an impending stall.

The FAA recognizes that some of the full stall and upset recognition and recovery maneuvers described in this proposal may not necessarily result in significant roll or yaw deviations (such as wings level stalls and nose high/nose low upsets with no bank angle) and could potentially be conducted in a Level A or a Level B FFS equipped with a three degree of freedom motion cueing system.[11] Furthermore, many Level A FFSs that do not have a minimum requirement for the simulation of stall buffets may, in fact, be equipped with such a system on a voluntary basis.[12] It is for these reasons, the FAA has proposed that Level A and Level B FFSs may be considered for the qualification of certain full stall and upset recognition and recovery maneuvers in accordance with the FSTD Directive where the motion and vibration cueing systems have been specifically evaluated to provide adequate cues for the accomplishment of the particular training tasks. Specific full stall or upset recovery maneuvers (such as high bank angle upset recovery maneuvers) may be excluded from qualification where it has been determined that the FSTD cannot provide the proper motion or vibration cues to accomplish the particular training tasks.

The FAA has considered the potential cost impact of imposing new evaluation requirements on previously qualified FSTDs where aerodynamic data and associated validation data for objective testing may not exist. Particularly with older aircraft and FSTDs that have been out of production for a number of years or may no longer be supported by the original aerodynamic data provider, the FAA recognizes that the collection of such data may prove to be very costly. In order to mitigate this potential cost impact, the FAA has proposed a number of cost relieving provisions in the FSTD Directive that would reduce the overall cost of compliance with the Directive. These provisions include:

- All new objective test cases for stall maneuvers include those maneuvers that are typically required for aircraft certification, such as turning flight stall and cruise configuration stalls. This would increase the likelihood that the aircraft manufacturer may already have flight test validation data on hand for use in validating required objective tests.

- Where an FSTD's aerodynamic data package is supplied by an aircraft manufacturer, the FAA is proposing to allow the use of approved engineering simulation data[13] for the purposes of

[10] See § 60.17, Previously Qualified FSTDs.

[11] Level A and Level B FFSs have minimum requirements for three degrees of freedom motion cues. See 14 CFR Part 60, Table A1A, Section 5.b.

[12] Level A FFSs do not have a minimum requirement for motion effects (stall buffets). See 14 CFR Part 60, Table A1A, Section 5.e.

[13] 14 CFR part 60, Appendix A, Attachment 2, paragraph 9.

meeting the objective testing requirements of the FSTD Directive.

• Where no adequate flight test data or engineering simulation data is available for use in validating required objective tests for stall maneuvers, the FAA is proposing to allow the validation of objective tests through evaluation by a subject matter expert pilot with relevant experience in the aircraft.

• For evaluating full stall maneuvers, where aerodynamic modeling data or validation data is not available or insufficient to fully meet the requirements of the Directive, the National Simulator Program Manager (NSPM) may restrict FSTD qualification to certain maneuvers where adequate validation data exists. For example, if validation data exists only for wings level stall maneuvers at angles of attack at or below the stick pusher activation, the NSPM may still qualify the FSTD for those limited stall maneuvers where data exists (in this example, wings level stalls where recovery is initiated at stick pusher activation).

The primary focus of this FSTD Directive is for those FSTDs that would be used to meet the air carrier training requirements in the Crewmember and Aircraft Dispatcher Training Final Rule. However, because the same safety risk exists for inappropriate simulator training in non-air carrier training programs, other qualified FSTDs that would be used to conduct such training tasks in any FAA-approved flight training program would also have to meet the requirements of this FSTD Directive. Since existing air carriers would not have to comply with the mandatory training requirements until 5 years after the Crewmember and Aircraft Dispatcher Training rulemaking becomes effective, the FAA believes there is sufficient time for the affected previously qualified FSTDs to be evaluated and modified in accordance with the FSTD Directive before such training takes place. In cases where affected training tasks are currently being conducted on a voluntary basis and the FSTD has been evaluated by the sponsor to conduct such maneuvers, the FAA has no intent to immediately halt such training. In order for such FSTDs to be modified and evaluated in a timely manner as described in the Directive, the FAA is proposing a compliance date of 3 years after this rule (and associated FSTD Directive) becomes effective. After that date, any FSTD being used in an FAA-approved training program for the following training tasks must be evaluated and issued an amended Statement of Qualification (SOQ) by the NSP in accordance with the FSTD Directive:

▪ Stall training maneuvers that are conducted at angles of attack higher than the activation of the stall warning system. This does not include approach-to-stall (stall prevention) maneuvers where recovery is initiated at the activation of the stall warning system.

▪ Upset Recognition and Recovery training maneuvers.

▪ Engine and Airframe Icing training maneuvers that demonstrate the aircraft specific effects of engine and airframe ice accretion.

▪ Takeoff and landing training tasks with gusting crosswinds.

▪ Bounced landing recovery training tasks.

Specific evaluation requirements that have been proposed for previously qualified FSTDs by FSTD Directive are indicated in the following sections by topic (sections D through H).

D. FSTD Evaluation Requirements for Full Stall Training Tasks (Appendix A; Table A1A, Section 2.1.7.S, Table A2A, Tests 2.a.10, 2.c.8, and 3.f.8; Table A3A, Test 5.b.1; and Attachment 7)

The current and previous FSTD qualification standards (dating back to AC 121–14C in 1980) contain both objective and subjective testing requirements for full stall maneuver evaluation. While these requirements include the evaluation of full stall maneuvers, the objective testing requirements are limited to only validating stall warning speeds, stall buffet onset speeds, and the stall speeds in flight conditions typically used for aircraft certification testing in a very controlled environment (such as wings level stalls in approach and climb configurations). Because there has never previously been a requirement to conduct full stall training in an FSTD (historically, stall training ends at the first indication of the stall), relatively little emphasis has been placed on the objective validation of simulator performance and handling qualities at airspeeds lower than the activation of the stall warning system.

When flight training to a full stall is provided to crewmembers, recognition cues and performance and handling characteristics in the FSTD must be accurate to ensure pilots properly respond to stall events or low energy states. Where a stall is imminent, critical seconds can be lost if the crew is not aware of the low energy cues indicating that the aircraft is approaching a dangerous flight condition. Furthermore, if a stalled condition is encountered in flight, accurate and repeated training helps pilots react and apply appropriate control input(s), to maintain or regain the desired flight path. Training in accurate and realistic scenarios may also help mitigate the startle factor that often accompanies such an event.

While the existing FSTD stall evaluation requirements have generally proven to be sufficient for approach to stall training tasks that terminate at the first indication of the stall, these standards do not adequately extend beyond the activation of the stall warning system for the purpose of validating the FSTD's performance and handling qualities at the stall through recovery. New FSTD evaluation requirements for stall recognition and aircraft handling qualities are necessary if training is to be conducted to a full stall. Most aerodynamic modeling on modern FSTDs assumes a certain amount of linearity from objectively validated test points to extrapolate aircraft performance and handling qualities between test points. As an aircraft approaches a stalled flight condition, this linearity can no longer be assumed, and more test points are required to validate the fidelity of the model.

Through the work of ICATEE and the SPAW ARC, several subject matter experts on pilot training concluded that stall recovery training does not require, nor is it practical, that the post stall behavior of the aircraft be exactly replicated in the FSTD. They also concluded that a ''type representative'' post stall model should suffice in properly training the recovery maneuver. Because of the typically unstable behavior of the aircraft at or beyond the stall angle of attack, it is not reasonable or practical to require tight tolerances applied to objective tests against flight test validation data beyond the stall angle of attack. In lieu of mandating objective tolerances in the post stall flight regime, it was recommended that the use of analytical methods, engineering simulation, and wind tunnel methods in combination with subject matter expert pilot assessment be authorized to develop and validate ''type representative'' post stall models.

In consideration of the recommendations of the SPAW ARC, the FAA proposes to amend the appendix A QPS requirements to improve the FSTD evaluation requirements for full stall training tasks. These amendments are intended to accomplish the following objectives to improve FSTD fidelity for flightcrews conducting full stall training tasks:

• Improve the fidelity of the FSTD's aerodynamic model and cueing systems

at angles of attack beyond the first indication of the stall (stall warning, stick shaker, etc.) to better match the aircraft specific recognition cues of an impending stall. This is accomplished through:

○ Improved objective testing to include additional test cases against approved validation data (flight test data, engineering simulation data, etc.) in training critical maneuvers such as turning flight (accelerated) stalls, high altitude (clean configuration) stalls, power-on stalls, and stalls at multiple flap settings.

○ New and improved objective testing tolerances to better validate performance and handling qualities, control inputs, stall buffet, and stick pusher forces (if equipped) of the FSTD as the stall is approached.

• Improve the fidelity of the FSTD's aerodynamic model and cueing systems at the stall break (if present) through stall recovery. This is accomplished through:

○ Defining a minimum level of fidelity and modeling requirements to develop ''type representative'' extended full stall models using available flight test data and alternate methods, such as engineering simulation, analytical methods, and wind tunnel analysis.

○ Defining functional evaluation criteria for qualified subject matter expert evaluation to determine suitability of a representative full stall model that supports training requirements.

In order to accomplish these objectives to improve FSTD fidelity in full stall training maneuvers, the FAA is proposing revisions to the following sections in appendix A of the QPS for FFSs. Where a specific requirement has been proposed for previously qualified FSTDs by FSTD Directive, it is indicated as such with an ''FD'':

Table A1A (General Simulator Requirements)

• Section 2.1.7.S/[FD] (High Angle of Attack Modeling)

Table A1B (Table of Tasks vs. Simulator Level)

• Table A1B, Section 3.b. (High Angle of Attack Maneuvers)

Table A2A (Full Flight Simulator Objective Tests)

• Test 2.a.10/[FD] (Stick Pusher System Force Calibration)
• Tests 2.c.8.a. and 2.c.8.b/[FD] (Stall Characteristics)
• Test 2.f.8. (Characteristic Motion Vibrations—Buffet at Stall)

Table A3A (Functions and Subjective Tests)

• Tests 5.b.1.a and 5.b.1.b/[FD] (Maneuvers—High Angle of Attack)

Attachment 7 (Additional Simulator Qualification Requirements for Stall, Upset Recognition and Recovery, and Airborne Icing Training Tasks)

• High Angle of Attack Model Evaluation [FD]

E. FSTD Evaluation Requirements for Upset Recognition and Recovery Training Tasks (Appendix A; Table A1A, Section 2.1.6.S and Attachment 7)

The current part 60 requirements do not explicitly define a minimum envelope of FSTD aerodynamic model validity required for training purposes. The objective validation of an FSTD is primarily based on direct comparison of the FSTD's performance and handling qualities against that of flight test collected validation data in a representative cross section of the flight envelope that includes many relevant training maneuvers. Outside of these objectively validated test conditions, an FSTD's aerodynamics are typically interpolated or extrapolated using predictive methods and data sources such as wind tunnel data and analytically derived data. Many of the recommended upset recovery training maneuvers (as defined in the AURTA) are conducted in flight regimes that make direct comparison against flight test data impractical due to safety concerns. However, since much of the aerodynamic characteristics necessary to program an FSTD to conduct such maneuvers are based on angle of attack and sideslip ranges that can be derived from flight testing and reliable predictive methods, a certain amount of aerodynamic model fidelity can be accurately implied across a large range of pitch, roll, and heading values. This aerodynamic model fidelity would necessarily be a function of the quality and amount of data sources, ranging from flight test and wind tunnel data sources through established extrapolation methods.

In addition to defining and measuring aerodynamic model fidelity in upset recovery maneuvers, it is important that the instructor have real-time situational awareness with respect to the aircraft's operational limits (including the degree to which the simulation being used accurately portrays the actual reaction of the airplane) and the flight control inputs being used by the student to conduct the recovery. It is critical for the instructor to be able to assess the student's application of control inputs, including those that may not be readily visible from the instructor's station (such as rudder pedal displacements and forces) to ascertain that control inputs to affect recovery do not result in exceeding either the aircraft's operational load limits or the simulator's validation data limits.

In order to properly conduct upset recovery training in an FSTD, a feedback mechanism is necessary to provide full situational awareness to the instructor to properly assess the student's recovery technique. The FAA proposes new requirements to define minimum requirements for a feedback mechanism necessary for upset recovery training in an FSTD. However, because FSTD sponsors may choose a number of methods to accomplish this, the FAA has not prescribed the exact content and layout of such a feedback mechanism. In this proposal, the FAA has included examples of recommended Instructor Operating Station displays the information section of appendix A.

In order to codify all of the proposed qualification requirements for upset recovery training in an FSTD, the FAA is proposing the following changes to Table A1A (General Simulator Requirements) and Attachment 7 of appendix A:

• The FSTD's validation limits (as a function of angle of attack and sideslip angle) must be defined by the aerodynamic data provider for use in establishing a validation envelope of the FSTD for upset recovery training maneuvers.

• For airplane upset conditions or scenarios,[14] the FSTD's aerodynamics must be evaluated to ensure the FSTD can stay within the flight tested or wind tunnel validation envelope during the execution of the recovery maneuvers. A minimum of three defined maneuvers (consistent with the maneuvers described in the AURTA) must be evaluated for FSTD qualification.

• Externally driven dynamic upset scenarios must be realistic, based on relevant data sources, and must not artificially degrade the simulated aircraft's performance capability without clear indication to the instructor.

• An instructor feedback mechanism must be provided to notify the instructor where the FSTD's validation envelope or the aircraft's operating limits has been exceeded. This feedback mechanism must also provide the

[14] The AURTA generally defines an airplane upset as one of the following unintentional conditions: Pitch attitude greater than 25 degrees nose up; Pitch attitude greater than 10 degrees nose down; Bank angle greater than 45 degrees; or flying at airspeeds inappropriate for the conditions.

instructor with relevant flight control position information and have the ability to record and playback for debriefing purposes.

In order to accomplish these objectives to improve FSTD functionality for upset recognition and recovery maneuvers, the FAA is proposing revisions to the following sections in appendix A of the QPS for FFSs. Where a specific requirement has been proposed for previously qualified FSTDs by FSTD Directive, it is indicated as such with an ''FD'':

Table A1A (General Simulator Requirements)

- Section 2.1.6.S/[FD] (Upset Recognition and Recovery)

Table A1B (Table of Tasks vs. Simulator Level)

- Section 3.f. (Upset Recognition and Recovery)

Table A3A (Functions and Subjective Tests)

- Test 5.b.15/[FD] (Maneuvers—Upset Recognition and Recovery)

Attachment 7 (Additional Simulator Qualification Requirements for Stall, Upset Recognition and Recovery, and Airborne Icing Training Tasks)

- Upset Recognition and Recovery Evaluation [FD]

F. FSTD Evaluation Requirements for Airborne Icing Training Tasks (Appendix A; Table A1A, Section 2.1.5.S; Table A2A, Test 2.i. and Attachment 7)

The FAA is proposing to amend the evaluation requirements for the simulation of engine and airframe icing as currently required in part 60 for Level C and Level D FSTDs. The proposed changes would require that an FSTD have ice accretion models that simulate the aerodynamic effects of ice accretion on the lifting surfaces of the aircraft. These ice accretion models must be realistic and based upon relevant data sources, such as aircraft manufacturer's data or other acceptable analytical methods. The SPAW ARC recommendations form the basis for these proposed requirements. The SPAW ARC recommended that aircraft type-specific flight training be conducted on the aerodynamic effects of ice accumulation; the use and failure of aircraft ice equipment; the use of autopilot; and the performance and handling effects of ice accumulation. The SPAW ARC cites incidents in which aircraft have encountered stall warning, stall buffet, and aerodynamic stall at lower than normal angles of attack due to ice accretion. Accordingly, the SPAW ARC found it to be important that flightcrews are appropriately trained on this phenomenon in a simulator training scenario that emphasizes that in icing conditions, the stall warning or protection system may not activate and stall margins may be significantly reduced.

The SPAW ARC further noted that some simulators may lack the fidelity to accurately portray the aerodynamic effects of ice accumulation. While minimum requirements for engine and airframe icing have existed in the FSTD qualification standards since the early 1980's, these requirements have lacked the specific detail for aerodynamic effects to be simulated. On many older simulators, the effects of ice accumulation have been approximated by adding weight increments to the simulated aircraft. While some icing effects can be approximated using this method, many other critical icing characteristics are not realistically replicated in this manner. For example, neither the altered critical angle of attack due to ice accumulation nor the actual weight indicative of the accumulation are accurately replicated using such weight increments.

To improve flightcrew training for such events, the FAA is proposing to amend some of the current requirements for FSTD evaluation of engine and airframe icing. These amendments would enhance the existing flightcrew training requirement for anti-icing operations by improving the recognition cues and realistic aerodynamic effects of ice accretion. The changes are based on the updated engine and airframe icing requirements that are published in the ICAO 9625, Edition 3 international FSTD qualification guidance as well as the following additional improvements that were recommended by the SPAW ARC:

- Ice accretion models must incorporate the aerodynamic effects of icing (where appropriate for the aircraft) such as reduced stall angle of attack, loss of lift, changes in pitching moment, and control effectiveness. These models must be based on aircraft original equipment manufacturer data or other analytical methods.
- Aircraft systems, such as autoflight systems and stall protection systems must respond properly to the effects of ice accretion.
- Objective tests must be developed to demonstrate the intended aerodynamic effects of simulated ice accretion.

In order to accomplish these objectives to improve FSTD fidelity in airborne icing training maneuvers, the FAA is proposing specific revisions to the following sections in appendix A of the QPS for FFSs. Where a specific requirement has been proposed for previously qualified FSTDs by FSTD Directive, it is indicated as such with an ''FD'':

Table A1A (General Simulator Requirements)

- Section 2.1.5.S/[FD] (Engine and Airframe Icing)

Table A2A (Full Flight Simulator Objective Tests)

- Test 2.i (Engine and Airframe Icing Effects Demonstration)

Attachment 7 (Additional Simulator Qualification Requirements for Stall, Upset Recognition and Recovery, and Airborne Icing Training Tasks)

- Engine and Airframe Icing Evaluation [FD]

G. FSTD Evaluation Requirements for Takeoff and Landing Training Tasks in Gusting Crosswinds (Appendix A, Table A1A, Sections 3.1.S, 3.1.R, and 11.4.R)

The FAA has introduced new FSTD evaluation requirements for the modeling of gusting crosswinds for takeoff and landing training tasks. The basis for this change is due to a recent air carrier accident where the aircraft experienced strong and gusty crosswinds during takeoff roll and departed the runway. The NTSB concluded the following in their final accident report:

> Because Continental's simulator training did not replicate the ground-level disturbances and gusting crosswinds that often occur at or near the runway surface, and it is unlikely that the accident captain had previously encountered gusting surface crosswinds like those he encountered the night of the accident, the captain was not adequately prepared to respond to the changes in heading encountered during this takeoff.[15]

While the current part 60 requirements have both objective and subjective evaluation requirements for crosswind takeoff and landing maneuvers, there is no current requirement for the modeling of gusting crosswinds. Since steady state crosswinds are currently validated with objective testing, the FAA believes most FSTDs should have adequate aerodynamic and ground modeling to react properly when stimulated with gusting crosswind profiles. Furthermore, the FAA agrees with the

[15] Runway Side Excursion During Attempted Takeoff in Strong and Gusty Crosswind Conditions, Continental Flight 1404, December 20, 2008, NTSB Final Report, NTSB/AAR–10/04.

NTSB's recommendations that such gusting crosswind profiles should be realistic and based on data sources. However, the FAA believes that such realistic gusting crosswind profiles can be derived from existing sources, such as the FAA Windshear Training Aid, and evaluated for training by subject matter expert pilots.

To ensure the FSTD supports a realistic training environment, the FAA proposes to add the following minimum requirements for the modeling of gusting crosswind profiles and the evaluation of the ground handling characteristics of the FSTD:

- Realistic gusting crosswind profiles must be available to the instructor. The profiles must be tuned in intensity and variation to require pilot intervention to avoid runway departure during takeoff or landing roll.
- A Statement of Compliance would be required that describes the source data used to develop the crosswind profiles. Additional information material in the QPS appendix recommends the use of the FAA Windshear Training Aid or other acceptable data sources in determining appropriate wind profiles.
- The FSTD's ground reaction model must be subjectively assessed to ensure it reacts appropriately to the gusting crosswind profiles.

In order to accomplish these objectives to improve FSTD functionality for gusting crosswinds, the FAA is proposing revisions to the following sections in appendix A of the QPS for FFSs. Where a specific requirement has been proposed for previously qualified FSTDs by FSTD Directive, it is indicated as such with an ''FD'':

Table A1A (General Simulator Requirements)

- Section 3.1.S(2)/[FD] (Ground Handling Characteristics)
- Section 11.4.R/[FD] (Atmosphere and Weather—Instructor Controls)

Table A3A (Functions and Subjective Tests)

- Test 3.a.3/[FD] (Takeoff—Crosswind—maximum demonstrated and gusting crosswind)
- Test 8.d./[FD] (Approach and Landing with crosswind—maximum demonstrated and gusting crosswind)

H. FSTD Evaluation Requirements for Bounced Landing Training Tasks (Appendix A, Table A1A, Section 3.1.S)

The Crewmember and Aircraft Dispatcher Training SNPRM proposed new requirements for bounced landing training tasks to address various aircraft accidents and NTSB Safety Recommendations. In response to the SNPRM, the FAA received a comment from the Air Line Pilots Association International (Docket entry FAA–2008–0677–0307) with concerns about the ability of an FSTD to adequately represent a bounced landing.

The FAA reviewed the current FSTD qualification standards and found that many of the currently required objective tests do, in fact, test the fidelity on an FSTD in this phase of flight. Objective tests, such as the required minimum unstick speed takeoff test (Vmu), landing tests, and ground effect tests should provide for a reasonable validation of the FSTD's aerodynamic performance in this phase of flight. Furthermore, the current part 60 rule has explicit motion system effects requirements for tail and engine pod strikes that can typically be a result of an incorrectly performed touchdown that could lead to the necessity of a bounced landing recovery. However, it was noted that the current part 60 general requirements for ground reaction and ground handling did not address the effects that should be accounted for in the models. To address this deficiency, the FAA is proposing to add new general requirements for ground reaction modeling to ensure the effects of a bounced landing and related tail strike are properly modeled and evaluated. Because of the safety risk involved in collecting airplane flight test data for such a maneuver, no new objective testing would be required and only subjective assessment of the FSTD would be conducted for this particular task.

In order to accomplish these objectives to improve FSTD functionality for bounced landing training tasks, the FAA is proposing revisions to the following sections in appendix A of the QPS for FFSs. Where a specific requirement has been proposed for previously qualified FSTDs by FSTD Directive, it is indicated as such with an ''FD'':

Table A1A (General Simulator Requirements)

- Section 3.1.S(1)/[FD] (Ground Reaction Characteristics)

Table A3A (Functions and Subjective Tests)

- Test 9.3./[FD] (Missed Approach—Bounced landing)

I. FSTD Evaluation Requirements for Windshear Training Tasks (Appendix A, Table A1A, Section 11.2.R)

One of the mandates of Public Law 111–216 was for the FAA to form a multidisciplinary panel to study ''. . . methods to increase the familiarity of flightcrew members with, and improve the response of flightcrew members to, stick pusher systems, icing conditions, and microburst and windshear weather events.'' [16] The FAA chartered the SPAW ARC in response to this mandate. While the SPAW ARC agreed that microburst and windshear events have decreased significantly since the introduction of the Windshear Training Aid,[17] it recommended a number of improvements to enhance the current FSTD windshear qualification requirements. The FAA is proposing to adopt the following three recommendations of the SPAW ARC, which would improve on the realism and provide better standardization of windshear training events:

- All required windshear profiles must be selectable and clearly labeled on the FSTD's instructor operating station. A method must be employed (such as an FSTD preset) to ensure that the FSTD is properly configured for the selected windshear profile. This requirement is to ensure that the proper windshear cues are present in crew training as originally qualified on the FSTD.
- Realistic levels of turbulence associated with each windshear profile must be available and selectable to the instructor.
- In addition to the four basic windshear models that are currently required, two additional ''complex'' models would be required that represent the complexity of an actual windshear encounter. These additional models may be derived from the example complex models published in the Windshear Training Aid. This requirement would provide an opportunity for crew training and practice in responding to more challenging and realistic windshear events.

In order to accomplish these objectives to improve FSTD functionality for windshear training tasks, the FAA is proposing to revise the following section of appendix A in the QPS for FFSs. No retroactive requirements have been proposed for windshear qualification by FSTD Directive:

Table A1A (General Simulator Requirements)

- Section 11.2.R (Windshear Qualification)

[16] Public Law 111–216, Section 208(b).

[17] Windshear Training Aid, U.S. Department of Transportation, Federal Aviation Administration 1987.

J. Significant Changes To Align With the International FSTD Evaluation Guidance (Appendix A)

In addition to the part 60 changes to address extended envelope and adverse weather event training, the FAA is also proposing to incorporate select portions of the latest ICAO FSTD qualification guidance [18] into the part 60 QPS requirements where practical. ICAO 9625, Edition 3 represents a major industry effort that redefined all qualification levels of FSTDs to better align FSTD fidelity with the intended pilot training tasks. The FAA is not proposing to align with the entire ICAO 9625, Edition 3 guidance document because it contains FSTD levels that differ significantly from the FAA's existing hierarchy of FSTD levels. There are several device levels in the new ICAO guidance document that currently have no basis in the FAA's existing regulations or in the FAA's existing guidance on flight training. Because of the far reaching implications beyond part 60 if changes were made to the FAA's existing FSTD hierarchy, we have limited our alignment to those FSTDs and associated evaluation guidance in the ICAO 9625, Edition 3 document that have an equivalent device in the FAA (Level C and D) or could potentially be used in the future (Level 7 FTD) with minimal impact to the existing hierarchy. Incorporation of the other device levels and evaluation guidance would require careful consideration and additional rulemaking. The FAA notes that the primary purpose of this proposal is to address the weather event, stall, stick pusher, and upset recovery training tasks required by Public Law 111–216. The FAA will continue to assess the possibility of incorporating additional ICAO 9625, Edition 3 FSTD qualification levels and evaluation guidance; however any changes made in this proposal cannot jeopardize the timely implementation of updated FSTD standards to address new and revised training tasks mandated by Public Law.

After an assessment of the ICAO 9625, Edition 3 document, the FAA is proposing to make the following changes to appendix A (Qualification Performance Standards for Airplane Full Flight Simulators) to better align the evaluation standards for Level C and Level D FSTDs with that of the current international guidance. The FAA has not proposed to align the evaluation standards for Level A and Level B FSTDs because similar devices do not exist in the ICAO 9625, Edition 3 document. Additional changes to introduce a new FTD level as defined in ICAO 9625 have been proposed in appendix B (fixed wing Qualification Performance Standards for Airplane Flight Training Devices) and will be discussed in a later section.

In its review of the new ICAO 9625, Edition 3 guidance, the FAA finds that some of the guidelines necessary for inclusion into part 60 are more restrictive and may impose additional cost (such as the increased visual field of view requirements). However, a majority of the changes are less restrictive or reflect established FSTD evaluation practice. The proposed requirements in part 60 that would align with the new ICAO guidance are expected to reduce expenses and workload for FSTD Sponsors by avoiding conflicting compliance standards between the FAA and other Civil Aviation Authorities. These amendments incorporate technological advances in, encourage innovation of, and standardize the initial and continuing qualification requirements for FSTDs that are consistent with the guidance recently established by the international flight simulation community.

1. Table A1A (General Requirements): The FAA is proposing to rewrite table A1A to incorporate the ICAO 9625, Edition 3 language and numbering system where appropriate. The FAA changed the numbering system to use the ICAO 9625, Edition 3 fidelity definitions for each simulation feature and to incorporate all general requirements for the ICAO 9625, Edition 3 Type VII FSTD into the FAA Level C and Level D FSTDs where appropriate. The general requirements for Level A and Level B FSTDs have been left mostly unchanged to maintain continuity with the current hierarchy of FSTD qualification levels. Where such a fidelity level is not used for any part 60 defined FSTD, the FAA kept the numbering intact and marked it as ''reserved'' for future use. The following sections within Table A1A contain notable changes to align with the ICAO 9625, Edition 3 requirements:

- Section 1.1.S (Flight Deck Layout and Structure)—Introduces minimum requirements for electronically displayed representations of cockpit instrumentation. This amendment to the existing standard would give FSTD sponsors a lower cost option of simulating costly aircraft components with digital representations.
- Section 6.4.R (Sound Volume)—Requires indication to the instructor when FSTD sound volume is in an abnormal setting. This is a new standard though some FSTDs already have this functionality.
- Section 6.5.R (Sound Directionality)—Requires cockpit sounds to be directionally representative. This is a new standard, but generally reflects existing practice.
- Section 7.1.1.S (Visual System Field of View)—Increases minimum visual display system field of view requirements from 180 (horizontal) x 40 (vertical) degrees to 200 x 40 degrees.
- Section 7.1.6.S (Visual System Lightpoint Brightness)—Introduces a new minimum brightness requirement of 8.8 foot-lamberts for visual scene lightpoints.
- Section 7.1.8 (Visual System Black Level and Sequential Contrast)—Introduces a new maximum visual system black level and sequential brightness level requirements (applicable only to light valve projectors).
- Section 7.1.9 (Visual Motion Blur)—Introduces a new maximum visual system motion blurring requirements (applicable only to light valve projectors).
- Section 7.1.10 (Visual Speckle Test)—Introduces a new maximum visual system speckle contrast requirement (applicable only to laser projectors).
- Section 7.2.1 (Visual—Heads-Up Display)—Introduces new minimum general requirements for the simulation of heads-up display systems.
- Section 7.2.2 (Visual—EFVS)—Introduces new minimum general requirements for the simulation of enhanced flight vision systems.
- Section 13.8.S (Miscellaneous—Transport Delay)—Reduces the maximum transport delay requirements from 150 ms to 100 ms (more restrictive).

2. Table A2A (Objective Testing Requirements): The FAA is proposing to rewrite table A2A to incorporate all of the ICAO 9625, Edition 3 language and test tolerances. Most changes to this section are less restrictive as compared to the current part 60 standards. Less restrictive test tolerances or testing conditions are expected to reduce overall cost to an FSTD Sponsor due to a reduction in the engineering hours required to match objective test results to validation data. The FAA is proposing to change the tolerances and test conditions in the following tests to align with the ICAO 9625, Edition 3 objective testing requirements:

- Test 1.a.1 (Minimum Radius Turn)—Adds a new requirement for ''key engine parameters.''

[18] Manual of Criteria for the Qualification of Flight Simulation Training Devices, ICAO 9625, Edition 3, 2009.

- Test 1.b.1 (Ground Acceleration)—Revises the tolerance from ±5% of time to ±1.5 seconds or ±5% of time (less restrictive).
- Test 1.b.7 (Rejected Takeoff)—Adds an acceptable alternative to requiring maximum braking (80% of maximum braking).
- Test 1.d.1 (Level Acceleration)—Relaxes the speed change requirement from a minimum of 50 kts of speed increase to 80% of operational speed range (for airplanes with a small operating speed range).
- Test 1.d.2 (Level Deceleration)—Relaxes the speed change requirement from a minimum of 50 kts of speed increase to 80% of operational speed range (for airplanes with a small operating speed range).
- Test 1.e.1 (Deceleration Time and Distance)—Revises the tolerance from ±5% of time to ±1.5 seconds or ±5% of time (less restrictive).
- Test 1.e.2 (Deceleration Time and Distance, Reverse Thrust)—Revises the tolerance from ±5% of time to ±1.5 seconds or ±5% of time (less restrictive).
- Test 1.f.1 (Engine Acceleration)—Revises the total time of engine acceleration (Tt) from ±10% to ±10% or ±0.25 seconds (less restrictive).
- Test 1.f.2 (Engine Deceleration)—Revises the total time of engine deceleration (Tt) from ±10% to ±10% or ±0.25 seconds (less restrictive).
- Test 2.a.7 (Pitch Trim Rate)—Revises the tolerance on trim rate from ±10% to ±10% or ±0.1 deg/sec (less restrictive).
- Tests 2.b.1, 2.b.2, 2.b.3 (Dynamic Control Checks)—Places a minimum absolute (less restrictive) tolerance on both time (0.05 s) and amplitude (0.5% of total control travel) where minimum tolerances did not previously exist. This prevents the rigid application of very small tolerances (±10% of time and ±10% of amplitude) on certain flight control systems.
- Test 2.c.7 (Longitudinal Static Stability)—Adds a new test condition that ''the speed range should be sufficient to demonstrate stick force versus speed characteristics.''
- Test 2.e.3 (Crosswind Landing)—Adds a new test tolerance on column force for airplanes with reversible flight control systems. This additional tolerance will improve the overall validation of cockpit control forces during the landing maneuver. Previous standards only included control force tolerances for the wheel and rudder pedal inputs.
- Test 3.b. (Motion Leg Balance)—Removes the testing requirement for motion leg balance. This test was determined to have not provided additional value in assessing the capability of a motion cueing platform and was recommended for removal during the development of the ICAO 9625 document.
- Test 3.e.1 (Motion Cueing Fidelity)—Replaces the existing part 60 tests for ''motion cueing performance signature'' (MCPS) with an objective test for motion cueing developed by the ICAO 9625, Edition 3 International Working Group. This test is designed to better compare motion platform cueing with the actual translational and rotational motion experienced in the aircraft.
- Test 4.a.1 (Visual—Field of View)—Increases the minimum visual system field of view from 176 × 36 degrees to 200 × 40 degrees.
- Test 4.a.2.a (Visual—System Geometry)—Defines new system geometry tolerances for image position, absolute geometry, and relative geometry.
- Test 4.a.7 (Visual—Lightpoint Brightness)—Defines a new minimum lightpoint brightness tolerance
- Test 4.a.9 (Visual—Black Level)—Defines new maximum black level requirements
- Test 4.a.10 (Visual—Motion Blur)—Defines new tolerances for motion blur of visual scenes
- Test 4.a.11 (Visual—Laser Speckle)—Defines a new maximum laser speckle contrast tolerance for applicable display systems
- Tests 4.b.1, 4.b.2, 4.b.3 (Heads-Up Display)—Defines new minimum tolerances for HUD alignment, display, and attitude.
- Tests 4.c.1, 4.c.2, 4.c.3 (Enhanced Flight Vision Systems)—Defines new minimum tolerances for EFVS registration, RVR, and thermal crossover.
- Tests 5.a and 5.b. (Sound System)—Revised objective sound testing tolerances to address subjective tuning and repeatability for recurrent evaluations
- Tests 6.a.1 (Systems Integration—Transport Delay)—Transport delay tolerances are reduced from 150 ms to 100 ms.
- Paragraph 6.d. (Motion Cueing—Frequency Domain Testing)—Additional background and recommended testing procedures for the OMCT tests (replaces existing guidance on the MCPS tests).
- Paragraphs 11.a.1 and 11.b.5 (Validation Test Tolerances)—Extends reduced tolerances for engineering simulation validation data from 20% of flight test tolerances to 40% of flight test tolerances (less restrictive).

3. Table A3A (Functions and Subjective Testing Requirements): The FAA added is proposing to add subjective tests in the following sections to align with ICAO 9625, Edition 3:

- Test 2.b.6 and 2.b.7 (Taxi)
- Test 5.b.2 (Slow Flight)
- Tests 5.b.1 (High Angle of Attack)
- Test 5.b.13 (Gliding to a Forced Landing)
- Tests 5.b.14 (Visual Resolution and FSTD Handling and Performance)
- Tests 7.a.1, 10.a.1, 11.a.20 (HUD/EFVS)
- Tests 11.a.16, 11.a.20, 11.a.25, 11.a.26, 11.a.27 (New Technology)

4. Table A3B (Class I Airport Models)

- The FAA is proposing to restructure this table to align with the ICAO 9625, Edition 3 airport model requirements. No significant differences exist between this proposed table and the current part 60 requirements.

5. Table A3D (Motion System Effects): The FAA is proposing to add or modify tests in the following sections to align with ICAO 9625, Edition 3:

- Test 1 (Taxi)—Introduces a new requirement for lateral and directional motion cueing effects during taxi maneuvers.
- Test 2 (Runway Contamination)—Introduces a new requirement for motion effects due to runway contamination and associated anti-skid system characteristics.
- Test 7 (Buffet Due to Atmospheric Disturbance)—Introduces a new requirement for motion cueing effects due to atmospheric disturbances.

K. New Level 7 Fixed Wing FSTD Requirements—Appendix B Changes (Appendix B, Tables B1A, B1B, B2A, B3A, B3B, B3C, B3D, and B3E)

In addition to the changes proposed for FFS requirements in appendix A, the FAA is also proposing to add a new FTD qualification level (Level 7 FTD) in appendix B of part 60. This new FTD level would be modeled after the ICAO 9625, Edition 3 Type V FSTD and would incorporate all of the general requirements, objective testing requirements, and subjective testing requirements as defined in ICAO 9625, Edition 3 for this level of FSTD. The purpose of adding this new FSTD level would be to expand the number of training tasks that can be qualified for training in a lower cost, fixed-base FSTD. The highest FTD level currently defined in the part 60 FSTD qualification standards is the Level 6 FTD. Because the standards for a Level 6 FTD do not include minimum requirements for ground reaction and ground handling modeling and also do

not require objective testing to validate the FSTD's performance in related maneuvers such as takeoff, landing, and taxi training tasks, the Level 6 FTD cannot be used for training these tasks.

In order to qualify such an FTD for these training tasks, new evaluation requirements would be required to properly evaluate the aerodynamic ground effect, ground handling, and visual display system characteristics to ensure an adequate level of fidelity for related training maneuvers. In ICAO 9625, Edition 3, such a new FSTD level (the ICAO Type V FSTD) was defined to expand the number of introductory training tasks that can be conducted in a fixed base FSTD. The Type V FSTD evaluation guidance introduce new objective testing requirements in the takeoff, landing, and taxi flight maneuvers in a fixed base FTD that do not currently exist in a part 60 defined Level 6 FTD. This additional validation testing would allow for additional training to be qualified for such maneuvers beyond what a current FAA Level 6 FTD is capable of performing. Consistent with the ICAO Type V guidance material, some testing and checking tasks would still be limited to upper level FFSs that have the six degree of freedom motion cueing systems. The minimum requirements for the Type V FSTD as defined in the ICAO 9625, Edition 3 are essentially that of an ICAO Type VII simulator without motion cueing requirements and less restrictive visual display system requirements.

The addition of this new FTD qualification level would be beneficial to industry because it would provide FSTD Sponsors with more options for conducting lower cost training in fixed base FSTDs rather than using more expensive Level D FFS for certain training tasks. The qualification and use of such FTDs in an FAA approved training program would be voluntary and would not impose additional cost on FSTD Sponsors.

To incorporate the proposed addition of the Level 7 FTD into appendix B of part 60, the FAA is proposing to make several modifications to the existing tables to define the technical evaluation requirements for the new FTD level while keeping the requirements intact for the current Level 4, 5, and 6 FTDs. The FAA proposes the following changes to appendix B to achieve this objective:

- Minimum FTD Requirements (Table B1A): The FAA has rewritten the minimum FTD requirements table to use the ICAO 9625, Edition 3 format and numbering system. The FAA has integrated the new Level 7 FTD requirements into the table and based them on the proposed Level D FFS requirements as defined in Table A1A with the exception of the motion and visual display system requirements. The FAA is proposing to leave all other FTD levels essentially unchanged from the current part 60 requirements.
- Table of Tasks vs FTD Level (Table B1B): The FAA is proposing to modify the minimum qualified task list to include the new Level 7 FTD device. The FAA based the qualified tasks for the Level 7 FTD upon the recommendations in ICAO 9625, Edition 3 for a Type V FSTD. Where a specific training task is limited to training only and not qualified for training to proficiency tasks (testing or checking), the FAA is proposing to annotate it in the table with a ''T.''
- Objective Testing Requirements (Table B2A): The FAA is proposing to update the table of objective tests to include new testing requirements for the Level 7 FTD. The FAA based these requirements on the FFS Level D requirements proposed in Table A2A with the exception of the motion system and visual system requirements.
- Functions and Subjective Testing Requirements (Tables B3A, B3B, B3C, B3D, and B3E): The FAA is proposing to add new and updated subjective tests to address the new tasks that may be accomplished in a Level 7 FTD. The FAA left the existing requirements for Level 4, 5, and 6 FTDs unchanged.

L. Miscellaneous Amendments To Improve and Codify FSTD Evaluation Procedures (§§ 60.15, 60.17, 60.19, 60.23, Appendix A Paragraph 11)

The FAA is further proposing to make minor amendments to the FSTD evaluation and oversight process as defined in several sections of the main rule. The part 60 rule was originally published in 2008 and codified many of the existing FSTD evaluation practices that had previously been defined in guidance material. Since the rule originally became effective, the FAA has found a number of requirements in the rule that have had unintentional negative consequences in the FAA's ability to oversee FSTD qualification issues. The proposed changes would allow for more flexibility in scheduling FSTD evaluations and reduce some of the paperwork that FSTD Sponsors currently submit to the FAA. The changes being proposed would be less restrictive and would not have a cost impact on FSTD Sponsors.

- Corrects language in the initial evaluation requirements where FSTD objective testing must be accomplished at the ''sponsor's training facility.'' This has been corrected to the FSTD's ''permanent location'' to accommodate for FSTDs that are not located at the sponsor's training facility, but at a third party location. (§ 60.15 and appendix A, paragraph 11).
- Modifies the ''grace month'' for conducting annual Continuing Qualification (CQ) evaluations from one month to three months.
- Establishes the CQ evaluation schedule on the Statement of Qualification rather than in the Master Qualification Test Guide (MQTG). These changes would provide more flexibility in scheduling CQ evaluations to accommodate both the FAA and FSTD Sponsors. (§ 60.19).
- Amends the date before which previously qualified FSTDs retain the qualification basis under which they were originally evaluated. This would ensure that FSTDs which were qualified after the original publication of part 60 (May 30, 2008) do not inadvertently lose grandfather rights. (§ 60.17).
- Clarifies the requirement to notify the FAA of changes made to an FSTD's MQTG. This requirement has been modified to require FAA reporting only for changes that would have a material impact on the MQTG content or the FSTD's qualification basis. This change would reduce the amount of reporting the FSTD Sponsors would have to conduct for minor text changes in the MQTG document. (§ 60.23).
- Reduces the minimum time prior to an initial evaluation that an FSTD Sponsor is required to send a confirmation statement to the FAA that an FSTD has been evaluated in accordance with the part 60 QPS, provided there is prior coordination and approval by the NSPM. This change would allow more flexibility for the FSTD sponsors in complex FSTD installations where on-site testing cannot be accomplished before the current 5 day time limit. (appendix A, Paragraph 11).

IV. Regulatory Notices and Analyses

A. Regulatory Evaluation

Changes to Federal regulations must undergo several economic analyses. First, Executive Order 12866 and Executive Order 13563 direct that each Federal agency shall propose or adopt a regulation only upon a reasoned determination that the benefits of the intended regulation justify its costs. Second, the Regulatory Flexibility Act of 1980 (Pub. L. 96–354) requires agencies to analyze the economic impact of regulatory changes on small entities. Third, the Trade Agreements Act (Pub. L. 96–39) prohibits agencies

from setting standards that create unnecessary obstacles to the foreign commerce of the United States. In developing U.S. standards, this Trade Act requires agencies to consider international standards and, where appropriate, that they be the basis of U.S. standards. Fourth, the Unfunded Mandates Reform Act of 1995 (Pub. L. 104–4) requires agencies to prepare a written assessment of the costs, benefits, and other effects of proposed or final rules that include a Federal mandate likely to result in the expenditure by State, local, or tribal governments, in the aggregate, or by the private sector, of $100 million or more annually (adjusted for inflation with base year of 1995). This portion of the preamble summarizes the FAA's analysis of the economic impacts of this proposed rule. We suggest readers seeking greater detail read the full regulatory evaluation, a copy of which we have placed in the docket for this rulemaking.

In conducting these analyses, FAA has determined this proposed rule has benefits that justify its costs. It has also been determined that this rule is not a ''significant regulatory action'' as defined in section 3(f) of Executive Order 12866, and is not ''significant'' as defined in DOT's Regulatory Policies and Procedures. The proposed rule, if adopted, will not have a significant economic impact on a substantial number of small entities, will not create unnecessary obstacles to international trade and will not impose an unfunded mandate on state, local, or tribal governments, or on the private sector.

Total Benefits and Costs of This Rule

Total Costs and Benefits

The FAA estimated three separate sets of costs, and provide separate benefit bases. The first set of costs would be incurred to make the necessary upgrades to the FSTDs to enable training required by the new Crewmember and Aircraft Dispatcher Training Final Rule. The training cost for the Crewmember and Aircraft Dispatcher Training Final Rule provides rental revenue to simulator sponsors which will fully compensate them for their FSTD upgrade expenses. These simulator revenues were accounted for as costs of the additional training and were fully justified by the benefits in that final rule. The second set of costs would be incurred for the evaluation and modification of engine and airframe icing models which would enhance existing training requirements for operations using anti-icing/de-icing equipment. Just avoiding one serious injury provides sufficient benefits to justify the estimated cost. Lastly there are a set of changes to part 60 QPS appendices which would align the simulator standards for some FSTD levels with those of the latest ICAO simulator evaluation guidance. This last set of changes would only apply to newly qualified FSTDs. The FAA expects unquantified safety improvements to result from these changes through more realistic training and possibly cost savings through avoiding conflicting compliance standards with other aviation authorities. The changes are expected to improve overall simulator fidelity with new and revised visual system and other FSTD evaluation standards, such as visual display resolution, visual system field of view, and system transport delay.

The table below summarizes the costs and benefits of this proposal over a ten year period:

		Present Value at a 7% Rate	Present Value at a 3% Rate
Total Cost	$52,378,480	$36,894,514	$44,892,676
Upgrade FSTDs for New Training Requirements			
Cost	$45,215,480	$32,286,867	$39,014,931
Benefits	Justified by the benefits of the training rule.		
Icing provisions			
Cost [1]	$468,000	$334,183	$403,822
Benefits	Only one prevented serious injury valued at $965,724 makes the icing benefits exceed the costs.		
Aligning Standards with ICAO			
Cost	$6,695,000	$4,273,464	$5,473,924
Benefits	Improved safety and cost savings		

[1] Implementing the icing upgrades can be accomplished at the same time as the non-icing upgrades. Therefore these estimates do not include the cost of implementation or FSTD downtime because these costs are included with the costs of the non-icing upgrades.

Note: Details may not add to row or column totals due to rounding

Costs

We now discuss the three separate sets of costs.

Upgrade Previously Qualified FSTDs for New Training Requirements. The first set of costs would be incurred to make the necessary upgrades to the FSTDs to enable training required by the new Crewmember and Aircraft Dispatcher Training Final Rule. In order to avoid inappropriate or negative training, FSTDs being used to comply with certain ''extended envelope'' training tasks in the new training rule would require evaluation and modification as defined in the FSTD Directive of this proposed part 60 rule.

Icing Provisions. The second set of costs would be incurred for the evaluation and modification of engine and airframe icing models which would enhance existing training requirements. These costs were estimated as a percentage of the total cost of the FSTD aerodynamic model development costs proposed by this rule. We did not include additional model implementation and FSTD downtime costs because it was assumed that these modifications would likely be conducted concurrently with the modifications required for the stall training tasks.

Aligning Standards With ICAO. Lastly there are a set of changes to part 60 QPS appendices which would align the simulator standards for some FSTD levels with those of the latest ICAO FSTD evaluation guidance document. These changes would only apply to newly qualified FSTDs.

Benefits

Upgrade Previously Qualified FSTDs for New Training Requirements. The best way to understand the benefits of this proposed rule is to view it in conjunction with the new Crewmember and Aircraft Dispatcher Training Final Rule. The costs of that training rule were justified by the expected benefits. The training rule cost/benefit analysis assumes that the simulators will be able to provide the required training at an hourly rate of $500. The part 60 proposed rule specifies the necessary simulator upgrade specifications. These upgrades require simulator owners to purchase and install upgrade packages, the costs of which are a cost of this proposed rule. Revenues received by simulator owners for providing training from the upgraded simulators are costs already incurred in the training rule that have been justified by the benefits of that rule. This revenue over time exceeds the cost of this proposed rule.

The proposed part 60 standards and upgrade simulator expense supporting the new training is $45 million ($32 million in present value at 7%) and has been fully justified by the new Crewmember and Aircraft Dispatcher Training Final Rule.

Icing Provisions. The second area for benefits is for the icing upgrade. Although this upgrade is not in response to a new training requirement, it would enhance existing training requirements for operations involving anti-icing/de-icing equipment and further address NTSB [19] [20] and ARC recommendations to the FAA.

These costs are minor at less than a million dollars and are expected to comprise a small percentage of the total cost of compliance with the FSTD Directive. One avoided serious injury would justify the minor costs of complying with these icing requirements.

Aligning Standards with ICAO. Lastly, we have not quantified benefits of aligning part 60 qualification standards with those recommended by ICAO, but we expect aligned FSTD standards to contribute to improved safety as they are developed by a broad coalition of experts with a combined pool of knowledge and experience and to result in cost savings through avoiding conflicting compliance standards with other aviation authorities. The changes are expected to improve overall simulator fidelity with new and revised visual system and other FSTD evaluation standards, such as visual display resolution, visual system field of view, and system transport delay.

B. Regulatory Flexibility Determination

The Regulatory Flexibility Act of 1980 (Pub. L. 96–354) (RFA) establishes ''as a principle of regulatory issuance that agencies shall endeavor, consistent with the objectives of the rule and of applicable statutes, to fit regulatory and informational requirements to the scale of the businesses, organizations, and governmental jurisdictions subject to regulation. To achieve this principle, agencies are required to solicit and consider flexible regulatory proposals and to explain the rationale for their actions to assure that such proposals are given serious consideration.'' The RFA covers a wide-range of small entities, including small businesses, not-for-profit organizations, and small governmental jurisdictions.

Agencies must perform a review to determine whether a rule will have a significant economic impact on a substantial number of small entities. If the agency determines that it will, the agency must prepare a regulatory flexibility analysis as described in the RFA.

However, if an agency determines that a rule is not expected to have a significant economic impact on a substantial number of small entities, section 605(b) of the RFA provides that the head of the agency may so certify and a regulatory flexibility analysis is not required. The certification must include a statement providing the factual basis for this determination, and the reasoning should be clear.

Description and Estimate of the Number of Small Entities

Only FSTD sponsors are affected by this rule. FSTD sponsors are air carriers who own simulators to train their pilots or training centers who own simulators and sell simulator training time. To identify FSTD sponsors that would be affected retroactively by the FSTD directive,[21] the FAA subjected the 811 FSTDs with an active qualification by the FAA to qualifying criteria designed to eliminate FSTDs not likely to be used in a part 121 training program for the applicable training tasks (i.e., stall training, upset recovery training, etc.). The remaining list of 322 FSTDs (included in Appendix A of the regulatory evaluation) were sponsored by the 26 companies presented in the table below.

[19] NTSB recommendations A–11–46 and A–11–47 address engine and airframe icing.

[20] *www.ntsb.gov*

[21] Part 60 contains grandfather rights for previously qualified FSTD so the FAA would invoke an FSTD Directive to require modification of previously qualified devices. The FSTD Directive process has provisions for mandating modifications to FSTDs retroactively for safety of flight reasons. See 14 CFR Part 60, § 60.23(b).

Company Sponsoring FSTD	FSTD
A.T.S. Inc.	1
ABX Air, Inc.	2
AIMS Community College	1
Airbus	7
Alaska Airlines	3
American Airlines	24
American Eagle Airlines Training Center	2
Atlas Air, Inc	3
Boeing Training and Flight Services	37
CAE SimuFlite Inc.	7
Compass Airlines, LLC	1
Delta Air Lines, Inc.	28
Evergreen International Airlines	1
ExpressJet Airlines, Inc.	3
FedEx	20
FlightSafety International	67
FSC Dallas, LLC	3
Global One Training Group, LLC	1
JetBlue Airways	8
Kalitta Air, LLC	2
Pan Am International Flight Academy	31
Pinnacle Airlines, Inc.	2
Southwest Airlines	9
United Airlines	30
United Parcel Service	8
US Airways, Inc.	21
Total	322

To determine which of the 26 organizations listed in the previous table are small entities, the FAA consulted the U.S. Small Business Administration Table of Small Business Size Standards Matched to North American Industry Classification System Codes.[22] For flight training (NAICS Code 611512) the threshold for small business is revenue of $25.5 million or less. The size standard for scheduled passenger air transportation (NAICS Code 481111) and scheduled freight air transportation (NAICS Code 481112) and non-scheduled charter passenger air transportation (NAICS Code 481211) is 1,500 employees. After consulting the World Aviation Directory, and other on-line sources, for employees and annual revenues, the FAA identified six companies that are qualified as small entities. In this instance, the FAA considers six a substantial number of small entities.

Economic Impact

The economic impact of this rule applies differently to previously qualified FSTD sponsors than it would to newly qualified FSTD sponsors. Below is a summary of the two separate analyses performed. One determines the impact of the proposal on small entities that would have to upgrade their previously qualified devices and the other analysis determines the impact on those that would have to purchase a newly qualified devices.

Economic Impact of Upgrading Previously Qualified FSTDs

Four of the small entities are training providers. If these companies choose to offer training in the extended envelope training tasks as required by the Crewmember and Aircraft Dispatcher Training Final Rule, they could do so only in an upgraded FSTD. However, if they offer this new required training there would be increased demand for training time in their FSTDs because in addition to current requirements for training, captains and first officers have two hours of additional training in the first year and additional training time in the future. The FAA estimated the cost of upgrading each simulator would be recovered in less than 300 hours at a simulator rental rate of $500 per hour. The training companies could therefore recover their upgrade costs for each simulator in less than one year. Therefore, the rule would not impose a significant economic impact on these companies.

Two of the companies identified as small businesses are part 121 air carriers. They have to comply with the Crewmember and Aircraft Dispatcher Training Final Rule by training their pilots in simulators that meet the standards of this part 60 rule. The additional pilot training cost in an upgraded simulator was accounted for and justified in that training final rule. This part 60 rule simply specifies how the simulators need to be upgraded such that the new training will be in compliance with the training final rule. These part 121 operators have two options. They can purchase training time for their pilots at a qualified training center. Alternatively they could choose to comply with the FSTD Directive by upgrading their own devices to train their pilots for the new training tasks. For these operators who already own simulators, the cost of complying with the FSTD Directive is estimated to be less than the cost of renting time at a training center to comply with the new requirements. Therefore, we expect that they would choose to upgrade their devices because it would be less costly to offer training in-house than to send pilots out to

[22] *http://www.sba.gov/sites/default/files/files/Size_Standards_Table.pdf.*

training centers. The cost to train pilots in the tasks required by the training rule is a cost of the training rule and not this rule. Thus, the rule would not impose a significant economic impact on these companies, because by upgrading their simulators these operators would lower their costs.

Economics of Newly Qualified Devices

It is unknown how many sponsors of newly qualified FSTDs in the future may qualify as small entities, but we expect it would be a substantial number as it could likely include the six identified above. The FAA expects the proposed requirements that address the new training tasks and upgrade the icing FSTD requirements to be included in future training packages and the cost would be minimal for a newly qualified FSTD. The requirement to align with ICAO guidance however, would result in some cost. The FAA does not know who in the future will be purchasing and qualifying FSTDs after the rule becomes effective. The FAA estimates that the incremental cost per newly qualified FSTD would be approximately $34,000. This is less than 0.5 percent of the cost of a new FSTD, which generally costs $10 million or more. Therefore we do not believe the proposed rule would have a significant economic impact on a substantial number of small entities that purchase newly qualified FSTDs after the rule is in effect.

Thus this proposed rule is expected to impact a substantial number of small entities, but not impose a significant economic impact. Therefore, as provided in section 605(b), the head of the FAA certifies that this rulemaking will not result in a significant economic impact on a substantial number of small entities. The FAA solicits comments regarding this determination.

C. International Trade Impact Assessment

The Trade Agreements Act of 1979 (Pub. L. 96–39), as amended by the Uruguay Round Agreements Act (Pub. L. 103–465), prohibits Federal agencies from establishing standards or engaging in related activities that create unnecessary obstacles to the foreign commerce of the United States. Pursuant to these Acts, the establishment of standards is not considered an unnecessary obstacle to the foreign commerce of the United States, so long as the standard has a legitimate domestic objective, such as the protection of safety, and does not operate in a manner that excludes imports that meet this objective. The statute also requires consideration of international standards and, where appropriate, that they be the basis for U.S. standards. The FAA has assessed the potential effect of this proposed rule and determined that it uses international standards as its basis and does not create unnecessary obstacles to the foreign commerce of the United States.

D. Unfunded Mandates Assessment

Title II of the Unfunded Mandates Reform Act of 1995 (Pub. L. 104–4) requires each Federal agency to prepare a written statement assessing the effects of any Federal mandate in a proposed or final agency rule that may result in an expenditure of $100 million or more (in 1995 dollars) in any one year by State, local, and tribal governments, in the aggregate, or by the private sector; such a mandate is deemed to be a ''significant regulatory action.'' The FAA currently uses an inflation-adjusted value of $151 million in lieu of $100 million. This proposed rule does not contain such a mandate; therefore, the requirements of Title II of the Act do not apply.

E. Paperwork Reduction Act

The Paperwork Reduction Act of 1995 (44 U.S.C. 3507(d)) requires that the FAA consider the impact of paperwork and other information collection burdens imposed on the public. According to the 1995 amendments to the Paperwork Reduction Act (5 CFR 1320.8(b)(2)(vi)), an agency may not collect or sponsor the collection of information, nor may it impose an information collection requirement unless it displays a currently valid Office of Management and Budget (OMB) control number.

This action contains the following proposed amendments to the existing information collection requirements previously approved under OMB Control Number 2120–0680. As required by the Paperwork Reduction Act of 1995 (44 U.S.C. 3507(d)), the FAA has submitted these proposed information collection amendments to OMB for its review.

Summary: Under this proposal, an increase in information collection requirements would be imposed on Sponsors of previously qualified FSTDs that require modification for the qualification of certain training tasks as defined in FSTD Directive 2. These Sponsors would be required to report FSTD modifications to the FAA as described in § 60.23 and § 60.16 which would result in a one-time information collection. Additionally, because compliance with the FSTD Directive (for previously qualified FSTDs) and the new QPS requirements (for newly qualified FSTDs) would increase the overall amount of objective testing necessary to maintain FSTD qualification under § 60.19, a slight increase in annual information collection would be required to document such testing.

Use: For previously qualified FSTDs, the information collection would be used to determine that the requirements of the FSTD Directive have been met. The FAA will use this information to issue amended Statements of Qualification (SOQ) for those FSTDs that have been found to meet those requirements and also to determine if the FSTDs annual inspection and maintenance requirements have been met.

Respondents (including number of): The additional information collection burden in this proposal is limited to those FSTD Sponsors that would require specific FSTD qualification for certain training tasks as defined in FSTD Directive 2. Approximately 322 previously qualified FSTDs [23] may require evaluation as described in the FSTD Directive to support the Crewmember and Aircraft Dispatcher Training Final Rule. The number of respondents would be limited to those Sponsors that maintain FSTDs which may require additional qualification in accordance with the FSTD Directive.

Frequency: This additional information collection would include both a one-time event and an increase to the annual part 60 information collection requirements.

Annual Burden Estimate: The FAA estimates that for each additional qualified task required in accordance with FSTD Directive 2, the one-time information collection burden to each FSTD Sponsor would be approximately 0.85 hours per FSTD for each additional qualified task.[24] Assuming all five of the additional qualified tasks would be required for each of the estimated 322 FSTDs (including qualification for full stall training, upset recovery training, airborne icing training, takeoff and landing in gusting crosswinds, and bounced landing training), the cumulative one-time information collection burden would be approximately 1,369 hours. This collection burden would be distributed over a time period of approximately 3

[23] The FAA estimated this from the number of previously qualified FSTDs that simulate aircraft which are currently used in U.S. part 121 air carrier operations.

[24] The 0.85 hour burden is derived from the existing Part 60 Paperwork Reduction Act supporting statement (OMB–2120–0680), Table 5 (§ 60.16) and includes estimated time for the FSTD Sponsor's staff to draft and send the letter as well as estimated time for updating the approved MQTG with new test results.

years. This 3 year time period represents the compliance period of the proposed FSTD Directive.

The one-time information collection burden to the Federal government is estimated at approximately 0.6 hours per FSTD for each qualified task to include Aerospace Engineer review and preparation of an FAA response.[25] Assuming all five of the additional qualified tasks would be required for each of the estimated 322 FSTDs, the cumulative one-time information collection burden to the Federal government would be approximately 966 hours. The modification of the FSTD's Statement of Qualification would be incorporated with the FSTD's next scheduled evaluation, so this would not impose additional burden.

Because the number of objective tests required to maintain FSTD qualification would increase slightly with this proposal, the annual information collection burden would also increase under the FSTD inspection and maintenance requirements of § 60.19. This additional information collection burden is estimated by increasing the average number of required objective tests for Level C and Level D FSTDs by four tests.[26] For the estimated 322 FSTDs that may be affected by the FSTD Directive, this will result in an additional 129 hours of annual information collection burden to FSTD Sponsors. This additional collection burden is based upon 0.1 hours[27] per test for a simulator technician to document as required by § 60.19. The additional information collection burden to the Federal government would also increase by approximately 43 hours[28] due to the additional tests that may be sampled and reviewed by the FAA during continuing qualification evaluations.

For new FSTDs qualified after the proposal becomes effective, the changes to the QPS appendices proposed to align with ICAO 9625 as well as the new requirements for the evaluation of stall and icing training maneuvers would result in an estimated average increase of four objective tests[29] that would require annual documentation as described in § 60.19. For the estimated 22 new[30] Level C and Level D FSTDs that may be initially qualified annually by the FAA, this will result in an additional 9 hours of annual information collection burden to FSTD Sponsors and an additional 3 hours of annual information collection burden to the Federal government. For newly qualified FSTDs, this proposal does not increase the frequency of reporting for FSTD sponsors.

The agency is soliciting comments to—

(1) Evaluate whether the proposed information requirement is necessary for the proper performance of the functions of the agency, including whether the information would have practical utility;

(2) Evaluate the accuracy of the agency's estimate of the burden;

(3) Enhance the quality, utility, and clarity of the information to be collected; and

(4) Minimize the burden of collecting information on those who are to respond, including by using appropriate automated, electronic, mechanical, or other technological collection techniques or other forms of information technology.

Individuals and organizations may send comments on the information collection requirement to the address listed in the **ADDRESSES** section at the beginning of this preamble by October 8, 2014. Comments also should be submitted to the Office of Management and Budget, Office of Information and Regulatory Affairs, Attention: Desk Officer for FAA, New Executive Building, Room 10202, 725 17th Street NW., Washington, DC 20053.

F. International Compatibility and Cooperation

In keeping with U.S. obligations under the Convention on International Civil Aviation, it is FAA policy to conform to ICAO Standards and Recommended Practices to the maximum extent practicable. The FAA has determined that there are no ICAO Standards and Recommended Practices that correspond to these proposed changes to the part 60 regulations. While the FAA has proposed to align the part 60 qualification standards for Level 7 FTDs and Level D fixed wing FFSs with that of ICAO Document 9625, the FSTD qualification guidance contained within ICAO 9625 are not defined in an ICAO Annex as a Standard and Recommended Practice and are considered guidance material.

Executive Order 13609, Promoting International Regulatory Cooperation, (77 FR 26413, May 4, 2012) promotes international regulatory cooperation to meet shared challenges involving health, safety, labor, security, environmental, and other issues and reduce, eliminate, or prevent unnecessary differences in regulatory requirements. The FAA has analyzed this action under the policy and agency responsibilities of Executive Order 13609, Promoting International Regulatory Cooperation. The agency has determined that this action would promote the elimination of differences between U.S. aviation standards and those of other civil aviation authorities by aligning evaluation standards for similar FSTD fidelity levels to the latest internationally recognized FSTD evaluation guidance in the ICAO 9625 document.

G. Environmental Analysis

FAA Order 1050.1E identifies FAA actions that are categorically excluded from preparation of an environmental assessment or environmental impact statement under the National Environmental Policy Act in the absence of extraordinary circumstances. The FAA has determined this rulemaking action qualifies for the categorical exclusion identified in paragraph 312f and involves no extraordinary circumstances.

V. Executive Order Determinations

A. Executive Order 13132, Federalism

The FAA has analyzed this proposed rule under the principles and criteria of Executive Order 13132, Federalism. The agency has determined that this action would not have a substantial direct effect on the States, or the relationship between the Federal Government and the States, or on the distribution of power and responsibilities among the various levels of government, and, therefore, would not have Federalism implications.

[25] The 0.6 hour burden on the Federal government is also derived from the existing Part 60 Paperwork Reduction Act supporting statement (OMB–2120–0680), Table 5 (§ 60.16).

[26] For previously qualified FSTDs, the requirements of FSTD Directive #2 will add a maximum of four additional objective test cases to the existing requirements.

[27] The 0.1 hour burden is derived from the existing Part 60 Paperwork Reduction Act supporting statement (OMB–2120–0680), Table 6 (§ 60.19) and includes estimated time for the FSTD Sponsor's staff to document the completion of required annual objective testing.

[28] This information collection burden is based upon 0.1 hours per test required for FAA personnel to review. These four additional tests are subject to the approximately 33% of which may be spot checked by FAA personnel on site during a continuing qualification evaluation.

[29] These four additional tests were estimated through comparison between the current and proposed list of objective tests required for qualification (Table A2A). Note that the total number of tests can vary between FSTDs as a function of aircraft type, test implementation, and the employment of certain technologies that would require additional testing.

[30] Based upon internal records review, the FAA calculated the number of newly qualified FSTDs at approximately 22 per year over a ten year period.

B. Executive Order 13211, Regulations That Significantly Affect Energy Supply, Distribution, or Use

The FAA analyzed this proposed rule under Executive Order 13211, Actions Concerning Regulations that Significantly Affect Energy Supply, Distribution, or Use (May 18, 2001). The agency has determined that it would not be a ''significant energy action'' under the executive order and would not be likely to have a significant adverse effect on the supply, distribution, or use of energy.

VI. Additional Information

A. Comments Invited

The FAA invites interested persons to participate in this rulemaking by submitting written comments, data, or views. The agency also invites comments relating to the economic, environmental, energy, or federalism impacts that might result from adopting the proposals in this document. The most helpful comments reference a specific portion of the proposal, explain the reason for any recommended change, and include supporting data. To ensure the docket does not contain duplicate comments, commenters should send only one copy of written comments, or if comments are filed electronically, commenters should submit only one time.

The FAA will file in the docket all comments it receives, as well as a report summarizing each substantive public contact with FAA personnel concerning this proposed rulemaking. Before acting on this proposal, the FAA will consider all comments it receives on or before the closing date for comments. The FAA will consider comments filed after the comment period has closed if it is possible to do so without incurring expense or delay. The agency may change this proposal in light of the comments it receives.

Proprietary or Confidential Business Information: Commenters should not file proprietary or confidential business information in the docket. Such information must be sent or delivered directly to the person identified in the **FOR FURTHER INFORMATION CONTACT** section of this document, and marked as proprietary or confidential. If submitting information on a disk or CD ROM, mark the outside of the disk or CD ROM, and identify electronically within the disk or CD ROM the specific information that is proprietary or confidential.

Under 14 CFR 11.35(b), if the FAA is aware of proprietary information filed with a comment, the agency does not place it in the docket. It is held in a separate file to which the public does not have access, and the FAA places a note in the docket that it has received it. If the FAA receives a request to examine or copy this information, it treats it as any other request under the Freedom of Information Act (5 U.S.C. 552). The FAA processes such a request under Department of Transportation procedures found in 49 CFR part 7.

B. Availability of Rulemaking Documents

An electronic copy of rulemaking documents may be obtained from the Internet by—

1. Searching the Federal eRulemaking Portal (*http://www.regulations.gov*);

2. Visiting the FAA's Regulations and Policies Web page at *http://www.faa.gov/regulations_policies* or

3. Accessing the Government Printing Office's Web page at *http://www.fdsys.gov*.

Copies may also be obtained by sending a request to the Federal Aviation Administration, Office of Rulemaking, ARM–1, 800 Independence Avenue SW., Washington, DC 20591, or by calling (202) 267–9680. Commenters must identify the docket or notice number of this rulemaking.

All documents the FAA considered in developing this proposed rule, including economic analyses and technical reports, may be accessed from the Internet through the Federal eRulemaking Portal referenced in item (1) above.

List of Subjects in 14 CFR Part 60

Airmen, Aviation safety, Reporting and recordkeeping requirements.

The Proposed Amendment

In consideration of the foregoing, the Federal Aviation Administration proposes to amend chapter I of title 14, Code of Federal Regulations as follows:

PART 60—FLIGHT SIMULATION TRAINING DEVICE INITIAL AND CONTINUING QUALIFICATION AND USE

■ 1. The authority citation for part 60 is revised to read as follows:

Authority: 49 U.S.C. 106(f), 106(g), 40113, and 44701; Pub. L. 111–216, 124 Stat. 2348 (49 U.S.C. 44701 note).

■ 2. Amend § 60.15 by revising paragraph (e) to read as follows:

§ 60.15 Initial Qualification requirements.

* * * * *

(e) The subjective tests that form the basis for the statements described in paragraph (b) of this section and the objective tests referenced in paragraph (f) of this section must be accomplished at the FSTD's permanent location, except as provided for in the applicable QPS.

* * * * *

■ 3. Amend § 60.17 by revising paragraph (a) to read as follows:

§ 60.17 Previously qualified FSTDs.

(a) Unless otherwise specified by an FSTD Directive, further referenced in the applicable QPS, or as specified in paragraph (e) of this section, an FSTD qualified before [effective date of final rule] will retain its qualification basis as long as it continues to meet the standards, including the objective test results recorded in the MQTG and subjective tests, under which it was originally evaluated, regardless of sponsor. The sponsor of such an FSTD must comply with the other applicable provisions of this part.

■ 4. Amend § 60.19 by revising paragraphs (b)(4) and (b)(5) to read as follows:

§ 60.19 Inspection, continuing qualification evaluation, and maintenance requirements.

* * * * *

(b) * * *

(4) The frequency of NSPM-conducted continuing qualification evaluations for each FSTD will be established by the NSPM and specified in the Statement of Qualification.

(5) Continuing qualification evaluations conducted in the 3 calendar months before or after the calendar month in which these continuing qualification evaluations are required will be considered to have been conducted in the calendar month in which they were required.

* * * * *

■ 5. Amend § 60.23 by adding new paragraph (a)(3) to read as follows:

§ 60.23 Modifications to FSTDs.

(a) * * *

(3) Changes to the MQTG which do not affect required objective testing results or validation data approved during the initial evaluation of the FSTD are not considered modifications under this section.

* * * * *

■ 6. Part 60 is amended by revising Appendix A to read as follows:

Appendix A to Part 60—Qualification Performance Standards for Airplane Full Flight Simulators

Begin Information

This appendix establishes the standards for Airplane FFS evaluation and qualification. The NSPM is responsible for the development, application, and

implementation of the standards contained within this appendix. The procedures and criteria specified in this appendix will be used by the NSPM, or a person assigned by the NSPM, when conducting airplane FFS evaluations.

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18. Operations With Missing, Malfunctioning, or Inoperative Components (§ 60.25).
19. Automatic Loss of Qualification and Procedures for Restoration of Qualification (§ 60.27).
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21. Record Keeping and Reporting (§ 60.31).
22. Applications, Logbooks, Reports, and Records: Fraud, Falsification, or Incorrect Statements (§ 60.33).
23. Specific FFS Compliance Requirements (§ 60.35).
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Attachment 1 to Appendix A to Part 60—General Simulator Requirements.
Attachment 2 to Appendix A to Part 60—FFS Objective Tests.
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Attachment 4 to Appendix A to Part 60—Sample Documents.
Attachment 5 to Appendix A to Part 60—Simulator Qualification Requirements for Windshear Training Program Use.
Attachment 6 to Appendix A to Part 60—FSTD Directives Applicable to Airplane Flight Simulators.
Attachment 7 to Appendix A to Part 60—Additional Simulator Qualification Requirements for Stall, Upset Recognition and Recovery, and Engine and Airframe Icing Training Tasks.

End Information

1. Introduction

Begin Information

a. This appendix contains background information as well as regulatory and informative material as described later in this section. To assist the reader in determining what areas are required and what areas are permissive, the text in this appendix is divided into two sections: ''QPS Requirements'' and ''Information.'' The QPS Requirements sections contain details regarding compliance with the part 60 rule language. These details are regulatory, but are found only in this appendix. The Information sections contain material that is advisory in nature, and designed to give the user general information about the regulation.

b. Questions regarding the contents of this publication should be sent to the U.S. Department of Transportation, Federal Aviation Administration, Flight Standards Service, National Simulator Program Staff, AFS–205, 100 Hartsfield Centre Parkway, Suite 400, Atlanta, Georgia, 30354. Telephone contact numbers for the NSP are: Phone, 404–832–4700; fax, 404–761–8906. The general email address for the NSP office is: *9-aso-avs-sim-team@faa.gov.* The NSP Internet Web site address is: *http://www.faa.gov/about/initiatives/nsp/.* On this Web site you will find an NSP personnel list with telephone and email contact information for each NSP staff member, a list of qualified flight simulation devices, advisory circulars (ACs), a description of the qualification process, NSP policy, and an NSP ''In-Works'' section. Also linked from this site are additional information sources, handbook bulletins, frequently asked questions, a listing and text of the Federal Aviation Regulations, Flight Standards Inspector's handbooks, and other FAA links.

c. The NSPM encourages the use of electronic media for all communication, including any record, report, request, test, or statement required by this appendix. The electronic media used must have adequate security provisions and be acceptable to the NSPM. The NSPM recommends inquiries on system compatibility, and minimum system requirements are also included on the NSP Web site.

d. Related Reading References.

(1) 14 CFR part 60.

(2) 14 CFR part 61.

(3) 14 CFR part 63.

(4) 14 CFR part 119.

(5) 14 CFR part 121.

(6) 14 CFR part 125.

(7) 14 CFR part 135.

(8) 14 CFR part 141.

(9) 14 CFR part 142.

(10) AC 120–28, as amended, Criteria for Approval of Category III Landing Weather Minima.

(11) AC 120–29, as amended, Criteria for Approving Category I and Category II Landing Minima for part 121 operators.

(12) AC 120–35, as amended, Line Operational Simulations: Line-Oriented Flight Training, Special Purpose Operational Training, Line Operational Evaluation.

(13) AC 120–40, as amended, Airplane Simulator Qualification.

(14) AC 120–41, as amended, Criteria for Operational Approval of Airborne Wind Shear Alerting and Flight Guidance Systems.

(15) AC 120–57, as amended, Surface Movement Guidance and Control System (SMGCS).

(16) AC 150/5300–13, as amended, Airport Design.

(17) AC 150/5340–1, as amended, Standards for Airport Markings.

(18) AC 150/5340–4, as amended, Installation Details for Runway Centerline Touchdown Zone Lighting Systems.

(19) AC 150/5340–19, as amended, Taxiway Centerline Lighting System.

(20) AC 150/5340–24, as amended, Runway and Taxiway Edge Lighting System.

(21) AC 150/5345–28, as amended, Precision Approach Path Indicator (PAPI) Systems.

(22) International Air Transport Association document, ''Flight Simulator Design and Performance Data Requirements,'' as amended.

(23) AC 25–7, as amended, Flight Test Guide for Certification of Transport Category Airplanes.

(24) AC 23–8, as amended, Flight Test Guide for Certification of Part 23 Airplanes.

(25) International Civil Aviation Organization (ICAO) Manual of Criteria for the Qualification of Flight Simulators, as amended.

(26) Airplane Flight Simulator Evaluation Handbook, Volume I, as amended and Volume II, as amended, The Royal Aeronautical Society, London, UK.

(27) FAA Publication FAA–S–8081 series (Practical Test Standards for Airline Transport Pilot Certificate, Type Ratings, Commercial Pilot, and Instrument Ratings).

(28) The FAA Aeronautical Information Manual (AIM). An electronic version of the AIM is on the internet at *http://www.faa.gov/atpubs.*

(29) Aeronautical Radio, Inc. (ARINC) document number 436, titled Guidelines For Electronic Qualification Test Guide (as amended).

(30) Aeronautical Radio, Inc. (ARINC) document 610, Guidance for Design and Integration of Aircraft Avionics Equipment in Simulators (as amended).

End Information

2. Applicability (§§ 60.1 and 60.2)

Begin Information

No additional regulatory or informational material applies to § 60.1, Applicability, or to § 60.2, Applicability of sponsor rules to person who are not sponsors and who are engaged in certain unauthorized activities.

End Information

3. Definitions (§ 60.3)

Begin Information

See Appendix F of this part for a list of definitions and abbreviations from part 1 and part 60, including the appropriate appendices of part 60.

End Information

4. Qualification Performance Standards (§ 60.4)

Begin Information

No additional regulatory or informational material applies to § 60.4, Qualification Performance Standards.

End Information

5. Quality Management System (§ 60.5)

Begin Information

See Appendix E of this part for additional regulatory and informational material regarding Quality Management Systems.

End Information

6. Sponsor Qualification Requirements (§ 60.7)

Begin Information

a. The intent of the language in § 60.7(b) is to have a specific FFS, identified by the sponsor, used at least once in an FAA-approved flight training program for the airplane simulated during the 12-month period described. The identification of the specific FFS may change from one 12-month period to the next 12-month period as long as the sponsor sponsors and uses at least one FFS at least once during the prescribed period. No minimum number of hours or minimum FFS periods are required.

b. The following examples describe acceptable operational practices:

(1) Example One.

(a) A sponsor is sponsoring a single, specific FFS for its own use, in its own facility or elsewhere—this single FFS forms the basis for the sponsorship. The sponsor uses that FFS at least once in each 12-month period in the sponsor's FAA-approved flight training program for the airplane simulated. This 12-month period is established according to the following schedule:

(i) If the FFS was qualified prior to May 30, 2008, the 12-month period begins on the date of the first continuing qualification evaluation conducted in accordance with § 60.19 after May 30, 2008, and continues for each subsequent 12-month period;

(ii) A device qualified on or after May 30, 2008, will be required to undergo an initial or upgrade evaluation in accordance with § 60.15. Once the initial or upgrade evaluation is complete, the first continuing qualification evaluation will be conducted within 6 months. The 12 month continuing qualification evaluation cycle begins on that date and continues for each subsequent 12-month period.

(b) There is no minimum number of hours of FFS use required.

(c) The identification of the specific FFS may change from one 12-month period to the next 12-month period as long as the sponsor sponsors and uses at least one FFS at least once during the prescribed period.

(2) Example Two.

(a) A sponsor sponsors an additional number of FFSs, in its facility or elsewhere. Each additionally sponsored FFS must be—

(i) Used by the sponsor in the sponsor's FAA-approved flight training program for the airplane simulated (as described in § 60.7(d)(1));

OR

(ii) Used by another FAA certificate holder in that other certificate holder's FAA-approved flight training program for the airplane simulated (as described in § 60.7(d)(1)). This 12-month period is established in the same manner as in example one;

OR

(iii) Provided a statement each year from a qualified pilot, (after having flown the airplane, not the subject FFS or another FFS, during the preceding 12-month period) stating that the subject FFSs performance and handling qualities represent the airplane (as described in § 60.7(d)(2)). This statement is provided at least once in each 12-month period established in the same manner as in example one.

(b) No minimum number of hours of FFS use is required.

(3) Example Three.

(a) A sponsor in New York (in this example, a Part 142 certificate holder) establishes ''satellite'' training centers in Chicago and Moscow.

(b) The satellite function means that the Chicago and Moscow centers must operate under the New York center's certificate (in accordance with all of the New York center's practices, procedures, and policies; e.g., instructor and/or technician training/checking requirements, record keeping, QMS program).

(c) All of the FFSs in the Chicago and Moscow centers could be dry-leased (i.e., the certificate holder does not have and use FAA-approved flight training programs for the FFSs in the Chicago and Moscow centers) because—

(i) Each FFS in the Chicago center and each FFS in the Moscow center is used at least once each 12-month period by another FAA certificate holder in that other certificate holder's FAA-approved flight training program for the airplane (as described in § 60.7(d)(1));

OR

(ii) A statement is obtained from a qualified pilot (having flown the airplane, not the subject FFS or another FFS during the preceding 12-month period) stating that the performance and handling qualities of each FFS in the Chicago and Moscow centers represents the airplane (as described in § 60.7(d)(2)).

End Information

7. Additional Responsibilities of the Sponsor (§ 60.9)

Begin Information

The phrase ''as soon as practicable'' in § 60.9(a) means without unnecessarily disrupting or delaying beyond a reasonable time the training, evaluation, or experience being conducted in the FFS.

End Information

8. FFS Use (§ 60.11)

Begin Information

No additional regulatory or informational material applies to § 60.11, Simulator Use.

End Information

9. FFS Objective Data Requirements (§ 60.13)

Begin QPS Requirements

a. Flight test data used to validate FFS performance and handling qualities must have been gathered in accordance with a flight test program containing the following:

(1) A flight test plan consisting of:

(a) The maneuvers and procedures required for aircraft certification and simulation programming and validation.

(b) For each maneuver or procedure—

(i) The procedures and control input the flight test pilot and/or engineer used.

(ii) The atmospheric and environmental conditions.

(iii) The initial flight conditions.

(iv) The airplane configuration, including weight and center of gravity.

(v) The data to be gathered.

(vi) All other information necessary to recreate the flight test conditions in the FFS.

(2) Appropriately qualified flight test personnel.

(3) An understanding of the accuracy of the data to be gathered using appropriate alternative data sources, procedures, and instrumentation that is traceable to a recognized standard as described in Attachment 2, Table A2E of this appendix.

(4) Appropriate and sufficient data acquisition equipment or system(s), including appropriate data reduction and analysis methods and techniques, as would be acceptable to the FAA's Aircraft Certification Service.

b. The data, regardless of source, must be presented as follows:

(1) In a format that supports the FFS validation process.

(2) In a manner that is clearly readable and annotated correctly and completely.

(3) With resolution sufficient to determine compliance with the tolerances set forth in Attachment 2, Table A2A of this appendix.

(4) With any necessary instructions or other details provided, such as yaw damper or throttle position.

(5) Without alteration, adjustments, or bias. Data may be corrected to address known data calibration errors provided that an explanation of the methods used to correct the errors appears in the QTG. The corrected data may be re-scaled, digitized, or otherwise manipulated to fit the desired presentation.

c. After completion of any additional flight test, a flight test report must be submitted in support of the validation data. The report must contain sufficient data and rationale to

support qualification of the FFS at the level requested.

d. As required by § 60.13(f), the sponsor must notify the NSPM when it becomes aware that an addition to, an amendment to, or a revision of data that may relate to FFS performance or handling characteristics is available. The data referred to in this paragraph is data used to validate the performance, handling qualities, or other characteristics of the aircraft, including data related to any relevant changes occurring after the type certificate was issued. The sponsor must—

(1) Within 10 calendar days, notify the NSPM of the existence of this data; and

(2) Within 45 calendar days, notify the NSPM of—

(a) The schedule to incorporate this data into the FFS; or

(b) The reason for not incorporating this data into the FFS.

e. In those cases where the objective test results authorize a ''snapshot test'' or a ''series of snapshot tests'' results in lieu of a time-history result, the sponsor or other data provider must ensure that a steady state condition exists at the instant of time captured by the ''snapshot.'' The steady state condition must exist from 4 seconds prior to, through 1 second following, the instant of time captured by the snapshot.

End QPS Requirements

Begin Information

f. The FFS sponsor is encouraged to maintain a liaison with the manufacturer of the aircraft being simulated (or with the holder of the aircraft type certificate for the aircraft being simulated if the manufacturer is no longer in business), and, if appropriate, with the person having supplied the aircraft data package for the FFS in order to facilitate the notification required by § 60.13(f).

g. It is the intent of the NSPM that for new aircraft entering service, at a point well in advance of preparation of the Qualification Test Guide (QTG), the sponsor should submit to the NSPM for approval, a descriptive document (see Table A2C, Sample Validation Data Roadmap for Airplanes) containing the plan for acquiring the validation data, including data sources. This document should clearly identify sources of data for all required tests, a description of the validity of these data for a specific engine type and thrust rating configuration, and the revision levels of all avionics affecting the performance or flying qualities of the aircraft. Additionally, this document should provide other information, such as the rationale or explanation for cases where data or data parameters are missing, instances where engineering simulation data are used or where flight test methods require further explanations. It should also provide a brief narrative describing the cause and effect of any deviation from data requirements. The aircraft manufacturer may provide this document.

h. There is no requirement for any flight test data supplier to submit a flight test plan or program prior to gathering flight test data. However, the NSPM notes that inexperienced data gatherers often provide data that is irrelevant, improperly marked, or lacking adequate justification for selection. Other problems include inadequate information regarding initial conditions or test maneuvers. The NSPM has been forced to refuse these data submissions as validation data for an FFS evaluation. It is for this reason that the NSPM recommends that any data supplier not previously experienced in this area review the data necessary for programming and for validating the performance of the FFS, and discuss the flight test plan anticipated for acquiring such data with the NSPM well in advance of commencing the flight tests.

i. The NSPM will consider, on a case-by-case basis, whether to approve supplemental validation data derived from flight data recording systems, such as a Quick Access Recorder or Flight Data Recorder.

End Information

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10. Special Equipment and Personnel Requirements for Qualification of the FFSs (§ 60.14)

Begin Information

a. In the event that the NSPM determines that special equipment or specifically qualified persons will be required to conduct an evaluation, the NSPM will make every attempt to notify the sponsor at least one (1) week, but in no case less than 72 hours, in advance of the evaluation. Examples of special equipment include spot photometers, flight control measurement devices, and sound analyzers. Examples of specially qualified personnel include individuals specifically qualified to install or use any special equipment when its use is required.

b. Examples of a special evaluation include an evaluation conducted after an FFS is moved, at the request of the TPAA, or as a result of comments received from users of the FFS that raise questions about the continued qualification or use of the FFS.

End Information

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11. Initial (and Upgrade) Qualification Requirements (§ 60.15)

Begin QPS Requirements

a. In order to be qualified at a particular qualification level, the FFS must:

(1) Meet the general requirements listed in Attachment 1 of this appendix;

(2) Meet the objective testing requirements listed in Attachment 2 of this appendix; and

(3) Satisfactorily accomplish the subjective tests listed in Attachment 3 of this appendix.

b. The request described in § 60.15(a) must include all of the following:

(1) A statement that the FFS meets all of the applicable provisions of this part and all applicable provisions of the QPS.

(2) Unless otherwise authorized through prior coordination with the NSPM, a confirmation that the sponsor will forward to the NSPM the statement described in § 60.15(b) in such time as to be received no later than 5 business days prior to the scheduled evaluation and may be forwarded to the NSPM via traditional or electronic means.

(3) A QTG, acceptable to the NSPM, that includes all of the following:

(a) Objective data obtained from traditional aircraft testing or another approved source.

(b) Correlating objective test results obtained from the performance of the FFS as prescribed in the appropriate QPS.

(c) The result of FFS subjective tests prescribed in the appropriate QPS.

(d) A description of the equipment necessary to perform the evaluation for initial qualification and the continuing qualification evaluations.

c. The QTG described in paragraph (a)(3) of this section, must provide the documented proof of compliance with the simulator objective tests in Attachment 2, Table A2A of this appendix.

d. The QTG is prepared and submitted by the sponsor, or the sponsor's agent on behalf of the sponsor, to the NSPM for review and approval, and must include, for each objective test:

(1) Parameters, tolerances, and flight conditions;

(2) Pertinent and complete instructions for the conduct of automatic and manual tests;

(3) A means of comparing the FFS test results to the objective data;

(4) Any other information as necessary, to assist in the evaluation of the test results;

(5) Other information appropriate to the qualification level of the FFS.

e. The QTG described in paragraphs (a)(3) and (b) of this section, must include the following:

(1) A QTG cover page with sponsor and FAA approval signature blocks (see Attachment 4, Figure A4C, of this appendix for a sample QTG cover page).

(2) A continuing qualification evaluation requirements page. This page will be used by the NSPM to establish and record the frequency with which continuing qualification evaluations must be conducted and any subsequent changes that may be determined by the NSPM in accordance with § 60.19. See Attachment 4, Figure A4G, of this appendix for a sample Continuing Qualification Evaluation Requirements page.

(3) An FFS information page that provides the information listed in this paragraph (see Attachment 4, Figure A4B, of this appendix for a sample FFS information page). For convertible FFSs, the sponsor must submit a separate page for each configuration of the FFS.

(a) The sponsor's FFS identification number or code.

(b) The airplane model and series being simulated.

(c) The aerodynamic data revision number or reference.

(d) The source of the basic aerodynamic model and the aerodynamic coefficient data used to modify the basic model.

(e) The engine model(s) and its data revision number or reference.

(f) The flight control data revision number or reference.

(g) The flight management system identification and revision level.

(h) The FFS model and manufacturer.
(i) The date of FFS manufacture.
(j) The FFS computer identification.
(k) The visual system model and manufacturer, including display type.
(l) The motion system type and manufacturer, including degrees of freedom.
(4) A Table of Contents.
(5) A log of revisions and a list of effective pages.
(6) A list of all relevant data references.
(7) A glossary of terms and symbols used (including sign conventions and units).
(8) Statements of Compliance and Capability (SOCs) with certain requirements.
(9) Recording procedures or equipment required to accomplish the objective tests.
(10) The following information for each objective test designated in Attachment 2, Table A2A, of this appendix as applicable to the qualification level sought:
(a) Name of the test.
(b) Objective of the test.
(c) Initial conditions.
(d) Manual test procedures.
(e) Automatic test procedures (if applicable).
(f) Method for evaluating FFS objective test results.
(g) List of all relevant parameters driven or constrained during the automatically conducted test(s).
(h) List of all relevant parameters driven or constrained during the manually conducted test(s).
(i) Tolerances for relevant parameters.
(j) Source of Validation Data (document and page number).
(k) Copy of the Validation Data (if located in a separate binder, a cross reference for the identification and page number for pertinent data location must be provided).
(l) Simulator Objective Test Results as obtained by the sponsor. Each test result must reflect the date completed and must be clearly labeled as a product of the device being tested.

f. A convertible FFS is addressed as a separate FFS for each model and series airplane to which it will be converted and for the FAA qualification level sought. If a sponsor seeks qualification for two or more models of an airplane type using a convertible FFS, the sponsor must submit a QTG for each airplane model, or a QTG for the first airplane model and a supplement to that QTG for each additional airplane model. The NSPM will conduct evaluations for each airplane model.

g. Form and manner of presentation of objective test results in the QTG:

(1) The sponsor's FFS test results must be recorded in a manner acceptable to the NSPM, that allows easy comparison of the FFS test results to the validation data (e.g., use of a multi-channel recorder, line printer, cross plotting, overlays, transparencies).

(2) FFS results must be labeled using terminology common to airplane parameters as opposed to computer software identifications.

(3) Validation data documents included in a QTG may be photographically reduced only if such reduction will not alter the graphic scaling or cause difficulties in scale interpretation or resolution.

(4) Scaling on graphical presentations must provide the resolution necessary to evaluate the parameters shown in Attachment 2, Table A2A of this appendix.

(5) Tests involving time histories, data sheets (or transparencies thereof) and FFS test results must be clearly marked with appropriate reference points to ensure an accurate comparison between the FFS and the airplane with respect to time. Time histories recorded via a line printer are to be clearly identified for cross plotting on the airplane data. Over-plots must not obscure the reference data.

h. The sponsor may elect to complete the QTG objective and subjective tests at the manufacturer's facility or at the sponsor's training facility. If the tests are conducted at the manufacturer's facility, the sponsor must repeat at least one-third of the tests at the sponsor's training facility in order to substantiate FFS performance. The QTG must be clearly annotated to indicate when and where each test was accomplished. Tests conducted at the manufacturer's facility and at the sponsor's training facility must be conducted after the FFS is assembled with systems and sub-systems functional and operating in an interactive manner. The test results must be submitted to the NSPM.

i. The sponsor must maintain a copy of the MQTG at the FFS location.

j. All FFSs for which the initial qualification is conducted after May 30, 2014, must have an electronic MQTG (eMQTG) including all objective data obtained from airplane testing, or another approved source (reformatted or digitized), together with correlating objective test results obtained from the performance of the FFS (reformatted or digitized) as prescribed in this appendix. The eMQTG must also contain the general FFS performance or demonstration results (reformatted or digitized) prescribed in this appendix, and a description of the equipment necessary to perform the initial qualification evaluation and the continuing qualification evaluations. The eMQTG must include the original validation data used to validate FFS performance and handling qualities in either the original digitized format from the data supplier or an electronic scan of the original time-history plots that were provided by the data supplier. A copy of the eMQTG must be provided to the NSPM.

k. All other FFSs not covered in subparagraph ''j'' must have an electronic copy of the MQTG by May 30, 2014. An electronic copy of the MQTG must be provided to the NSPM. This may be provided by an electronic scan presented in a Portable Document File (PDF), or similar format acceptable to the NSPM.

l. During the initial (or upgrade) qualification evaluation conducted by the NSPM, the sponsor must also provide a person who is a user of the device (e.g., a qualified pilot or instructor pilot with flight time experience in that aircraft) and knowledgeable about the operation of the aircraft and the operation of the FFS.

End QPS Requirements

Begin Information

m. Only those FFSs that are sponsored by a certificate holder as defined in Appendix F of this part will be evaluated by the NSPM. However, other FFS evaluations may be conducted on a case-by-case basis as the Administrator deems appropriate, but only in accordance with applicable agreements.

n. The NSPM will conduct an evaluation for each configuration, and each FFS must be evaluated as completely as possible. To ensure a thorough and uniform evaluation, each FFS is subjected to the general simulator requirements in Attachment 1 of this appendix, the objective tests listed in Attachment 2 of this appendix, and the subjective tests listed in Attachment 3 of this appendix. The evaluations described herein will include, but not necessarily be limited to the following:

(1) Airplane responses, including longitudinal and lateral-directional control responses (see Attachment 2 of this appendix);

(2) Performance in authorized portions of the simulated airplane's operating envelope, to include tasks evaluated by the NSPM in the areas of surface operations, takeoff, climb, cruise, descent, approach, and landing as well as abnormal and emergency operations (see Attachment 2 of this appendix);

(3) Control checks (see Attachment 1 and Attachment 2 of this appendix);

(4) Flight deck configuration (see Attachment 1 of this appendix);

(5) Pilot, flight engineer, and instructor station functions checks (see Attachment 1 and Attachment 3 of this appendix);

(6) Airplane systems and sub-systems (as appropriate) as compared to the airplane simulated (see Attachment 1 and Attachment 3 of this appendix);

(7) FFS systems and sub-systems, including force cueing (motion), visual, and aural (sound) systems, as appropriate (see Attachment 1 and Attachment 2 of this appendix); and

(8) Certain additional requirements, depending upon the qualification level sought, including equipment or circumstances that may become hazardous to the occupants. The sponsor may be subject to Occupational Safety and Health Administration requirements.

o. The NSPM administers the objective and subjective tests, which includes an examination of functions. The tests include a qualitative assessment of the FFS by an NSP pilot. The NSP evaluation team leader may assign other qualified personnel to assist in accomplishing the functions examination and/or the objective and subjective tests performed during an evaluation when required.

(1) Objective tests provide a basis for measuring and evaluating FFS performance and determining compliance with the requirements of this part.

(2) Subjective tests provide a basis for:

(a) Evaluating the capability of the FFS to perform over a typical utilization period;

(b) Determining that the FFS satisfactorily simulates each required task;

(c) Verifying correct operation of the FFS controls, instruments, and systems; and

(d) Demonstrating compliance with the requirements of this part.

p. The tolerances for the test parameters listed in Attachment 2 of this appendix reflect the range of tolerances acceptable to the NSPM for FFS validation and are not to be confused with design tolerances specified for FFS manufacture. In making decisions regarding tests and test results, the NSPM relies on the use of operational and engineering judgment in the application of data (including consideration of the way in which the flight test was flown and way the data was gathered and applied) data presentations, and the applicable tolerances for each test.

q. In addition to the scheduled continuing qualification evaluation, each FFS is subject to evaluations conducted by the NSPM at any time without prior notification to the sponsor. Such evaluations would be accomplished in a normal manner (i.e., requiring exclusive use of the FFS for the conduct of objective and subjective tests and an examination of functions) if the FFS is not being used for flightcrew member training, testing, or checking. However, if the FFS were being used, the evaluation would be conducted in a non-exclusive manner. This non-exclusive evaluation will be conducted by the FFS evaluator accompanying the check airman, instructor, Aircrew Program Designee (APD), or FAA inspector aboard the FFS along with the student(s) and observing the operation of the FFS during the training, testing, or checking activities.

r. Problems with objective test results are handled as follows:

(1) If a problem with an objective test result is detected by the NSP evaluation team during an evaluation, the test may be repeated or the QTG may be amended.

(2) If it is determined that the results of an objective test do not support the level requested but do support a lower level, the NSPM may qualify the FFS at that lower level. For example, if a Level D evaluation is requested and the FFS fails to meet sound test tolerances, it could be qualified at Level C.

s. After an FFS is successfully evaluated, the NSPM issues a Statement of Qualification (SOQ) to the sponsor. The NSPM recommends the FFS to the TPAA, who will approve the FFS for use in a flight training program. The SOQ will be issued at the satisfactory conclusion of the initial or continuing qualification evaluation and will list the tasks for which the FFS is qualified, referencing the tasks described in Table A1B in Attachment 1 of this appendix. However, it is the sponsor's responsibility to obtain TPAA approval prior to using the FFS in an FAA-approved flight training program.

t. Under normal circumstances, the NSPM establishes a date for the initial or upgrade evaluation within ten (10) working days after determining that a complete QTG is acceptable. Unusual circumstances may warrant establishing an evaluation date before this determination is made. A sponsor may schedule an evaluation date as early as 6 months in advance. However, there may be a delay of 45 days or more in rescheduling and completing the evaluation if the sponsor is unable to meet the scheduled date. See Attachment 4 of this appendix, Figure A4A, Sample Request for Initial, Upgrade, or Reinstatement Evaluation.

u. The numbering system used for objective test results in the QTG should closely follow the numbering system set out in Attachment 2 of this appendix, FFS Objective Tests, Table A2A.

v. Contact the NSPM or visit the NSPM Web site for additional information regarding the preferred qualifications of pilots used to meet the requirements of § 60.15(d).

w. Examples of the exclusions for which the FFS might not have been subjectively tested by the sponsor or the NSPM and for which qualification might not be sought or granted, as described in § 60.15(g)(6), include windshear training and circling approaches.

End Information

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12. Additional Qualifications for a Currently Qualified FFS (§ 60.16)

Begin Information

No additional regulatory or informational material applies to § 60.16, Additional Qualifications for a Currently Qualified FFS.

End Information

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13. Previously Qualified FFSs (§ 60.17)

Begin QPS Requirements

a. In instances where a sponsor plans to remove an FFS from active status for a period of less than two years, the following procedures apply:

(1) The NSPM must be notified in writing and the notification must include an estimate of the period that the FFS will be inactive;

(2) Continuing Qualification evaluations will not be scheduled during the inactive period;

(3) The NSPM will remove the FFS from the list of qualified FSTDs on a mutually established date not later than the date on which the first missed continuing qualification evaluation would have been scheduled;

(4) Before the FFS is restored to qualified status, it must be evaluated by the NSPM. The evaluation content and the time required to accomplish the evaluation is based on the number of continuing qualification evaluations and sponsor-conducted quarterly inspections missed during the period of inactivity.

(5) The sponsor must notify the NSPM of any changes to the original scheduled time out of service;

b. Simulators qualified prior to May 30, 2008, are not required to meet the general simulation requirements, the objective test requirements or the subjective test requirements of attachments 1, 2, and 3 of this appendix as long as the simulator continues to meet the test requirements contained in the MQTG developed under the original qualification basis.

c. After May 30, 2009, each visual scene or airport model beyond the minimum required for the FFS qualification level that is installed in and available for use in a qualified FFS must meet the requirements described in attachment 3 of this appendix.

d. Simulators qualified prior to May 30, 2008, may be updated. If an evaluation is deemed appropriate or necessary by the NSPM after such an update, the evaluation will not require an evaluation to standards beyond those against which the simulator was originally qualified.

End QPS Requirements

Begin Information

e. Other certificate holders or persons desiring to use an FFS may contract with FFS sponsors to use FFSs previously qualified at a particular level for an airplane type and approved for use within an FAA-approved flight training program. Such FFSs are not required to undergo an additional qualification process, except as described in § 60.16.

f. Each FFS user must obtain approval from the appropriate TPAA to use any FFS in an FAA-approved flight training program.

g. The intent of the requirement listed in § 60.17(b), for each FFS to have a SOQ within 6 years, is to have the availability of that statement (including the configuration list and the limitations to authorizations) to provide a complete picture of the FFS inventory regulated by the FAA. The issuance of the statement will not require any additional evaluation or require any adjustment to the evaluation basis for the FFS.

h. Downgrading of an FFS is a permanent change in qualification level and will necessitate the issuance of a revised SOQ to reflect the revised qualification level, as appropriate. If a temporary restriction is placed on an FFS because of a missing, malfunctioning, or inoperative component or on-going repairs, the restriction is not a permanent change in qualification level. Instead, the restriction is temporary and is removed when the reason for the restriction has been resolved.

i. The NSPM will determine the evaluation criteria for an FFS that has been removed from active status. The criteria will be based on the number of continuing qualification evaluations and quarterly inspections missed during the period of inactivity. For example, if the FFS were out of service for a 1 year period, it would be necessary to complete the entire QTG, since all of the quarterly evaluations would have been missed. The NSPM will also consider how the FFS was stored, whether parts were removed from the FFS and whether the FFS was disassembled.

j. The FFS will normally be requalified using the FAA-approved MQTG and the criteria that was in effect prior to its removal from qualification. However, inactive periods of 2 years or more will require requalification under the standards in effect and current at the time of requalification.

End Information

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14. Inspection, Continuing Qualification Evaluation, and Maintenance Requirements (§ 60.19)

Begin QPS Requirements

a. The sponsor must conduct a minimum of four evenly spaced inspections throughout the year. The objective test sequence and content of each inspection must be developed by the sponsor and must be acceptable to the NSPM.

b. The description of the functional preflight check must be contained in the sponsor's QMS.

c. Record ''functional preflight'' in the FFS discrepancy log book or other acceptable location, including any item found to be missing, malfunctioning, or inoperative.

d. During the continuing qualification evaluation conducted by the NSPM, the sponsor must also provide a person knowledgeable about the operation of the aircraft and the operation of the FFS.

e. The NSPM will conduct continuing qualification evaluations every 12 months unless:

(1) The NSPM becomes aware of discrepancies or performance problems with the device that warrants more frequent evaluations; or

(2) The sponsor implements a QMS that justifies less frequent evaluations. However, in no case shall the frequency of a continuing qualification evaluation exceed 36 months.

End QPS Requirements

Begin Information

f. The sponsor's test sequence and the content of each quarterly inspection required in § 60.19(a)(1) should include a balance and a mix from the objective test requirement areas listed as follows:

(1) Performance.

(2) Handling qualities.

(3) Motion system (where appropriate).

(4) Visual system (where appropriate).

(5) Sound system (where appropriate).

(6) Other FFS systems.

g. If the NSP evaluator plans to accomplish specific tests during a normal continuing qualification evaluation that requires the use of special equipment or technicians, the sponsor will be notified as far in advance of the evaluation as practical; but not less than 72 hours. Examples of such tests include latencies, control dynamics, sounds and vibrations, motion, and/or some visual system tests.

h. The continuing qualification evaluations, described in § 60.19(b), will normally require 4 hours of FFS time. However, flexibility is necessary to address abnormal situations or situations involving aircraft with additional levels of complexity (e.g., computer controlled aircraft). The sponsor should anticipate that some tests may require additional time. The continuing qualification evaluations will consist of the following:

(1) Review of the results of the quarterly inspections conducted by the sponsor since the last scheduled continuing qualification evaluation.

(2) A selection of approximately 8 to 15 objective tests from the MQTG that provide an adequate opportunity to evaluate the performance of the FFS. The tests chosen will be performed either automatically or manually and should be able to be conducted within approximately one-third (⅓) of the allotted FFS time.

(3) A subjective evaluation of the FFS to perform a representative sampling of the tasks set out in attachment 3 of this appendix. This portion of the evaluation should take approximately two-thirds (⅔) of the allotted FFS time.

(4) An examination of the functions of the FFS may include the motion system, visual system, sound system, instructor operating station, and the normal functions and simulated malfunctions of the airplane systems. This examination is normally accomplished simultaneously with the subjective evaluation requirements.

End Information

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15. Logging FFSs Discrepancies (§ 60.20)

Begin Information

No additional regulatory or informational material applies to § 60.20. Logging FFS Discrepancies.

End Information

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16. Interim Qualification of FFSs for New Airplane Types or Models (§ 60.21)

Begin Information

No additional regulatory or informational material applies to § 60.21, Interim Qualification of FFSs for New Airplane Types or Models.

End Information

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17. Modifications to FFSs (§ 60.23)

Begin QPS Requirements

a. The notification described in § 60.23(c)(2) must include a complete description of the planned modification, with a description of the operational and engineering effect the proposed modification will have on the operation of the FFS and the results that are expected with the modification incorporated.

b. Prior to using the modified FFS:

(1) All the applicable objective tests completed with the modification incorporated, including any necessary updates to the MQTG (e.g., accomplishment of FSTD Directives) must be acceptable to the NSPM; and

(2) The sponsor must provide the NSPM with a statement signed by the MR that the factors listed in § 60.15(b) are addressed by the appropriate personnel as described in that section.

End QPS Requirements

Begin Information

c. FSTD Directives are considered modifications of an FFS. See Attachment 4 of this appendix for a sample index of effective FSTD Directives. See Attachment 6 of this appendix for a list of all effective FSTD Directives applicable to Airplane FFSs.

d. Examples of MQTG changes that do not require FAA notification under § 60.23(a) are limited to repagination, correction of typographical or grammatical errors, typesetting, or presenting additional parameters on existing test result formats. All changes regardless of nature should be documented in the MQTG revision history.

End Information

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18. Operation With Missing, Malfunctioning, or Inoperative Components (§ 60.25)

Begin Information

a. The sponsor's responsibility with respect to § 60.25(a) is satisfied when the sponsor fairly and accurately advises the user of the current status of an FFS, including any missing, malfunctioning, or inoperative (MMI) component(s).

b. It is the responsibility of the instructor, check airman, or representative of the administrator conducting training, testing, or checking to exercise reasonable and prudent judgment to determine if any MMI component is necessary for the satisfactory completion of a specific maneuver, procedure, or task.

c. If the 29th or 30th day of the 30-day period described in § 60.25(b) is on a Saturday, a Sunday, or a holiday, the FAA will extend the deadline until the next business day.

d. In accordance with the authorization described in § 60.25(b), the sponsor may develop a discrepancy prioritizing system to accomplish repairs based on the level of impact on the capability of the FFS. Repairs having a larger impact on FFS capability to provide the required training, evaluation, or flight experience will have a higher priority for repair or replacement.

End Information

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19. Automatic Loss of Qualification and Procedures for Restoration of Qualification (§ 60.27)

Begin Information

If the sponsor provides a plan for how the FFS will be maintained during its out-of-service period (e.g., periodic exercise of mechanical, hydraulic, and electrical systems; routine replacement of hydraulic fluid; control of the environmental factors in which the FFS is to be maintained) there is a greater likelihood that the NSPM will be able to determine the amount of testing required for requalification.

End Information

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20. Other Losses of Qualification and Procedures for Restoration of Qualification (§ 60.29)

Begin Information

If the sponsor provides a plan for how the FFS will be maintained during its out-of-service period (e.g., periodic exercise of mechanical, hydraulic, and electrical systems; routine replacement of hydraulic fluid; control of the environmental factors in which the FFS is to be maintained) there is a greater likelihood that the NSPM will be able to determine the amount of testing required for requalification.

End Information

21. Recordkeeping and Reporting (§ 60.31)

Begin QPS Requirements

a. FFS modifications can include hardware or software changes. For FFS modifications involving software programming changes, the record required by § 60.31(a)(2) must consist of the name of the aircraft system software, aerodynamic model, or engine model change, the date of the change, a summary of the change, and the reason for the change.

b. If a coded form for record keeping is used, it must provide for the preservation and retrieval of information with appropriate security or controls to prevent the inappropriate alteration of such records after the fact.

End QPS Requirements

22. Applications, Logbooks, Reports, and Records: Fraud, Falsification, or Incorrect Statements (§ 60.33)

Begin Information

No additional regulatory or informational material applies to § 60.33, Applications, Logbooks, Reports, and Records: Fraud, Falsification, or Incorrect Statements.

23. Specific FFS Compliance Requirements (§ 60.35)

No additional regulatory or informational material applies to § 60.35, Specific FFS Compliance Requirements.

24. [Reserved]

25. FFS Qualification on the Basis of a Bilateral Aviation Safety Agreement (BASA) (§ 60.37)

No additional regulatory or informational material applies to § 60.37, FFS Qualification on the Basis of a Bilateral Aviation Safety Agreement (BASA).

End Information

Attachment 1 to Appendix A to Part 60—General Simulator Requirements

Begin QPS Requirements

1. Requirements

a. Certain requirements included in this appendix must be supported with an SOC as defined in Appendix F, which may include objective and subjective tests. The requirements for SOCs are indicated in the ''General Simulator Requirements'' column in Table A1A of this appendix.

b. Table A1A describes the requirements for the indicated level of FFS. Many devices include operational systems or functions that exceed the requirements outlined in this section. However, all systems will be tested and evaluated in accordance with this appendix to ensure proper operation.

End QPS Requirements

Begin Information

2. Discussion

a. This attachment describes the general simulator requirements for qualifying an airplane FFS. The sponsor should also consult the objective tests in Attachment 2 of this appendix and the examination of functions and subjective tests listed in Attachment 3 of this appendix to determine the complete requirements for a specific level simulator.

b. The material contained in this attachment is divided into the following categories:

(1) General flight deck configuration.

(2) Simulator programming.

(3) Equipment operation.

(4) Equipment and facilities for instructor/evaluator functions.

(5) Motion system.

(6) Visual system.

(7) Sound system.

c. Table A1A provides the standards for the General Simulator Requirements.

d. Table A1B provides the tasks that the sponsor will examine to determine whether the FFS satisfactorily meets the requirements for flight crew training, testing, and experience, and provides the tasks for which the simulator may be qualified.

e. Table A1C provides the functions that an instructor/check airman must be able to control in the simulator.

f. It is not required that all of the tasks that appear on the List of Qualified Tasks (part of the SOQ) be accomplished during the initial or continuing qualification evaluation.

End Information

Table A1A

Minimum Simulator Requirements						
	QPS REQUIREMENTS	**Simulator Levels**				**INFORMATION**
Entry Number	**General Simulator Requirements**	**A**	**B**	**C**	**D**	**Notes**
1.	**FEATURE GENERAL REQUIREMENT** **FLIGHT DECK LAYOUT & STRUCTURE**					
1.S	**An enclosed full scale replica of the airplane cockpit/flight deck, which will have fully functional controls, instruments and switches to support the approved use.** **Anything not required to be accessed by the flight crew during normal, abnormal, emergency and, where applicable, non-normal operations does not need to be functional.**	**X**	**X**	**X**	**X**	
1.R	**Reserved**					
1.G	**Reserved**					
	FEATURE TECHNICAL REQUIREMENT COCKPIT/FLIGHT DECK LAYOUT & STRUCTURE					
1.1	COCKPIT/FLIGHT DECK STRUCTURE					
1.1.S.a	An enclosed, full scale replica of the cockpit/flight deck of the airplane being simulated.	**X**	**X**	**X**	**X**	
1.1.S.b	Reserved					
1.1.S.c	An enclosed, full scale replica of the cockpit/flight deck of the airplane being simulated including all: structure and panels; primary and secondary flight controls; engine and propeller controls, as applicable; equipment and systems with associated controls and observable indicators; circuit breakers; flight instruments; navigation, communications and similar use equipment; caution and warning systems and emergency equipment. The tactile feel, technique, effort, travel and direction required to manipulate the preceding, as applicable, must replicate those in the airplane. As applicable, equipment for operation of the cockpit/flight deck windows must be included but the actual windows need not be operable. Additional required flight crew member duty stations and those bulkheads aft of the pilots' seats containing items such as switches, circuit breakers, supplementary radio panels, etc., to which the flight crew may require access during any event after pre-flight cockpit/flight deck preparation is complete, are also considered part of the cockpit/flight deck and must replicate the airplane. *Note.— The cockpit/flight deck, for flight simulation purposes, consists of all that space forward of a cross section of the fuselage at the most extreme aft setting of the flight crew members' seats or if applicable, to that cross section immediately aft of additional flight crew member seats and/or required bulkheads.*	**X**	**X**	**X**	**X**	Airplane observer seats are not considered to be additional flight crew member duty stations and may be omitted. The use of electronically displayed images with physical overlay or masking for FSTD instruments and/or instrument panels is acceptable provided: – all instruments and instrument panel layouts are dimensionally correct with differences, if any, being imperceptible to the pilot; – instruments replicate those of the airplane including full instrument functionality and embedded logic; – instruments displayed are free of quantization (stepping); – instrument display characteristics replicate those of the airplane including: resolution, colors, luminance, brightness, fonts, fill patterns, line styles and

Table A1A

Minimum Simulator Requirements						
	QPS REQUIREMENTS	Simulator Levels				INFORMATION
Entry Number	General Simulator Requirements	A	B	C	D	Notes
						symbology; – overlay or masking, including bezels and bugs, as applicable, replicates the airplane panel(s); – instrument controls and switches replicate and operate with the same technique, effort, travel and in the same direction as those in the airplane; – instrument lighting replicates that of the airplane and is operated from the FSTD control for that lighting and, if applicable, is at a level commensurate with other lighting operated by that same control; – as applicable, instruments should have faceplates that replicate those in the airplane; and Level D only; • the display image of any three dimensional instrument, such as an electro-mechanical instrument, should appear to have the same three dimensional depth as the replicated instrument. The appearance of the simulated instrument, when viewed from any angle, should replicate that of the actual airplane instrument. Any instrument reading inaccuracy due to viewing angle and parallax present in the actual airplane instrument should be duplicated in the simulated instrument display image.
1.1.R	Reserved					
1.1.G	Reserved					
1.2	SEATING					
1.2.1.S	Flight crew member seats must replicate those in the airplane being simulated.	X	X	X	X	
1.2.1.R	Reserved					
1.2.1.G	Reserved					

Table A1A

Minimum Simulator Requirements						
	QPS REQUIREMENTS	Simulator Levels				INFORMATION
Entry Number	General Simulator Requirements	A	B	C	D	Notes
1.2.2.S.a	In addition to the flight crew member seats, there must be one instructor station seat and two suitable seats for an observer and an authority inspector. The location of at least one of these seats must provide an adequate view of the pilots' panels and forward windows.	X	X	X	X	The NSPM may consider options to this requirement based on unique cockpit/flight deck configurations. The seats need not represent those found in the airplane but should be adequately secured and fitted with positive restraint devices of sufficient integrity to safely restrain the occupant during any known or predicted motion system excursion. Both seats should have adequate lighting to permit note taking and a system to permit selective monitoring of all flight crew member and instructor communications. Both seats should be of adequate comfort for the occupant to remain seated for a two-hour training session.
1.2.2.S.b	Reserved					
1.2.2.R	Reserved					
1.2.2.G	Reserved					
1.3	COCKPIT/FLIGHT DECK LIGHTING					
1.3.S	Cockpit/flight deck lighting must replicate that in the airplane	X	X	X	X	
1.3.R	Reserved					
1.3.G	Reserved					
2.	**FEATURE GENERAL REQUIREMENT FLIGHT MODEL**					
2.S	**Aerodynamic and engine modeling for all combinations of drag and thrust, including the effects of change in airplane attitude, sideslip, altitude, temperature, gross mass, center of gravity location and configuration to support the approved use. Must address ground effect, mach effect, aeroelastic representations, non-linearities due to sideslip, effects of airframe icing, forward and reverse dynamic thrust effect on control surfaces. Realistic airplane mass properties, including mass, center of gravity and moments of inertia as a function of payload and fuel loading must be implemented. Extended envelope modeling to the extent necessary for full stall training and upset recovery training.**			X	X	
2.S1	**Aerodynamic and engine modeling for all combinations of drag and thrust, including the effects of change in airplane attitude, sideslip, altitude, temperature, gross mass, center of gravity location and configuration to support the approved use. Realistic airplane mass properties, including mass, center of gravity and moments of inertia as a function of payload and fuel loading must be implemented.**	X	X			

Table A1A

Minimum Simulator Requirements						
	QPS REQUIREMENTS	Simulator Levels				INFORMATION
Entry Number	General Simulator Requirements	A	B	C	D	Notes
2.R	**Reserved**					
2.G	**Reserved**					
	FEATURE TECHNICAL REQUIREMENT FLIGHT MODEL					
2.1	FLIGHT DYNAMICS MODEL					
2.1.1.S,S1	Flight dynamics model that accounts for various combinations of drag and thrust normally encountered in flight supported by type-specific flight test data, including the effect of change in airplane attitude, sideslip, thrust, drag, altitude, temperature, gross mass, moments of inertia, center of gravity location and configuration to support the approved use.	X	X	X	X	
2.1.2.S	Aerodynamic modeling that includes, for airplanes issued an original type certificate after 30 June 1980, Mach effect, normal and reverse dynamic thrust effect on control surfaces, aeroelastic effect and representations of non-linearities due to side-slip based on airplane flight test data provided by the airplane manufacturer. SOC required.			X	X	Mach effect, aeroelastic representations and non-linearities due to side-slip are normally included in the flight simulator aerodynamic model. The SOC should address each of these items. Separate tests for thrust effects and an SOC are required.
2.1.3.S	Aerodynamic modeling to include ground effect derived from type-specific flight test data. For example: round-out, flare and touchdown. This requires data on lift, drag, pitching moment, trim and power in ground effect. SOC required.			X	X	See Attachment 2, paragraph 5 and test 2.f for further information on ground effect.
2.1.4.S,S1	Aerodynamic modeling for the effects of reverse thrust on directional control.		X	X	X	Tests required. See Attachment 2, tests 2.e.8 and 2.e.9 (directional control).
2.1.5.S	Engine and Airframe Icing Modeling that includes the effects of icing, where appropriate, on the airframe, aerodynamics, and the engine(s). Icing models must simulate the aerodynamic degradation effects of ice accretion on the airplane lifting surfaces including loss of lift, decrease in stall angle of attack, change in pitching moment, decrease in control effectiveness, and changes in control forces in addition to any overall increase in drag. Aircraft systems (such as the stall protection system and autoflight system) must respond properly to ice accretion consistent with the simulated aircraft. Aircraft OEM data or other acceptable analytical methods must be utilized to develop ice accretion models that are representative of the simulated aircraft's performance degradation in a typical in-flight icing encounter. SOC and tests required. See objective testing requirements.			X	X	SOC should be provided describing the effects which provide training in the specific skills required for recognition of icing phenomena and execution of recovery. The SOC should describe the source data and any analytical methods used to develop ice accretion models including verification that these effects have been tested. Icing effects simulation models are only required for those airplanes authorized for operations in icing conditions. Icing simulation models should be developed to provide training in the specific skills required for recognition of ice accumulation and execution of the required response. See Attachment 7 of this Appendix for further guidance material.
2.1.6.S	Upset Recognition and Recovery. Aerodynamics Evaluation: The simulator must be evaluated for specific upset recovery maneuvers for the purpose of determining that the combination of angle of attack and sideslip does not exceed the range of flight test validated			X	X	This section generally applies to the qualification of airplane upset recovery training maneuvers that may exceed one or

Table A1A

Minimum Simulator Requirements						
	QPS REQUIREMENTS	Simulator Levels				INFORMATION
Entry Number	General Simulator Requirements	A	B	C	D	Notes
	data or wind tunnel/analytical data while performing the recovery maneuver. The following minimum set of upset recovery maneuvers must be evaluated in this manner and made available to the instructor/evaluator. Other upset recovery scenarios as developed by the FSTD sponsor must be evaluated in the same manner: ▪ A nose-high, wings level aircraft upset. ▪ A nose-low, wings level aircraft upset. ▪ A high bank angle aircraft upset. Upset Scenarios: Selectable dynamic airplane upsets must provide guidance to the instructor concerning the method utilized to drive the FSTD into an upset condition including any malfunction or degradation in the FSTD's functionality required to initiate the upset. To avoid a potential negative transfer of training, the intentional degradation of simulator functionality (such as degrading flight control effectiveness) to drive an airplane upset is generally not acceptable unless used purely as a tool for repositioning the FSTD with the pilot out of the loop. Aircraft system malfunctions or other malfunctions may be utilized to stimulate an aircraft upset, however the effects of these malfunctions must be representative of the aircraft and, where possible, supported by data. IOS selectable dynamic airplane upsets that simulate external events (such as a wake vortex encounter) that require pilot intervention to avoid and/or recover from an upset condition must be realistic and based upon relevant data sources. Instructor Operating System (IOS): The simulator must have a feedback mechanism in place to notify the instructor/evaluator when the simulator's validated aerodynamic envelope (in terms of angle of attack and sideslip) and aircraft operating limits have been exceeded during an upset recovery training task. To allow for controlled training of upset prevention and recovery maneuvers, the following features as listed below, or equivalent, must be provided: o A means to playback audio and video o A means to record and playback pertinent parameters including: ▪ Aircraft weight and center of gravity ▪ Attitudes, airspeed, altitude, angle of attack, sideslip, and g-loading. ▪ Primary flight control position and force ▪ Secondary flight controls: stabilizer/trim, speed brake, flaps, and gear positions ▪ Warnings (audible and visual), stick shaker/pusher trigger and limits (CI-max) The data recording may be in time history or graphical format. Specific Features and/or malfunctions for use in upset prevention and recovery training are not prescribed. The operator may use appropriate available features/malfunctions to ensure a minimum are available to allow for the following: o Selection of features or malfunctions specifically tailored to allow for the training of crew "awareness" of a potential upset condition must be provided. o Selection of features or malfunctions specifically tailored to allow for the training of crew "recognition" of a developing upset condition must be provided. o Selection of features or malfunctions specifically tailored to allow for the training of crew "recovery" of a developed upset condition must be provided. These features/malfunctions must be evaluated in conjunction with the aerodynamic assessment described above. Statement of Compliance (SOC):					more of the following conditions: ▪ Pitch attitude greater than 25 degrees, nose up ▪ Pitch attitude greater than 10 degrees, nose down ▪ Bank angle greater than 45 degrees ▪ Flight at airspeeds inappropriate for conditions. Airplane upsets should be based primarily upon the criteria defined in the Airplane Upset Recovery Training Aid (revision 2). FSTDs used to conduct upset recovery maneuvers at angles of attack above the stall warning system activation must meet the requirements for high angle of attack modeling as described in section 2.1.7.S. Special consideration should be given to the motion system response during upset prevention and recovery maneuvers. Notwithstanding the limitations of simulator motion, specific emphasis should be placed on tuning out motion system responses and effects that have the potential for the transfer of negative training. See Attachment 7 of this Appendix for further guidance material.

Table A1A

Minimum Simulator Requirements						
	QPS REQUIREMENTS	**Simulator Levels**				**INFORMATION**
Entry Number	**General Simulator Requirements**	**A**	**B**	**C**	**D**	**Notes**
	• An SOC is required that defines the source data used to construct the flight test and wind tunnel/analytical envelope. • The SOC must verify that each upset prevention and recovery feature programmed at the instructor station and the associated training maneuver has been evaluated by a suitably qualified pilot using methods described in this section. The statement must confirm that the recovery maneuver can be performed such that the FSTD does not exceed the flight test and wind tunnel envelope described above, or when exceeded, that it is within the realm of confidence in the simulation accuracy. • The SOC must confirm the source of data used for the aircraft operating limits which are used to provide the instructor indications or warnings on approaching or exceeding these limits.					
2.1.7.S	High Angle of Attack Modeling The simulator must include aerodynamic modeling for high angle of attack maneuvers to at least ten degrees beyond the stall angle of attack or as required to execute a recovery from a fully stalled flight condition. The following stall maneuvers must be evaluated for qualification: ▪ Stall entry at wings level (1g) ▪ Stall entry in turning flight of at least 25° bank angle (accelerated stall) ▪ Stall entry in a power-on condition (required only for propeller driven aircraft) ▪ Aircraft configurations of second segment climb, high altitude cruise (near performance limited condition), and approach or landing. Tests required For stick pusher equipped aircraft, a Statement of Compliance (SOC) is required verifying that the stick pusher system has been modeled, programmed, and validated using the aircraft manufacturer's design data or other acceptable data source. The SOC must address, at a minimum, stick pusher activation and cancellation logic as well as system dynamics, control displacement and forces as a result of the stick pusher activation. A Statement of Compliance (SOC) is required which describes the aerodynamic modeling methods, validation, and checkout of the stall characteristics of the FSTD. The SOC must also include verification that the FSTD has been evaluated by a subject matter expert pilot with acceptable supporting documentation and/or direct experience of the stall characteristics of the aircraft being simulated. See Attachment 7 of this Appendix for detailed requirements. For aircraft equipped with a stall identification system (e.g. stick pusher) that is required for aircraft dispatch, objective testing will only be required through activation of the stall identification system to recovery to a normal flight attitude. The aerodynamic model must be programmed and evaluated using the best available data to demonstrate the expected aircraft behavior should the stall identification system be overridden or disabled as required for training. Specific FSTD limitations due to data availability must be identified to the NSPM and indicated on the Statement of Qualification. See objective testing requirements for details.			**X**	**X**	See Attachment 7 of this Appendix for further guidance material. Specific guidance should be available to the instructor which clearly communicates the flight configurations and stall maneuvers that have been evaluated in the FSTD for use in training. The use of an "alpha/beta" validation envelope that defines the range of stall model validation is encouraged (see section 2.1.6.S.on upset recognition and recovery).
2.1.R	Reserved					
2.1.G	Reserved					
2.2	MASS PROPERTIES					
2.2.S	Type specific implementation of airplane mass properties, including mass, center of gravity and moments of inertia as a function of payload and fuel loading. The effects of pitch attitude and of fuel slosh on the aircraft center of gravity must be simulated.	**X**	**X**	**X**	**X**	SOC should include a range of tabulated target values to enable a demonstration of the mass properties model to be conducted from the instructor's station.

Table A1A

Minimum Simulator Requirements						
	QPS REQUIREMENTS	Simulator Levels				INFORMATION
Entry Number	General Simulator Requirements	A	B	C	D	Notes
	SOC required.					The SOC should include the effects of fuel slosh on center of gravity.
2.2.R	Reserved					
2.2.G	Reserved					
3.	**FEATURE GENERAL REQUIREMENT** **GROUND REACTION AND HANDLING CHARACTERISTICS**					
3.S	**Represents ground reaction and handling characteristics of the airplane during surface operations to support the approved use.** **Brake and tire failure dynamics (including antiskid) and decreased brake efficiency must be specific to the aircraft simulated. Stopping and directional control forces must be representative for all environmental runway conditions.**			**X**	**X**	
3.R	**Represents ground reaction and handling, airplane-like, derived from and appropriate to class.**		**X**			
3.G	**Represents ground reaction, airplane-like, derived from and appropriate to class.** **Simple airplane like ground reactions, appropriate to the airplane mass and geometry.**	**X**				
	FEATURE TECHNICAL REQUIREMENT GROUND REACTION AND HANDLING CHARACTERISTICS					
3.1	GROUND REACTION AND HANDLING CHARACTERISTICS					
3.1.S	Airplane type specific ground handling simulation to include: (1) Ground reaction. Reaction of the airplane upon contact with the runway during take-off, landing and ground operations to include strut deflections, tire friction, side forces, environmental effects and other appropriate data, such as weight and speed, necessary to identify the flight condition and configuration. Ground reaction modeling must simulate the effects of a bounced or skipped landing (to include indications of a tail strike or nosewheel exceedances) as appropriate for the simulated aircraft and conditions; and (2) Ground handling characteristics. Steering inputs to include crosswind, gusting crosswind, braking, thrust reversing, deceleration and turning radius. Ground handling must react properly to crosswind and gusting crosswind up to the aircraft's maximum demonstrated crosswind component. SOC required.			**X**	**X**	Tests required.
3.1.R	Representative airplane ground handling simulation to include: (1) Ground reaction. Reaction of the airplane upon contact with the runway during take-off, landing and ground operations to include strut deflections, tire friction, side forces and other appropriate data, such as weight and speed, necessary to identify the flight condition and configuration; and (2) Ground handling characteristics. Steering inputs to include crosswind, gusting crosswind, braking, thrust reversing, deceleration and turning radius. Ground handling must react properly to crosswind and gusting crosswind up to the aircraft's maximum demonstrated crosswind component.		**X**			Tests required.

Table A1A

Minimum Simulator Requirements						
	QPS REQUIREMENTS	Simulator Levels				INFORMATION
Entry Number	General Simulator Requirements	A	B	C	D	Notes
	SOC required.					
3.1.G	Surface operations must be represented to the extent that allows turns within the confines of the runway and adequate controls on the landing and roll-out from a crosswind approach to a landing.	X				
3.2	RUNWAY CONDITIONS					
3.2.S	Stopping and directional control forces for at least the following runway conditions based on airplane related data: (1) dry; (2) wet; (3) icy; (4) patchy wet; (5) patchy icy; and (6) wet on rubber residue in touchdown zone. SOC required.			X	X	Objective tests required for (1), (2) and (3). See Attachment 2, tests 1.e (stopping). Subjective tests for (4), (5) and (6). See Attachment 3.
3.2.R	Stopping and directional control forces must be representative for at least the following runway conditions based on airplane related data: (1) dry; and (2) wet.		X			
3.2.G	Stopping and directional control forces for dry runway conditions.	X				
3.3	BRAKE AND TIRE FAILURES					
3.3.S	Brake and tire failure dynamics (including anti-skid) and decreased braking efficiency due to brake temperatures. SOC required.			X	X	Subjective tests required for decreased braking efficiency due to brake temperature, if applicable.
3.3.R	Reserved					
3.3.G	Reserved					
4.	**FEATURE GENERAL REQUIREMENT AIRPLANE SYSTEMS (ATA)**					
4.S	**Airplane systems must be replicated with sufficient functionality for flight crew operation to support the approved use. System functionality must enable all normal, abnormal, and emergency operating procedures to be accomplished to include communications, navigation, caution and warning equipment corresponding to the airplane. Circuit breakers required for operations must be functional.**	X	X	X	X	
4.R	**Reserved**					

Table A1A

Minimum Simulator Requirements						
	QPS REQUIREMENTS	Simulator Levels				INFORMATION
Entry Number	General Simulator Requirements	A	B	C	D	Notes
4.G	**Reserved**					
	FEATURE TECHNICAL REQUIREMENT AIRPLANE SYSTEMS (ATA)					
4.1	NORMAL, ABNORMAL AND EMERGENCY SYSTEMS OPERATION					
4.1.S	All airplane systems represented in the FSTD must simulate the specific airplane type system operation including system interdependencies, both on the ground and in flight. Systems must be operative to the extent that all normal, abnormal and emergency operating procedures can be accomplished.	X	X	X	X	Airplane system operation should be predicated on, and traceable to, the system data supplied by the airplane manufacturer, original equipment manufacturer or alternative approved data for the airplane system or component. Once activated, proper systems operation should result from system management by the crew member and not require any further input from the instructor's controls.
4.1.R	Reserved					
4.1.G	Reserved					
4.2	CIRCUIT BREAKERS					
4.2.S	Circuit breakers that affect procedures and/or result in observable cockpit/flight deck indications must be functionally accurate.	X	X	X	X	
4.2.R	Reserved					
4.2.G	Reserved					
4.3	INSTRUMENT INDICATIONS					
4.3.S	All relevant instrument indications involved in the simulation of the airplane must automatically respond to control movement by a flight crew member or to atmospheric disturbance and also respond to effects resulting from icing.	X	X	X	X	Numerical values should be presented in the appropriate units.
4.3.R	Reserved					
4.3.G	N/A.					
4.4	COMMUNICATIONS, NAVIGATION AND CAUTION AND WARNING SYSTEMS					
4.4.S	Communications, navigation, and caution and warning equipment corresponding to that installed in a specific airplane type must operate within the tolerances prescribed for the applicable airborne equipment.	X	X	X	X	
4.4.R	Reserved					
4.4.G	N/A.					
4.5	ANTI-ICING SYSTEMS					
4.5.S	Operation of anti-icing systems corresponding to those installed in the specific airplane type must operate with appropriate effects upon ice formation on airframe, engines and instrument sensors.	X	X	X	X	
4.5.R	Reserved					
4.5.G	N/A.					
5.	**FEATURE GENERAL REQUIREMENT** **FLIGHT CONTROLS AND FORCES**					

Table A1A

Minimum Simulator Requirements						
	QPS REQUIREMENTS	Simulator Levels				INFORMATION
Entry Number	General Simulator Requirements	A	B	C	D	Notes
5.S	**Control forces and control travel must correspond to that of the airplane to support the approved use.** **Control displacement must generate the same effect as the airplane under the same flight conditions.** **Control feel dynamics must replicate the airplane simulated.**			X	X	
5.S1	**Control forces and control travel must correspond to that of the airplane to support the approved use.** **Control displacement must generate the same effect as the airplane under the same flight conditions.**	X	X			
5.R	**Reserved**					
5.R1	**Reserved**					
5.G	**Reserved**					
	FEATURE TECHNICAL REQUIREMENT FLIGHT CONTROLS AND FORCES					
5.1	CONTROL FORCES AND TRAVEL					Testing of position versus force is not applicable if forces are generated solely by use of airplane hardware in the FSTD.
5.1.S, S1	Control forces, control travel and surface position must correspond to that of the type-specific airplane being replicated. Control travel, forces and surfaces must react in the same manner as in the airplane under the same flight and system conditions.	X	X	X	X	Active Force feedback required if appropriate to the airplane installation.
5.1.R	Reserved					
5.1.R1	Reserved					
5.1.G	Reserved					
5.2	CONTROL FEEL DYNAMICS					
5.2.S	Control feel dynamics must replicate the airplane simulated.			X	X	See Attachment 2, paragraph 4 for a discussion of acceptable methods of validating control dynamics. Tests required. See Attachment 2, tests 2.b.1 through 2.b.3 (dynamic control checks).
5.2.S1,R,G	N/A.					
5.3	CONTROL SYSTEM OPERATION					
5.3.S, S1	Control systems must replicate airplane operation for the normal and any non-normal modes including back-up systems and should reflect failures of associated systems. Appropriate cockpit indications and messages must be replicated.	X	X	X	X	
5.3.R, R1	Reserved					
5.3.G	Reserved					
6.	**FEATURE GENERAL REQUIREMENT** **SOUND CUES**					
6.S	**N/A.**					
6.R	**Significant sounds perceptible to the flight crew during flight operations to support the approved use.**				X	Objective tests required. See Attachment 2,

Table A1A

Minimum Simulator Requirements						
	QPS REQUIREMENTS	Simulator Levels				INFORMATION
Entry Number	General Simulator Requirements	A	B	C	D	Notes
	Comparable engine, airframe and environmental sounds. **The volume control must have an indication of sound level setting.**					Section 5.
6.R1	**Significant sounds perceptible to the flight crew during flight operations to support the approved use.** **Comparable engine, airframe and environmental sounds.** **The volume control must have an indication of sound level setting.**			**X**		
6.R2	**Significant sounds perceptible to the flight crew during flight operations to support the approved use.** **Comparable engine and airframe sounds.** **The volume control must have an indication of sound level setting.**	**X**	**X**			
6.G	**Reserved**					
	FEATURE TECHNICAL REQUIREMENT SOUND CUES					
6.1	SOUND SYSTEM					
6.1.R	Significant cockpit/flight deck sounds during normal and abnormal operations corresponding to those of the airplane, including engine and airframe sounds as well as those which result from pilot or instructor-induced actions. SOC required. Tests required				**X**	See Attachment 2.
6.1.R1, R2	Significant cockpit/flight deck sounds during normal and abnormal operations corresponding to those of the airplane, including engine and airframe sounds as well as those which result from pilot or instructor-induced actions. SOC required	**X**	**X**	**X**		
6.1.G	Reserved					
6.2	CRASH SOUNDS					
6.2.R, R1	The sound of a crash when the simulated airplane exceeds limitations.			**X**	**X**	
6.2.G	Reserved					
6.3	ENVIRONMENTAL SOUNDS					
6.3.R, R1	Significant environmental sounds must be coordinated with the simulated weather.			**X**	**X**	
6.3.R2	Environmental sounds are not required. If environmental sounds are present, they must be coordinated with the simulated weather.	**X**	**X**			
6.3.G	Reserved					
6.4	SOUND VOLUME					
6.4.R	The volume control must have an indication of sound level setting which meets all qualification requirements. Full volume must correspond to actual volume levels in the approved data set. When full volume is not selected, an				**X**	The abnormal setting should consist of an annunciation on a main IOS page which is always visible to the instructor.

Table A1A

Minimum Simulator Requirements						
	QPS REQUIREMENTS	Simulator Levels				INFORMATION
Entry Number	General Simulator Requirements	A	B	C	D	Notes
	indication of abnormal setting must be provided to the instructor.					
6.4.R1, R2	The volume control must have an indication of sound level setting which meets all qualification requirements. Full volume must correspond to actual volume level agreed at the initial evaluation. When full volume is not selected, an indication of abnormal setting must be provided to the instructor.	X	X	X		
6.4.G	Reserved					
6.5	SOUND DIRECTIONALITY					
6.5.R, R1	Sound must be directionally representative. SOC required.			X	X	
6.5.R2	Sound not required to be directional.	X	X			
7.	**FEATURE GENERAL REQUIREMENT** **VISUAL DISPLAY CUE**					
7.S	**Continuous field of view with infinity perspective and textured representation of all ambient conditions for each pilot, to support the approved use.** **Horizontal and vertical field of view to support the most demanding maneuvers requiring a continuous view of the runway.** **A minimum of 200° horizontal and 40° vertical field of view.**			X	X	
7.S1	**Continuous field of view with infinity perspective and textured representation of all ambient conditions for each pilot, to support the approved use.** **Horizontal and vertical field of view to support the most demanding maneuvers requiring a continuous view of the runway.** **A minimum of 45° horizontal and 30° vertical field of view.**	X	X			
7.R	**Reserved**					
7.G	**Reserved**					
	FEATURE TECHNICAL REQUIREMENT VISUAL CUES					
7.1	DISPLAY					
7.1.1	DISPLAY GEOMETRY AND FIELD OF VIEW					
7.1.1.S	Continuous, cross-cockpit, collimated visual. Display providing each pilot with a minimum 200° horizontal and 40° vertical field of view. The system must be free from optical discontinuities and artifacts that create non-realistic cues.			X	X	See Attachment 2 – Test 4.a.1. An SOC is acceptable in place of this test. *Note. Where the training task includes circling approaches with the landing on the reciprocal runway, a visual field of view in excess of 200° horizontal and 40° vertical will likely be required.*

Table A1A

Minimum Simulator Requirements						
	QPS REQUIREMENTS	Simulator Levels				INFORMATION
Entry Number	General Simulator Requirements	A	B	C	D	Notes
7.1.1.S1	The simulator must provide a continuous collimated field-of-view of at least 45° horizontally and 30° vertically per pilot seat or the number of degrees necessary to meet the visual ground segment requirement, whichever is greater. Both pilot seat visual systems must be operable simultaneously. The system must be free from optical discontinuities and artifacts that create non-realistic cues. An SOC is required and must explain the system geometry measurements including system linearity and field-of-view.	X	X			See Attachment 2 – Test 4.a.1. Additional field-of-view capability may be added at the sponsor's discretion provided the minimum fields of view are retained.
7.1.1.R	Reserved					
7.1.1.G	Reserved					
7.1.2	DISPLAY RESOLUTION					
7.1.2.S	Display resolution demonstrated by a test pattern of objects shown to occupy a visual angle of not greater than 2 arc minutes in the visual display used on a scene from the pilot's eye point. SOC required containing calculations confirming resolution.			X	X	See Attachment 2 (surface resolution) – Test 4.a.3.
7.1.2.R	Reserved					
7.1.2.G	Reserved					
7.1.3	LIGHT-POINT SIZE					
7.1.3.S	Light-point size — not greater than 5 arc minutes. SOC required confirming test pattern represents lights used for airport lighting.			X	X	See Attachment 2 – Test 4.a.4.
7.1.3.R	Reserved					
7.1.3.G	Reserved					
7.1.4	DISPLAY CONTRAST RATIO					
7.1.4.S	Display Contrast ratio — not less than 5:1.			X	X	See Attachment 2 (surface contrast ratio) – Test 4.a.5.
7.1.4.R	Reserved					
7.1.4.G	Reserved					
7.1.5	LIGHT-POINT CONTRAST RATIO					
7.1.5.S	Light-point contrast ratio — not less than 25:1.			X	X	See Attachment 2 (light-point contrast ratio) – Test 4.a.6.
7.1.5.S1	Light-point contrast ratio — not less than 10:1.	X	X			See Attachment 2 (light-point contrast ratio) – Test 4.a.6.
7.1.5.R	Reserved					
7.1.5.G	Reserved					
7.1.6	LIGHT-POINT BRIGHTNESS					
7.1.6.S	Light-point brightness – not less than 30 cd/m^2 (8.8 foot-lamberts).			X	X	See Attachment 2, (light-point brightness) – Test 4.a.7.
7.1.6.R	Reserved					
7.1.6.G	Reserved					
7.1.7	DISPLAY BRIGHTNESS					

Table A1A

Minimum Simulator Requirements						
	QPS REQUIREMENTS	Simulator Levels				INFORMATION
Entry Number	General Simulator Requirements	A	B	C	D	Notes
7.1.7.S	Display brightness must be demonstrated using a raster drawn test pattern. The surface brightness must not be less than 20 cd/m^2 (5.8 foot-lamberts).			X	X	See Attachment 2 – Test 4.a.8.
7.1.7.R	Reserved					
7.1.7.G	Reserved					
7.1.8	BLACK LEVEL AND SEQUENTIAL CONTRAST (**Light valve systems only**)					
7.1.8.S, S1	The black level and sequential contrast need to be measured to determine it is sufficient for training in all times of day.	X	X	X	X	A test is generally only required for light valve projectors. See Attachment 2 – Test 4.a.9.
7.1.8.R	Reserved					
7.1.8.G	Reserved					
7.1.9	MOTION BLUR (**Light valve systems only**)					
7.1.9.S, S1	Tests are required to determine the amount of motion blur that is typical of certain types of display equipment. A test must be provided that demonstrates the amount of blurring at a pre-defined rate of movement across the image.	X	X	X	X	A test is generally only required for light valve projectors. See Attachment 2 – Test 4.a.10.
7.1.9.R	Reserved					
7.1.9.G	Reserved					
7.1.10	SPECKLE TEST (**Laser systems only**)					
7.1.10.S, S1	A test is required to determine that the speckle typical of laser-based displays is below a distracting level.	X	X	X	X	A test is generally only required for laser projectors. See Attachment 2 – Test 4.a.11.
7.1.10.R	Reserved					
7.1.10.G	Reserved					
7.2	ADDITIONAL DISPLAY SYSTEMS					
7.2.1	HEAD-UP DISPLAY (where fitted)					
7.2.1.S, S1	The system must be shown to perform its intended function for each operation and phase of flight. An active display (repeater) of all parameters displayed on the pilot's combiner must be located on the instructor operating station (IOS), or other location approved by the NSPM. Display format of the repeater must represent that of the combiner. SOC required.	X	X	X	X	See Attachment 2 – Test 4.b.
7.2.1.R	Reserved					
7.2.1.G	N/A.					
7.2.2	ENHANCED FLIGHT VISION SYSTEM (EFVS) (Where fitted)					
7.2.2.S, S1	The EFVS simulator hardware/software, including associated cockpit displays and annunciation, must function the same or equivalent to the EFVS system installed in the airplane.	X	X	X	X	See Attachment 2 – Test 4.c.

Table A1A

Minimum Simulator Requirements						
	QPS REQUIREMENTS	Simulator Levels				INFORMATION
Entry Number	General Simulator Requirements	A	B	C	D	Notes
	A minimum of one airport must be modeled for EFVS operation. The model must include an ILS and a non-precision approach (with VNAV if required for that airplane type). Image must be repeated on the IOS as per HUD requirement in section 7.2.1.S. IOS weather presets must be provided for EFVS minimums.					
7.2.2.R	Reserved					
7.2.2.G	N/A.					
7.3	VISUAL GROUND SEGMENT					
7.3.S, S1	A test is required to demonstrate that the visibility is correct on final approach in CAT II conditions and the positioning of the airplane is correct relative to the runway.	X	X	X	X	See Attachment 2 – Test 4.d.
7.3.R	Reserved					
7.3.G	Reserved					
8.	**FEATURE GENERAL REQUIREMENT MOTION CUES**					
8.S	**N/A.**					
8.R	**Pilot receives an effective and representative motion cue and stimulus, which provides the appropriate sensations of acceleration of the airplane's 6 degrees of freedom (DOF). Motion cues and vibration cues should always provide the correct sensation, to support the approved use.**				X	Characteristic motion vibrations must be measured and compared to airplane data.
8.R1	**Reserved**					
8.R2	**Pilot receives an effective and representative motion cue and stimulus, which provides the appropriate sensations of acceleration of the airplane's 6 degrees of freedom (DOF). Motion cues should always provide the correct sensation, to support the approved use.**			X		
8.R3	**The simulator must have a motion (force cueing) system with a minimum of three degrees of freedom (at least pitch, roll, and heave). Motion effects programming is required.**		X			
8.R4	**The simulator must have a motion (force cueing) system with a minimum of three degrees of freedom (at least pitch, roll, and heave).**	X				
8.G	**N/A.**					
	FEATURE TECHNICAL REQUIREMENT MOTION CUES					
8.1	MOTION CUES GENERAL					
8.1.R,R2	Motion cues (force) in 6 DOF, as perceived by the pilot, must be representative of the simulated airplane's motion (e.g. touchdown cues must be a function of the rate of descent (R/D) of the simulated airplane). SOC required.			X	X	
8.1.R1	Reserved					

Table A1A

Minimum Simulator Requirements						
	QPS REQUIREMENTS	Simulator Levels				INFORMATION
Entry Number	General Simulator Requirements	A	B	C	D	Notes
8.2.R3	Motion cues (force) in 3 DOF, as perceived by the pilot, must be representative of the simulated airplane's motion (e.g. touchdown cues must be a function of the rate of descent (R/D) of the simulated airplane). SOC required.		X			
8.2.R4	Motion cues (force) in 3 DOF, as perceived by the pilot, must be representative of the simulated airplane's motion. SOC required.	X				Touchdown cues should be a function of the rate of descent (R/D) of the simulated airplane
8.2	MOTION FORCE CUEING					
8.2.R,R2	A motion system (force cueing) must produce cues at least equivalent to those of a 6 DOF platform motion system (i.e., pitch, roll, yaw, heave, sway, and surge). SOC required.			X	X	
8.2.R1	Reserved					
8.2.R3,R4	A motion system (force cueing) must produce cues at least equivalent to those of a 3 DOF platform motion system (i.e., pitch, roll, and heave). SOC required.	X	X			
8.3	MOTION EFFECTS					
8.3.R,R2,R3	Motion effects must include characteristic motion vibrations, buffets and bumps that result from operation of the airplane, in so far as these mark an event or airplane state that can be sensed at the cockpit/flight deck. Such effects must be in at least 3 axes, x, y and z, to represent the effects as experienced in the airplane:		X	X	X	See Attachment 3.
8.3.R,R2,R3	(1) Taxiing effects such as lateral and directional cues resulting from steering and braking inputs.		X	X	X	
8.3.R,R2,R3	(2) Effects of runway and taxiway rumble, oleo deflections, uneven runway, runway contamination with associated anti-skid characteristics, center line lights characteristics (such effects should be a function of groundspeed).		X	X	X	
8.3.R,R2,R3	(3) Buffets on the ground due to spoiler/speedbrake extension and thrust reversal.		X	X	X	
8.3.R,R2,R3	(4) Bumps associated with the landing gear.		X	X	X	
8.3.R,R2,R3	(5) Buffet during extension and retraction of landing gear.		X	X	X	
8.3.R,R2,R3	(6) Buffet in the air due to flap and spoiler/speedbrake extension.		X	X	X	
8.3.R,R2,R3	(7) Buffet due to atmospheric disturbances, e.g. turbulence in three linear axes (isotropic).		X	X	X	
8.3.R,R2,R3	(8) Approach to stall buffet.		X	X	X	
8.3.R,R2,R3	(9) Touchdown cues for main and nose gear.		X	X	X	Touchdown bumps should reflect the effects of lateral and directional cues resulting from crab or crosswind landings.
8.3.R,R2,R3	(10) Nosewheel scuffing (if applicable).		X	X	X	
8.3.R,R2,R3	(11) Thrust effect with brakes set.		X	X	X	
8.3.R,R2,R3	(12) Mach and maneuver buffet.		X	X	X	
8.3.R,R2,R3	(13) Tire failure dynamics.		X	X	X	
8.3.R,R2,R3	(14) Engine failures, malfunctions and engine damage.		X	X	X	Appropriate cues to aid recognition of failures for flight critical cases (e.g. directional and lateral cues for asymmetric engine failure).

Table A1A

Minimum Simulator Requirements						
	QPS REQUIREMENTS	Simulator Levels				INFORMATION
Entry Number	General Simulator Requirements	A	B	C	D	Notes
8.3.R,R2,R3	(15) Tail and pod strike.		X	X	X	
8.3.R,R2,R3	(16) Other significant vibrations, buffets and bumps that are not mentioned above (e.g. RAT), or checklist items such as motion effects due to pre-flight flight control inputs.		X	X	X	
8.3.R1	Reserved					
8.3.R4	N/A					
8.4	MOTION VIBRATIONS					
8.4.R	Motion vibrations tests are required and must include recorded results that allow the comparison of relative amplitudes versus frequency (relevant frequencies up to at least 20 Hz). Characteristic motion vibrations that result from operation of the airplane must be present, in so far as vibration marks an event or airplane state that can be sensed at the cockpit/flight deck. The FSTD must be programmed and instrumented in such a manner that the characteristic vibration modes can be measured and compared to airplane data. An SOC is required				X	See Attachment 2 – Table A2A, Section 3.f.
8.4.R	(1) Thrust effects with brakes set.				X	
8.4.R	(2) Landing gear extended buffet.				X	
8.4.R	(3) Flaps extended buffet.				X	
8.4.R	(4) Speedbrake deployed buffet.				X	
8.4.R	(5) Approach to stall buffet.				X	
8.4.R	(6) High speed or Mach buffet.				X	
8.4.R	(7) In-flight vibrations.				X	Propeller-driven airplanes only.
8.4.R,R2	(8) Stall buffet			X	X	Stall buffet vibration measurements are required for all FSTDs qualified to conduct full stall training tasks. See Attachment 2, Table A2A, test 3.f.
8.4.R1	Reserved					
8.4.R2	N/A					
8.4.R3	N/A					
8.4.R4	N/A					
9.	**Reserved**					
10	**FEATURE GENERAL REQUIREMENT ENVIRONMENT — NAVIGATION**					
10.S	**Navigational data with the corresponding approach facilities to support the approved use. Navigation aids must be usable within range or line-of-sight without restriction, as applicable to the geographic area. A complete navigational database is required for at least 3 airport models**			X	X	
10.S1	**Navigational data with the corresponding approach facilities to support the approved use.**	X	X			

Table A1A

Minimum Simulator Requirements						
	QPS REQUIREMENTS	Simulator Levels				INFORMATION
Entry Number	General Simulator Requirements	A	B	C	D	Notes
	Navigation aids must be usable within range or line-of-sight without restriction, as applicable to the geographic area. **A complete navigational database is required for at least 1 airport model**					
10.R	**N/A.**					
10.G	**N/A.**					
	FEATURE TECHNICAL REQUIREMENT ENVIRONMENT - NAVIGATION					
10.1	NAVIGATION DATABASE					
10.1.S,S1	Navigation database sufficient to support simulated airplane systems for real world operations.	X	X	X	X	
10.1.R	N/A.					
10.1.G	N/A.					
10.2	MINIMUM AIRPORT REQUIREMENT					
10.2.S	Complete navigation database for at least 3 airports with corresponding precision and non-precision approach procedures, including navigational database updates.			X	X	
10.2.S1	Complete navigation database for at least 1 airport with corresponding precision and non-precision approach procedures, including navigational database updates.	X	X			
10.2.R	N/A.					
10.2.G	N/A.					
10.3	INSTRUCTOR CONTROLS					
10.3.S,S1	Instructor controls of internal and external navigational aids.	X	X	X	X	E.g. airplane ILS glideslope receiver failure compared to ground facility glideslope failure.
10.3.R	N/A.					
10.3.G	N/A.					
10.4	ARRIVAL / DEPARTURE FEATURES					
10.4.S,S1	Navigational data with all the corresponding standard arrival and departure procedures.	X	X	X	X	
10.4.R	N/A.					
10.4.G	N/A.					
10.5	NAVIGATION AIDS RANGE					
10.5.S,S1	Navigation aids must be usable within range or line-of-sight without restriction, as applicable to the geographic area.	X	X	X	X	Replication of the geographic environment with its specific limitations.
10.5.R	N/A.					
10.5.G	N/A.					
11	**FEATURE GENERAL REQUIREMENT** **ENVIRONMENT – ATMOSPHERE AND WEATHER**					
11.S	**N/A.**					
11.R	**Fully integrated dynamic environment simulation including a representative atmosphere with weather effects to support the approved use.**			X	X	

Table A1A

Minimum Simulator Requirements						
	QPS REQUIREMENTS	Simulator Levels				INFORMATION
Entry Number	General Simulator Requirements	A	B	C	D	Notes
	The environment must be synchronized with appropriate airplane and simulation features to provide integrity. Environment simulation must include thunderstorms, wind shear, turbulence, microbursts and appropriate types of precipitation.					
11.G	**Basic atmospheric model, pressure, temperature, visibility, cloud base and winds to support the approved use.** **The environment must be synchronized with appropriate airplane and simulation features to provide integrity.**	**X**	**X**			
	FEATURE TECHNICAL REQUIREMENT ENVIRONMENT – ATMOSPHERE AND WEATHER					
11.1	STANDARD ATMOSPHERE					
11.1.S	N/A.					
11.1.R,G	Simulation of the standard atmosphere including instructor control over key parameters.	**X**	**X**	**X**	**X**	
11.2	WIND SHEAR					
11.2.S	N/A.					
11.2.R	If the aircraft being simulated is one of the aircraft listed in § 121.358, Low-altitude windshear system equipment requirements, the simulator must employ windshear models that provide training for recognition of windshear phenomena and the execution of recovery procedures. Models must be available to the instructor/evaluator for the following critical phases of flight: (1) Prior to takeoff rotation. (2) At liftoff. (3) During initial climb. (4) On final approach, below 500 ft AGL. The QTG must reference the FAA Windshear Training Aid or present alternate airplane related data, including the implementation method(s) used. If the alternate method is selected, wind models from the Royal Aerospace Establishment (RAE), the Joint Airport Weather Studies (JAWS) Project and other recognized sources may be implemented, but must be supported and properly referenced in the QTG. Only those simulators meeting these requirements may be used to satisfy the training requirements of part 121 pertaining to a certificate holder's approved low-altitude windshear flight training program as described in § 121.409. The addition of realistic levels of turbulence associated with each required windshear profile must be available and selectable to the instructor. In addition to the four basic windshear models required for qualification, at least two additional "complex" windshear models must be available to the instructor which represent the complexity of actual windshear encounters. These models must be available in the takeoff and landing configurations and must consist of independent variable winds in multiple simultaneous components. The Windshear Training Aid provides two such example "complex" windshear models that may be used to satisfy this requirement. Any proposed alternate wind models used to meet this requirement must be properly supported and referenced in the Master QTG. Instructor Operating Station (IOS): All required windshear models must be selectable and clearly labeled on the IOS. Additionally, all IOS selectable windshear models must employ a method, such as a simulator preset, to ensure that the FFS is properly configured for use in training. This method must address variables such as windshear			**X**	**X**	Refer to Attachment 2 – Table A2A, Test 2.g. The QTG should reference the FAA *Wind Shear Training Aid* or present alternate airplane-related data, including the implementation method(s) used. If the alternate method is selected, wind models from the Royal Aeroplane Establishment (RAE) *Wind Shear Training*, the *Joint Airport Weather Studies (JAWS) Project* and other recognized sources may be implemented, but should be supported and properly referenced in the QTG. If desired, Level A and B simulators may qualify for windshear training by meeting these standards; see Attachment 5 of this appendix.

Table A1A

Minimum Simulator Requirements						
	QPS REQUIREMENTS	Simulator Levels				INFORMATION
Entry Number	General Simulator Requirements	A	B	C	D	Notes
	intensity, aircraft configurations (weights, flap settings, etc.), and ambient conditions to ensure that the proper windshear recognition cues and training objectives are present as originally qualified.					
11.2.G	Reserved					
11.3	WEATHER EFFECTS					
11.3.S	N/A.					
11.3.R	The following weather effects as observed on the visual system must be simulated and respective instructor controls provided.			X	X	
	(1) Multiple cloud layers with adjustable bases, tops, sky coverage and scud effect.					
	(2) Storm cells activation and/or deactivation.					
	(3) Visibility and runway visual range (RVR), including fog and patchy fog effect.					Objective test required. Refer to Attachment 2 – Test 4.d.
	(4) Effects on ownship external lighting.					
	(5) Effects on airport lighting (including variable intensity and fog effects).					
	(6) Surface contaminants (including wind blowing effect).					
	(7) Variable precipitation effects (rain, hail, snow).					
	(8) In-cloud airspeed effect.					
	(9) Gradual visibility changes entering and breaking out of cloud.					
11.3 G	The following weather effects as observed on the visual system must be simulated and respective instructor controls provided.	X	X			
	(1) Visibility.					
11.4	INSTRUCTOR CONTROLS					
11.4.S	N/A.					
11.4.R,G	The following features must be simulated with appropriate instructor controls provided:	X	X	X	X	
	(1) surface wind speed, direction and gusts. Realistic gusting crosswind profiles must be available to the instructor that have been tuned in intensity and variation to require pilot intervention to avoid runway departure during takeoff or landing roll; An SOC is required describing source data used to construct gusting crosswind profiles.					Programmed gusting crosswind intensity and rate of change should be based upon data sources such as the FAA Windshear Training Aid or other acceptable source data. Additional tuning of the gusting crosswind profile(s) by a subject matter expert pilot in order to achieve the required training objectives is encouraged.
	(2) intermediate and high altitude wind speed and direction;					
	(3) thunderstorms and microbursts; and					
	(4) turbulence.					
12	**FEATURE GENERAL REQUIREMENT ENVIRONMENT – AIRPORTS AND TERRAIN**					
12.S	**N/A.**					

Table A1A

Minimum Simulator Requirements						
	QPS REQUIREMENTS	Simulator Levels				INFORMATION
Entry Number	General Simulator Requirements	A	B	C	D	Notes
12.R	**Specific airport models with topographical features to support the approved use.** **Correct terrain modeling, runway orientation, markings, lighting, dimensions and taxiways. Visual terrain and EGPWS databases must be matched to support training to avoid CFIT accidents.** **Where the device is required to perform low visibility operations, at least one airport scene with functionality to support the required approval type, e.g. low visibility taxi route with marker boards, stop bars, runway guard lights plus the required approach and runway lighting.**			X	X	See Table A3B and Table A3C in Attachment 3 for specific Class I and Class II airport model requirements.
12.R1	**Specific airport models with topographical features to support the approved use.** **Correct terrain modeling, runway orientation, markings, lighting, dimensions and taxiways. Visual terrain and EGPWS databases must be matched to support training to avoid CFIT accidents.**	X	X			
12.R(S)	**Reserved**					
12.G	**Reserved**					
12.G(S)	**Reserved**					
12.1	VISUAL CUES					
12.1.1R(S) G(S)	Reserved					
12.1.1R	Visual cues to assess sink rate and depth perception during take-off and landing must be provided. This must include: (1) surface on runways, taxiways, and ramps; (2) terrain features; and (3) highly detailed and accurate surface depiction of the terrain surface within an approximate area from 400 m (1/4 sm) before the runway approach end to 400 m (1/4 sm) beyond the runway departure end with a total width of approximately 400 m (1/4 sm) including the width of the runway.			X	X	
12.1.1R1	Visual cues to assess sink rate and depth perception during take-off and landing must be provided. This must include: (1) surface on runways, taxiways, and ramps; and (2) terrain features.		X			
12.1.1G	Reserved					
12.2	VISUAL EFFECTS					
12.2.1R	The system must provide visual effects for: (1) light poles; (2) raised edge lights as appropriate; and			X	X	

Table A1A

Minimum Simulator Requirements						
	QPS REQUIREMENTS	Simulator Levels				INFORMATION
Entry Number	General Simulator Requirements	A	B	C	D	Notes
	(3) glow associated with approach lights in low visibility before physical lights are seen.					
12.3	ENVIRONMENT ATTITUDE					
12.3.1R,R1	The FSTD must provide for accurate portrayal of the visual environment relating to the FSTD attitude.	X	X	X	X	Visual attitude versus FSTD attitude is a comparison of pitch and roll of the horizon as displayed in the visual scene compared to the display on the attitude indicator. Required for initial qualification only (SOC acceptable).
12.4	AIRPORT SCENES					
12.4.1R	The system must include at least 3 designated real-world airports available in daylight, twilight (dusk or dawn) and night illumination states.			X	X	The three required airport models are intended to demonstrate visual system capability and must meet the Class I airport model requirements in Attachment 3, Table A3B.
12.4.1R1	The system must include at least 1 designated real-world airport available in daylight, twilight (dusk or dawn) and night illumination states.	X	X			The required airport model is intended to demonstrate visual system capability and must meet the Class I airport model requirements in Attachment 3, Table A3B.
12.4.1G	Reserved					
12.4.2.1R	Daylight Capability. SOC required for system capability.			X	X	System objective tests are required. See Attachment 2 (visual scene quality) — Test 4.a.
12.4.2.2R	The system must provide full-color presentations and sufficient surfaces with appropriate textural cues to successfully accomplish a visual approach, landing and airport movement (taxi).			X	X	
12.4.2.3R	Surface shading effects must be consistent with simulated sun position.			X	X	This does not imply continuous time of day.
12.4.2.4R	Total scene content comparable in detail to that produced by 10 000 visible textured surfaces and 6 000 visible lights must be provided.			X	X	
12.4.2.4G	Reserved					
12.4.2.5R	The system must have sufficient capacity to display 16 simultaneously moving objects.			X	X	
12.4.3.1R	Twilight (dusk) capability.			X	X	
12.4.3.2R	The system must provide twilight (or dusk) visual scenes with full colour presentations of reduced ambient intensity and typical terrain characteristics such as fields, roads and bodies of water and surfaces illuminated by representative ownship lighting (e.g. landing lights) sufficient to successfully accomplish visual approach, landing and airport movement (taxi).			X	X	
12.4.3.3R	Total scene content comparable in detail to that produced by 10 000 visible textured surfaces and 15 000 visible lights must be provided.			X	X	
12.4.3.3R	Scenes must include self-illuminated objects such as road networks, ramp lighting and airport signage, to conduct a visual approach, landing and airport movement (taxi).			X	X	
12.4.3.4R	The system must include a definable horizon.			X	X	If provided, directional horizon lighting should have correct orientation and be consistent with surface shading effects.

Table A1A

Minimum Simulator Requirements						
	QPS REQUIREMENTS	Simulator Levels				INFORMATION
Entry Number	General Simulator Requirements	A	B	C	D	Notes
12.4.3.6R	The system must have sufficient capacity to display 16 simultaneously moving objects.			X	X	
12.4.4R,R1	Night capability.	X	X	X	X	
12.4.4.1R,R1	The system must provide at night all features applicable to the twilight scene, as defined above, with the addition of the need to portray reduced ambient intensity that removes ground cues that are not self-illuminating or illuminated by airplane lights (e.g. landing lights).	X	X	X	X	
12.5	AIRPORT CLUTTER					
12.5.1R	Airport models must include representative static and dynamic clutter such as gates, airplanes, and ground handling equipment.			X	X	Clutter need not be dynamic unless required (e.g. ATC correlation).
12.6	DATABASE CURRENCY					
12.6.1R,R1	The specific airports used in the system must be maintained current with the state of the corresponding real-world airports as identified in the airport charts.	X	X	X	X	Specific requirements for maintaining airport model currency are described in Attachment 3, Paragraph (f).
12.7	Reserved					
12.8	Reserved					
12.9	LOW VISIBILITY TRAINING					
12.9.1R	The system must include at least one airport scene with functionality to support the required approval type, e.g. low visibility taxi route with marker boards, stop bars, runway guard lights plus the required approach and runway lighting.			X	X	
13	**FEATURE GENERAL REQUIREMENT MISCELLANEOUS**					
13.S	**N/A.**					
13.S1	**N/A.**					
13.R	**N/A.**					
13.G	**N/A.**					
13	FEATURE TECHNICAL REQUIREMENT MISCELLANEOUS					
13.1	INSTRUCTOR OPERATING STATION					
13.1S,S1	The instructor station must provide an adequate view of the pilots' panels and forward windows.	X	X	X	X	For an FSTD with a motion cueing system, any on board instructor seat should be adequately secured and fitted with positive restraint devices of sufficient integrity to safely restrain the occupant during any known or predicted motion system excursion.
13.1R	Reserved					
13.1G	N/A.					
13.2	INSTRUCTOR CONTROLS					
13.2 S,S1	Instructor controls must be provided for all required system variables, freezes, resets and for insertion of malfunctions to simulate abnormal or emergency conditions. The effects of these malfunctions must be sufficient to correctly exercise the procedures in relevant operating manuals.	X	X	X	X	
13.3	SELF–DIAGNOSTIC TESTING					

Table A1A

Minimum Simulator Requirements						
	QPS REQUIREMENTS	Simulator Levels				INFORMATION
Entry Number	General Simulator Requirements	A	B	C	D	Notes
13.3S,S1	Self-diagnostic testing of the FSTD must be available to determine the integrity of hardware and software operation and to provide a means for quickly and effectively conducting daily testing of the FSTD software and hardware. An SOC is required	X	X	X	X	
13.4	COMPUTER CAPACITY					
13.4 S,S1	Sufficient FSTD computer capacity, accuracy, resolution and dynamic response must be provided to fully support the overall FSTD fidelity needed to meet the qualification type sought. An SOC is required.	X	X	X	X	
13.5	AUTOMATIC TESTING FACILITIES					
13.5S,S1	Automatic QTG/validation testing of FSTD hardware and software to determine compliance with the validation requirements must be available.	X	X	X	X	Evidence of testing should include test identification, FSTD number, date, time, conditions, tolerances, and the appropriate dependent variables portrayed in comparison with the airplane standard.
13.5 R,G	Reserved					
13.6	UPDATES TO FSTD HARDWARE AND SOFTWARE					
13.6 S,S1	Timely permanent update of FSTD hardware and software must be conducted subsequent to airplane modification where it affects training, sufficient for the qualification type sought.	X	X	X	X	
13.6G	Reserved					
13.7	DAILY PRE-FLIGHT DOCUMENTATION					
13.7 S,S1	Daily pre-flight documentation either in the daily log or in a location easily accessible for review is required.	X	X	X	X	
13.8	SYSTEM INTEGRATION					
13.8	System Integration. Relative response of the visual system, cockpit/flight deck instruments and initial motion system coupled closely to provide integrated sensory cues. Visual scene changes from steady state disturbance (i.e. the start of the scan of the first video field containing different information) must occur within the system dynamic response limit of 100 milliseconds (ms). Motion onset must also occur within the system dynamic response limit of 100 ms. While motion onset must occur before the start of the scan of the first video field containing different information, it needs to occur before the end of the scan of the same video field. The test to determine compliance with these requirements must include simultaneously recording the output from the pilot's pitch, roll and yaw controllers, the output from the accelerometer attached to the motion system platform located at an acceptable location near the pilots' seats, the output signal to the visual system display (including visual system analogue delays) and the output signal to the pilot's attitude indicator or an equivalent test approved by the NSPM.					Test required. See Attachment 2, Table A2A, Transport delay – Test 6.a. Latency test may be used as an alternate means of compliance in place of the transport delay test. Attachment 2, Paragraph 15 provides guidance for transport delay test methodology and also latency.
13.8S	Transport delay: A transport delay test may be used to demonstrate that the FSTD system response does not exceed 100 ms. Where EFVS systems are installed, they must respond within + or - 30 ms from the visual system, and not before the motion response.			X	X	Results required for instruments, motion and visual systems. Additional transport delay test results are required where HUD systems are installed, which are simulated and not actual airplane

Table A1A

Minimum Simulator Requirements						
	QPS REQUIREMENTS	Simulator Levels				INFORMATION
Entry Number	General Simulator Requirements	A	B	C	D	Notes
						systems. Where a visual system's mode of operation (daylight, twilight and night) can affect performance, additional tests are required. An SOC is required where the visual system's mode of operation does not affect performance, precluding the need to submit additional tests.
13.8S1	Transport delay: A transport delay test may be used to demonstrate that the FSTD system response does not exceed 300 ms. Where EFVS systems are installed, they must respond within + or - 30 ms from the visual system, and not before the motion response.	X	X			Results required for instruments, motion and visual systems. Additional transport delay test results are required where HUD systems are installed, which are simulated and not actual airplane systems. Where a visual system's mode of operation (daylight, twilight and night) can affect performance, additional tests are required. An SOC is required where the visual system's mode of operation does not affect performance, precluding the need to submit additional tests.
13.8 R.G	Reserved					

Table A1B

Table of Tasks vs. Simulator Level						
QPS REQUIREMENTS						INFORMATION
Entry Number	Subjective Requirements In order to be qualified at the simulator qualification level indicated, the simulator must be able to perform at least the tasks associated with that level of qualification.	Simulator Levels				Notes
		A	B	C	D	
1. Preflight Procedures.						
1.a.	Preflight Inspection (flight deck only)	X	X	X	X	
1.b.	Engine Start	X	X	X	X	
1.c.	Taxiing		R	X	X	
1.d.	Pre-takeoff Checks	X	X	X	X	
2. Takeoff and Departure Phase.						
2.a.	Normal and Crosswind Takeoff		R	X	X	
2.b.	Instrument Takeoff	X	X	X	X	
2.c.	Engine Failure During Takeoff	A	X	X	X	
2.d.	Rejected Takeoff	X	X	X	X	
2.e.	Departure Procedure	X	X	X	X	
3. Inflight Maneuvers.						
3.a.	Steep Turns	X	X	X	X	
3.b.	High Angle of Attack Maneuvers					
3.b.1	Approaches to Stalls	X	X			
3.b.2	Full Stalls			X	X	Stall maneuvers at angles of attack above the activation of the stall warning system.
3.c.	Engine Failure—Multiengine Airplane	X	X	X	X	
3.d.	Engine Failure—Single-Engine Airplane	X	X	X	X	
3.e.	Specific Flight Characteristics incorporated into the user's FAA approved flight training program.	A	A	A	A	
3.f.	Upset Recognition and Recovery			X	X	Upset recovery maneuvers conducted within the FSTD's defined validation envelope.
4. Instrument Procedures.						
4.a.	Standard Terminal Arrival / Flight Management System Arrivals Procedures	X	X	X	X	
4.b.	Holding	X	X	X	X	
4.c.	Precision Instrument					
4.c.1.	All engines operating.	X	X	X	X	e.g., Autopilot, Manual (Flt. Dir. Assisted), Manual (Raw Data)

"A" - indicates that the system, task, or procedure may be examined if the appropriate aircraft system or control is simulated in the FSTD and is working properly.
"R" - indicates that the simulator may be qualified for this task for continuing qualification training.
"X" - indicates that the simulator must be able to perform this task for this level of qualification.

Table A1B

Table of Tasks vs. Simulator Level						
QPS REQUIREMENTS						INFORMATION
Entry Number	Subjective Requirements In order to be qualified at the simulator qualification level indicated, the simulator must be able to perform at least the tasks associated with that level of qualification.	Simulator Levels				Notes
		A	B	C	D	
4.c.2.	One engine inoperative.	X	X	X	X	e.g., Manual (Flt. Dir. Assisted), Manual (Raw Data)
4.d.	Non-precision Instrument Approach	X	X	X	X	e.g., NDB, VOR, VOR/DME, VOR/TAC, RNAV, LOC, LOC/BC, ADF, and SDF.
4.e.	Circling Approach	X	X	X	X	Specific authorization required.
4.f.	Missed Approach					
4.f.1.	Normal.	X	X	X	X	
4.f.2.	One engine Inoperative.	X	X	X	X	
5. Landings and Approaches to Landings.						
5.a.	Normal and Crosswind Approaches and Landings		R	X	X	
5.b.	Landing From a Precision / Non-Precision Approach		R	X	X	
5.c.	Approach and Landing with (Simulated) Engine Failure – Multiengine Airplane		R	X	X	
5.d.	Landing From Circling Approach		R	X	X	
5.e.	Rejected Landing	X	X	X	X	
5.f.	Landing From a No Flap or a Nonstandard Flap Configuration Approach		R	X	X	
6. Normal and Abnormal Procedures.						
6.a.	Engine (including shutdown and restart)	X	X	X	X	
6.b.	Fuel System	X	X	X	X	
6.c.	Electrical System	X	X	X	X	
6.d.	Hydraulic System	X	X	X	X	
6.e.	Environmental and Pressurization Systems	X	X	X	X	
6.f.	Fire Detection and Extinguisher Systems	X	X	X	X	
6.g.	Navigation and Avionics Systems	X	X	X	X	
6.h.	Automatic Flight Control System, Electronic Flight Instrument System, and Related Subsystems	X	X	X	X	
6.i.	Flight Control Systems	X	X	X	X	
6.j.	Anti-ice and Deice Systems	X	X	X	X	
6.k.	Aircraft and Personal Emergency Equipment	X	X	X	X	
7. Emergency Procedures.						
7.a.	Emergency Descent (Max. Rate)	X	X	X	X	

"A" - indicates that the system, task, or procedure may be examined if the appropriate aircraft system or control is simulated in the FSTD and is working properly.

"R" - indicates that the simulator may be qualified for this task for continuing qualification training.

"X" - indicates that the simulator must be able to perform this task for this level of qualification.

Table A1B

Table of Tasks vs. Simulator Level						
QPS REQUIREMENTS						INFORMATION
Entry Number	Subjective Requirements In order to be qualified at the simulator qualification level indicated, the simulator must be able to perform at least the tasks associated with that level of qualification.	Simulator Levels				Notes
		A	B	C	D	
7.b.	Inflight Fire and Smoke Removal	X	X	X	X	
7.c.	Rapid Decompression	X	X	X	X	
7.d.	**Emergency Evacuation**	X	X	X	X	
8. Postflight Procedures.						
8.a.	After-Landing Procedures	X	X	X	X	
8.b.	Parking and Securing	X	X	X	X	

"A" - indicates that the system, task, or procedure may be examined if the appropriate aircraft system or control is simulated in the FSTD and is working properly.
"R" - indicates that the simulator may be qualified for this task for continuing qualification training.
"X" - indicates that the simulator must be able to perform this task for this level of qualification.

Table A1C

Table of Simulator System Tasks						
QPS REQUIREMENTS						**INFORMATION**
Entry Number	**Subjective Requirements** In order to be qualified at the simulator qualification level indicated, the simulator must be able to perform at least the tasks associated with that level of qualification.	**Simulator Levels**				**Notes**
		A	**B**	**C**	**D**	
1. Instructor Operating Station (IOS), as appropriate.						
1.a.	Power switch(es).	**X**	**X**	**X**	**X**	
1.b.	Airplane conditions.	**X**	**X**	**X**	**X**	e.g., GW, CG, Fuel loading and Systems.
1.c.	Airports / Runways.	**X**	**X**	**X**	**X**	e.g., Selection, Surface, Presets, Lighting controls.
1.d.	Environmental controls.	**X**	**X**	**X**	**X**	e.g., Clouds, Visibility, RVR, Temp, Wind, Ice, Snow, Rain, and Windshear.
1.e.	Airplane system malfunctions (Insertion / deletion)	**X**	**X**	**X**	**X**	
1.f.	Locks, Freezes, and Repositioning.	**X**	**X**	**X**	**X**	
2. Sound Controls.						
2.a.	On / off / adjustment	**X**	**X**	**X**	**X**	
3. Motion / Control Loading System.						
3.a.	On / off / emergency stop.	**X**	**X**	**X**	**X**	
4. Observer Seats / Stations.						
4.a.	Position / Adjustment / Positive restraint system.	**X**	**X**	**X**	**X**	

Attachment 2 to Appendix A to Part 60--
FFS OBJECTIVE TESTS

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Begin Information

1. Introduction

a. For the purposes of this attachment, the flight conditions specified in the Flight Conditions Column of Table A2A of this appendix, are defined as follows:

(1) Ground—on ground, independent of airplane configuration;

(2) Take-off—gear down with flaps/slats in any certified takeoff position;

(3) First segment climb—gear down with flaps/slats in any certified takeoff position (normally not above 50 ft AGL);

(4) Second segment climb—gear up with flaps/slats in any certified takeoff position (normally between 50 ft and 400 ft AGL);

(5) Clean—flaps/slats retracted and gear up;

(6) Cruise—clean configuration at cruise altitude and airspeed;

(7) Approach—gear up or down with flaps/slats at any normal approach position as recommended by the airplane manufacturer; and

(8) Landing—gear down with flaps/slats in any certified landing position.

b. The format for numbering the objective tests in Appendix A, Attachment 2, Table A2A, and the objective tests in Appendix B, Attachment 2, Table B2A, is identical. However, each test required for FFSs is not necessarily required for FTDs. Also, each test required for FTDs is not necessarily required for FFSs. Therefore, when a test number (or series of numbers) is not required, the term ''Reserved'' is used in the table at that location. Following this numbering format provides a degree of commonality between the two tables and substantially reduces the potential for confusion when referring to objective test numbers for either FFSs or FTDs.

c. The reader is encouraged to review the Airplane Flight Simulator Evaluation Handbook, Volumes I and II, published by the Royal Aeronautical Society, London, UK, and AC 25–7, as amended, Flight Test Guide for Certification of Transport Category Airplanes, and AC 23–8, as amended, Flight Test Guide for Certification of Part 23 Airplanes, for references and examples regarding flight testing requirements and techniques.

d. If relevant winds are present in the objective data, the wind vector should be clearly noted as part of the data presentation, expressed in conventional terminology, and related to the runway being used for the test.

End Information

Begin QPS Requirements

2. Test Requirements

a. The ground and flight tests required for qualification are listed in Table of A2A, FFS Objective Tests. Computer generated simulator test results must be provided for each test except where an alternative test is specifically authorized by the NSPM. If a flight condition or operating condition is required for the test but does not apply to the airplane being simulated or to the qualification level sought, it may be disregarded (e.g., an engine out missed approach for a single-engine airplane or a maneuver using reverse thrust for an airplane without reverse thrust capability). Each test result is compared against the validation data described in § 60.13 and in this appendix. Although use of a driver program designed to automatically accomplish the tests is encouraged for all simulators and required for Level C and Level D simulators, it must be possible to conduct each test manually while recording all appropriate parameters. The results must be produced on an appropriate recording device acceptable to the NSPM and must include simulator number, date, time, conditions, tolerances, and appropriate dependent variables portrayed in comparison to the validation data. Time histories are required unless

otherwise indicated in Table A2A. All results must be labeled using the tolerances and units given.

b. Table A2A in this attachment sets out the test results required, including the parameters, tolerances, and flight conditions for simulator validation. Tolerances are provided for the listed tests because mathematical modeling and acquisition and development of reference data are often inexact. All tolerances listed in the following tables are applied to simulator performance. When two tolerance values are given for a parameter, the less restrictive may be used unless otherwise indicated. In those cases where a tolerance is expressed only as a percentage, the tolerance percentage applies to the maximum value of that parameter within its normal operating range as measured from the neutral or zero position unless otherwise indicated.

c. Certain tests included in this attachment must be supported with an SOC. In Table A2A, requirements for SOCs are indicated in the ''Test Details'' column.

d. When operational or engineering judgment is used in making assessments for flight test data applications for simulator validity, such judgment must not be limited to a single parameter. For example, data that exhibit rapid variations of the measured parameters may require interpolations or a ''best fit'' data selection. All relevant parameters related to a given maneuver or flight condition must be provided to allow overall interpretation. When it is difficult or impossible to match simulator to airplane data throughout a time history, differences must be justified by providing a comparison of other related variables for the condition being assessed.

e. It is not acceptable to program the FFS so that the mathematical modeling is correct only at the validation test points. Unless otherwise noted, simulator tests must represent airplane performance and handling qualities at operating weights and centers of gravity (CG) typical of normal operation. If a test is supported by airplane data at one extreme weight or CG, another test supported by airplane data at mid-conditions or as close as possible to the other extreme must be included. Certain tests that are relevant only at one extreme CG or weight condition need not be repeated at the other extreme. Tests of handling qualities must include validation of augmentation devices.

f. When comparing the parameters listed to those of the airplane, sufficient data must also be provided to verify the correct flight condition and airplane configuration changes. For example, to show that control force is within the parameters for a static stability test, data to show the correct airspeed, power, thrust or torque, airplane configuration, altitude, and other appropriate datum identification parameters must also be given. If comparing short period dynamics, normal acceleration may be used to establish a match to the airplane, but airspeed, altitude, control input, airplane configuration, and other appropriate data must also be given. If comparing landing gear change dynamics, pitch, airspeed, and altitude may be used to establish a match to the airplane, but landing gear position must also be provided. All airspeed values must be properly annotated (e.g., indicated versus calibrated). In addition, the same variables must be used for comparison (e.g., compare inches to inches rather than inches to centimeters).

g. The QTG provided by the sponsor must clearly describe how the simulator will be set up and operated for each test. Each simulator subsystem may be tested independently, but overall integrated testing of the simulator must be accomplished to assure that the total simulator system meets the prescribed standards. A manual test procedure with explicit and detailed steps for completing each test must also be provided.

h. For previously qualified simulators, the tests and tolerances of this attachment may be used in subsequent continuing qualification evaluations for any given test if the sponsor has submitted a proposed MQTG revision to the NSPM and has received NSPM approval.

i. Simulators are evaluated and qualified with an engine model simulating the airplane data supplier's flight test engine. For qualification of alternative engine models (either variations of the flight test engines or other manufacturer's engines) additional tests with the alternative engine models may be required. This attachment contains guidelines for alternative engines.

j. For testing Computer Controlled Aircraft (CCA) simulators, or other highly augmented airplane simulators, flight test data is required for the Normal (N) and/or Non-normal (NN) control states, as indicated in this attachment. Where test results are independent of control state, Normal or Non-normal control data may be used. All tests in Table A2A require test results in the Normal control state unless specifically noted otherwise in the Test Details section following the CCA designation. The NSPM will determine what tests are appropriate for airplane simulation data. When making this determination, the NSPM may require other levels of control state degradation for specific airplane tests. Where Non-normal control states are required, test data must be provided for one or more Non-normal control states, and must include the least augmented state. Where applicable, flight test data must record Normal and Non-normal states for:

(1) Pilot controller deflections or electronically generated inputs, including location of input; and

(2) Flight control surface positions unless test results are not affected by, or are independent of, surface positions.

k. Tests of handling qualities must include validation of augmentation devices. FFSs for highly augmented airplanes will be validated both in the unaugmented configuration (or failure state with the maximum permitted degradation in handling qualities) and the augmented configuration. Where various levels of handling qualities result from failure states, validation of the effect of the failure is necessary. Requirements for testing will be mutually agreed to between the sponsor and the NSPM on a case-by-case basis.

l. Some tests will not be required for airplanes using airplane hardware in the simulator flight deck (e.g., ''side stick controller''). These exceptions are noted in Section 2 ''Handling Qualities'' in Table A2A of this attachment. However, in these cases, the sponsor must provide a statement that the airplane hardware meets the appropriate manufacturer's specifications and the sponsor must have supporting information to that fact available for NSPM review.

m. For objective test purposes, see Appendix F of this part for the definitions of ''Near maximum,'' ''Light,'' and ''Medium'' gross weight.

End QPS Requirements

Begin Information

n. In those cases where the objective test results authorize a ''snapshot test'' or a ''series of snapshot tests'' results in lieu of a time-history result, the sponsor or other data provider must ensure that a steady state condition exists at the instant of time captured by the ''snapshot.'' The steady state condition should exist from 4 seconds prior to, through 1 second following, the instant of time captured by the snap shot.

o. For references on basic operating weight, see AC 120–27, ''Aircraft Weight and Balance;'' and FAA- H–8083–1, ''Aircraft Weight and Balance Handbook.''

End Information

Table A2A

Full Flight Simulator (FFS) Objective Tests									
QPS REQUIREMENTS									INFORMATION
Test		Tolerance	Flight Conditions	Test Details	Simulator Level				Notes
Entry Number	Title				A	B	C	D	
1. Performance.									
1.a.	**Taxi.**								
1.a.1	Minimum radius turn.	±0.9 m (3 ft) or ±20% of airplane turn radius.	Ground.	Plot both main and nose gear loci and key engine parameter(s). Data for no brakes and the minimum thrust required to maintain a steady turn except for airplanes requiring asymmetric thrust or braking to achieve the minimum radius turn.		X	X	X	
1.a.2	Rate of turn versus nosewheel steering angle (NWA).	±10% or ±2°/s of turn rate.	Ground.	Record for a minimum of two speeds, greater than minimum turning radius speed with one at a typical taxi speed, and with a spread of at least 5 kt.		X	X	X	
1.b.	**Takeoff.**			*Note.— All airplane manufacturer commonly-used certificated take-off flap settings must be demonstrated at least once either in minimum unstick speed (1.b.3), normal take-off (1.b.4), critical engine failure on take-off (1.b.5) or crosswind take-off (1.b.6).*					
1.b.1	Ground acceleration time and distance.	±1.5 s or ±5% of time; and ±61 m (200 ft) or ±5% of distance.	Takeoff.	Acceleration time and distance must be recorded for a minimum of 80% of the total time from brake release to V_r. Preliminary aircraft certification data may be used.	X	X	X	X	May be combined with normal takeoff (1.b.4.) or rejected takeoff (1.b.7.). Plotted data should be shown using appropriate scales for each portion of the maneuver.
1.b.2	Minimum control speed, ground (V_{mcg}) using aerodynamic controls only per applicable airworthiness requirement or alternative engine inoperative test to demonstrate ground control characteristics.	±25% of maximum airplane lateral deviation reached or ±1.5 m (5 ft). For airplanes with reversible flight control systems: ±10% or ±2.2 daN (5 lbf) rudder pedal force.	Takeoff.	Engine failure speed must be within ±1 kt of airplane engine failure speed. Engine thrust decay must be that resulting from the mathematical model for the engine applicable to the FSTD under test. If the modeled engine is not the same as the airplane manufacturer's flight test engine, a further test may be run with the same initial conditions using the thrust from the flight test data as the driving parameter. To ensure only aerodynamic control, nosewheel steering must be disabled (i.e. castored) or the nosewheel held slightly off the ground.	X	X	X	X	If a V_{mcg} test is not available, an acceptable alternative is a flight test snap engine deceleration to idle at a speed between V_1 and V_1-10 kt, followed by control of heading using aerodynamic control only and recovery should be achieved with the main gear on the ground.
1.b.3	Minimum unstick speed (V_{mu}) or equivalent test to demonstrate early	±3 kt airspeed. ±1.5° pitch angle.	Takeoff.	Record time history data from 10 knots before start of rotation until at least 5 seconds after the occurrence of main gear lift-off.	X	X	X	X	V_{mu} is defined as the minimum speed at which the last main landing gear leaves

Table A2A

Full Flight Simulator (FFS) Objective Tests									
QPS REQUIREMENTS									INFORMATION
Test		Tolerance	Flight Conditions	Test Details	Simulator Level				Notes
Entry Number	Title				A	B	C	D	
	rotation take-off characteristics.								the ground. Main landing gear strut compression or equivalent air/ground signal should be recorded. If a V_{mu} test is not available, alternative acceptable flight tests are a constant high-attitude takeoff run through main gear lift-off or an early rotation takeoff. If either of these alternative solutions is selected, aft body contact/tail strike protection functionality, if present on the airplane, should be active.
1.b.4	Normal take-off.	±3 kt airspeed. ±1.5° pitch angle. ±1.5° AOA. ±6 m (20 ft) height. For airplanes with reversible flight control systems: ±2.2 daN (5 lbf) or ±10% of column force.	Takeoff.	Data required for near maximum certificated takeoff weight at mid center of gravity location and light takeoff weight at an aft center of gravity location. If the airplane has more than one certificated takeoff configuration, a different configuration must be used for each weight. Record takeoff profile from brake release to at least 61 m (200 ft) AGL.	X	X	X	X	The test may be used for ground acceleration time and distance (1.b.1). Plotted data should be shown using appropriate scales for each portion of the maneuver.
1.b.5	Critical engine failure on take-off.	±3 kt airspeed. ±1.5° pitch angle. ±1.5° AOA. ±6 m (20 ft) height. ±2° roll angle. ±2° side-slip angle. ±3° heading angle. For airplanes with	Takeoff.	Record takeoff profile to at least 61 m (200 ft) AGL. Engine failure speed must be within ±3 kt of airplane data. Test at near maximum takeoff weight.	X	X	X	X	

Table A2A

Full Flight Simulator (FFS) Objective Tests									
QPS REQUIREMENTS									INFORMATION
Test		Tolerance	Flight Conditions	Test Details	Simulator Level				Notes
Entry Number	Title				A	B	C	D	
		reversible flight control systems: ±2.2 daN (5 lbf) or ±10% of column force; ±1.3 daN (3 lbf) or ±10% of wheel force; and ±2.2 daN (5 lbf) or ±10% of rudder pedal force.							
1.b.6	Crosswind takeoff.	± 3 kt airspeed. ±1.5° pitch angle. ±1.5° AOA. ±6 m (20 ft) height. ±2° roll angle. ±2° side-slip angle. ±3° heading angle. Correct trends at ground speeds below 40 kt for rudder/pedal and heading angle. For airplanes with reversible flight control systems: ±2.2 daN (5 lbf) or ±10% of column force; ±1.3 daN (3 lbf) or ±10% of wheel force; and	Takeoff.	Record takeoff profile from brake release to at least 61 m (200 ft) AGL. This test requires test data, including wind profile, for a crosswind component of at least 60% of the airplane performance data value measured at 10 m (33 ft) above the runway. Wind components must be provided as headwind and crosswind values with respect to the runway.	X	X	X	X	In those situations where a maximum crosswind or a maximum demonstrated crosswind is not known, contact the NSPM.

Table A2A

Full Flight Simulator (FFS) Objective Tests									
QPS REQUIREMENTS									INFORMATION
Test		Tolerance	Flight Conditions	Test Details	Simulator Level				Notes
Entry Number	Title				A	B	C	D	
		±2.2 daN (5 lbf) or ±10% of rudder pedal force.							
1.b.7.	Rejected Takeoff.	±5% of time or ±1.5 s. ±7.5% of distance or ±76 m (250 ft).	Takeoff.	Record at mass near maximum takeoff weight. Speed for reject must be at least 80% of V_1. Maximum braking effort, auto or manual. Where a maximum braking demonstration is not available, an acceptable alternative is a test using approximately 80% braking and full reverse, if applicable. Time and distance must be recorded from brake release to a full stop.	X	X	X	X	Autobrakes will be used where applicable.
1.b.8.	Dynamic Engine Failure After Takeoff.	±2°/s or ±20% of body angular rates.	Takeoff.	Engine failure speed must be within ±3 kt of airplane data. Engine failure may be a snap deceleration to idle. Record hands-off from 5 s before engine failure to +5 s or 30° roll angle, whichever occurs first. **CCA**: Test in Normal and Non-normal control state.			X	X	For safety considerations, airplane flight test may be performed out of ground effect at a safe altitude, but with correct airplane configuration and airspeed.
1.c.	**Climb.**								
1.c.1.	Normal Climb, all engines operating.	±3 kt airspeed. ±0.5 m/s (100 ft/ min) or ±5% of rate of climb.	Clean.	Flight test data are preferred; however, airplane performance manual data are an acceptable alternative. Record at nominal climb speed and mid initial climb altitude. FSTD performance is to be recorded over an interval of at least 300 m (1 000 ft).	X	X	X	X	
1.c.2.	One-engine-inoperative 2nd segment climb.	±3 kt airspeed. ±0.5 m/s (100 ft/ min) or ±5% of rate of climb, but not less than airplane performance	2nd segment climb.	Flight test data is preferred; however, airplane performance manual data is an acceptable alternative. Record at nominal climb speed.	X	X	X	X	

Table A2A

Full Flight Simulator (FFS) Objective Tests									
QPS REQUIREMENTS									INFORMATION
Test		Tolerance	Flight Conditions	Test Details	Simulator Level				Notes
Entry Number	Title				A	B	C	D	
		data requirements.		FSTD performance is to be recorded over an interval of at least 300 m (1 000 ft). Test at WAT (weight, altitude or temperature) limiting condition.					
1.c.3.	One Engine Inoperative En route Climb.	±10% time, ±10% distance, ±10% fuel used	Clean	Flight test data or airplane performance manual data may be used. Test for at least a 1550 m (5 000 ft) segment.			**X**	**X**	
1.c.4.	One Engine Inoperative Approach Climb for airplanes with icing accountability if provided in the airplane performance data for this phase of flight.	±3 kt airspeed. ±0.5 m/s (100 ft/ min) or ±5% rate of climb, but not less than airplane performance data.	Approach	Flight test data or airplane performance manual data may be used. FSTD performance to be recorded over an interval of at least 300 m (1 000 ft). Test near maximum certificated landing weight as may be applicable to an approach in icing conditions.	**X**	**X**	**X**	**X**	Airplane should be configured with all anti-ice and de-ice systems operating normally, gear up and go-around flap. All icing accountability considerations, in accordance with the airplane performance data for an approach in icing conditions, should be applied.
1.d.	**Cruise / Descent.**								
1.d.1.	Level flight acceleration	±5% Time	Cruise	Time required to increase airspeed a minimum of 50 kt, using maximum continuous thrust rating or equivalent. For airplanes with a small operating speed range, speed change may be reduced to 80% of operational speed change.	**X**	**X**	**X**	**X**	
1.d.2.	Level flight deceleration.	±5% Time	Cruise	Time required to decrease airspeed a minimum of 50 kt, using idle power. For airplanes with a small operating speed range, speed change may be reduced to 80% of operational speed change.	**X**	**X**	**X**	**X**	
1.d.3.	Cruise performance.	±.05 EPR or ±3% N1 or ±5% of torque. ±5% of fuel flow.	Cruise.	The test may be a single snapshot showing instantaneous fuel flow, or a minimum of two consecutive snapshots with a spread of at least 3 minutes in steady flight.			**X**	**X**	
1.d.4.	Idle descent.	±3 kt airspeed.	Clean.	Idle power stabilized descent at normal descent speed at mid altitude.	**X**	**X**	**X**	**X**	

Table A2A

Full Flight Simulator (FFS) Objective Tests									
QPS REQUIREMENTS									INFORMATION
Test		Tolerance	Flight Conditions	Test Details	Simulator Level				Notes
Entry Number	Title				A	B	C	D	
		±1.0 m/s (200 ft/min) or ±5% of rate of descent.		FSTD performance to be recorded over an interval of at least 300 m (1 000 ft).					
1.d.5.	Emergency descent.	±5 kt airspeed. ±1.5 m/s (300 ft/min) or ±5% of rate of descent.	As per airplane performance data.	FSTD performance to be recorded over an interval of at least 900 m (3 000 ft).	**X**	**X**	**X**	**X**	Stabilized descent to be conducted with speed brakes extended if applicable, at mid altitude and near V_{mo} or according to emergency descent procedure.
1.e.	**Stopping.**								
1.e.1.	Deceleration time and distance, manual wheel brakes, dry runway, no reverse thrust.	±1.5 s or ±5% of time. For distances up to 1 220 m (4 000 ft), the smaller of ±61 m (200 ft) or ±10% of distance. For distances greater than 1 220 m (4 000 ft), ±5% of distance.	Landing.	Time and distance must be recorded for at least 80% of the total time from touchdown to a full stop. Position of ground spoilers and brake system pressure must be plotted (if applicable). Data required for medium and near maximum certificated landing mass. Engineering data may be used for the medium mass condition.	**X**	**X**	**X**	**X**	
1.e.2.	Deceleration time and distance, reverse thrust, no wheel brakes, dry runway.	±1.5 s or ±5% of time; and the smaller of ±61 m (200 ft) or ±10% of distance.	Landing	Time and distance must be recorded for at least 80% of the total time from initiation of reverse thrust to full thrust reverser minimum operating speed. Position of ground spoilers must be plotted (if applicable). Data required for medium and near maximum certificated landing mass. Engineering data may be used for the medium mass condition.	**X**	**X**	**X**	**X**	
1.e.3.	Stopping distance, wheel brakes, wet runway.	±61 m (200 ft) or ±10% of distance.	Landing.	Either flight test or manufacturer's performance manual data must be used, where available. Engineering data, based on dry runway flight test stopping distance and the effects of contaminated			**X**	**X**	

Table A2A

Full Flight Simulator (FFS) Objective Tests									
QPS REQUIREMENTS									INFORMATION
Test		Tolerance	Flight Conditions	Test Details	Simulator Level				Notes
Entry Number	Title				A	B	C	D	
				runway braking coefficients, are an acceptable alternative.					
1.e.4.	Stopping distance, wheel brakes, icy runway.	±61 m (200 ft) or ±10% of distance.	Landing.	Either flight test or manufacturer's performance manual data must be used, where available. Engineering data, based on dry runway flight test stopping distance and the effects of contaminated runway braking coefficients, are an acceptable alternative.			X	X	
1.f.	**Engines.**								
1.f.1.	Acceleration.	±10% Ti or ±0.25 s; and ±10% Tt or ±0.25 s.	Approach or landing	Total response is the incremental change in the critical engine parameter from idle power to go-around power.	X	X	X	X	See Appendix F of this part for definitions of T_i and T_t.
1.f.2.	Deceleration.	±10% Ti or ±0.25 s; and ±10% Tt or ±0.25 s.	Ground	Total response is the incremental change in the critical engine parameter from maximum takeoff power to idle power.	X	X	X	X	See Appendix F of this part for definitions of T_i and T_t.
2. **Handling Qualities.**									
	Note 1.— Pitch, roll and yaw controller position versus force or time must be measured at the control. An alternative method in lieu of external test fixtures at the flight controls would be to have recording and measuring instrumentation built into the FSTD. The force and position data from this instrumentation could be directly recorded and matched to the airplane data. Provided the instrumentation was verified by using external measuring equipment while conducting the static control checks, or equivalent means, and that evidence of the satisfactory comparison is included in the MQTG, the instrumentation could be used for both initial and recurrent evaluations for the measurement of all required control checks. Verification of the instrumentation by using external measuring equipment should be repeated if major modifications and/or repairs are made to the control loading system. Such a permanent installation could be used without any time being lost for the installation of external devices. Static and dynamic flight control tests must be accomplished at the same feel or impact pressures as the validation data where applicable. *Note 2.— FSTD testing from the second set of pilot controls is only required if both sets of controls are not mechanically interconnected on the FSTD. A rationale is required from the data provider if a single set of data is applicable to both sides. If controls are mechanically interconnected in the FSTD, a single set of tests is sufficient.*								Contact the NSPM for clarification of any issue regarding airplanes with reversible controls.
2.a.	**Static Control Tests.**								
	Note.— Testing of position versus force is not applicable if forces are generated solely by use of airplane hardware in the FSTD.								
2.a.1.a.	Pitch controller position versus force and surface position calibration.	±0.9 daN (2 lbf) breakout. ±2.2 daN (5 lbf) or ±10% of force. ±2° elevator angle.	Ground.	Record results for an uninterrupted control sweep to the stops.	X	X	X	X	Test results should be validated with in-flight data from tests such as longitudinal static stability, stalls, etc.

Table A2A

Full Flight Simulator (FFS) Objective Tests									
QPS REQUIREMENTS									INFORMATION
Test		Tolerance	Flight Conditions	Test Details	Simulator Level				Notes
Entry Number	Title				A	B	C	D	
2.a.1.b.	**(Reserved)**								
2.a.2.a.	Roll controller position versus force and surface position calibration.	±0.9 daN (2 lbf) breakout. ±1.3 daN (3 lbf) or ±10% of force. ±2° aileron angle. ±3° spoiler angle.	Ground.	Record results for an uninterrupted control sweep to the stops.	X	X	X	X	Test results should be validated with in-flight data from tests such as engine-out trims, steady state side-slips, etc.
2.a.2.b.	**(Reserved)**								
2.a.3.a.	Rudder pedal position versus force and surface position calibration.	±2.2 daN (5 lbf) breakout. ±2.2 daN (5 lbf) or ±10% of force. ±2° rudder angle.	Ground.	Record results for an uninterrupted control sweep to the stops.	X	X	X	X	Test results should be validated with in-flight data from tests such as engine-out trims, steady state side-slips, etc.
2.a.3.b.	**(Reserved)**								
2.a.4.	Nosewheel Steering Controller Force and Position Calibration.	±0.9 daN (2 lbf) breakout. ±1.3 daN (3 lbf) or ±10% of force. ±2° NWA.	Ground.	Record results of an uninterrupted control sweep to the stops.	X	X	X	X	
2.a.5.	Rudder Pedal Steering Calibration.	±2° NWA.	Ground.	Record results of an uninterrupted control sweep to the stops.	X	X	X	X	
2.a.6.	Pitch Trim Indicator vs. Surface Position Calibration.	±0.5° trim angle.	Ground.		X	X	X	X	The purpose of the test is to compare FSTD surface position and indicator against the software value.
2.a.7.	Pitch Trim Rate.	±10% of trim rate (°/s) or ±0.1°/s trim rate.	Ground and approach.	Trim rate to be checked at pilot primary induced trim rate (ground) and autopilot or pilot primary trim rate in-flight at go-around flight conditions. For CCA, representative flight test conditions must be used.	X	X	X	X	
2.a.8.	Alignment of cockpit	When matching engine	Ground.	Simultaneous recording for all engines. The	X	X	X	X	Data from a test airplane or

Table A2A

Full Flight Simulator (FFS) Objective Tests									
QPS REQUIREMENTS									INFORMATION
Test		Tolerance	Flight Conditions	Test Details	Simulator Level				Notes
Entry Number	Title				A	B	C	D	
	throttle lever versus selected engine parameter.	parameters: ±5° of TLA. When matching detents: ±3% N1 or ±.03 EPR or ±3% torque, or equivalent. Where the levers do not have angular travel, a tolerance of ±2 cm (±0.8 in) applies.		tolerances apply against airplane data. For airplanes with throttle detents, all detents to be presented and at least one position between detents/ endpoints (where practical). For airplanes without detents, end points and at least three other positions are to be presented.					engineering test bench are acceptable, provided the correct engine controller (both hardware and software) is used. In the case of propeller-driven airplanes, if an additional lever, usually referred to as the propeller lever, is present, it should also be checked. This test may be a series of snapshot tests.
2.a.9.	Brake pedal position versus force and brake system pressure calibration.	±2.2 daN (5 lbf) or ±10% of force. ±1.0 MPa (150 psi) or ±10% of brake system pressure.	Ground.	Relate the hydraulic system pressure to pedal position in a ground static test. Both left and right pedals must be checked.	**X**	**X**	**X**	**X**	FFS computer output results may be used to show compliance.
2.a.10	Stick Pusher System Force Calibration	±10% or ±5 lb (2.2 daN)) Stick/Column force	Ground or Flight	Test is intended to validate the stick/column transient forces as a result of a stick pusher system activation. This test may be conducted in an on-ground condition through stimulation of the stall protection system in a manner that generates a stick pusher response that is representative of an in-flight condition.	**X**	**X**	**X**	**X**	Aircraft manufacturer design data may be utilized as validation data as determined acceptable by the NSPM. Test requirement may be met through column force validation testing in conjunction with the Stall Characteristics test (2.c.8).
2.b.	**Dynamic Control Tests.**								
	Note.— Tests 2.b.1, 2.b.2 and 2.b.3 are not applicable for FSTDs where the control forces are completely generated within the airplane controller unit installed in the FSTD. Power setting may be that required for level flight unless otherwise specified. See paragraph 4 of this attachment..								
2.b.1.	Pitch Control.	**For underdamped systems**: $T(P_0)$ ±10% of P_0 or ±0.05 s.	Takeoff, Cruise, and Landing.	Data must be for normal control displacements in both directions (approximately 25% to 50% of full throw or approximately 25% to 50% of maximum allowable pitch controller deflection for flight conditions limited by the maneuvering load envelope).			**X**	**X**	n = the sequential period of a full oscillation. Refer to paragraph 4 of this Attachment.

Table A2A

Full Flight Simulator (FFS) Objective Tests									
QPS REQUIREMENTS									INFORMATION
Test		Tolerance	Flight Conditions	Test Details	Simulator Level				Notes
Entry Number	Title				A	B	C	D	
		$T(P_1)$ ±20% of P_1 or ±0.05 s. $T(P_2)$ ±30% of P_2 or ±0.05 s. $T(P_n)$ ±10*(n+1)% of P_n or ±0.05 s. $T(A_n)$ ±10% of A_{max}, where A_{max} is the largest amplitude or ±0.5% of the total control travel (stop to stop). $T(A_d)$ ±5% of A_d = residual band or ±0.5% of the maximum control travel = residual band. ±1 significant overshoots (minimum of 1 significant overshoot). Steady state position within residual band. *Note 1.— Tolerances should not be applied on period or amplitude after the last significant overshoot.* *Note 2.— Oscillations within the residual band are not considered significant and are not subject to tolerances.* **For overdamped and**		Tolerances apply against the absolute values of each period (considered independently).					

Table A2A

Full Flight Simulator (FFS) Objective Tests									
QPS REQUIREMENTS									INFORMATION
Test		Tolerance	Flight Conditions	Test Details	Simulator Level				Notes
Entry Number	Title				A	B	C	D	
		critically damped systems only, the following tolerance applies: $T(P_0)$ ±10% of P_0 or ±0.05 s.							
2.b.2.	Roll Control.	Same as 2.b.1.	Takeoff, Cruise, and Landing.	Data must be for normal control displacement (approximately 25% to 50% of full throw or approximately 25% to 50% of maximum allowable roll controller deflection for flight conditions limited by the maneuvering load envelope).			**X**	**X**	Refer to paragraphs 4 of this Attachment.
2.b.3.	Yaw Control.	Same as 2.b.1.	Takeoff, Cruise, and Landing.	Data must be for normal control displacement (approximately 25% to 50% of full throw).			**X**	**X**	Refer to paragraphs 4 of this Attachment.
2.b.4.	Small Control Inputs – Pitch.	±0.15°/s body pitch rate or ±20% of peak body pitch rate applied throughout the time history.	Approach or Landing.	Control inputs must be typical of minor corrections made while established on an ILS approach (approximately 0.5 to 2°/s pitch rate). Test in both directions. Show time history data from 5 s before until at least 5 s after initiation of control input. If a single test is used to demonstrate both directions, there must be a minimum of 5 s before control reversal to the opposite direction. **CCA**: Test in normal and non-normal control state.			**X**	**X**	
2.b.5.	Small Control Inputs – Roll.	±0.15°/s body roll rate or ±20% of peak body roll rate applied throughout the time history.	Approach or landing.	Control inputs must be typical of minor corrections made while established on an ILS approach (approximately 0.5 to 2°/s roll rate). Test in one direction. For airplanes that exhibit non-symmetrical behavior, test in both directions. Show time history data from 5 s before until at least 5 s after initiation of control input.			**X**	**X**	

Table A2A

Full Flight Simulator (FFS) Objective Tests									
QPS REQUIREMENTS									INFORMATION
Test		Tolerance	Flight Conditions	Test Details	Simulator Level				Notes
Entry Number	Title				A	B	C	D	
				If a single test is used to demonstrate both directions, there must be a minimum of 5 s before control reversal to the opposite direction. **CCA**: Test in normal and non-normal control state.					
2.b.6.	Small Control Inputs – Yaw.	±0.15°/s body yaw rate or ±20% of peak body yaw rate applied throughout the time history.	Approach or landing.	Control inputs must be typical of minor corrections made while established on an ILS approach (approximately 0.5 to 2°/s yaw rate). Test in both directions. Show time history data from 5 s before until at least 5 s after initiation of control input. If a single test is used to demonstrate both directions, there must be a minimum of 5 s before control reversal to the opposite direction. **CCA:** Test in normal and non-normal control state.			**X**	**X**	
2.c.	**Longitudinal Control Tests.**								
	Power setting is that required for level flight unless otherwise specified.								
2.c.1.	Power Change Dynamics.	±3 kt airspeed. ±30 m (100 ft) altitude. ±1.5° or ±20% of pitch angle.	Approach.	Power change from thrust for approach or level flight to maximum continuous or go-around power. Time history of uncontrolled free response for a time increment equal to at least 5 s before initiation of the power change to the completion of the power change + 15 s. **CCA:** Test in normal and non-normal control mode	**X**	**X**	**X**	**X**	
2.c.2.	Flap/Slat Change Dynamics.	±3 kt airspeed. ±30 m (100 ft) altitude.	Takeoff through initial flap retraction, and approach to landing.	Time history of uncontrolled free response for a time increment equal to at least 5 s before initiation of the reconfiguration change to the completion of the reconfiguration change + 15 s.	**X**	**X**	**X**	**X**	

Table A2A

Full Flight Simulator (FFS) Objective Tests									
QPS REQUIREMENTS									INFORMATION
Test		Tolerance	Flight Conditions	Test Details	Simulator Level				Notes
Entry Number	Title				A	B	C	D	
		±1.5° or ±20% of pitch angle.		**CCA:** Test in normal and non-normal control mode					
2.c.3.	Spoiler/Speedbrake Change Dynamics.	±3 kt airspeed. ±30 m (100 ft) altitude. ±1.5° or ±20% of pitch angle.	Cruise.	Time history of uncontrolled free response for a time increment equal to at least 5 s before initiation of the configuration change to the completion of the configuration change +15 s. Results required for both extension and retraction. **CCA:** Test in normal and non-normal control mode	**X**	**X**	**X**	**X**	
2.c.4.	Gear Change Dynamics.	±3 kt airspeed. ±30 m (100 ft) altitude. ±1.5° or ±20% of pitch angle.	Takeoff (retraction), and Approach (extension).	Time history of uncontrolled free response for a time increment equal to at least 5 s before initiation of the configuration change to the completion of the configuration change + 15 s. **CCA:** Test in normal and non-normal control mode	**X**	**X**	**X**	**X**	
2.c.5.	Longitudinal Trim.	±1° elevator angle. ±0.5° stabilizer angle. ±1° pitch angle. ±5% of net thrust or equivalent.	Cruise, Approach, and Landing.	Steady-state wings level trim with thrust for level flight. This test may be a series of snapshot tests. **CCA**: Test in normal or non-normal control mode, as applicable.	**X**	**X**	**X**	**X**	
2.c.6.	Longitudinal Maneuvering Stability (Stick Force/g).	±2.2 daN (5 lbf) or ±10% of pitch controller force. Alternative method: ±1° or ±10% of the change of elevator angle.	Cruise, Approach, and Landing.	Continuous time history data or a series of snapshot tests may be used. Test up to approximately 30° of roll angle for approach and landing configurations. Test up to approximately 45° of roll angle for the cruise configuration. Force tolerance not applicable if forces are generated solely by the use of airplane hardware in the FSTD.	**X**	**X**	**X**	**X**	

Table A2A

Full Flight Simulator (FFS) Objective Tests									
QPS REQUIREMENTS									INFORMATION
Test		Tolerance	Flight Conditions	Test Details	Simulator Level				Notes
Entry Number	Title				A	B	C	D	
				Alternative method applies to airplanes which do not exhibit stick-force-per-g characteristics. **CCA:** Test in normal or non-normal control mode					
2.c.7.	Longitudinal Static Stability.	±2.2 daN (5 lbf) or ±10% of pitch controller force. Alternative method: ±1° or ±10% of the change of elevator angle.	Approach.	Data for at least two speeds above and two speeds below trim speed. The speed range must be sufficient to demonstrate stick force versus speed characteristics. This test may be a series of snapshot tests. Force tolerance is not applicable if forces are generated solely by the use of airplane hardware in the FSTD. Alternative method applies to airplanes which do not exhibit speed stability characteristics. **CCA:** Test in normal or non-normal control mode, as applicable.	**X**	**X**	**X**	**X**	
2.c.8.a	Approach to Stall Characteristics	±3 kt airspeed for initial buffet, stall warning, and stall speeds. Control displacements and flight control surfaces must be plotted and demonstrate correct trend and magnitude. ±2.0° pitch angle ±2.0° angle of attack ±2.0° bank angle ±2.0° sideslip angle ±10% or ±5 lb (2.2 daN)) Stick/Column force	Second Segment Climb, High Altitude Cruise (Near Performance Limited Condition), and Approach or Landing	Each of the following approach to stall entry methods must be demonstrated in at least one of the three required flight conditions: ▪ Stall entry at wings level (1g) ▪ Stall entry in turning flight of at least 25° bank angle (accelerated stall) ▪ Stall entry in a power-on condition (required only for propeller driven aircraft) The required cruise condition must be conducted in a flaps-up (clean) configuration. The second segment climb and approach/landing conditions must be conducted at different flap settings. **CCA:** Test in Normal and Non-normal control states as applicable.	**X**	**X**			Tests may be conducted at centers of gravity and weights typically required for airplane certification stall testing.

Table A2A

Full Flight Simulator (FFS) Objective Tests									
QPS REQUIREMENTS									INFORMATION
Test		Tolerance	Flight Conditions	Test Details	Simulator Level				Notes
Entry Number	Title				A	B	C	D	
2.c.8.b	Stall Characteristics	±3 kt airspeed for initial buffet, stall warning, and stall speeds. Control displacements and flight control surfaces must be plotted and demonstrate correct trend and magnitude. For speeds greater than stick shaker or initial buffet speed: ±2.0° pitch angle ±2.0° angle of attack ±2.0° bank angle ±2.0° sideslip angle For speeds less than stick shaker or initial buffet speed to stall break: ±2.0° pitch angle ±2.0° angle of attack Correct trend and magnitude for roll rate and yaw rate. Stall Break and Recovery: SOC Required (see Attachment 7) ±10% or ±5 lb (2.2 daN)) Stick/Column force (prior to "g break" only). See general requirements (high angle of attack modeling) for additional requirements on stick pusher system modeling.	Second Segment Climb, High Altitude Cruise (Near Performance Limited Condition), and Approach or Landing	Each of the following stall entry methods must be demonstrated in at least one of the three required flight conditions: ▪ Stall entry at wings level (1g) ▪ Stall entry in turning flight of at least 25° bank angle (accelerated stall) ▪ Stall entry in a power-on condition (required only for propeller driven aircraft) The required cruise condition must be conducted in a flaps-up (clean) configuration. The second segment climb and approach/landing conditions must be conducted at different flap settings. Record the stall warning signal and initial buffet, if applicable. Time history data must be recorded for full stall through recovery to normal flight. The stall warning signal must occur in the proper relation to buffet/stall. FSTDs of airplanes exhibiting a sudden pitch attitude change or "g break" must demonstrate this characteristic. FSTDs of airplanes exhibiting a roll off and/or loss of roll control authority must demonstrate this characteristic. Numerical tolerances on pitch angle and angle of attack are not applicable past the aerodynamic stall (g-break, pitch break, etc.) but must demonstrate correct trend through recovery. For aircraft equipped with a stall identification system (e.g. stick pusher), flight test validation data to the aerodynamic stall is not required where the system is required to be operational for aircraft dispatch. **CCA:** Test in Normal and Non-normal control states as applicable. .			X	X	Initial buffet onset speed should be based on .03 g peak to peak normal acceleration above the background noise at the pilot seat. Demonstrate correct trend in growth of buffet amplitude from initial buffet to stall speed for normal and lateral acceleration – device manufacturer may limit maximum buffet based on motion platform capability/limitations Tests may be conducted at centers of gravity and weights typically required for airplane certification stall testing.

Table A2A

Full Flight Simulator (FFS) Objective Tests									
QPS REQUIREMENTS									INFORMATION
Test		Tolerance	Flight Conditions	Test Details	Simulator Level				Notes
Entry Number	Title				A	B	C	D	
2.c.9.	Phugoid Dynamics.	±10% of period. ±10% of time to one half or double amplitude or ±0.02 of damping ratio.	Cruise.	Test must include three full cycles or that necessary to determine time to one half or double amplitude, whichever is less. **CCA:** Test in non-normal control mode.	X	X	X	X	
2.c.10	Short Period Dynamics.	±1.5° pitch angle or ±2°/s pitch rate. ±0.1 g normal acceleration	Cruise.	**CCA:** Test in normal and non-normal control mode.	X	X	X	X	
2.c.11.	**(Reserved)**								
2.d.	**Lateral Directional Tests.**								
	Power setting is that required for level flight unless otherwise specified.								
2.d.1.	Minimum control speed, air (V_{mca}) or landing (V_{mcl}), per applicable airworthiness requirement or low speed engine-inoperative handling characteristics in the air.	±3 kt airspeed.	Takeoff or Landing (whichever is most critical in the airplane).	Takeoff thrust must be set on the operating engine(s). Time history or snapshot data may be used. **CCA**: Test in normal or non-normal control state, as applicable.	X	X	X	X	Minimum speed may be defined by a performance or control limit which prevents demonstration of V_{mca} or V_{mcl} in the conventional manner.
2.d.2.	Roll Response (Rate).	±2°/s or ±10% of roll rate. For airplanes with reversible flight control systems: ±1.3 daN (3 lbf) or ±10% of wheel force.	Cruise, and Approach or Landing.	Test with normal roll control displacement (approximately one-third of maximum roll controller travel). This test may be combined with step input of flight deck roll controller test 2.d.3.	X	X	X	X	
2.d.3.	Step input of flight deck roll controller.	±2° or ±10% of roll angle.	Approach or Landing.	This test may be combined with roll response (rate) test 2.d.2. **CCA**: Test in normal and non-normal control mode	X	X	X	X	With wings level, apply a step roll control input using approximately one-third of the roll controller travel. When reaching approximately 20° to 30° of bank, abruptly return the roll controller to neutral and allow

Table A2A

Full Flight Simulator (FFS) Objective Tests									
QPS REQUIREMENTS									INFORMATION
Test		Tolerance	Flight Conditions	Test Details	Simulator Level				Notes
Entry Number	Title				A	B	C	D	
									approximately 10 seconds of airplane free response.
2.d.4.	Spiral Stability.	Correct trend and ±2° or ±10% of roll angle in 20 s. If alternate test is used: correct trend and ±2° aileron angle.	Cruise, and Approach or Landing.	Airplane data averaged from multiple tests may be used. Test for both directions. As an alternative test, show lateral control required to maintain a steady turn with a roll angle of approximately 30°. **CCA:** Test in non-normal control mode.	**X**	**X**	**X**	**X**	
2.d.5.	Engine Inoperative Trim.	±1° rudder angle or ±1° tab angle or equivalent rudder pedal. ±2° side-slip angle.	Second Segment Climb, and Approach or Landing.	This test may consist of snapshot tests.	**X**	**X**	**X**	**X**	Test should be performed in a manner similar to that for which a pilot is trained to trim an engine failure condition. 2nd segment climb test should be at takeoff thrust. Approach or landing test should be at thrust for level flight.
2.d.6.	Rudder Response.	±2°/s or ±10% of yaw rate.	Approach or Landing.	Test with stability augmentation on and off. Test with a step input at approximately 25% of full rudder pedal throw. **CCA:** Test in normal and non-normal control mode	**X**	**X**	**X**	**X**	
2.d.7.	Dutch Roll	±0.5 s or ±10% of period. ±10% of time to one half or double amplitude or ±.02 of damping ratio. ±1 s or ±20% of time difference between peaks of roll angle and	Cruise, and Approach or Landing.	Test for at least six cycles with stability augmentation off. **CCA:** Test in non-normal control mode.		**X**	**X**	**X**	

Table A2A

Full Flight Simulator (FFS) Objective Tests									
QPS REQUIREMENTS									INFORMATION
Test		Tolerance	Flight Conditions	Test Details	Simulator Level				Notes
Entry Number	Title				A	B	C	D	
		side-slip angle.							
2.d.8.	Steady State Sideslip.	For a given rudder position: ±2° roll angle; ±1° side-slip angle; ±2° or ±10% of aileron angle; and ±5° or ±10% of spoiler or equivalent roll controller position or force. For airplanes with reversible flight control systems: ±1.3 daN (3 lbf) or ±10% of wheel force. ±2.2 daN (5 lbf) or ±10% of rudder pedal force.	Approach or Landing.	This test may be a series of snapshot tests using at least two rudder positions (in each direction for propeller-driven airplanes), one of which must be near maximum allowable rudder.	X	X	X	X	
2.e.	**Landings.**								
2.e.1.	Normal Landing.	±3 kt airspeed. ±1.5° pitch angle. ±1.5° AOA. ±3 m (10 ft) or ±10% of height. For airplanes with reversible flight control	Landing.	Test from a minimum of 61 m (200 ft) AGL to nosewheel touchdown. **CCA:** Test in normal and non-normal control mode, if applicable.		X	X	X	Two tests should be shown, including two normal landing flaps (if applicable) one of which should be near maximum certificated landing mass, the other at light or medium mass.

Table A2A

Full Flight Simulator (FFS) Objective Tests									
QPS REQUIREMENTS									INFORMATION
Test		Tolerance	Flight Conditions	Test Details	Simulator Level				Notes
Entry Number	Title				A	B	C	D	
		systems: ±2.2 daN (5 lbf) or ±10% of column force.							
2.e.2.	Minimum Flap Landing.	±3 kt airspeed. ±1.5° pitch angle. ±1.5° AOA. ±3 m (10 ft) or ±10% of height. For airplanes with reversible flight control systems: ±2.2 daN (5 lbf) or ±10% of column force.	Minimum Certified Landing Flap Configuration.	Test from a minimum of 61 m (200 ft) AGL to nosewheel touchdown. Test at near maximum certificated landing weight.			**X**	**X**	
2.e.3.	Crosswind Landing.	±3 kt airspeed. ±1.5° pitch angle. ±1.5° AOA. ±3 m (10 ft) or ±10% of height. ±2° roll angle. ±2° side-slip angle. ±3° heading angle. For airplanes with reversible flight control systems: ±2.2 daN (5 lbf) or ±10% of	Landing.	Test from a minimum of 61 m (200 ft) AGL to a 50% decrease in main landing gear touchdown speed. Test data is required, including wind profile, for a crosswind component of at least 60% of airplane performance data value measured at 10 m (33 ft) above the runway. Wind components must be provided as headwind and crosswind values with respect to the runway.		**X**	**X**	**X**	In those situations where a maximum crosswind or a maximum demonstrated crosswind is not known, contact the NSPM.

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Full Flight Simulator (FFS) Objective Tests									
QPS REQUIREMENTS									INFORMATION
Test		Tolerance	Flight Conditions	Test Details	Simulator Level				Notes
Entry Number	Title				A	B	C	D	
		column force. ±1.3 daN (3 lbf) or ±10% of wheel force. ±2.2 daN (5 lbf) or ±10% of rudder pedal force.							
2.e.4.	One Engine Inoperative Landing.	±3 kt airspeed. ±1.5° pitch angle. ±1.5° AOA. ±3 m (10 ft) or ±10% of height. ±2° roll angle. ±2° side-slip angle. ±3° heading angle.	Landing.	Test from a minimum of 61 m (200 ft) AGL to a 50% decrease in main landing gear touchdown speed.		**X**	**X**	**X**	
2.e.5.	Autopilot landing (if applicable).	±1.5 m (5 ft) flare height. ±0.5 s or ± 10% of Tf. ±0.7 m/s (140 ft/min) rate of descent at touchdown. ±3 m (10 ft) lateral deviation during roll-out.	Landing.	If autopilot provides roll-out guidance, record lateral deviation from touchdown to a 50% decrease in main landing gear touchdown speed. Time of autopilot flare mode engage and main gear touchdown must be noted.		**X**	**X**	**X**	See Appendix F of this part for definition of T_f.
2.e.6.	All-engine autopilot go-around.	±3 kt airspeed. ±1.5° pitch angle. ±1.5° AOA.	As per airplane performance data.	Normal all-engine autopilot go-around must be demonstrated (if applicable) at medium weight.		**X**	**X**	**X**	
2.e.7.	One engine	±3 kt airspeed.	As per airplane	Engine inoperative go-around required near		**X**	**X**	**X**	

Table A2A

Full Flight Simulator (FFS) Objective Tests									
QPS REQUIREMENTS									INFORMATION
Test		Tolerance	Flight Conditions	Test Details	Simulator Level				Notes
Entry Number	Title				A	B	C	D	
	inoperative go around.	±1.5° pitch angle. ±1.5° AOA. ±2° roll angle. ±2° side-slip angle.	performance data.	maximum certificated landing weight with critical engine inoperative. Provide one test with autopilot (if applicable) and one without autopilot. **CCA**: Non-autopilot test to be conducted in non-normal mode.					
2.e.8.	Directional control (rudder effectiveness) with symmetric reverse thrust.	±5 kt airspeed. ±2°/s yaw rate.	Landing.	Apply rudder pedal input in both directions using full reverse thrust until reaching full thrust reverser minimum operating speed.		X	X	X	
2.e.9.	Directional control (rudder effectiveness) with asymmetric reverse thrust.	±5 kt airspeed. ±3° heading angle.	Landing.	With full reverse thrust on the operating engine(s), maintain heading with rudder pedal input until maximum rudder pedal input or thrust reverser minimum operation speed is reached.		X	X	X	
2.f.	**Ground Effect.**								
	Test to demonstrate Ground Effect.	±1° elevator angle. ±0.5° stabilizer angle. ±5% of net thrust or equivalent. ±1° AOA. ±1.5 m (5 ft) or ±10% of height. ±3 kt airspeed. ±1° pitch angle.	Landing.	A rationale must be provided with justification of results. **CCA:** Test in normal or non-normal control mode, as applicable.		X	X	X	See paragraph 5 of this Attachment for additional information.
2.g.	**Windshear.**								
	Four tests, two takeoff and two landing, with one of each conducted in still air and the other with windshear active	See Attachment 5 of this appendix.	Takeoff and Landing.	Requires windshear models that provide training in the specific skills needed to recognize windshear phenomena and to execute recovery procedures. See Attachment 5 of this appendix for tests, tolerances, and procedures.			X	X	See Attachment 5 of this appendix for information related to Level A and B simulators.

Table A2A

Full Flight Simulator (FFS) Objective Tests									
QPS REQUIREMENTS									INFORMATION
Test		Tolerance	Flight Conditions	Test Details	Simulator Level				Notes
Entry Number	Title				A	B	C	D	
	to demonstrate windshear models.								
2.h.	**Flight Maneuver and Envelope Protection Functions.**								
	Note. The requirements of 2.h are only applicable to computer-controlled airplanes. Time history results of response to control inputs during entry into each envelope protection function (i.e. with normal and degraded control states if their function is different) are required. Set thrust as required to reach the envelope protection function.								
2.h.1.	Overspeed.	±5 kt airspeed.	Cruise.			X	X	X	
2.h.2.	Minimum Speed.	±3 kt airspeed.	Takeoff, Cruise, and Approach or Landing.			X	X	X	
2.h.3.	Load Factor.	±0.1g normal load factor	Takeoff, Cruise.			X	X	X	
2.h.4.	Pitch Angle.	±1.5° pitch angle	Cruise, Approach.			X	X	X	
2.h.5.	Bank Angle.	±2° or ±10% bank angle	Approach.			X	X	X	
2.h.6.	Angle of Attack.	±1.5° angle of attack	Second Segment Climb, and Approach or Landing.			X	X	X	
2.i.	Engine and Airframe Icing Effects Demonstration (Aerodynamic Stall)		Takeoff, Approach, or Landing	Time history of a full stall and initiation of the recovery. Tests are intended to demonstrate representative aerodynamic effects caused by in-flight ice accretion. Flight test validation data is not required. Two tests are required to demonstrate engine and airframe icing effects. One test will demonstrate the FSTDs baseline performance without ice accretion, and the second test will demonstrate the aerodynamic effects of ice accretion relative to the baseline test. The test must utilize the icing model(s) as described in the required Statement of Compliance in Table A1A, Section 2.j. Test must include rationale that describes the icing effects being demonstrated. Icing effects must include, but are not limited to the following effects as applicable to the particular airplane: ▪ Decrease in stall angle of attack ▪ Changes in pitching moment ▪ Decrease in control effectiveness ▪ Changes in control forces ▪ Increase in drag ▪ Change in stall buffet characteristics and onset.			X	X	Tests will be evaluated for representative effects on relevant aerodynamic parameters such as angle of attack, control inputs, and thrust/power settings. Plotted parameters must include: • Altitude • Airspeed • Normal acceleration • Engine power • Angle of attack • Pitch attitude • Bank angle • Flight control inputs • Stall warning and stall buffet onset

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Full Flight Simulator (FFS) Objective Tests									
QPS REQUIREMENTS									INFORMATION
Test		Tolerance	Flight Conditions	Test Details	Simulator Level				Notes
Entry Number	Title				A	B	C	D	
				▪ Engine effects (power reduction/variation, vibration, etc.)					
3. Motion System.									
3.a.	**Frequency response.**								
		As specified by the sponsor for FSTD qualification.	Not applicable.	Appropriate test to demonstrate required frequency response.	X	X	X	X	See paragraph 6 of this Attachment.
3.b.	**Turn-around check.**								
		As specified by the sponsor for FSTD qualification.	Not applicable.	Appropriate test to demonstrate required smooth turn-around.	X	X	X	X	See paragraph 6 of this Attachment.
3.c	**Motion effects.**				X	X	X	X	Refer to Appendix C of this Part on subjective testing.
3.d.	**Motion system repeatability.**								
	Motion system repeatability	±0.05 g actual platform linear accelerations.	None.		X	X	X	X	Ensure that motion system hardware and software (in normal FSTD operating mode) continue to perform as originally qualified. Performance changes from the original baseline can be readily identified with this information. See paragraph 6.c. of this Attachment.
3.e.	**Motion cueing fidelity**								
3.e.1.	Motion cueing fidelity – Frequency-domain criterion.	As specified by the sponsor for flight simulator qualification.	Ground and flight.	For the motion system as applied during training, record the combined modulus and phase of the motion cueing algorithm and motion platform over the frequency range appropriate to the characteristics of the simulated aircraft. This test is only required during the initial FSTD qualification.	X	X	X	X	See paragraph 6.d. of this Attachment.
3.e.2.	Reserved								
3.f	Characteristic motion vibrations. The following tests	None.	Ground and flight.					X	The recorded test results for characteristic buffets should allow the comparison of

Table A2A

Full Flight Simulator (FFS) Objective Tests									
QPS REQUIREMENTS									INFORMATION
Test		Tolerance	Flight Conditions	Test Details	Simulator Level				Notes
Entry Number	Title				A	B	C	D	
	with recorded results and an SOC are required for characteristic motion vibrations, which can be sensed at the flight deck where applicable by airplane type.								relative amplitude versus frequency. See also paragraph 6.e. of this Attachment.
3.f.1.	Thrust effect with brakes set.	The FSTD test results must exhibit the overall appearance and trends of the airplane data, with at least three (3) of the predominant frequency "spikes" being present within ± 2 Hz of the airplane data.	Ground.	Test must be conducted at maximum possible thrust with brakes set.				**X**	
3.f.2.	Buffet with landing gear extended.	The FSTD test results must exhibit the overall appearance and trends of the airplane data, with at least three (3) of the predominant frequency "spikes" being present within ± 2 Hz of the airplane data.	Flight.	Test condition must be for a normal operational speed and not at the gear limiting speed.				**X**	
3.f.3.	Buffet with flaps extended.	The FSTD test results must exhibit the overall appearance and trends of the airplane data, with at least three (3) of the predominant frequency "spikes" being present within ± 2 Hz of the airplane data.	Flight.	Test condition must be at a normal operational speed and not at the flap limiting speed.				**X**	
3.f.4.	Buffet with speedbrakes deployed.	The FSTD test results must exhibit the overall appearance and trends of the airplane data, with at least three (3) of the predominant frequency "spikes" being present within ± 2	Flight.	Test condition must be at a typical speed for a representative buffet.				**X**	

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Full Flight Simulator (FFS) Objective Tests									
QPS REQUIREMENTS									INFORMATION
Test		Tolerance	Flight Conditions	Test Details	Simulator Level				Notes
Entry Number	Title				A	B	C	D	
		Hz of the airplane data.							
3.f.5.	Buffet at approach-to-stall.	The FSTD test results must exhibit the overall appearance and trends of the airplane data, with at least three (3) of the predominant frequency "spikes" being present within ± 2 Hz of the airplane data.	Flight.	Test condition must be at approach to stall. Post-stall characteristics are not required.				X	
3.f.6.	Buffet at high airspeeds or high Mach.	The FSTD test results must exhibit the overall appearance and trends of the airplane data, with at least three (3) of the predominant frequency "spikes" being present within ± 2 Hz of the airplane data.	Flight.					X	Test condition should be for high-speed maneuver buffet/wind-up-turn or alternatively Mach buffet.
3.f.7.	In-flight vibrations for propeller driven airplanes.	The FSTD test results must exhibit the overall appearance and trends of the airplane data, with at least three (3) of the predominant frequency "spikes" being present within ± 2 Hz of the airplane data.	Flight (clean configuration).					X	Test should be conducted to be representative of in-flight vibrations for propeller-driven airplanes.
3.f.8	Buffet at stall.	The FSTD test results must exhibit the overall appearance and trends of the airplane data, with at least three (3) of the predominant frequency "spikes" being present within ± 2 Hz of the airplane data.	Cruise (High Altitude) and Second Segment Climb, or Approach or Landing	Tests must be conducted for approach to stall at angles of attack between the initial buffet and the critical angle of attack. Post stall characteristics are not required. Test required only for those FSTDs qualified for full stall training tasks.			X	X	If stabilized flight data between initial buffet and stall speed are not available, PSD analysis should be conducted for a time span between initial buffet and stall speed.
4. Visual System.									
4.a.	**Visual scene quality**								
4.a.1.	Continuous collimated cross-cockpit visual field of view.	Cross-cockpit, collimated visual display providing each pilot with a minimum of	Not applicable.	Required as part of MQTG but not required as part of continuing evaluations.			X	X	Field of view should be measured using a visual test pattern filling the entire visual scene (all channels)

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Full Flight Simulator (FFS) Objective Tests									
QPS REQUIREMENTS									INFORMATION
Test		Tolerance	Flight Conditions	Test Details	Simulator Level				Notes
Entry Number	Title				A	B	C	D	
		200° horizontal and 40° vertical continuous field of view.							consisting of a matrix of black and white 5° squares. Installed alignment should be confirmed in an SOC (this would generally consist of results from acceptance testing).
	Continuous collimated cross-cockpit visual field of view.	Continuous collimated field-of-view providing at least 45° horizontal and 30° vertical field-of-view for each pilot seat. Both pilot seat visual systems must be operable simultaneously.	Not applicable.	Required as part of MQTG but not required as part of continuing evaluations.	X	X			A vertical field-of-view of 30° may be insufficient to meet visual ground segment requirements.
4.a.2.	System geometry								
4.a.2.a.1	System geometry – Image position.	From each eyepoint position the center of the image is between 0° and 2° inboard in the horizontal plane and within +/-0.25° vertically. The difference between the left and right horizontal angles must not exceed 1°.	Not applicable.				X	X	The image position should be checked relative to the FSTD centerline. Where there is a design offset in the vertical display center this should be stated.
4.a.2.a.2	System geometry – Absolute geometry.	Within the central 200° x 40°, all points on a 5-degree grid must fall within 3° of the design position as measured from each pilot eyepoint.	Not applicable.				X	X	Where a system with more than 200° x 40° is supplied, the geometry outside the central area should not have any distracting discontinuities.
4.a.2.a.3	System geometry – Relative geometry.	Measurements of relative dot positions must be made every 5 degrees.	Not applicable.				X	X	For a diagram showing zones 1, 2 and 3 and further discussion of this test, see paragraph 18 of this Attachment.

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Full Flight Simulator (FFS) Objective Tests									
QPS REQUIREMENTS									INFORMATION
Test		Tolerance	Flight Conditions	Test Details	Simulator Level				Notes
Entry Number	Title				A	B	C	D	
		In the area from -10° to the lowest visible point at 15° azimuth inboard, 0°, 30°, 60° and 90° degrees outboard for each pilot position, vertical measurements must be made every 1° to the edge of the visible image. The relative position from one point to the next must not exceed: Zone 1: 0.075°/degree; Zone 2: 0.15°/degree; Zone 3: 0.2°/degree.							*Note.— A means to perform this check with a simple go/no go gauge is encouraged for recurrent testing.*
4.a.3	Surface resolution (object detection).	Not greater than 2 arc minutes.	Not applicable.				X	X	Resolution will be demonstrated by a test of objects shown to occupy the required visual angle in each visual display used on a scene from the pilot's eyepoint. The object will subtend 2 arc minutes to the eye. This may be demonstrated using threshold bars for a horizontal test. A vertical test should also be demonstrated. The subtended angles should be confirmed by calculations in an SOC.
4.a.4	Light point size.	Not greater than 5 arc minutes.	Not applicable.				X	X	Light point size should be measured using a test pattern consisting of a centrally located single row of white light points displayed as both

Table A2A

Full Flight Simulator (FFS) Objective Tests									
QPS REQUIREMENTS									INFORMATION
Test		Tolerance	Flight Conditions	Test Details	Simulator Level				Notes
Entry Number	Title				A	B	C	D	
									a horizontal and vertical row. It should be possible to move the light points relative to the eyepoint in all axes. At a point where modulation is just discernible in each visual channel, a calculation should be made to determine the light spacing. An SOC is required to state test method and calculation.
4.a.5	Raster surface contrast ratio.	Not less than 5:1.	Not applicable.				X	X	Surface contrast ratio should be measured using a raster drawn test pattern filling the entire visual scene (all channels). The test pattern should consist of black and white squares, 5° per square, with a white square in the center of each channel. Measurement should be made on the center bright square for each channel using a 1° spot photometer. This value should have a minimum brightness of 7 cd/m^2 (2 ft-lamberts). Measure any adjacent dark squares. The contrast ratio is the bright square value divided by the dark square value. *Note 1. — During contrast ratio testing, FSTD aft-cab and flight deck ambient light*

Table A2A

Full Flight Simulator (FFS) Objective Tests									
QPS REQUIREMENTS									INFORMATION
Test		Tolerance	Flight Conditions	Test Details	Simulator Level				Notes
Entry Number	Title				A	B	C	D	
									levels should be as low as possible. *Note 2. — Measurements should be taken at the center of squares to avoid light spill into the measurement device.*
4.a.6	Light point contrast ratio.	Not less than 25:1.	Not applicable.				X	X	Light point contrast ratio should be measured using a test pattern demonstrating an area of greater than 1° area filled with white light points and should be compared to the adjacent background. *Note. — Light point modulation should be just discernible on calligraphic systems but will not be discernable on raster systems.* Measurements of the background should be taken such that the bright square is just out of the light meter FOV. *Note. — During contrast ratio testing, FSTD aft-cab and flight deck ambient light levels should be as low as practical.*
	Light point contrast ratio.	Not less than 10:1.	Not applicable.		X	X			
4.a.7	Light point brightness.	Not less than 30 cd/m^2 (8.8 ft-lamberts).	Not applicable.				X	X	Light points should be displayed as a matrix creating a square.

Table A2A

Full Flight Simulator (FFS) Objective Tests									
QPS REQUIREMENTS									INFORMATION
Test		Tolerance	Flight Conditions	Test Details	Simulator Level				Notes
Entry Number	Title				A	B	C	D	
									On calligraphic systems the light points should just merge. On raster systems the light points should overlap such that the square is continuous (individual light points will not be visible).
4.a.8	Surface brightness.	Not less than 20 cd/m^2 (5.8 ft-lamberts) on the display.	Not applicable.				X	X	Surface brightness should be measured on a white raster, measuring the brightness using the 1° spot photometer. Light points are not acceptable. Use of calligraphic capabilities to enhance raster brightness is acceptable.
4.a.9	Black level and sequential contrast.	Black intensity: Background brightness – Black polygon brightness < 0.015 cd/m^2 (0.004 ft-lamberts). Sequential contrast: Maximum brightness – (Background brightness – Black polygon brightness) > 2 000:1.	Not applicable.		X	X	X	X	The light meter should be mounted in a fixed position viewing the forward center area of each display. All projectors should be turned off and the cockpit environment made as dark as possible. A background reading should be taken of the remaining ambient light on the screen. The projectors should then be turned on and a black polygon displayed. A second reading should then be taken and the difference between this and the ambient level recorded.

Table A2A

Full Flight Simulator (FFS) Objective Tests									
QPS REQUIREMENTS									INFORMATION
Test		Tolerance	Flight Conditions	Test Details	Simulator Level				Notes
Entry Number	Title				A	B	C	D	
									A full brightness white polygon should then be measured for the sequential contrast test. This test is generally only required for **light valve projectors**. An SOC should be provided if the test is not run, stating why.
4.a.10	Motion blur.	When a pattern is rotated about the eyepoint at 10°/s, the smallest detectable gap must be 4 arc min or less.	Not applicable.		X	X	X	X	A test pattern consists of an array of 5 peak white squares with black gaps between them of decreasing width. The range of black gap widths should at least extend above and below the required detectable gap, and be in steps of 1 arc min. The pattern is rotated at the required rate. Two arrays of squares should be provided, one rotating in heading and the other in pitch, to provide testing in both axes. A series of stationary numbers identifies the gap number. *Note.— This test can be limited by the display technology. Where this is the case the NSPM should be consulted on the limitations.*

Table A2A

Full Flight Simulator (FFS) Objective Tests									
QPS REQUIREMENTS									INFORMATION
Test		Tolerance	Flight Conditions	Test Details	Simulator Level				Notes
Entry Number	Title				A	B	C	D	
									This test is generally only required for **light valve projectors**. An SOC should be provided if the test is not run, stating why.
4.a.11	Speckle test.	Speckle contrast must be < 10%.	Not applicable.	An SOC is required describing the test method.	X	X	X	X	This test is generally only required for **laser projectors**. An SOC should be provided if the test is not run, stating why.
4.b	**Head-Up Display (HUD)**								
4.b.1	Static Alignment.	Static alignment with displayed image. HUD bore sight must align with the center of the displayed image spherical pattern. Tolerance +/- 6 arc min.			X	X	X	X	Alignment requirement applies to any HUD system in use or both simultaneously if they are used simultaneously for training.
4.b.2	System display.	All functionality in all flight modes must be demonstrated.			X	X	X	X	A statement of the system capabilities should be provided and the capabilities demonstrated
4.b.3	HUD attitude versus FSTD attitude indicator (pitch and roll of horizon).	Pitch and roll align with aircraft instruments.	Flight.		X	X	X	X	
4.c	**Enhanced Flight Vision System (EFVS)**								
4.c.1	Registration test.	Alignment between EFVS display and out of the window image must represent the alignment	Takeoff point and on approach at 200 ft.		X	X	X	X	*Note.— The effects of the alignment tolerance in 4.b.1 should be taken into account.*

Table A2A

Full Flight Simulator (FFS) Objective Tests									
QPS REQUIREMENTS									INFORMATION
Test		Tolerance	Flight Conditions	Test Details	Simulator Level				Notes
Entry Number	Title				A	B	C	D	
		typical of the aircraft and system type.							
4.c.2	EFVS RVR and visibility calibration.	The scene represents the EFVS view at 350 m (1200 ft) and 1609 m (1 sm) RVR including correct light intensity.	Flight.		X	X	X	X	Infra-red scene representative of both 350 m (1 200 ft), and 1 609 m (1 sm) RVR. Visual scene may be removed.
4.c.3	Thermal crossover.	Demonstrate thermal crossover effects during day to night transition.	Day and night.		X	X	X	X	The scene will correctly represent the thermal characteristics of the scene during a day to night transition.
4.d	**Visual ground segment**								
4.d.1	Visual ground segment (VGS).	Near end: the correct number of approach lights within the computed VGS must be visible. Far end: ±20% of the computed VGS. The threshold lights computed to be visible must be visible in the FSTD.	Trimmed in the landing configuration at 30 m (100 ft) wheel height above touchdown zone on glide slope at an RVR setting of 300 m (1 000 ft) or 350 m (1 200 ft).	This test is designed to assess items impacting the accuracy of the visual scene presented to a pilot at DH on an ILS approach. These items include: 1) RVR/Visibility; 2) glide slope (G/S) and localizer modeling accuracy (location and slope) for an ILS; 3) for a given weight, configuration and speed representative of a point within the airplane's operational envelope for a normal approach and landing; and 4) Radio altimeter. *Note. — If non-homogeneous fog is used, the vertical variation in horizontal visibility should be described and included in the slant range visibility calculation used in the VGS computation.*	X	X	X	X	Pre-position for this test is encouraged but may be achieved via manual or autopilot control to the desired position.
4.e	**Visual System Capacity**								
4.e.1	System capacity – Day mode.	Not less than: 10 000 visible textured surfaces, 6 000 light	Not applicable.				X	X	Demonstrated through use of a visual scene rendered with the same image generator

Table A2A

Full Flight Simulator (FFS) Objective Tests									
QPS REQUIREMENTS									INFORMATION
Test		Tolerance	Flight Conditions	Test Details	Simulator Level				Notes
Entry Number	Title				A	B	C	D	
		points, 16 moving models.							modes used to produce scenes for training. The required surfaces, light points, and moving models should be displayed simultaneously.
4.e.2	System capacity – Twilight/night mode.	Not less than: 10 000 visible textured surfaces, 15 000 light points, 16 moving models.	Not applicable.				X	X	Demonstrated through use of a visual scene rendered with the same image generator modes used to produce scenes for training. The required surfaces, light points, and moving models should be displayed simultaneously.
5. Sound System. The sponsor will not be required to repeat the airplane tests (i.e., tests 5.a.1. through 5.a.8. (or 5.b.1. through 5.b.9.) and 5.c., as appropriate) during continuing qualification evaluations if frequency response and background noise test results are within tolerance when compared to the initial qualification evaluation results, and the sponsor shows that no software changes have occurred that will affect the airplane test results. If the frequency response test method is chosen and fails, the sponsor may elect to fix the frequency response problem and repeat the test or the sponsor may elect to repeat the airplane tests. If the airplane tests are repeated during continuing qualification evaluations, the results may be compared against initial qualification evaluation results or airplane master data. All tests in this section must be presented using an unweighted 1/3-octave band format from band 17 to 42 (50 Hz to 16 kHz). A minimum 20 second average must be taken at the location corresponding to the airplane data set. The airplane and flight simulator results must be produced using comparable data analysis techniques.									

Table A2A

Full Flight Simulator (FFS) Objective Tests									
QPS REQUIREMENTS									INFORMATION
Test		Tolerance	Flight Conditions	Test Details	Simulator Level				Notes
Entry Number	Title				A	B	C	D	
5.a.	**Turbo-jet airplanes.**								All tests in this section should be presented using an unweighted 1/3-octave band format from at least band 17 to 42 (50 Hz to 16 kHz). A measurement of minimum 20 s should be taken at the location corresponding to the approved data set. The approved data set and FSTD results should be produced using comparable data analysis techniques. Refer to paragraph 7 of this Attachment
5.a.1.	Ready for engine start.	Initial evaluation: ± 5 dB per 1/3 octave band. Recurrent evaluation: cannot exceed ±5 dB difference on three consecutive bands when compared to initial evaluation and the average of the absolute differences between initial and recurrent evaluation results cannot exceed 2 dB.	Ground.	Normal condition prior to engine start. The APU should be on if appropriate.				X	It is acceptable to have some 1/3 octave bands out of ± 5 dB tolerance but not more than 2 that are consecutive and in any case within ± 7 dB from approved reference data, providing that the overall trend is correct. Where initial evaluation employs approved subjective tuning to develop the approved reference standard, recurrent evaluation tolerances should be used during recurrent evaluations.
5.a.2.	All engines at idle.	Initial evaluation: ± 5 dB per 1/3 octave band. Recurrent evaluation: cannot exceed ±5 dB difference on three	Ground.	Normal condition prior to takeoff.				X	It is acceptable to have some 1/3 octave bands out of ± 5 dB tolerance but not more than 2 that are consecutive and in any case within ± 7 dB from approved reference data,

Table A2A

Full Flight Simulator (FFS) Objective Tests									
QPS REQUIREMENTS									INFORMATION
Test		Tolerance	Flight Conditions	Test Details	Simulator Level				Notes
Entry Number	Title				A	B	C	D	
		consecutive bands when compared to initial evaluation and the average of the absolute differences between initial and recurrent evaluation results cannot exceed 2 dB.							providing that the overall trend is correct. Where initial evaluation employs approved subjective tuning to develop the approved reference standard, recurrent evaluation tolerances should be used during recurrent evaluations.
5.a.3.	All engines at maximum allowable thrust with brakes set.	Initial evaluation: ± 5 dB per 1/3 octave band. Recurrent evaluation: cannot exceed ±5 dB difference on three consecutive bands when compared to initial evaluation and the average of the absolute differences between initial and recurrent evaluation results cannot exceed 2 dB.	Ground.	Normal condition prior to takeoff.				X	It is acceptable to have some 1/3 octave bands out of ± 5 dB tolerance but not more than 2 that are consecutive and in any case within ± 7 dB from approved reference data, providing that the overall trend is correct. Where initial evaluation employs approved subjective tuning to develop the approved reference standard, recurrent evaluation tolerances should be used during recurrent evaluations.
5.a.4.	Climb	Initial evaluation: ± 5 dB per 1/3 octave band. Recurrent evaluation: cannot exceed ±5 dB difference on three consecutive bands when compared to initial evaluation and the average of the absolute differences between initial and recurrent evaluation results cannot exceed 2 dB.	En-route climb.	Medium altitude.				X	It is acceptable to have some 1/3 octave bands out of ± 5 dB tolerance but not more than 2 that are consecutive and in any case within ± 7 dB from approved reference data, providing that the overall trend is correct. Where initial evaluation employs approved subjective tuning to develop the approved reference standard, recurrent evaluation

Table A2A

Full Flight Simulator (FFS) Objective Tests									
QPS REQUIREMENTS									INFORMATION
Test		Tolerance	Flight Conditions	Test Details	Simulator Level				Notes
Entry Number	Title				A	B	C	D	
									tolerances should be used during recurrent evaluations.
5.a.5.	Cruise	Initial evaluation: ± 5 dB per 1/3 octave band. Recurrent evaluation: cannot exceed ±5 dB difference on three consecutive bands when compared to initial evaluation and the average of the absolute differences between initial and recurrent evaluation results cannot exceed 2 dB.	Cruise.	Normal cruise configuration.				X	It is acceptable to have some 1/3 octave bands out of ± 5 dB tolerance but not more than 2 that are consecutive and in any case within ± 7 dB from approved reference data, providing that the overall trend is correct. Where initial evaluation employs approved subjective tuning to develop the approved reference standard, recurrent evaluation tolerances should be used during recurrent evaluations.
5.a.6.	Speed brake/spoilers extended (as appropriate).	Initial evaluation: ± 5 dB per 1/3 octave band. Recurrent evaluation: cannot exceed ±5 dB difference on three consecutive bands when compared to initial evaluation and the average of the absolute differences between initial and recurrent evaluation results cannot exceed 2 dB.	Cruise.	Normal and constant speed brake deflection for descent at a constant airspeed and power setting.				X	It is acceptable to have some 1/3 octave bands out of ± 5 dB tolerance but not more than 2 that are consecutive and in any case within ± 7 dB from approved reference data, providing that the overall trend is correct. Where initial evaluation employs approved subjective tuning to develop the approved reference standard, recurrent evaluation tolerances should be used during recurrent evaluations.
5.a.7	Initial approach.	Initial evaluation: ± 5 dB per 1/3 octave band. Recurrent evaluation: cannot exceed ±5 dB difference on three	Approach.	Constant airspeed, gear up, flaps/slats as appropriate.				X	It is acceptable to have some 1/3 octave bands out of ± 5 dB tolerance but not more than 2 that are consecutive and in any case within ± 7 dB from approved reference data,

Table A2A

Full Flight Simulator (FFS) Objective Tests									
QPS REQUIREMENTS									INFORMATION
Test		Tolerance	Flight Conditions	Test Details	Simulator Level				Notes
Entry Number	Title				A	B	C	D	
		consecutive bands when compared to initial evaluation and the average of the absolute differences between initial and recurrent evaluation results cannot exceed 2 dB.							providing that the overall trend is correct. Where initial evaluation employs approved subjective tuning to develop the approved reference standard, recurrent evaluation tolerances should be used during recurrent evaluations.
5.a.8	Final approach.	Initial evaluation: ± 5 dB per 1/3 octave band. Recurrent evaluation: cannot exceed ±5 dB difference on three consecutive bands when compared to initial evaluation and the average of the absolute differences between initial and recurrent evaluation results cannot exceed 2 dB.	Landing.	Constant airspeed, gear down, landing configuration flaps.				X	It is acceptable to have some 1/3 octave bands out of ± 5 dB tolerance but not more than 2 that are consecutive and in any case within ± 7 dB from approved reference data, providing that the overall trend is correct. Where initial evaluation employs approved subjective tuning to develop the approved reference standard, recurrent evaluation tolerances should be used during recurrent evaluations.

Table A2A

Full Flight Simulator (FFS) Objective Tests									
QPS REQUIREMENTS									INFORMATION
Test		Tolerance	Flight Conditions	Test Details	Simulator Level				Notes
Entry Number	Title				A	B	C	D	
5.b	**Propeller-driven airplanes**								All tests in this section should be presented using an unweighted 1/3-octave band format from at least band 17 to 42 (50 Hz to 16 kHz). A measurement of minimum 20 s should be taken at the location corresponding to the approved data set. The approved data set and FSTD results should be produced using comparable data analysis techniques. Refer to paragraph 3.7 of this Appendix.
5.b.1.	Ready for engine start.	Initial evaluation: ± 5 dB per 1/3 octave band. Recurrent evaluation: cannot exceed ±5 dB difference on three consecutive bands when compared to initial evaluation and the average of the absolute differences between initial and recurrent evaluation results cannot exceed 2 dB.	Ground.	Normal condition prior to engine start. The APU should be on if appropriate.				X	It is acceptable to have some 1/3 octave bands out of ± 5 dB tolerance but not more than 2 that are consecutive and in any case within ± 7 dB from approved reference data, providing that the overall trend is correct. Where initial evaluation employs approved subjective tuning to develop the approved reference standard, recurrent evaluation tolerances should be used during recurrent evaluations.
5.b.2	All propellers feathered, if applicable.	Initial evaluation: ± 5 dB per 1/3 octave band.	Ground.	Normal condition prior to takeoff.				X	It is acceptable to have some 1/3 octave bands out of ± 5 dB tolerance but not more than 2 that are consecutive and in any case within ± 7 dB

Table A2A

Full Flight Simulator (FFS) Objective Tests									
QPS REQUIREMENTS									INFORMATION
Test		Tolerance	Flight Conditions	Test Details	Simulator Level				Notes
Entry Number	Title				A	B	C	D	
		Recurrent evaluation: cannot exceed ±5 dB difference on three consecutive bands when compared to initial evaluation and the average of the absolute differences between initial and recurrent evaluation results cannot exceed 2 dB.							from approved reference data, providing that the overall trend is correct. Where initial evaluation employs approved subjective tuning to develop the approved reference standard, recurrent evaluation tolerances should be used during recurrent evaluations.
5.b.3.	Ground idle or equivalent.	Initial evaluation: ± 5 dB per 1/3 octave band. Recurrent evaluation: cannot exceed ±5 dB difference on three consecutive bands when compared to initial evaluation and the average of the absolute differences between initial and recurrent evaluation results cannot exceed 2 dB.	Ground.	Normal condition prior to takeoff.				X	It is acceptable to have some 1/3 octave bands out of ± 5 dB tolerance but not more than 2 that are consecutive and in any case within ± 7 dB from approved reference data, providing that the overall trend is correct. Where initial evaluation employs approved subjective tuning to develop the approved reference standard, recurrent evaluation tolerances should be used during recurrent evaluations.
5.b.4	Flight idle or equivalent.	Initial evaluation: ± 5 dB per 1/3 octave band. Recurrent evaluation: cannot exceed ±5 dB difference on three consecutive bands when compared to initial evaluation and the average of the absolute differences between initial and recurrent evaluation results	Ground.	Normal condition prior to takeoff.				X	It is acceptable to have some 1/3 octave bands out of ± 5 dB tolerance but not more than 2 that are consecutive and in any case within ± 7 dB from approved reference data, providing that the overall trend is correct. Where initial evaluation employs approved subjective tuning to develop the approved reference standard, recurrent evaluation

Table A2A

Full Flight Simulator (FFS) Objective Tests									
QPS REQUIREMENTS									INFORMATION
Test		Tolerance	Flight Conditions	Test Details	Simulator Level				Notes
Entry Number	Title				A	B	C	D	
		cannot exceed 2 dB.							tolerances should be used during recurrent evaluations.
5.b.5	All engines at maximum allowable power with brakes set.	Initial evaluation: ± 5 dB per 1/3 octave band. Recurrent evaluation: cannot exceed ±5 dB difference on three consecutive bands when compared to initial evaluation and the average of the absolute differences between initial and recurrent evaluation results cannot exceed 2 dB.	Ground.	Normal condition prior to takeoff.				X	It is acceptable to have some 1/3 octave bands out of ± 5 dB tolerance but not more than 2 that are consecutive and in any case within ± 7 dB from approved reference data, providing that the overall trend is correct. Where initial evaluation employs approved subjective tuning to develop the approved reference standard, recurrent evaluation tolerances should be used during recurrent evaluations.
5.b.6	Climb.	Initial evaluation: ± 5 dB per 1/3 octave band. Recurrent evaluation: cannot exceed ±5 dB difference on three consecutive bands when compared to initial evaluation and the average of the absolute differences between initial and recurrent evaluation results cannot exceed 2 dB.	En-route climb.	Medium altitude.				X	It is acceptable to have some 1/3 octave bands out of ± 5 dB tolerance but not more than 2 that are consecutive and in any case within ± 7 dB from approved reference data, providing that the overall trend is correct. Where initial evaluation employs approved subjective tuning to develop the approved reference standard, recurrent evaluation tolerances should be used during recurrent evaluations.
5.b.7	Cruise	Initial evaluation: ± 5 dB per 1/3 octave band. Recurrent evaluation: cannot exceed ±5 dB difference on three consecutive bands when	Cruise.	Normal cruise configuration.				X	It is acceptable to have some 1/3 octave bands out of ± 5 dB tolerance but not more than 2 that are consecutive and in any case within ± 7 dB from approved reference data, providing that the overall trend is correct.

Table A2A

Full Flight Simulator (FFS) Objective Tests									
QPS REQUIREMENTS									INFORMATION
Test		Tolerance	Flight Conditions	Test Details	Simulator Level				Notes
Entry Number	Title				A	B	C	D	
		compared to initial evaluation and the average of the absolute differences between initial and recurrent evaluation results cannot exceed 2 dB.							Where initial evaluation employs approved subjective tuning to develop the approved reference standard, recurrent evaluation tolerances should be used during recurrent evaluations.
5.b.8	Initial approach.	Initial evaluation: ± 5 dB per 1/3 octave band. Recurrent evaluation: cannot exceed ±5 dB difference on three consecutive bands when compared to initial evaluation and the average of the absolute differences between initial and recurrent evaluation results cannot exceed 2 dB.	Approach.	Constant airspeed, gear up, flaps extended as appropriate, RPM as per operating manual.				X	It is acceptable to have some 1/3 octave bands out of ± 5 dB tolerance but not more than 2 that are consecutive and in any case within ± 7 dB from approved reference data, providing that the overall trend is correct. Where initial evaluation employs approved subjective tuning to develop the approved reference standard, recurrent evaluation tolerances should be used during recurrent evaluations.
5.b.9	Final approach.	Initial evaluation: ± 5 dB per 1/3 octave band. Recurrent evaluation: cannot exceed ±5 dB difference on three consecutive bands when compared to initial evaluation and the average of the absolute differences between initial and recurrent evaluation results cannot exceed 2 dB.	Landing.	Constant airspeed, gear down, landing configuration flaps, RPM as per operating manual.				X	It is acceptable to have some 1/3 octave bands out of ± 5 dB tolerance but not more than 2 that are consecutive and in any case within ± 7 dB from approved reference data, providing that the overall trend is correct. Where initial evaluation employs approved subjective tuning to develop the approved reference standard, recurrent evaluation tolerances should be used during recurrent evaluations.
5.c.	**Special cases.**	Initial evaluation: ± 5 dB per 1/3 octave	As appropriate.					X	This applies to special steady-state cases identified as

Table A2A

Full Flight Simulator (FFS) Objective Tests									
QPS REQUIREMENTS									INFORMATION
Test		Tolerance	Flight Conditions	Test Details	Simulator Level				Notes
Entry Number	Title				A	B	C	D	
		band. Recurrent evaluation: cannot exceed ±5 dB difference on three consecutive bands when compared to initial evaluation and the average of the absolute differences between initial and recurrent evaluation results cannot exceed 2 dB.							particularly significant to the pilot, important in training, or unique to a specific airplane type or model. It is acceptable to have some 1/3 octave bands out of ± 5 dB tolerance but not more than 2 that are consecutive and in any case within ± 7 dB from approved reference data, providing that the overall trend is correct. Where initial evaluation employs approved subjective tuning to develop the approved reference standard, recurrent evaluation tolerances should be used during recurrent evaluations
5.d	**FSTD background noise**	Initial evaluation: background noise levels must fall below the sound levels described in Paragraph 7.c (5) of this Attachment. Recurrent evaluation: ±3 dB per 1/3 octave band compared to initial evaluation.		Results of the background noise at initial qualification must be included in the QTG document and approved by the NSPM. The measurements are to be made with the simulation running, the sound muted and a dead cockpit.				X	The simulated sound will be evaluated to ensure that the background noise does not interfere with training. Refer to paragraph 7 of this Attachment. This test should be presented using an unweighted 1/3 octave band format from band 17 to 42 (50 Hz to 16 kHz).
5.e	**Frequency response**	Initial evaluation: not applicable. Recurrent evaluation: cannot exceed ±5 dB difference on three						X	Only required if the results are to be used during continuing qualification evaluations in lieu of airplane tests.

Table A2A

Full Flight Simulator (FFS) Objective Tests									
QPS REQUIREMENTS									INFORMATION
Test		Tolerance	Flight Conditions	Test Details	Simulator Level				Notes
Entry Number	Title				A	B	C	D	
		consecutive bands when compared to initial evaluation and the average of the absolute differences between initial and recurrent evaluation results cannot exceed 2 dB.							The results must be approved by the NSPM during the initial qualification. This test should be presented using an unweighted 1/3 octave band format from band 17 to 42 (50 Hz to 16 kHz).
6	**SYSTEMS INTEGRATION**								
6.a.	**System response time**								
6.a.1	Transport delay.	100 milliseconds or less after controller movement.	Pitch, roll and yaw.				X	X	One separate test is required in each axis. Where EFVS systems are installed, the EFVS response should be within + or - 30 ms from visual system response, and not before motion system response. *Note.— The delay from the airplane EFVS electronic elements should be added to the 30 ms tolerance before comparison with visual system reference as described in Attachment G of this Part.*
	Transport delay.	300 milliseconds or less after controller movement.	Pitch, roll and yaw.		X	X			

Begin Information

3. General

a. If relevant winds are present in the objective data, the wind vector should be clearly noted as part of the data presentation, expressed in conventional terminology, and related to the runway being used for test near the ground.

b. The reader is encouraged to review the Airplane Flight Simulator Evaluation Handbook, Volumes I and II, published by the Royal Aeronautical Society, London, UK, and AC 25–7, as amended, Flight Test Guide for Certification of Transport Category Airplanes, and AC 23–8, as amended, Flight Test Guide for Certification of Part 23 Airplanes, for references and examples regarding flight testing requirements and techniques.

4. Control Dynamics

a. General. The characteristics of an airplane flight control system have a major effect on handling qualities. A significant consideration in pilot acceptability of an airplane is the ''feel'' provided through the flight controls. Considerable effort is expended on airplane feel system design so that pilots will be comfortable and will consider the airplane desirable to fly. In order for an FFS to be representative, it should ''feel'' like the airplane being simulated. Compliance with this requirement is determined by comparing a recording of the control feel dynamics of the FFS to actual airplane measurements in the takeoff, cruise and landing configurations.

(1) Recordings such as free response to an impulse or step function are classically used to estimate the dynamic properties of electromechanical systems. In any case, it is only possible to estimate the dynamic properties as a result of being able to estimate true inputs and responses. Therefore, it is imperative that the best possible data be collected since close matching of the FFS control loading system to the airplane system is essential. The required dynamic control tests are described in Table A2A of this attachment.

(2) For initial and upgrade evaluations, the QPS requires that control dynamics characteristics be measured and recorded directly from the flight controls (Handling Qualities—Table A2A). This procedure is usually accomplished by measuring the free response of the controls using a step or impulse input to excite the system. The procedure should be accomplished in the takeoff, cruise and landing flight conditions and configurations.

(3) For airplanes with irreversible control systems, measurements may be obtained on the ground if proper pitot-static inputs are provided to represent airspeeds typical of those encountered in flight. Likewise, it may be shown that for some airplanes, takeoff, cruise, and landing configurations have like effects. Thus, one may suffice for another. In either case, engineering validation or airplane manufacturer rationale should be submitted as justification for ground tests or for eliminating a configuration. For FFSs requiring static and dynamic tests at the controls, special test fixtures will not be required during initial and upgrade evaluations if the QTG shows both test fixture results and the results of an alternate approach (e.g., computer plots that were produced concurrently and show satisfactory agreement). Repeat of the alternate method during the initial evaluation satisfies this test requirement.

b. Control Dynamics Evaluation. The dynamic properties of control systems are often stated in terms of frequency, damping and a number of other classical measurements. In order to establish a consistent means of validating test results for FFS control loading, criteria are needed that will clearly define the measurement interpretation and the applied tolerances. Criteria are needed for underdamped, critically damped and overdamped systems. In the case of an underdamped system with very light damping, the system may be quantified in terms of frequency and damping. In critically damped or overdamped systems, the frequency and damping are not readily measured from a response time history. Therefore, the following suggested measurements may be used:

(1) For Level C and D simulators. Tests to verify that control feel dynamics represent the airplane should show that the dynamic damping cycles (free response of the controls) match those of the airplane within specified tolerances. The NSPM recognizes that several different testing methods may be used to verify the control feel dynamic response. The NSPM will consider the merits of testing methods based on reliability and consistency. One acceptable method of evaluating the response and the tolerance to be applied is described below for the underdamped and critically damped cases. A sponsor using this method to comply with the QPS requirements should perform the tests as follows:

(a) Underdamped response. Two measurements are required for the period, the time to first zero crossing (in case a rate limit is present) and the subsequent frequency of oscillation. It is necessary to measure cycles on an individual basis in case there are non-uniform periods in the response. Each period will be independently compared to the respective period of the airplane control system and, consequently, will enjoy the full tolerance specified for that period. The damping tolerance will be applied to overshoots on an individual basis. Care should be taken when applying the tolerance to small overshoots since the significance of such overshoots becomes questionable. Only those overshoots larger than 5 per cent of the total initial displacement should be considered. The residual band, labeled $T(A_d)$ on Figure A2A is ±5 percent of the initial displacement amplitude A_d from the steady state value of the oscillation. Only oscillations outside the residual band are considered significant. When comparing FFS data to airplane data, the process should begin by overlaying or aligning the FFS and airplane steady state values and then comparing amplitudes of oscillation peaks, the time of the first zero crossing and individual periods of oscillation. The FFS should show the same number of significant overshoots to within one when compared against the airplane data. The procedure for evaluating the response is illustrated in Figure A2A.

(b) Critically damped and overdamped response. Due to the nature of critically damped and overdamped responses (no overshoots), the time to reach 90 percent of the steady state (neutral point) value should be the same as the airplane within ±10 percent. Figure A2B illustrates the procedure.

(c) Special considerations. Control systems that exhibit characteristics other than classical overdamped or underdamped responses should meet specified tolerances. In addition, special consideration should be given to ensure that significant trends are maintained.

(2) Tolerances.

(a) The following table summarizes the tolerances, T, for underdamped systems, and ''n'' is the sequential period of a full cycle of oscillation. See Figure A2A of this attachment for an illustration of the referenced measurements.

$T(P_0)$ ±10% of P_0
$T(P_1)$ ±20% of P_1
$T(P_2)$ ±30% of P_2
$T(P_n)$ ±10(n+1)% of P_n
$T(A_n)$ ±10% of A_1
$T(A_d)$ ±5% of A_d = residual band
Significant overshoots First overshoot and ±1 subsequent overshoots

(b) The following tolerance applies to critically damped and overdamped systems only. See Figure A2B for an illustration of the reference measurements:

$T(P_0)$ ±10% of P_0

End Information

Begin QPS Requirement

c. Alternative method for control dynamics evaluation.

(1) An alternative means for validating control dynamics for aircraft with hydraulically powered flight controls and artificial feel systems is by the measurement of control force and rate of movement. For each axis of pitch, roll, and yaw, the control must be forced to its maximum extreme position for the following distinct rates. These tests are conducted under normal flight and ground conditions.

(a) Static test—Slowly move the control so that a full sweep is achieved within 95 to 105 seconds. A full sweep is defined as movement of the controller from neutral to the stop, usually aft or right stop, then to the opposite stop, then to the neutral position.

(b) Slow dynamic test—Achieve a full sweep within 8–12 seconds.

(c) Fast dynamic test—Achieve a full sweep within 3–5 seconds.

Note: Dynamic sweeps may be limited to forces not exceeding 100 lbs. (44.5 daN).

(d) Tolerances

(i) Static test; see Table A2A, FFS Objective Tests, Entries 2.a.1., 2.a.2., and 2.a.3.

(ii) Dynamic test—± 2 lbs (0.9 daN) or ± 10% on dynamic increment above static test.

End QPS Requirement

Begin Information

d. The FAA is open to alternative means such as the one described above. The alternatives should be justified and appropriate to the application. For example, the method described here may not apply to all manufacturers' systems and certainly not to aircraft with reversible control systems. Each case is considered on its own merit on an ad hoc basis. If the FAA finds that alternative methods do not result in satisfactory performance, more conventionally accepted methods will have to be used.

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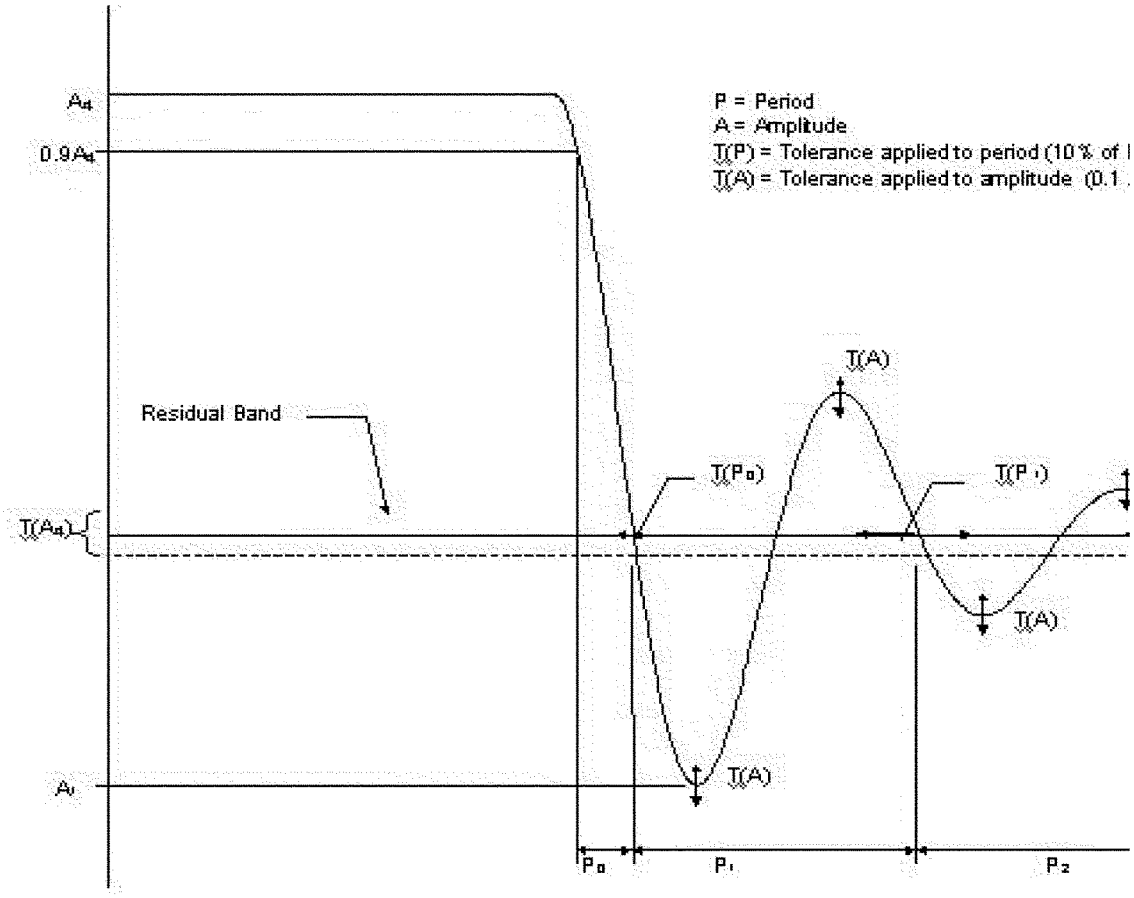


Figure A2A
Underdamped Step Response

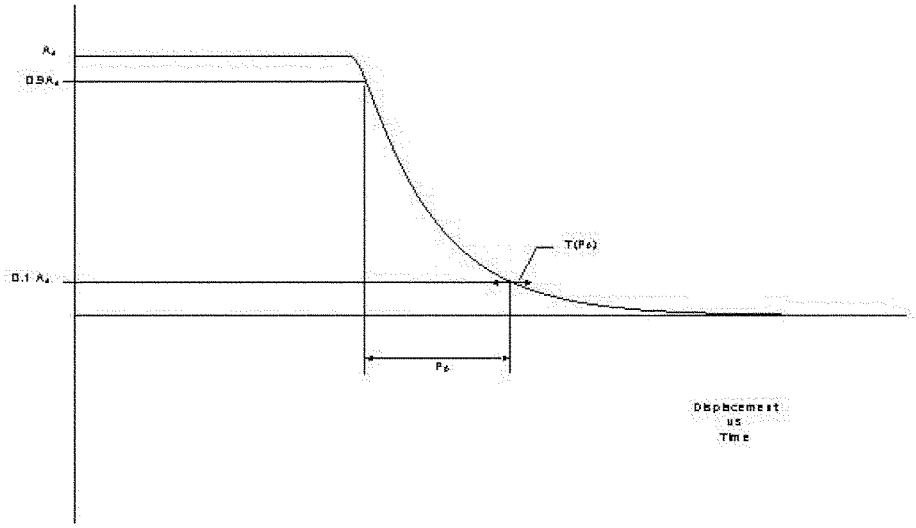


Figure A2B
Critically and Overdamped Step Response

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5. Ground Effect

a. For an FFS to be used for take-off and landing (not applicable to Level A simulators in that the landing maneuver may not be credited in a Level A simulator) it should reproduce the aerodynamic changes that occur in ground effect. The parameters

chosen for FFS validation should indicate these changes.

(1) A dedicated test should be provided that will validate the aerodynamic ground effect characteristics.

(2) The organization performing the flight tests may select appropriate test methods and procedures to validate ground effect. However, the flight tests should be performed with enough duration near the ground to sufficiently validate the ground-effect model.

b. The NSPM will consider the merits of testing methods based on reliability and consistency. Acceptable methods of validating ground effect are described below. If other methods are proposed, rationale should be provided to conclude that the tests performed validate the ground-effect model. A sponsor using the methods described below to comply with the QPS requirements should perform the tests as follows:

(1) Level fly-bys. The level fly-bys should be conducted at a minimum of three altitudes within the ground effect, including one at no more than 10% of the wingspan above the ground, one each at approximately 30% and 50% of the wingspan where height refers to main gear tire above the ground. In addition, one level-flight trim condition should be conducted out of ground effect (e.g., at 150% of wingspan).

(2) Shallow approach landing. The shallow approach landing should be performed at a glide slope of approximately one degree with negligible pilot activity until flare.

c. The lateral-directional characteristics are also altered by ground effect. For example, because of changes in lift, roll damping is affected. The change in roll damping will affect other dynamic modes usually evaluated for FFS validation. In fact, Dutch roll dynamics, spiral stability, and roll-rate for a given lateral control input are altered by ground effect. Steady heading sideslips will also be affected. These effects should be accounted for in the FFS modeling. Several tests such as crosswind landing, one engine inoperative landing, and engine failure on take-off serve to validate lateral-directional ground effect since portions of these tests are accomplished as the aircraft is descending through heights above the runway at which ground effect is an important factor.

6. Motion System

a. General.

(1) Pilots use continuous information signals to regulate the state of the airplane. In concert with the instruments and outside-world visual information, whole-body motion feedback is essential in assisting the pilot to control the airplane dynamics, particularly in the presence of external disturbances. The motion system should meet basic objective performance criteria, and should be subjectively tuned at the pilot's seat position to represent the linear and angular accelerations of the airplane during a prescribed minimum set of maneuvers and conditions. The response of the motion cueing system should also be repeatable.

(2) The Motion System tests in Section 3 of Table A2A are intended to qualify the FFS motion cueing system from a mechanical performance standpoint. Additionally, the list of motion effects provides a representative sample of dynamic conditions that should be present in the flight simulator. An additional list of representative, training-critical maneuvers, selected from Section 1 (Performance tests), and Section 2 (Handling Qualities tests), in Table A2A, that should be recorded during initial qualification (but without tolerance) to indicate the flight simulator motion cueing performance signature have been identified (reference Section 3.e). These tests are intended to help improve the overall standard of FFS motion cueing.

b. Motion System Checks. The intent of test 3a, Frequency Response, test 3b, Leg Balance, and test 3c, Turn-Around Check, as described in the Table of Objective Tests, is to demonstrate the performance of the motion system hardware, and to check the integrity of the motion set-up with regard to calibration and wear. These tests are independent of the motion cueing software and should be considered robotic tests.

c. Motion System Repeatability. The intent of this test is to ensure that the motion system software and motion system hardware have not degraded or changed over time. This diagnostic test should be completed during continuing qualification checks in lieu of the robotic tests. This will allow an improved ability to determine changes in the software or determine degradation in the hardware. The following information delineates the methodology that should be used for this test.

(1) Input: The inputs should be such that rotational accelerations, rotational rates, and linear accelerations are inserted before the transfer from airplane center of gravity to pilot reference point with a minimum amplitude of 5 deg/sec/sec, 10 deg/sec and 0.3 g, respectively, to provide adequate analysis of the output.

(2) Recommended output:

(a) Actual platform linear accelerations; the output will comprise accelerations due to both the linear and rotational motion acceleration;

(b) Motion actuators position.

d. Objective Motion Cueing Test—Frequency Domain

(1) Background. This test quantifies the response of the motion cueing system from the output of the flight model to the motion platform response. Other motion tests, such as the motion system frequency response, concentrate on the mechanical performance of the motion system hardware alone. The intent of this test is to provide quantitative frequency response records of the entire motion system for specified degree-of-freedom transfer relationships over a range of frequencies. This range should be representative of the manual control range for that particular aircraft type and the simulator as set up during qualification. The measurements of this test should include the combined influence of the motion cueing algorithm, the motion platform dynamics, and the transport delay associated with the motion cueing and control system implementation. Specified frequency responses describing the ability of the FSTD to reproduce aircraft translations and rotations, as well as the cross-coupling relations, are required as part of these measurements. When simulating forward aircraft acceleration, the simulator is accelerated momentarily in the forward direction to provide the onset cueing. This is considered the direct transfer relation. The simulator is simultaneously tilted nose-up due to the low-pass filter in order to generate a sustained specific force. The tilt associated with the generation of the sustained specific force, and the angular rates and angular accelerations associated with the initiation of the sustained specific force, are considered cross-coupling relations. The specific force is required for the perception of the aircraft sustained specific force, while the angular rates and accelerations do not occur in the aircraft and should be minimized.

(2) Frequency response test. This test requires the frequency response to be measured for the motion cueing system. Reference sinusoidal signals are inserted at the pilot reference position prior to the motion cueing computations. The response of the motion platform in the corresponding degree-of-freedom (the direct transfer relations), as well as the motions resulting from cross-coupling (the cross-coupling relations), are recorded. These are the tests that are important to pilot motion cueing and are general tests applicable to all types of airplanes. These tests can be run at any time deemed acceptable to the NSPM prior to and/or during the initial qualification.

(3) Transfer Functions. The frequency responses describe the relations between aircraft motions and simulator motions. The relations are explained below per individual test. Tests 1, 3, 5, 6, 8 and 10 show the direct transfer relations, while tests 2, 4, 7 and 9 show the cross-coupling relations.

1. FSTD pitch response to aircraft pitch input
2. FSTD surge specific force response due to aircraft pitch input
3. FSTD roll response to aircraft roll input
4. FSTD sway specific force response due to aircraft roll input
5. FSTD yaw response to aircraft yaw input
6. FSTD surge specific force response to aircraft surge input
7. FSTD pitch rate and pitch acceleration response to aircraft surge input
8. FSTD sway specific force response to aircraft sway input
9. FSTD roll rate and pitch acceleration response to aircraft sway input
10. FSTD heave specific force response to aircraft heave input

(4) Frequency Range. The tests should be conducted by introducing sinusoidal inputs at discrete input frequencies entered at the output of the flight model, transformed to the pilot reference position just before the motion cueing computations, and measured at the response of the FSTD platform. For each relation defined in section (3), measurements must be taken in at least 12 discrete frequencies within a range of 0.0159 and 2.515 Hz.

(5) Input Signal Amplitude. The tests applied here to the motion cueing system are intended to qualify its response to normal control inputs during maneuvering (i.e. not aggressive or excessively hard control inputs). It is necessary to excite the system in such a manner that the response is measured with a high signal-to-noise ratio,

and that the possible non-linear elements in the motion cueing system are not overly excited.

(6) Presentation of Results. The measured modulus and phase should be tabulated for the twelve frequencies and for each of the transfer relations given section (3). The results should also be plotted for each component in a modulus versus phase plot. The modulus should range from 0.0 to 1.0 along the horizontal axis, and the absolute value of the phase from 0 to 180 degrees along the vertical axis. An example is shown in Figure A2C.

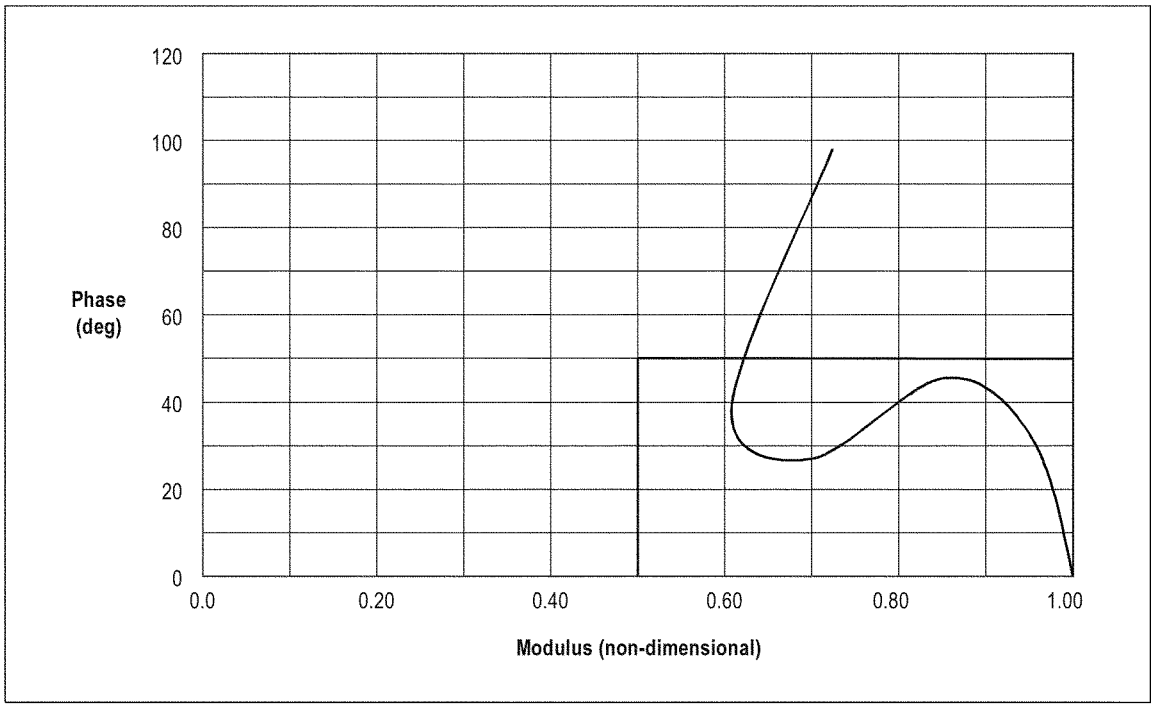


Figure A2C Example plot of frequency response test of a motion cueing system. The frequency varies along the curved line.

e. Motion Vibrations.

(1) Presentation of results. The characteristic motion vibrations may be used to verify that the flight simulator can reproduce the frequency content of the airplane when flown in specific conditions. The test results should be presented as a Power Spectral Density (PSD) plot with frequencies on the horizontal axis and amplitude on the vertical axis. The airplane data and flight simulator data should be presented in the same format with the same scaling. The algorithms used for generating the flight simulator data should be the same as those used for the airplane data. If they are not the same then the algorithms used for the flight simulator data should be proven to be sufficiently comparable. As a minimum, the results along the dominant axes should be presented and a rationale for not presenting the other axes should be provided.

(2) Interpretation of results. The overall trend of the PSD plot should be considered while focusing on the dominant frequencies. Less emphasis should be placed on the differences at the high frequency and low amplitude portions of the PSD plot. During the analysis, certain structural components of the flight simulator have resonant frequencies that are filtered and may not appear in the PSD plot. If filtering is required, the notch filter bandwidth should be limited to 1 Hz to ensure that the buffet feel is not adversely affected. In addition, a rationale should be provided to explain that the characteristic motion vibration is not being adversely affected by the filtering. The amplitude should match airplane data as described below. However, if the PSD plot was altered for subjective reasons, a rationale should be provided to justify the change. If the plot is on a logarithmic scale, it may be difficult to interpret the amplitude of the buffet in terms of acceleration. For example, a 1×10^{-3} g-rms^2/Hz would describe a heavy buffet and may be seen in the deep stall regime. Alternatively, a 1×10^{-6} g-rms^2/Hz buffet is almost not perceivable; but may represent a flap buffet at low speed. The previous two examples differ in magnitude by 1000. On a PSD plot this represents three decades (one decade is a change in order of magnitude of 10; and two decades is a change in order of magnitude of 100).

Note: In the example, ''g-rms^2 is the mathematical expression for ''g's root mean squared.''

7. Sound System

a. General. The total sound environment in the airplane is very complex, and changes with atmospheric conditions, airplane configuration, airspeed, altitude, and power settings. Flight deck sounds are an important component of the flight deck operational environment and provide valuable information to the flight crew. These aural cues can either assist the crew (as an indication of an abnormal situation), or hinder the crew (as a distraction or nuisance). For effective training, the flight simulator should provide flight deck sounds that are perceptible to the pilot during normal and abnormal operations, and comparable to those of the airplane. The flight simulator operator should carefully evaluate background noises in the location where the device will be installed. To demonstrate compliance with the sound requirements, the objective or validation tests in this attachment were selected to provide a representative sample of normal static conditions typically experienced by a pilot.

b. Alternate propulsion. For FFS with multiple propulsion configurations, any condition listed in Table A2A of this attachment should be presented for evaluation as part of the QTG if identified by the airplane manufacturer or other data supplier as significantly different due to a change in propulsion system (engine or propeller).

c. Data and Data Collection System.

(1) Information provided to the flight simulator manufacturer should be presented in the format suggested by the International Air Transport Association (IATA) ''Flight Simulator Design and Performance Data Requirements,'' as amended. This information should contain calibration and frequency response data.

(2) The system used to perform the tests listed in Table A2A should comply with the following standards:

(a) The specifications for octave, half octave, and third octave band filter sets may be found in American National Standards Institute (ANSI) S1.11–1986;

(b) Measurement microphones should be type WS2 or better, as described in International Electrotechnical Commission (IEC) 1094–4–1995.

(3) Headsets. If headsets are used during normal operation of the airplane they should also be used during the flight simulator evaluation.

(4) Playback equipment. Playback equipment and recordings of the QTG conditions should be provided during initial evaluations.

(5) Background noise.

(a) Background noise is the noise in the flight simulator that is not associated with the airplane, but is caused by the flight simulator's cooling and hydraulic systems and extraneous noise from other locations in the building. Background noise can seriously impact the correct simulation of airplane sounds and should be kept below the airplane sounds. In some cases, the sound level of the simulation can be increased to compensate for the background noise. However, this approach is limited by the specified tolerances and by the subjective acceptability of the sound environment to the evaluation pilot.

(b) The acceptability of the background noise levels is dependent upon the normal sound levels in the airplane being represented. Background noise levels that fall below the lines defined by the following points, may be acceptable:

(i) 70 dB @ 50 Hz;

(ii) 55 dB @ 1000 Hz;

(iii) 30 dB @ 16 kHz

(Note: These limits are for unweighted 1/3 octave band sound levels. Meeting these limits for background noise does not ensure an acceptable flight simulator. Airplane sounds that fall below this limit require careful review and may require lower limits on background noise.)

(6) Validation testing. Deficiencies in airplane recordings should be considered when applying the specified tolerances to ensure that the simulation is representative of the airplane. Examples of typical deficiencies are:

(a) Variation of data between tail numbers;

(b) Frequency response of microphones;

(c) Repeatability of the measurements.

TABLE A2B—EXAMPLE OF CONTINUING QUALIFICATION FREQUENCY RESPONSE TEST TOLERANCE

Band center frequency	Initial results (dBSPL)	Continuing qualification results (dBSPL)	Absolute difference
50	75.0	73.8	1.2
63	75.9	75.6	0.3
80	77.1	76.5	0.6
100	78.0	78.3	0.3
125	81.9	81.3	0.6
160	79.8	80.1	0.3
200	83.1	84.9	1.8
250	78.6	78.9	0.3
315	79.5	78.3	1.2
400	80.1	79.5	0.9
500	80.7	79.8	0.9
630	81.9	80.4	1.5
800	73.2	74.1	0.9
1000	79.2	80.1	0.9
1250	80.7	82.8	2.1
1600	81.6	78.6	3.0
2000	76.2	74.4	1.8
2500	79.5	80.7	1.2
3150	80.1	77.1	3.0
4000	78.9	78.6	0.3
5000	80.1	77.1	3.0
6300	80.7	80.4	0.3
8000	84.3	85.5	1.2
10000	81.3	79.8	1.5
12500	80.7	80.1	0.6
16000	71.1	71.1	0.0
	Average		1.1

8. Additional Information About Flight Simulator Qualification for New or Derivative Airplanes

a. Typically, an airplane manufacturer's approved final data for performance, handling qualities, systems or avionics is not available until well after a new or derivative airplane has entered service. However, flight crew training and certification often begins several months prior to the entry of the first airplane into service. Consequently, it may be necessary to use preliminary data provided by the airplane manufacturer for interim qualification of flight simulators.

b. In these cases, the NSPM may accept certain partially validated preliminary airplane and systems data, and early release ('red label') avionics data in order to permit the necessary program schedule for training, certification, and service introduction.

c. Simulator sponsors seeking qualification based on preliminary data should consult the NSPM to make special arrangements for using preliminary data for flight simulator qualification. The sponsor should also consult the airplane and flight simulator manufacturers to develop a data plan and flight simulator qualification plan.

d. The procedure to be followed to gain NSPM acceptance of preliminary data will vary from case to case and between airplane manufacturers. Each airplane manufacturer's new airplane development and test program is designed to suit the needs of the particular project and may not contain the same events or sequence of events as another manufacturer's program, or even the same manufacturer's program for a different airplane. Therefore, there cannot be a prescribed invariable procedure for acceptance of preliminary data, but instead there should be a statement describing the final sequence of events, data sources, and validation procedures agreed by the simulator sponsor, the airplane manufacturer, the flight simulator manufacturer, and the NSPM.

Note: A description of airplane manufacturer-provided data needed for flight simulator modeling and validation is to be

found in the IATA Document ''Flight Simulator Design and Performance Data Requirements,'' as amended.

e. The preliminary data should be the manufacturer's best representation of the airplane, with assurance that the final data will not significantly deviate from the preliminary estimates. Data derived from these predictive or preliminary techniques should be validated against available sources including, at least, the following:

(1) Manufacturer's engineering report. The report should explain the predictive method used and illustrate past success of the method on similar projects. For example, the manufacturer could show the application of the method to an earlier airplane model or predict the characteristics of an earlier model and compare the results to final data for that model.

(2) Early flight test results. This data is often derived from airplane certification tests, and should be used to maximum advantage for early flight simulator validation. Certain critical tests that would normally be done early in the airplane certification program should be included to validate essential pilot training and certification maneuvers. These include cases where a pilot is expected to cope with an airplane failure mode or an engine failure. Flight test data that will be available early in the flight test program will depend on the airplane manufacturer's flight test program design and may not be the same in each case. The flight test program of the airplane manufacturer should include provisions for generation of very early flight test results for flight simulator validation.

f. The use of preliminary data is not indefinite. The airplane manufacturer's final data should be available within 12 months after the airplane's first entry into service or as agreed by the NSPM, the simulator sponsor, and the airplane manufacturer. When applying for interim qualification using preliminary data, the simulator sponsor and the NSPM should agree on the update program. This includes specifying that the final data update will be installed in the flight simulator within a period of 12 months following the final data release, unless special conditions exist and a different schedule is acceptable. The flight simulator performance and handling validation would then be based on data derived from flight tests or from other approved sources. Initial airplane systems data should be updated after engineering tests. Final airplane systems data should also be used for flight simulator programming and validation.

g. Flight simulator avionics should stay essentially in step with airplane avionics (hardware and software) updates. The permitted time lapse between airplane and flight simulator updates should be minimal. It may depend on the magnitude of the update and whether the QTG and pilot training and certification are affected. Differences in airplane and flight simulator avionics versions and the resulting effects on flight simulator qualification should be agreed between the simulator sponsor and the NSPM. Consultation with the flight simulator manufacturer is desirable throughout the qualification process.

h. The following describes an example of the design data and sources that might be used in the development of an interim qualification plan.

(1) The plan should consist of the development of a QTG based upon a mix of flight test and engineering simulation data. For data collected from specific airplane flight tests or other flights, the required design model or data changes necessary to support an acceptable Proof of Match (POM) should be generated by the airplane manufacturer.

(2) For proper validation of the two sets of data, the airplane manufacturer should compare their simulation model responses against the flight test data, when driven by the same control inputs and subjected to the same atmospheric conditions as recorded in the flight test. The model responses should result from a simulation where the following systems are run in an integrated fashion and are consistent with the design data released to the flight simulator manufacturer:

(a) Propulsion
(b) Aerodynamics;
(c) Mass properties;
(d) Flight controls;
(e) Stability augmentation; and
(f) Brakes/landing gear.

i. A qualified test pilot should be used to assess handling qualities and performance evaluations for the qualification of flight simulators of new airplane types.

End Information

Begin QPS Requirement

9. Engineering Simulator—Validation Data

a. When a fully validated simulation (i.e., validated with flight test results) is modified due to changes to the simulated airplane configuration, the airplane manufacturer or other acceptable data supplier must coordinate with the NSPM if they propose to supply validation data from an ''audited'' engineering simulator/simulation to selectively supplement flight test data. The NSPM must be provided an opportunity to audit the engineering simulation or the engineering simulator used to generate the validation data. Validation data from an audited engineering simulation may be used for changes that are incremental in nature. Manufacturers or other data suppliers must be able to demonstrate that the predicted changes in aircraft performance are based on acceptable aeronautical principles with proven success history and valid outcomes. This must include comparisons of predicted and flight test validated data.

b. Airplane manufacturers or other acceptable data suppliers seeking to use an engineering simulator for simulation validation data as an alternative to flight-test derived validation data, must contact the NSPM and provide the following:

(1) A description of the proposed aircraft changes, a description of the proposed simulation model changes, and the use of an integral configuration management process, including a description of the actual simulation model modifications that includes a step-by-step description leading from the original model(s) to the current model(s).

(2) A schedule for review by the NSPM of the proposed plan and the subsequent validation data to establish acceptability of the proposal.

(3) Validation data from an audited engineering simulator/simulation to supplement specific segments of the flight test data.

c. To be qualified to supply engineering simulator validation data, for aerodynamic, engine, flight control, or ground handling models, an airplane manufacturer or other acceptable data supplier must:

(1) Be able to verify their ability able to:

(a) Develop and implement high fidelity simulation models; and

(b) Predict the handling and performance characteristics of an airplane with sufficient accuracy to avoid additional flight test activities for those handling and performance characteristics.

(2) Have an engineering simulator that:

(a) Is a physical entity, complete with a flight deck representative of the simulated class of airplane;

(b) Has controls sufficient for manual flight;

(c) Has models that run in an integrated manner;

(d) Has fully flight-test validated simulation models as the original or baseline simulation models;

(e) Has an out-of-the-flight deck visual system;

(f) Has actual avionics boxes interchangeable with the equivalent software simulations to support validation of released software;

(g) Uses the same models as released to the training community (which are also used to produce stand-alone proof-of-match and checkout documents);

(h) Is used to support airplane development and certification; and

(i) Has been found to be a high fidelity representation of the airplane by the manufacturer's pilots (or other acceptable data supplier), certificate holders, and the NSPM.

(3) Use the engineering simulator/simulation to produce a representative set of integrated proof-of-match cases.

(4) Use a configuration control system covering hardware and software for the operating components of the engineering simulator/simulation.

(5) Demonstrate that the predicted effects of the change(s) are within the provisions of sub-paragraph ''a'' of this section, and confirm that additional flight test data are not required.

d. Additional Requirements for Validation Data

(1) When used to provide validation data, an engineering simulator must meet the simulator standards currently applicable to training simulators except for the data package.

(2) The data package used must be:

(a) Comprised of the engineering predictions derived from the airplane design, development, or certification process;

(b) Based on acceptable aeronautical principles with proven success history and valid outcomes for aerodynamics, engine operations, avionics operations, flight control applications, or ground handling;

(c) Verified with existing flight-test data; and

(d) Applicable to the configuration of a production airplane, as opposed to a flight-test airplane.

(3) Where engineering simulator data are used as part of a QTG, an essential match must exist between the training simulator and the validation data.

(4) Training flight simulator(s) using these baseline and modified simulation models must be qualified to at least internationally recognized standards, such as contained in the ICAO Document 9625, the ''Manual of Criteria for the Qualification of Flight Simulators.''

End QPS Requirement

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10. [Reserved]

11. Validation Test Tolerances

Begin Information

a. Non-Flight-Test Tolerances

(1) If engineering simulator data or other non-flight-test data are used as an allowable form of reference validation data for the objective tests listed in Table A2A of this attachment, the data provider must supply a well-documented mathematical model and testing procedure that enables a replication of the engineering simulation results within 40% of the corresponding flight test tolerances.

b. Background

(1) The tolerances listed in Table A2A of this attachment are designed to measure the quality of the match using flight-test data as a reference.

(2) Good engineering judgment should be applied to all tolerances in any test. A test is failed when the results clearly fall outside of the prescribed tolerance(s).

(3) Engineering simulator data are acceptable because the same simulation models used to produce the reference data are also used to test the flight training simulator (i.e., the two sets of results should be ''essentially'' similar).

(4) The results from the two sources may differ for the following reasons:

(a) Hardware (avionics units and flight controls);

(b) Iteration rates;

(c) Execution order;

(d) Integration methods;

(e) Processor architecture;

(f) Digital drift, including:

(i) Interpolation methods;

(ii) Data handling differences; and

(iii) Auto-test trim tolerances.

(5) The tolerance limit between the reference data and the flight simulator results is generally 40% of the corresponding 'flight-test' tolerances. However, there may be cases where the simulator models used are of higher fidelity, or the manner in which they are cascaded in the integrated testing loop have the effect of a higher fidelity, than those supplied by the data provider. Under these circumstances, it is possible that an error greater than 20% may be generated. An error greater than 40% may be acceptable if simulator sponsor can provide an adequate explanation.

(6) Guidelines are needed for the application of tolerances to engineering-simulator-generated validation data because:

(a) Flight-test data are often not available due to technical reasons;

(b) Alternative technical solutions are being advanced; and

(c) High costs.

12. Validation Data Roadmap

a. Airplane manufacturers or other data suppliers should supply a validation data roadmap (VDR) document as part of the data package. A VDR document contains guidance material from the airplane validation data supplier recommending the best possible sources of data to be used as validation data in the QTG. A VDR is of special value when requesting interim qualification, qualification of simulators for airplanes certificated prior to 1992, and qualification of alternate engine or avionics fits. A sponsor seeking to have a device qualified in accordance with the standards contained in this QPS appendix should submit a VDR to the NSPM as early as possible in the planning stages. The NSPM is the final authority to approve the data to be used as validation material for the QTG. The NSPM and the Joint Aviation Authorities' Synthetic Training Devices Advisory Board have committed to maintain a list of agreed VDRs.

b. The VDR should identify (in matrix format) sources of data for all required tests. It should also provide guidance regarding the validity of these data for a specific engine type, thrust rating configuration, and the revision levels of all avionics affecting airplane handling qualities and performance. The VDR should include rationale or explanation in cases where data or parameters are missing, engineering simulation data are to be used, flight test methods require explanation, or there is any deviation from data requirements. Additionally, the document should refer to other appropriate sources of validation data (e.g., sound and vibration data documents).

c. The Sample Validation Data Roadmap (VDR) for airplanes, shown in Table A2C, depicts a generic roadmap matrix identifying sources of validation data for an abbreviated list of tests. This document is merely a sample and does not provide actual data. A complete matrix should address all test conditions and provide actual data and data sources.

d. Two examples of rationale pages are presented in Appendix F of the IATA ''Flight Simulator Design and Performance Data Requirements.'' These illustrate the type of airplane and avionics configuration information and descriptive engineering rationale used to describe data anomalies or provide an acceptable basis for using alternative data for QTG validation requirements.

End Information

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Table A2C - Sample Validation Data Roadmap for Airplanes

ICAO or IATA #	Test Description		Validation Source		Validation Document						Comments
Notes: 1. Only one page is shown; and some test conditions were deleted for brevity. 2. Relevant regulatory material should be consulted and all applicable tests addressed. 3. Validation source, document and comments provided herein are for reference only and do not constitute approval for use. 4. CCA mode must be described for each test condition. 5. If more than one aircraft type (e.g., derivative and baseline) are used as validation data more columns may be necessary.		CCA Mode	Aircraft Flight Test Data	Engineering Simulator Data (DEF-73 Engines)	Aerodynamics POM Doc.#xxx123, Rev. A	Flight Controls POM Doc.#xxx456, NEW	Ground Handling POM Doc. #xxx789, Rev. B	Propulsion POM Doc. #321, Rev. C	Integrated POM Doc. #xxx654, Rev. A	Appendix to this VDR Doc. #xxx987, NEW	*Legend:* D71 = Engine Type (Thrust Rating of 71.5K) D73 = Engine Type (Thrust Rating of 73K) Bold upper case = primary validation source. Lower case, within parentheses = alternative validation source. R = Rationale included in the data package Appendix.
1.a.1.	Minimum Radius Turn.		**X**				**D71**				
1.a.2.	Rate of Turn vs. Nosewheel Angle (2 speeds).		**X**				**D71**				
1.b.1.	Ground Acceleration Time and Distance.		**X**				(d73)		**D73**		Primary data contained in IPOM.
1.b.2.	Minimum Control Speed, Ground (Vmcg).		(x)	**X**	(d71)					**D73**	See engineering rationale for test data in VDR.
1.b.3.	Minimum Unstick Speed (Vmu).		**X**		**D71**						
1.b.4.	Normal Takeoff.		**X**		(d73)				**D73**		Primary data contained in IPOM.
1.b.5.	Critical Engine Failure on Takeoff.		**X**		(d71)					**D73**	Alternative engine thrust rating flight test data in VDR.
1.b.6.	Crosswind Takeoff.		**X**		(d71)					**D73**	Alternative engine thrust rating flight test data in VDR.
1.b.7.	Rejected Takeoff.		**X**		**D71**					**R**	Test procedure anomaly; see rationale.
1.b.8.	Dynamic Engine Failure After Takeoff.			**X**						**D73**	No flight test data available; see rationale.
1.c.1.	Normal Climb – All Engines.		**X**		(d71)				**D71**		Primary data contained in IPOM.
1.c.2.	Climb – Engine-out, Second Segment.		**X**		(d71)					**D73**	Alternative engine thrust rating flight test data in VDR.
1.c.3.	Climb – Engine-out, Enroute.		**X**		(d71)					**D73**	AFM data available (73K).
1.c.4.	Engine-out, Approach Climb.		**X**		**D71**						
1.c.5.a.	Level Flight Acceleration.		(x)	**X**	(d73)					**D73**	Eng sim data w/ modified EEC accel rate in VDR.
1.c.5.b.	Level Flight Deceleration.		(x)	**X**	(d73)					**D73**	Eng sim data w/ modified EEC accel rate in VDR.
1.d.1.	Cruise Performance.		**X**		**D71**						
1.e.1.a.	Stopping Time & Distance (Wheel brakes / Light weight).			**X**	**D71**					(d73)	No flight test data available; see rationale.
1.e.1.b.	Stopping Time & Distance (Wheel brakes/ Med. weight).		**X**	(x)	**D71**					(d73)	
1.e.1.c.	Stopping Time & Distance (Wheel brakes / Heavy weight).		**X**	(x)	**D71**					(d73)	
1.e.2.a.	Stopping Time & Distance (Reverse thrust / Light weight).		**X**	(x)	**D71**					(d73)	
1.e.2.b.	Stopping Time & Distance (Reverse thrust / Med. Weight).			**X**	(d71)					**D73**	No flight test data available; see rationale.

BILLING CODE 4910–13–C

Begin Information

13. Acceptance Guidelines for Alternative Engines Data

a. Background

(1) For a new airplane type, the majority of flight validation data are collected on the first airplane configuration with a ''baseline'' engine type. These data are then used to validate all flight simulators representing that airplane type.

(2) Additional flight test validation data may be needed for flight simulators representing an airplane with engines of a different type than the baseline, or for engines with thrust rating that is different from previously validated configurations.

(3) When a flight simulator with alternate engines is to be qualified, the QTG should contain tests against flight test validation data for selected cases where engine differences are expected to be significant.

b. Approval Guidelines For Validating Alternate Engine Applications

(1) The following guidelines apply to flight simulators representing airplanes with alternate engine applications or with more than one engine type or thrust rating.

(2) Validation tests can be segmented into two groups, those that are dependent on engine type or thrust rating and those that are not.

(3) For tests that are independent of engine type or thrust rating, the QTG can be based on validation data from any engine application. Tests in this category should be designated as independent of engine type or thrust rating.

(4) For tests that are affected by engine type, the QTG should contain selected engine-specific flight test data sufficient to validate that particular airplane-engine configuration. These effects may be due to engine dynamic characteristics, thrust levels or engine-related airplane configuration changes. This category is primarily characterized by variations between different engine manufacturers' products, but also includes differences due to significant engine design changes from a previously flight-validated configuration within a single engine type. See Table A2D, Alternate Engine Validation Flight Tests in this section for a list of acceptable tests.

(5) Alternate engine validation data should be based on flight test data, except as noted in sub-paragraphs 13.c.(1) and (2), or where other data are specifically allowed (e.g., engineering simulator/simulation data). If certification of the flight characteristics of the airplane with a new thrust rating (regardless of percentage change) does require certification flight testing with a comprehensive stability and control flight instrumentation package, then the conditions described in Table A2D in this section should be obtained from flight testing and presented in the QTG. Flight test data, other than throttle calibration data, are not required if the new thrust rating is certified on the airplane without need for a comprehensive stability and control flight instrumentation package.

(6) As a supplement to the engine-specific flight tests listed in Table A2D and baseline engine-independent tests, additional engine-specific engineering validation data should be provided in the QTG, as appropriate, to facilitate running the entire QTG with the alternate engine configuration. The sponsor and the NSPM should agree in advance on the specific validation tests to be supported by engineering simulation data.

(7) A matrix or VDR should be provided with the QTG indicating the appropriate validation data source for each test.

(8) The flight test conditions in Table A2D are appropriate and should be sufficient to validate implementation of alternate engines in a flight simulator.

End Information

Begin QPS Requirement

c. Test Requirements

(1) The QTG must contain selected engine-specific flight test data sufficient to validate the alternative thrust level when:

(a) the engine type is the same, but the thrust rating exceeds that of a previously flight-test validated configuration by five percent (5%) or more; or

(b) the engine type is the same, but the thrust rating is less than the lowest previously flight-test validated rating by fifteen percent (15%) or more. See Table A2D for a list of acceptable tests.

(2) Flight test data is not required if the thrust increase is greater than 5%, but flight tests have confirmed that the thrust increase does not change the airplane's flight characteristics.

(3) Throttle calibration data (i.e., commanded power setting parameter versus throttle position) must be provided to validate all alternate engine types and engine thrust ratings that are higher or lower than a previously validated engine. Data from a test airplane or engineering test bench with the correct engine controller (both hardware and software) are required.

End QPS Requirement

Begin QPS Requirement

TABLE A2D—ALTERNATIVE ENGINE VALIDATION FLIGHT TESTS

Entry No.	Test description		Alternative engine type	Alternative thrust rating [2]
1.b.1.	Normal take-off/ground acceleration time and distance		X	X
1.b.4. 1.b.2.	$V_{mcg,}$ if performed for airplane certification		X	X
1.b.5. 1.b.8.	Engine-out take-off Dynamic engine failure after take-off	Either test may be performed.	X	
1.b.7. 1.d.1.	Rejected take-off if performed for airplane certification Cruise performance		X X	
1.f.1. 1.f.2.	Engine acceleration and deceleration		X	X
2.a.8.	Throttle calibration [1]		X	X
2.c.1.	Power change dynamics (acceleration)		X	X
2.d.1.	V_{mca} if performed for airplane certification		X	X
2.d.5.	Engine inoperative trim		X	X
2.e.1.	Normal landing		X	

[1] Must be provided for all changes in engine type or thrust rating; see paragraph 13.c.(3).
[2] See paragraphs 13.c.(1) through13.c.(3), for a definition of applicable thrust ratings.

End QPS Requirement

Begin Information

14. Acceptance Guidelines for Alternative Avionics (Flight-Related Computers and Controllers)

a. Background

(1) For a new airplane type, the majority of flight validation data are collected on the first airplane configuration with a ''baseline'' flight-related avionics ship-set; (see subparagraph b.(2) of this section). These data are then used to validate all flight simulators representing that airplane type.

(2) Additional validation data may be required for flight simulators representing an airplane with avionics of a different hardware design than the baseline, or a different software revision than previously validated configurations.

(3) When a flight simulator with additional or alternate avionics configurations is to be qualified, the QTG should contain tests against validation data for selected cases where avionics differences are expected to be significant.

b. Approval Guidelines For Validating Alternate Avionics

(1) The following guidelines apply to flight simulators representing airplanes with a revised avionics configuration, or more than one avionics configuration.

(2) The baseline validation data should be based on flight test data, except where other data are specifically allowed (e.g., engineering flight simulator data).

(3) The airplane avionics can be segmented into two groups, systems or components whose functional behavior contributes to the aircraft response presented in the QTG results, and systems that do not. The following avionics are examples of contributory systems for which hardware design changes or software revisions may lead to significant differences in the aircraft response relative to the baseline avionics configuration: Flight control computers and controllers for engines, autopilot, braking system, nosewheel steering system, and high lift system. Related avionics such as stall warning and augmentation systems should also be considered.

(4) The acceptability of validation data used in the QTG for an alternative avionics fit should be determined as follows:

(a) For changes to an avionics system or component that do not affect QTG validation test response, the QTG test can be based on validation data from the previously validated avionics configuration.

(b) For an avionics change to a contributory system, where a specific test is not affected by the change (e.g., the avionics change is a Built In Test Equipment (BITE) update or a modification in a different flight phase), the QTG test can be based on validation data from the previously-validated avionics configuration. The QTG should include authoritative justification (e.g., from the airplane manufacturer or system supplier) that this avionics change does not affect the test.

(c) For an avionics change to a contributory system, the QTG may be based on validation data from the previously-validated avionics configuration if no new functionality is added and the impact of the avionics change on the airplane response is small and based on acceptable aeronautical principles with proven success history and valid outcomes. This should be supplemented with avionics-specific validation data from the airplane manufacturer's engineering simulation, generated with the revised avionics configuration. The QTG should also include an explanation of the nature of the change and its effect on the airplane response.

(d) For an avionics change to a contributory system that significantly affects some tests in the QTG or where new functionality is added, the QTG should be based on validation data from the previously validated avionics configuration and supplemental avionics-specific flight test data sufficient to validate the alternate avionics revision. Additional flight test validation data may not be needed if the avionics changes were certified without the need for testing with a comprehensive flight instrumentation package. The airplane manufacturer should coordinate flight simulator data requirements, in advance with the NSPM.

(5) A matrix or ''roadmap'' should be provided with the QTG indicating the appropriate validation data source for each test. The roadmap should include identification of the revision state of those contributory avionics systems that could affect specific test responses if changed.

15. Transport Delay Testing

a. This paragraph explains how to determine the introduced transport delay through the flight simulator system so that it does not exceed a specific time delay. The transport delay should be measured from control inputs through the interface, through each of the host computer modules and back through the interface to motion, flight instrument, and visual systems. The transport delay should not exceed the maximum allowable interval.

b. Four specific examples of transport delay are:

(1) Simulation of classic non-computer controlled aircraft;

(2) Simulation of computer controlled aircraft using real airplane black boxes;

(3) Simulation of computer controlled aircraft using software emulation of airplane boxes;

(4) Simulation using software avionics or re-hosted instruments.

c. Figure A2D illustrates the total transport delay for a non-computer-controlled airplane or the classic transport delay test. Since there are no airplane-induced delays for this case, the total transport delay is equivalent to the introduced delay.

d. Figure A2E illustrates the transport delay testing method using the real airplane controller system.

e. To obtain the induced transport delay for the motion, instrument and visual signal, the delay induced by the airplane controller should be subtracted from the total transport delay. This difference represents the introduced delay and should not exceed the standards prescribed in Table A1A.

f. Introduced transport delay is measured from the flight deck control input to the reaction of the instruments and motion and visual systems (See Figure A2D).

g. The control input may also be introduced after the airplane controller system and the introduced transport delay measured directly from the control input to the reaction of the instruments, and simulator motion and visual systems (See Figure A2E).

h. Figure A2F illustrates the transport delay testing method used on a flight simulator that uses a software emulated airplane controller system.

i. It is not possible to measure the introduced transport delay using the simulated airplane controller system architecture for the pitch, roll and yaw axes. Therefore, the signal should be measured directly from the pilot controller. The flight simulator manufacturer should measure the total transport delay and subtract the inherent delay of the actual airplane components because the real airplane controller system has an inherent delay provided by the airplane manufacturer. The flight simulator manufacturer should ensure that the introduced delay does not exceed the standards prescribed in Table A1A.

j. Special measurements for instrument signals for flight simulators using a real airplane instrument display system instead of a simulated or re-hosted display. For flight instrument systems, the total transport delay should be measured and the inherent delay of the actual airplane components subtracted to ensure that the introduced delay does not exceed the standards prescribed in Table A1A.

(1) Figure A2GA illustrates the transport delay procedure without airplane display simulation. The introduced delay consists of the delay between the control movement and the instrument change on the data bus.

(2) Figure A2GB illustrates the modified testing method required to measure introduced delay due to software avionics or re-hosted instruments. The total simulated instrument transport delay is measured and the airplane delay should be subtracted from this total. This difference represents the introduced delay and should not exceed the standards prescribed in Table A1A. The inherent delay of the airplane between the data bus and the displays is indicated in figure A2GA. The display manufacturer should provide this delay time.

k. Recorded signals. The signals recorded to conduct the transport delay calculations should be explained on a schematic block diagram. The flight simulator manufacturer should also provide an explanation of why each signal was selected and how they relate to the above descriptions.

l. Interpretation of results. Flight simulator results vary over time from test to test due to ''sampling uncertainty.'' All flight simulators run at a specific rate where all modules are executed sequentially in the host computer. The flight controls input can occur at any time in the iteration, but these data will not be processed before the start of the new iteration. For example, a flight simulator running at 60 Hz may have a difference of as much as 16.67 msec between test results. This does not mean that the test has failed. Instead, the difference is

attributed to variations in input processing. In some conditions, the host simulator and the visual system do not run at the same iteration rate, so the output of the host computer to the visual system will not always be synchronized.

m. The transport delay test should account for both daylight and night modes of operation of the visual system. In both cases, the tolerances prescribed in Table A1A must be met and the motion response should occur before the end of the first video scan containing new information.

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Figure A2D
Transport Delay for simulation of classic non-computer controlled aircraft.

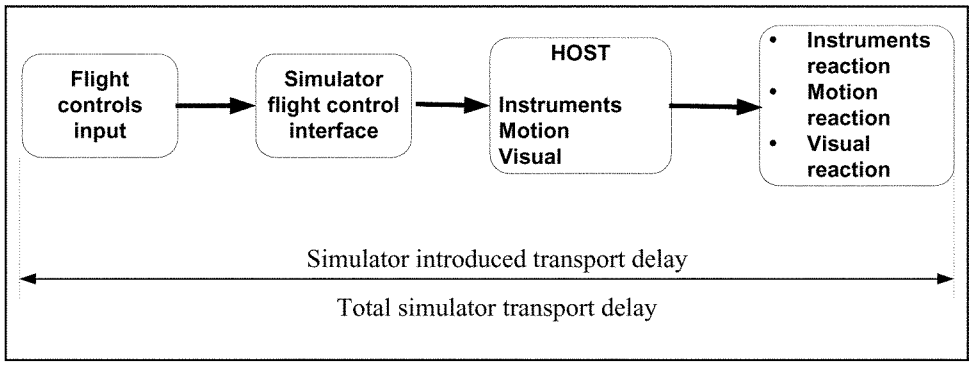


Figure A2E
Transport Delay for simulation of computer controlled aircraft using real airplane black boxes

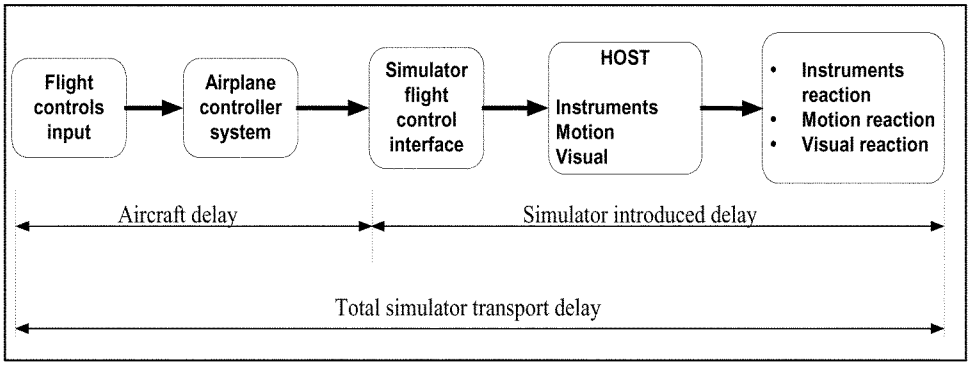


Figure A2F
Transport Delay for simulation of computer controlled aircraft using software emulation of airplane boxes

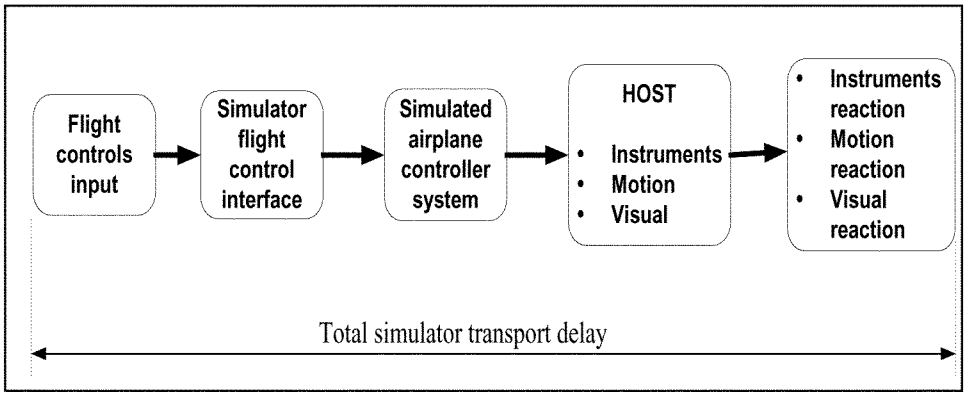
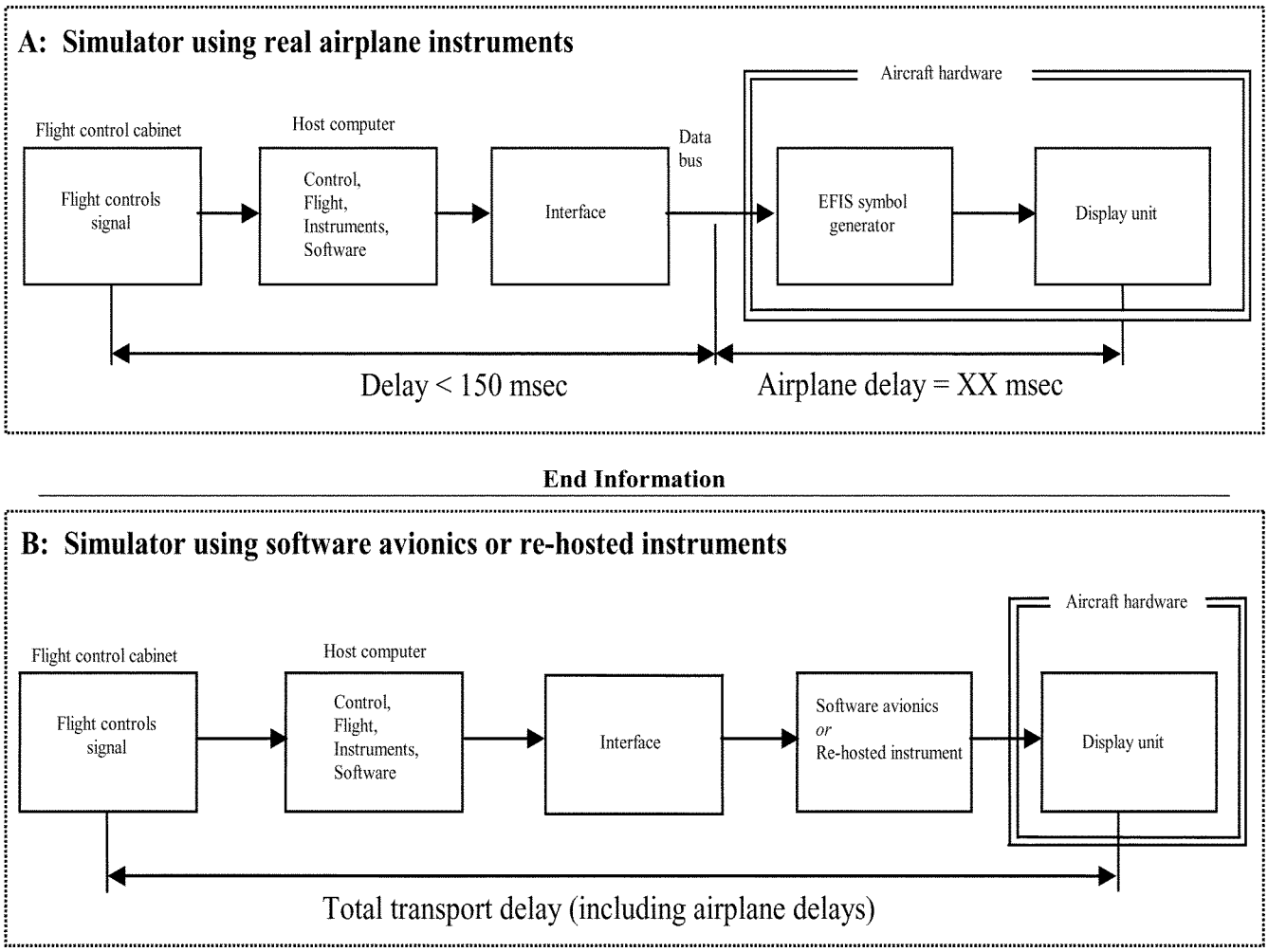


Figure A2GA and A2GB
Transport delay for simulation of airplanes using real or re-hosted instrument drivers



End Information

BILLING CODE 4910–13–C

Begin Information

16. Continuing Qualification Evaluations—Validation Test Data Presentation

a. Background

(1) The MQTG is created during the initial evaluation of a flight simulator. This is the master document, as amended, to which flight simulator continuing qualification evaluation test results are compared.

(2) The currently accepted method of presenting continuing qualification evaluation test results is to provide flight simulator results over-plotted with reference data. Test results are carefully reviewed to determine if the test is within the specified tolerances. This can be a time consuming process, particularly when reference data exhibits rapid variations or an apparent anomaly requiring engineering judgment in the application of the tolerances. In these cases, the solution is to compare the results to the MQTG. The continuing qualification results are compared to the results in the MQTG for acceptance. The flight simulator operator and the NSPM should look for any change in the flight simulator performance since initial qualification.

b. Continuing Qualification Evaluation Test Results Presentation

(1) Flight simulator operators are encouraged to over-plot continuing qualification validation test results with MQTG flight simulator results recorded during the initial evaluation and as amended. Any change in a validation test will be readily apparent. In addition to plotting continuing qualification validation test and MQTG results, operators may elect to plot reference data as well.

(2) There are no suggested tolerances between flight simulator continuing qualification and MQTG validation test results. Investigation of any discrepancy between the MQTG and continuing qualification flight simulator performance is left to the discretion of the flight simulator operator and the NSPM.

(3) Differences between the two sets of results, other than variations attributable to repeatability issues that cannot be explained, should be investigated.

(4) The flight simulator should retain the ability to over-plot both automatic and manual validation test results with reference data.

End Information

Begin QPS Requirements

17. Alternative Data Sources, Procedures, and Instrumentation: Level A and Level B Simulators Only

a. Sponsors are not required to use the alternative data sources, procedures, and instrumentation. However, a sponsor may choose to use one or more of the alternative sources, procedures, and instrumentation described in Table A2E.

End QPS Requirements

Begin Information

b. It has become standard practice for experienced simulator manufacturers to use

modeling techniques to establish data bases for new simulator configurations while awaiting the availability of actual flight test data. The data generated from the aerodynamic modeling techniques is then compared to the flight test data when it becomes available. The results of such comparisons have become increasingly consistent, indicating that these techniques, applied with the appropriate experience, are dependable and accurate for the development of aerodynamic models for use in Level A and Level B simulators.

c. Based on this history of successful comparisons, the NSPM has concluded that those who are experienced in the development of aerodynamic models may use modeling techniques to alter the method for acquiring flight test data for Level A or Level B simulators.

d. The information in Table A2E (Alternative Data Sources, Procedures, and Instrumentation) is presented to describe an acceptable alternative to data sources for simulator modeling and validation and an acceptable alternative to the procedures and instrumentation traditionally used to gather such modeling and validation data.

(1) Alternative data sources that may be used for part or all of a data requirement are the Airplane Maintenance Manual, the Airplane Flight Manual (AFM), Airplane Design Data, the Type Inspection Report (TIR), Certification Data or acceptable supplemental flight test data.

(2) The sponsor should coordinate with the NSPM prior to using alternative data sources in a flight test or data gathering effort.

e. The NSPM position regarding the use of these alternative data sources, procedures, and instrumentation is based on the following presumptions:

(1) Data gathered through the alternative means does not require angle of attack (AOA) measurements or control surface position measurements for any flight test. However, AOA can be sufficiently derived if the flight test program ensures the collection of acceptable level, unaccelerated, trimmed flight data. All of the simulator time history tests that begin in level, unaccelerated, and trimmed flight, including the three basic trim tests and ''fly-by'' trims, can be a successful validation of angle of attack by comparison with flight test pitch angle. (Note: Due to the criticality of angle of attack in the development of the ground effects model, particularly critical for normal landings and landings involving cross-control input applicable to Level B simulators, stable ''fly-by'' trim data will be the acceptable norm for normal and cross-control input landing objective data for these applications.)

(2) The use of a rigorously defined and fully mature simulation controls system model that includes accurate gearing and cable stretch characteristics (where applicable), determined from actual aircraft measurements. Such a model does not require control surface position measurements in the flight test objective data in these limited applications.

f. The sponsor is urged to contact the NSPM for clarification of any issue regarding airplanes with reversible control systems. Table A2E is not applicable to Computer Controlled Aircraft FFSs.

g. Utilization of these alternate data sources, procedures, and instrumentation (Table A2E) does not relieve the sponsor from compliance with the balance of the information contained in this document relative to Level A or Level B FFSs.

h. The term ''inertial measurement system'' is used in the following table to include the use of a functional global positioning system (GPS).

i. Synchronized video for the use of alternative data sources, procedures, and instrumentation should have:

(1) Sufficient resolution to allow magnification of the display to make appropriate measurement and comparisons; and

(2) Sufficient size and incremental marking to allow similar measurement and comparison. The detail provided by the video should provide sufficient clarity and accuracy to measure the necessary parameter(s) to at least ½ of the tolerance authorized for the specific test being conducted and allow an integration of the parameter(s) in question to obtain a rate of change.

End Information

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Table A2E

Alternative Data Sources, Procedures, and Instrumentation				
QPS REQUIREMENTS The standards in this table are required if the data gathering methods described in paragraph 9 of Appendix A are not used.				**INFORMATION**
Table of Objective Tests **Test Entry Number and Title**	**Sim Level**		**Alternative Data Sources, Procedures, and Instrumentation**	**Notes**
	A	**B**		
1.a.1. Performance. Taxi. Minimum Radius turn	X	X	TIR, AFM, or Design data may be used.	
1.a.2. Performance. Taxi Rate of Turn vs. Nosewheel Steering Angle		X	Data may be acquired by using a constant tiller position, measured with a protractor or full rudder pedal application for steady state turn, and synchronized video of heading indicator. If less than full rudder pedal is used, pedal position must be recorded.	A single procedure may not be adequate for all airplane steering systems, therefore appropriate measurement procedures must be devised and proposed for NSPM concurrence.
1.b.1. Performance. Takeoff. Ground Acceleration Time and Distance	X	X	Preliminary certification data may be used. Data may be acquired by using a stop watch, calibrated airspeed, and runway markers during a takeoff with power set before brake release. Power settings may be hand recorded. If an inertial measurement system is installed, speed and distance may be derived from acceleration measurements.	
1.b.2. Performance. Takeoff. Minimum Control Speed - ground (V_{mcg}) using aerodynamic controls only (per applicable airworthiness standard) or low speed, engine inoperative ground control characteristics	X	X	Data may be acquired by using an inertial measurement system and a synchronized video of calibrated airplane instruments and force/position measurements of flight deck controls.	Rapid throttle reductions at speeds near V_{mcg} may be used while recording appropriate parameters. The nosewheel must be free to caster, or equivalently freed of sideforce generation.
1.b.3. Performance. Takeoff. Minimum Unstick Speed (V_{mu}) or equivalent test to demonstrate early rotation takeoff characteristics.	X	X	Data may be acquired by using an inertial measurement system and a synchronized video of calibrated airplane instruments and the force/position measurements of flight deck controls.	
1.b.4. Performance. Takeoff. Normal Takeoff	X	X	Data may be acquired by using an inertial measurement system and a synchronized video of calibrated airplane instruments and force/position measurements of flight deck controls. AOA can be calculated from pitch attitude and flight path.	
1.b.5.	X	X	Data may be acquired by using an	Record airplane dynamic

Table A2E

Alternative Data Sources, Procedures, and Instrumentation				
QPS REQUIREMENTS The standards in this table are required if the data gathering methods described in paragraph 9 of Appendix A are not used.				**INFORMATION**
Table of Objective Tests **Test Entry Number and Title**	**Sim Level**		**Alternative Data Sources, Procedures, and Instrumentation**	**Notes**
	A	**B**		
Performance. Takeoff. Critical Engine Failure during Takeoff			inertial measurement system and a synchronized video of calibrated airplane instruments and force/position measurements of flight deck controls.	response to engine failure and control inputs required to correct flight path.
1.b. 6. Performance. Takeoff. Crosswind Takeoff	**X**	**X**	Data may be acquired by using an inertial measurement system and a synchronized video of calibrated airplane instruments and force/position measurements of flight deck controls.	The "1:7 law" to 100 feet (30 meters) is an acceptable wind profile.
1.b. 7. Performance. Takeoff. Rejected Takeoff	**X**	**X**	Data may be acquired with a synchronized video of calibrated airplane instruments, thrust lever position, engine parameters, and distance (e.g., runway markers). A stop watch is required.	
1.c. 1. Performance. Climb. Normal Climb all engines operating.	**X**	**X**	Data may be acquired with a synchronized video of calibrated airplane instruments and engine power throughout the climb range.	
1.c.2. Performance. Climb. One engine Inoperative Climb	**X**	**X**	Data may be acquired with a synchronized video of calibrated airplane instruments and engine power throughout the climb range.	
1.c.4. Performance. Climb. One Engine Inoperative Approach Climb (if operations in icing conditions are authorized)	**X**	**X**	Data may be acquired with a synchronized video of calibrated airplane instruments and engine power throughout the climb range.	
1.d.1. Cruise / Descent. Level flight acceleration.	**X**	**X**	Data may be acquired with a synchronized video of calibrated airplane instruments, thrust lever position, engine parameters, and elapsed time.	
1.d.2. Cruise / Descent. Level flight deceleration.	**X**	**X**	Data may be acquired with a synchronized video of calibrated airplane instruments, thrust lever position, engine parameters, and elapsed time.	
1.d.4. Cruise / Descent. Idle descent.	**X**	**X**	Data may be acquired with a synchronized video of calibrated airplane instruments, thrust lever position, engine parameters, and elapsed time.	
1.d.5.	**X**	**X**	Data may be acquired with a	

Table A2E

Alternative Data Sources, Procedures, and Instrumentation				
QPS REQUIREMENTS The standards in this table are required if the data gathering methods described in paragraph 9 of Appendix A are not used.				**INFORMATION**
Table of Objective Tests **Test Entry Number and Title**	**Sim Level**		**Alternative Data Sources, Procedures, and Instrumentation**	**Notes**
	A	**B**		
Cruise / Descent. Emergency Descent.			synchronized video of calibrated airplane instruments, thrust lever position, engine parameters, and elapsed time.	
1.e.1. Performance. Stopping. Deceleration time and distance, using manual application of wheel brakes and no reverse thrust on a dry runway.	**X**	**X**	Data may be acquired during landing tests using a stop watch, runway markers, and a synchronized video of calibrated airplane instruments, thrust lever position and the pertinent parameters of engine power.	
1.e.2. Performance. Ground. Deceleration Time and Distance, using reverse thrust and no wheel brakes.	**X**	**X**	Data may be acquired during landing tests using a stop watch, runway markers, and a synchronized video of calibrated airplane instruments, thrust lever position and pertinent parameters of engine power.	
1.f.1. Performance. Engines. Acceleration	**X**	**X**	Data may be acquired with a synchronized video recording of engine instruments and throttle position.	
1.f.2. Performance. Engines. Deceleration	**X**	**X**	Data may be acquired with a synchronized video recording of engine instruments and throttle position.	
2.a.1.a. Handling Qualities. Static Control Checks. Pitch Controller Position vs. Force and Surface Position Calibration	**X**	**X**	Surface position data may be acquired from flight data recorder (FDR) sensor or, if no FDR sensor, at selected, significant column positions (encompassing significant column position data points), acceptable to the NSPM, using a control surface protractor on the ground. Force data may be acquired by using a hand held force gauge at the same column position data points.	For airplanes with reversible control systems, surface position data acquisition should be accomplished with winds less than 5 kts.
2.a.2.a. Handling Qualities. Static Control Checks. Roll Controller Position vs. Force and Surface Position Calibration	**X**	**X**	Surface position data may be acquired from flight data recorder (FDR) sensor or, if no FDR sensor, at selected, significant wheel positions (encompassing significant wheel position data points), acceptable to the NSPM, using a control surface protractor on the ground. Force data may be acquired by using a hand held force gauge at the same wheel position data points.	For airplanes with reversible control systems, surface position data acquisition should be accomplished with winds less than 5 kts.
2.a.3.a.	**X**	**X**	Surface position data may be acquired	For airplanes with

Table A2E

Alternative Data Sources, Procedures, and Instrumentation				
QPS REQUIREMENTS The standards in this table are required if the data gathering methods described in paragraph 9 of Appendix A are not used.				**INFORMATION**
Table of Objective Tests **Test Entry Number and Title**	**Sim Level**		**Alternative Data Sources, Procedures, and Instrumentation**	**Notes**
	A	**B**		
Handling Qualities. Static Control Checks. Rudder Pedal Position vs. Force and Surface Position Calibration			from flight data recorder (FDR) sensor or, if no FDR sensor, at selected, significant rudder pedal positions (encompassing significant rudder pedal position data points), acceptable to the NSPM, using a control surface protractor on the ground. Force data may be acquired by using a hand held force gauge at the same rudder pedal position data points.	reversible control systems, surface position data acquisition should be accomplished with winds less than 5 kts.
2.a.4. Handling Qualities. Static Control Checks. Nosewheel Steering Controller Force and Position	**X**	**X**	Breakout data may be acquired with a hand held force gauge. The remainder of the force to the stops may be calculated if the force gauge and a protractor are used to measure force after breakout for at least 25% of the total displacement capability.	
2.a.5. Handling Qualities. Static Control Checks. Rudder Pedal Steering Calibration	**X**	**X**	Data may be acquired through the use of force pads on the rudder pedals and a pedal position measurement device, together with design data for nosewheel position.	
2.a.6. Handling Qualities. Static Control Checks. Pitch Trim Indicator vs. Surface Position Calibration.	**X**	**X**	Data may be acquired through calculations.	
2.a.7. Handling qualities. Static control tests. Pitch trim rate.	**X**	**X**	Data may be acquired by using a synchronized video of pitch trim indication and elapsed time through range of trim indication.	
2.a.8. Handling Qualities. Static Control tests. Alignment of Flight deck Throttle Lever Angle vs. Selected engine parameter .	**X**	**X**	Data may be acquired through the use of a temporary throttle quadrant scale to document throttle position. Use a synchronized video to record steady state instrument readings or hand-record steady state engine performance readings.	
2.a.9. Handling qualities. Static control tests. Brake pedal position vs. force and brake system pressure calibration.	**X**	**X**	Use of design or predicted data is acceptable. Data may be acquired by measuring deflection at "zero" and "maximum" and calculating deflections between the extremes using the airplane design data curve.	
2.c.1.	**X**	**X**	Data may be acquired by using an	

Table A2E

Alternative Data Sources, Procedures, and Instrumentation				
QPS REQUIREMENTS The standards in this table are required if the data gathering methods described in paragraph 9 of Appendix A are not used.				**INFORMATION**
Table of Objective Tests **Test Entry Number and Title**	**Sim Level**		**Alternative Data Sources, Procedures, and Instrumentation**	**Notes**
	A	**B**		
Handling qualities. Longitudinal control tests. Power change dynamics			inertial measurement system and a synchronized video of calibrated airplane instruments and throttle position.	
2.c.2. Handling qualities. Longitudinal control tests. Flap/slat change dynamics	**X**	**X**	Data may be acquired by using an inertial measurement system and a synchronized video of calibrated airplane instruments and flap/slat position.	
2.c.3. Handling qualities. Longitudinal control tests. Spoiler/speedbrake change dynamics	**X**	**X**	Data may be acquired by using an inertial measurement system and a synchronized video of calibrated airplane instruments and spoiler/speedbrake position.	
2.c.4. Handling qualities. Longitudinal control tests. Gear change dynamics	**X**	**X**	Data may be acquired by using an inertial measurement system and a synchronized video of calibrated airplane instruments and gear position.	
2.c.5. Handling qualities. Longitudinal control tests. Longitudinal trim	**X**	**X**	Data may be acquired through use of an inertial measurement system and a synchronized video of flight deck controls position (previously calibrated to show related surface position) and the engine instrument readings.	
2.c.6. Handling qualities. Longitudinal control tests. Longitudinal maneuvering stability (stick force/g)	**X**	**X**	Data may be acquired through the use of an inertial measurement system and a synchronized video of calibrated airplane instruments; a temporary, high resolution bank angle scale affixed to the attitude indicator; and a wheel and column force measurement indication.	
2.c.7. Handling qualities. Longitudinal control tests. Longitudinal static stability	**X**	**X**	Data may be acquired through the use of a synchronized video of airplane flight instruments and a hand held force gauge.	
2.c.8. Handling qualities. Longitudinal control tests. Stall characteristics	**X**	**X**	Data may be acquired through a synchronized video recording of a stop watch and calibrated airplane airspeed indicator. Hand-record the flight conditions and airplane configuration.	Airspeeds may be cross checked with those in the TIR and AFM.
2.c.9. Handling qualities. Longitudinal control tests. Phugoid dynamics	**X**	**X**	Data may be acquired by using an inertial measurement system and a synchronized video of calibrated airplane instruments and force/position measurements of flight deck controls.	

Table A2E

Alternative Data Sources, Procedures, and Instrumentation				
QPS REQUIREMENTS The standards in this table are required if the data gathering methods described in paragraph 9 of Appendix A are not used.				**INFORMATION**
Table of Objective Tests **Test Entry Number and Title**	**Sim Level**		**Alternative Data Sources, Procedures, and Instrumentation**	**Notes**
	A	**B**		
2.c.10. Handling qualities. Longitudinal control tests. Short period dynamics		**X**	Data may be acquired by using an inertial measurement system and a synchronized video of calibrated airplane instruments and force/position measurements of flight deck controls.	
2.d.1. Handling qualities. Lateral directional tests. Minimum control speed, air (V_{mca} or V_{mci}), per applicable airworthiness standard or Low speed engine inoperative handling characteristics in the air	**X**	**X**	Data may be acquired by using an inertial measurement system and a synchronized video of calibrated airplane instruments and force/position measurements of flight deck controls.	
2.d.2. Handling qualities. Lateral directional tests. Roll response (rate).	**X**	**X**	Data may be acquired by using an inertial measurement system and a synchronized video of calibrated airplane instruments and force/position measurements of flight deck lateral controls.	May be combined with step input of flight deck roll controller test, 2.d.3.
2.d.3. Handling qualities. Lateral directional tests. Roll response to flight deck roll controller step input	**X**	**X**	Data may be acquired by using an inertial measurement system and a synchronized video of calibrated airplane instruments and force/position measurements of flight deck lateral controls.	
2.d.4. Handling qualities. Lateral directional tests. Spiral stability	**X**	**X**	Data may be acquired by using an inertial measurement system and a synchronized video of calibrated airplane instruments; force/position measurements of flight deck controls; and a stop watch.	
2.d.5. Handling qualities. Lateral directional tests. Engine inoperative trim	**X**	**X**	Data may be hand recorded in-flight using high resolution scales affixed to trim controls that have been calibrated on the ground using protractors on the control / trim surfaces with winds less than 5 kts. OR Data may be acquired during second segment climb (with proper pilot control input for an engine-out condition) by using a synchronized video of calibrated airplane instruments and force/position measurements of	Trimming during second segment climb is not a certification task and should not be conducted until a safe altitude is reached.

Table A2E

Alternative Data Sources, Procedures, and Instrumentation				
QPS REQUIREMENTS The standards in this table are required if the data gathering methods described in paragraph 9 of Appendix A are not used.				**INFORMATION**
Table of Objective Tests **Test Entry Number and Title**	**Sim Level**		**Alternative Data Sources, Procedures, and Instrumentation**	**Notes**
	A	**B**		
			flight deck controls.	
2.d.6. Handling qualities. Lateral directional tests. Rudder response.	**X**	**X**	Data may be acquired by using an inertial measurement system and a synchronized video of calibrated airplane instruments andforce/position measurements of rudder pedals.	
2.d.7. Handling qualities. Lateral directional tests. Dutch roll, (yaw damper OFF)	**X**	**X**	Data may be acquired by using an inertial measurement system and a synchronized video of calibrated airplane instruments and force/position measurements of flight deck controls.	
2.d.8. Handling qualities. Lateral directional tests. Steady state sideslip	**X**	**X**	Data may be acquired by using an inertial measurement system and a synchronized video of calibrated airplane instruments and force/position measurements of flight deck controls. Ground track and wind corrected heading may be used for sideslip angle.	
2.e.1. Handling qualities. Landings. Normal landing.		**X**	Data may be acquired by using an inertial measurement system and a synchronized video of calibrated airplane instruments and force/position measurements of flight deck controls.	
2.e.3. Handling qualities. Landings. Crosswind landing.		**X**	Data may be acquired by using an inertial measurement system and a synchronized video of calibrated airplane instruments and force/position measurements of flight deck controls.	
2.e.4. Handling qualities. Landings. One engine inoperative landing.		**X**	Data may be acquired by using an inertial measurement system and a synchronized video of calibrated airplane instruments and the force/position measurements of flight deck controls. Normal and lateral accelerations may be recorded in lieu of AOA and sideslip.	
2.e.5. Handling qualities. Landings. Autopilot landing (if applicable)		**X**	Data may be acquired by using an inertial measurement system and a synchronized video of calibrated airplane instruments and force/position measurements of flight deck controls. Normal and lateral accelerations may be recorded in lieu of AOA and sideslip.	
2.e.6. Handling qualities.		**X**	Data may be acquired by using an inertial measurement system and a	

Table A2E

Alternative Data Sources, Procedures, and Instrumentation				
QPS REQUIREMENTS The standards in this table are required if the data gathering methods described in paragraph 9 of Appendix A are not used.				**INFORMATION**
Table of Objective Tests **Test Entry Number and Title**	**Sim Level**		**Alternative Data Sources, Procedures, and Instrumentation**	**Notes**
	A	**B**		
Landings. All engines operating, autopilot, go around.			synchronized video of calibrated airplane instruments and force/position measurements of flight deck controls. Normal and lateral accelerations may be recorded in lieu of AOA and sideslip.	
2.e.7. Handling qualities. Landings. One engine inoperative go around.		**X**	Data may be acquired by using an inertial measurement system and a synchronized video of calibrated airplane instruments and force/position measurements of flight deck controls. Normal and lateral accelerations may be recorded in lieu of AOA and sideslip.	
2.e.8. Handling qualities. Landings. Directional control (rudder effectiveness with symmetric thrust).		**X**	Data may be acquired by using an inertial measurement system and a synchronized video of calibrated airplane instruments and force/position measurements of flight deck controls. Normal and lateral accelerations may be recorded in lieu of AOA and sideslip.	
2.e.9. Handling qualities. Landings. Directional control (rudder effectiveness with asymmetric reverse thrust).		**X**	Data may be acquired by using an inertial measurement system and a synchronized video of calibrated airplane instruments and force/position measurements of flight deck controls. Normal and lateral accelerations may be recorded in lieu of AOA and sideslip.	
2.f. Handling qualities. Ground effect. Test to demonstrate ground effect		**X**	Data may be acquired by using calibrated airplane instruments, an inertial measurement system, and a synchronized video of calibrated airplane instruments and force/position measurements of flight deck controls.	

End Information

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Begin Information

18. Visual Display Systems—Additional Information on Image Geometry Testing

a. Background.

(1) The geometry of the final image as displayed to each pilot should meet the criteria defined. This assumes that the individual optical components have been tested to demonstrate a performance that is adequate to achieve this end result.

b. Image Position. See test 4.a.2.a.1.

(1) When measured from the pilot's and co-pilot's eyepoint the centre of the image should be positioned horizontally between 0 degrees and 2 degrees inboard and within ± 0.25 degree vertically relative to the aircraft centreline taking into account any designed vertical offset.

(2) The differential between the measurements of horizontal position between each eyepoint should not exceed 1 degree.

(3) The tolerances are based on eye spacings of up to ±53.3 cm (±21 inches). Greater eye spacings should be accompanied by an explanation of any additional tolerance required.

c. Image Absolute Geometry. See test 4.a.2.a.2.

(1) The absolute geometry of any point on the image should not exceed 3 degrees from the theoretical position. This tolerance applies to the central 200 degrees by 40 degrees. For larger fields of view, there should be no distracting discontinuities outside this area.

d. Image Relative Geometry. See test 4.a.2.a.3.

(1) The relative geometry check is intended to test the displayed image to demonstrate that there are no significant changes in image size over a small angle of view. With high detail visual systems, the eye can be a very

powerful comparator to discern changes in geometric size. If there are large changes in image magnification over a small area of the picture the image can appear to 'swim' as it moves across the mirror.

(2) The typical Mylar-based mirror system will naturally tend to form a 'bathtub' shape. This can cause magnification or 'rush' effects at the bottom and top of the image. These can be particularly distracting in the lower half of the mirror when in the final approach phase and hence should be minimized. The tolerances are designed to try to keep these effects to an acceptable level while accepting the technology is limited in its ability to produce a perfect spherical shape.

(3) The 200° × 40° Field of View is divided up into 3 zones to set tolerances for relative geometry as shown in Figure B–9. The testing of the relative geometry should be conducted as follows:

(a) From the pilot's eye position, measure every visible 5 degree point on the vertical lines and horizontal lines. Also, at −90, −60, −30, 0 and +15 degrees in azimuth, measure all visible 1 degree points from the –10° point to the lowest visible point. *Note.— Not all points depicted on the pattern are measured, but they may be measured if observation suggests a problem.*

(b) From the co-pilot's eye position, measure every visible 5 degree point on the vertical lines and horizontal lines. Also, at +90, +60, +30, 0 and −15 degrees in azimuth, measure all visible 1 degree points from the –10° point to the lowest visible point. *Note.— Not all points depicted on the pattern are measured, but they may be measured if observation suggests a problem.*

(c) The relative spacing of points should not exceed the following tolerances when comparing the gap between one pair of dots with the gap between an adjacent pair:

Zone 1 < 0.075 degree/degree.
Zone 2 < 0.15 degree/degree.
Zone 3 < 0.2 degree/degree.

(d) Where 5 degree gaps are being measured the tolerances should be multiplied by 5, e.g., one 5 degree gap should not be more than (5*0.075) = 0.375 deg. more or less than the adjacent gap when in zone 1.

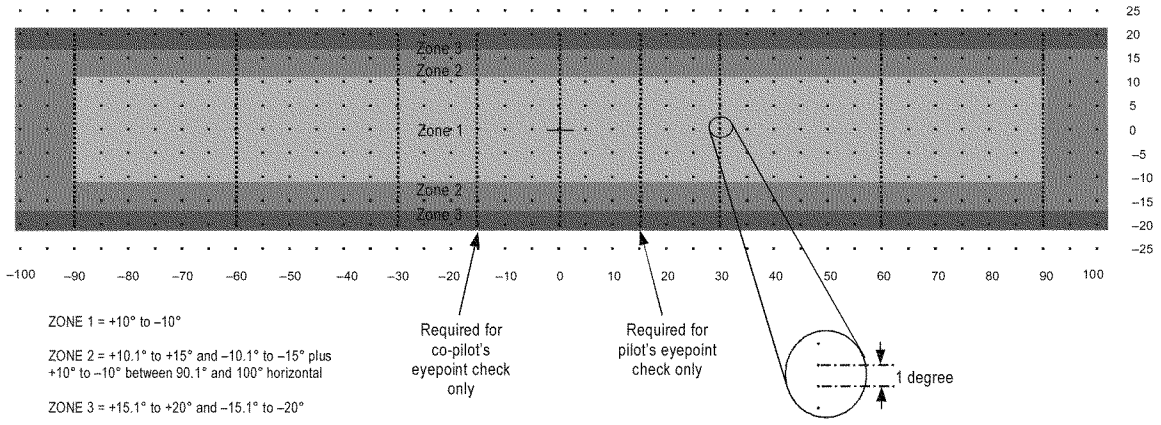
(e) For larger fields of view, there should be no distracting discontinuities outside this area.

(4) For continuing qualification testing, the use of an optical checking device is encouraged. This device should typically consist of a hand-held go/no go gauge to check that the relative positioning is maintained.

Figure A2H

Relative Geometry Test Pattern Showing Zones.

End Information



Attachment 3 to Appendix A to Part 60—Simulator Subjective Evaluation

Begin QPS Requirements

1. Requirements.

a. Except for special use airport models, described as Class III, all airport models required by this part must be representations of real-world, operational airports or representations of fictional airports and must meet the requirements set out in Tables A3B or A3C of this attachment, as appropriate.

b. If fictional airports are used, the sponsor must ensure that navigational aids and all appropriate maps, charts, and other navigational reference material for the fictional airports (and surrounding areas as necessary) are compatible, complete, and accurate with respect to the visual presentation of the airport model of this fictional airport. An SOC must be submitted that addresses navigation aid installation and performance and other criteria (including obstruction clearance protection) for all instrument approaches to the fictional airports that are available in the simulator. The SOC must reference and account for information in the terminal instrument procedures manual and the construction and availability of the required maps, charts, and other navigational material. This material must be clearly marked ''for training purposes only.''

c. When the simulator is being used by an instructor or evaluator for purposes of training, checking, or testing under this chapter, only airport models classified as Class I, Class II, or Class III may be used by the instructor or evaluator. Detailed descriptions/definitions of these classifications are found in Appendix F of this part.

d. When a person sponsors an FFS maintained by a person other than a U.S. certificate holder, the sponsor is accountable for that FFS originally meeting, and continuing to meet, the criteria under which it was originally qualified and the appropriate Part 60 criteria, including the airport models that may be used by instructors or evaluators for purposes of training, checking, or testing under this chapter.

e. Neither Class II nor Class III airport visual models are required to appear on the SOQ, and the method used for keeping instructors and evaluators apprised of the airport models that meet Class II or Class III requirements on any given simulator is at the option of the sponsor, but the method used must be available for review by the TPAA.

f. When an airport model represents a real world airport and a permanent change is made to that real world airport (e.g., a new runway, an extended taxiway, a new lighting system, a runway closure) without a written extension grant from the NSPM (described in paragraph 1.g. of this section), an update to that airport model must be made in accordance with the following time limits:

(1) For a new airport runway, a runway extension, a new airport taxiway, a taxiway extension, or a runway/taxiway closure—within 90 days of the opening for use of the new airport runway, runway extension, new airport taxiway, or taxiway extension; or within 90 days of the closure of the runway or taxiway.

(2) For a new or modified approach light system—within 45 days of the activation of the new or modified approach light system.

(3) For other facility or structural changes on the airport (e.g., new terminal, relocation of Air Traffic Control Tower)—within 180 days of the opening of the new or changed facility or structure.

g. If a sponsor desires an extension to the time limit for an update to a visual scene or airport model or has an objection to what

must be updated in the specific airport model requirement, the sponsor must provide a written extension request to the NSPM stating the reason for the update delay and a proposed completion date, or explain why the update is not necessary (i.e., why the identified airport change will not have an impact on flight training, testing, or checking). A copy of this request or objection must also be sent to the POI/TCPM. The NSPM will send the official response to the sponsor and a copy to the POI/TCPM. If there is an objection, after consultation with the appropriate POI/TCPM regarding the training, testing, or checking impact, the NSPM will send the official response to the sponsor and a copy to the POI/TCPM.

End QPS Requirements

Begin Information

2. Discussion

a. The subjective tests provide a basis for evaluating the capability of the simulator to perform over a typical utilization period; determining that the simulator accurately simulates each required maneuver, procedure, or task; and verifying correct operation of the simulator controls, instruments, and systems. The items listed in the following Tables are for simulator evaluation purposes only. They may not be used to limit or exceed the authorizations for use of a given level of simulator, as described on the SOQ, or as approved by the TPAA.

b. The tests in Table A3A, Operations Tasks, in this attachment, address pilot functions, including maneuvers and procedures (called flight tasks), and are divided by flight phases. The performance of these tasks by the NSPM includes an operational examination of the visual system and special effects. There are flight tasks included to address some features of advanced technology airplanes and innovative training programs. For example, ''high angle-of-attack maneuvering'' is included to provide a required alternative to ''approach to stalls'' for airplanes employing flight envelope protection functions.

c. The tests in Table A3A, Operations Tasks, and Table A3G, Instructor Operating Station of this attachment, address the overall function and control of the simulator including the various simulated environmental conditions; simulated airplane system operations (normal, abnormal, and emergency); visual system displays; and special effects necessary to meet flight crew training, evaluation, or flight experience requirements.

d. All simulated airplane systems functions will be assessed for normal and, where appropriate, alternate operations. Normal, abnormal, and emergency operations associated with a flight phase will be assessed during the evaluation of flight tasks or events within that flight phase. Simulated airplane systems are listed separately under ''Any Flight Phase'' to ensure appropriate attention to systems checks. Operational navigation systems (including inertial navigation systems, global positioning systems, or other long-range systems) and the associated electronic display systems will be evaluated if installed. The NSP pilot will include in his report to the TPAA, the effect of the system operation and any system limitation.

e. Simulators demonstrating a satisfactory circling approach will be qualified for the circling approach maneuver and may be approved for such use by the TPAA in the sponsor's FAA-approved flight training program. To be considered satisfactory, the circling approach will be flown at maximum gross weight for landing, with minimum visibility for the airplane approach category, and must allow proper alignment with a landing runway at least 90° different from the instrument approach course while allowing the pilot to keep an identifiable portion of the airport in sight throughout the maneuver (reference—14 CFR 91.175(e)).

f. At the request of the TPAA, the NSPM may assess a device to determine if it is capable of simulating certain training activities in a sponsor's training program, such as a portion of a Line Oriented Flight Training (LOFT) scenario. Unless directly related to a requirement for the qualification level, the results of such an evaluation would not affect the qualification level of the simulator. However, if the NSPM determines that the simulator does not accurately simulate that training activity, the simulator would not be approved for that training activity.

g. The FAA intends to allow the use of Class III airport models when the sponsor provides the TPAA (or other regulatory authority) an appropriate analysis of the skills, knowledge, and abilities (SKAs) necessary for competent performance of the tasks in which this particular media element is used. The analysis should describe the ability of the FFS/visual media to provide an adequate environment in which the required SKAs are satisfactorily performed and learned. The analysis should also include the specific media element, such as the airport model. Additional sources of information on the conduct of task and capability analysis may be found on the FAA's Advanced Qualification Program (AQP) Web site at: *http://www.faa.gov/education_research/training/aqp/.*

h. The TPAA may accept Class III airport models without individual observation provided the sponsor provides the TPAA with an acceptable description of the process for determining the acceptability of a specific airport model, outlines the conditions under which such an airport model may be used, and adequately describes what restrictions will be applied to each resulting airport or landing area model. Examples of situations that may warrant Class III model designation by the TPAA include the following:

(a) Training, testing, or checking on very low visibility operations, including SMGCS operations.

(b) Instrument operations training (including instrument takeoff, departure, arrival, approach, and missed approach training, testing, or checking) using—

(i) A specific model that has been geographically ''moved'' to a different location and aligned with an instrument procedure for another airport.

(ii) A model that does not match changes made at the real-world airport (or landing area for helicopters) being modeled.

(iii) A model generated with an ''off-board'' or an ''on-board'' model development tool (by providing proper latitude/longitude reference; correct runway or landing area orientation, length, width, marking, and lighting information; and appropriate adjacent taxiway location) to generate a facsimile of a real world airport or landing area.

i. Previously qualified simulators with certain early generation Computer Generated Image (CGI) visual systems, are limited by the capability of the Image Generator or the display system used. These systems are:

(1) Early CGI visual systems that are excepted from the requirement of including runway numbers as a part of the specific runway marking requirements are:

(a) Link NVS and DNVS.

(b) Novoview 2500 and 6000.

(c) FlightSafety VITAL series up to, and including, VITAL III, but not beyond.

(d) Redifusion SP1, SP1T, and SP2.

(2) Early CGI visual systems are excepted from the requirement of including runway numbers unless the runways are used for LOFT training sessions. These LOFT airport models require runway numbers but only for the specific runway end (one direction) used in the LOFT session. The systems required to display runway numbers only for LOFT scenes are:

(a) FlightSafety VITAL IV.

(b) Redifusion SP3 and SP3T.

(c) Link-Miles Image II.

(3) The following list of previously qualified CGI and display systems are incapable of generating blue lights. These systems are not required to have accurate taxi-way edge lighting:

(a) Redifusion SP1.

(b) FlightSafety Vital IV.

(c) Link-Miles Image II and Image IIT

(d) XKD displays (even though the XKD image generator is capable of generating blue colored lights, the display cannot accommodate that color).

End Information

Table A3A

Functions And Subjective Tests					
QPS REQUIREMENTS					
Entry Number	Operations Tasks	Simulator Level			
		A	B	C	D
	Tasks in this table are subject to evaluation if appropriate for the airplane simulated as indicated in the SOQ Configuration List or the level of simulator qualification involved. Items not installed or not functional on the simulator and, therefore, not appearing on the SOQ Configuration List, are not required to be listed as exceptions on the SOQ.				
1.	**Preparation For Flight**				
1.a.	**Pre-flight.** Accomplish a functions check of all switches, indicators, systems, and equipment at all crew members' and instructors' stations and determine that:				
1.a.1	The flight deck design and functions are identical to that of the airplane simulated.	X	X	X	X
1.a.2	Reserved				
1.a.3	Reserved				
2.	**Surface Operations (pre-flight).**				
2.a.	**Engine Start.**				
2.a.1.	Normal start.	X	X	X	X
2.a.2.	Alternate start procedures.	X	X	X	X
2.a.3.	Abnormal starts and shutdowns (e.g., hot/hung start, tail pipe fire).	X	X	X	X
2.b.	**Taxi.**				
2.b.1	Pushback/powerback	X	X	X	X
2.b.2.	Thrust response.	X	X	X	X
2.b.3.	Power lever friction.	X	X	X	X
2.b.4.	Ground handling.	X	X	X	X
2.b.5.	Nosewheel scuffing.			X	X
2.b.6.	Taxi aids (e.g. taxi camera, moving map)			X	X
2.b.7.	Low visibility (taxi route, signage, lighting, markings, etc.)			X	X
2.c.	**Brake Operation**				
2.c.1.	Brake operation (normal and alternate/emergency).	X	X	X	X
2.c.2.	Brake fade (if applicable).	X	X	X	X
2.d	**Other**				
3.	**Take-off.**				
3.a.	**Normal.**				
3.a.1.	Airplane/engine parameter relationships, including run-up.	X	X	X	X
3.a.2.	Nosewheel and rudder steering.	X	X	X	X
3.a.3.	Crosswind (maximum demonstrated and gusting crosswind).	X	X	X	X
3.a.4.	Special performance				
3.a.4.a	Reduced V_1	X	X	X	X
3.a.4.b	Maximum engine de-rate.	X	X	X	X
3.a.4.c	Soft surface.			X	X
3.a.4.d	Short field/short take-off and landing (STOL) operations.	X	X	X	X
3.a.4.e	Obstacle (performance over visual obstacle).			X	X
3.a.5.	Low visibility take-off.	X	X	X	X
3.a.6.	Landing gear, wing flap leading edge device operation.	X	X	X	X
3.a.7.	Contaminated runway operation.			X	X

Table A3A

Functions And Subjective Tests					
QPS REQUIREMENTS					
Entry Number	Operations Tasks	Simulator Level			
		A	B	C	D
3.a.8.	Other				
3.b.	Abnormal/emergency.				
3.b.1.	Rejected Take-off.	X	X	X	X
3.b.2.	Rejected special performance (e.g., reduced V_1, max de-rate, short field operations).	X	X	X	X
3.b.3.	Rejected take-off with contaminated runway.			X	X
3.b.4.	Takeoff with a propulsion system malfunction (allowing an analysis of causes, symptoms, recognition, and the effects on aircraft performance and handling) at the following points: . (i) Prior to V1 decision speed. (ii) Between V1 and Vr (rotation speed). (iii)Between Vr and 500 feet above ground level.	X	X	X	X
3.b.5.	Flight control system failures, reconfiguration modes, manual reversion and associated handling.	X	X	X	X
3.b.6.	Other				
4.	**Climb.**				
4.a.	Normal.	X	X	X	X
4.b.	One or more engines inoperative.	X	X	X	X
4.c.	Approach climb in icing (for airplanes with icing accountability).	X	X	X	X
4.d.	Other				
5.	**Cruise.**				
5.a.	**Performance characteristics (speed vs. power, configuration, and attitude)**				
5.a.1.	Straight and level flight.	X	X	X	X
5.a.2.	Change of airspeed.	X	X	X	X
5.a.3.	High altitude handling.	X	X	X	X
5.a.4.	High Mach number handling (Mach tuck, Mach buffet) and recovery (trim change).	X	X	X	X
5.a.5.	Overspeed warning (in excess of V_{mo} or M_{mo}).	X	X	X	X
5.a.6.	High IAS handling.	X	X	X	X
5.a.7.	Other				
5.b.	**Maneuvers.**				
5.b.1.	High Angle of Attack				
5.b.1.a	High angle of attack, approach to stalls, stall warning, stall buffet, and stall (take-off, cruise, approach, and landing configuration) including reaction of the autoflight system and stall protection system.			X	X
5.b.1.b	High angle of attack, approach to stalls, stall warning, and stall buffet (take-off, cruise, approach, and landing configuration) including reaction of the autoflight system and stall protection system.	X	X		
5.b.2.	Slow flight	X	X	X	X
5.b.3.	Reserved			X	X
5.b.4.	Flight envelope protection (high angle of attack, bank limit,	X	X	X	X

Table A3A

Functions And Subjective Tests QPS REQUIREMENTS					
Entry Number	Operations Tasks	Simulator Level			
		A	B	C	D
	overspeed, etc.).				
5.b.5.	Turns with/without speedbrake/spoilers deployed.	X	X	X	X
5.b.6.	Normal and standard rate turns.	X	X	X	X
5.b.7.	Steep turns	X	X	X	X
5.b.8.	Performance turn	X	X	X	X
5.b.9.	In flight engine shutdown and restart (assisted and windmill).	X	X	X	X
5.b.10.	Maneuvering with one or more engines inoperative, as appropriate.	X	X	X	X
5.b.11.	Specific flight characteristics (e.g., direct lift control).	X	X	X	X
5.b.12.	Flight control system failures, reconfiguration modes, manual reversion and associated handling.	X	X	X	X
5.b.13	Gliding to a forced landing.			X	X
5.b.14	Visual resolution and FSTD handling and performance for the following (where applicable by aircraft type and training program):				
5.b.14.a	Terrain accuracy for forced landing area selection.			X	X
5.b.14.b	Terrain accuracy for VFR Navigation.			X	X
5.b.14.c	Eights on pylons (visual resolution).			X	X
5.b.14.d	Turns about a point.			X	X
5.b.14.e	S-turns about a road or section line.			X	X
5.b.15	Upset recognition and recovery			X	X
5.b.16	Other.				
6.	**Descent.**				
6.a.	Normal.	X	X	X	X
6.b.	Maximum rate/emergency (clean and with speedbrake, etc.).	X	X	X	X
6.c.	With autopilot.	X	X	X	X
6.d.	Flight control system failures, reconfiguration modes, manual reversion and associated handling.	X	X	X	X
6.e.	Other				
7.	**Instrument Approaches And Landing.** Those instrument approach and landing tests relevant to the simulated airplane type are selected from the following list. Some tests are made with limiting wind velocities, under windshear conditions, and with relevant system failures, including the failure of the Flight Director. If Standard Operating Procedures allow use autopilot for non-precision approaches, evaluation of the autopilot will be included. Level A simulators are not authorized to credit the landing maneuver.				
7.a.	**Precision approach**				
7.a.1	CAT I published approaches.				
7.a.1.a	Manual approach with/without flight director including landing.	X	X	X	X
7.a.1.b	Autopilot/autothrottle coupled approach and manual landing.	X	X	X	X
7.a.1.c	Autopilot/autothrottle coupled approach, engine(s) inoperative.	X	X	X	X
7.a.1.d	Manual approach, engine(s) inoperative.	X	X	X	X

Table A3A

Functions And Subjective Tests					
QPS REQUIREMENTS					
Entry Number	Operations Tasks	Simulator Level			
		A	B	C	D
7.a.1.e	HUD/EFVS.	X	X	X	X
7.a.2	CAT II published approaches.				
7.a.2.a	Autopilot/autothrottle coupled approach to DH and landing (manual and autoland).	X	X	X	X
7.a.2.b	Autopilot/autothrottle coupled approach with one-engine-inoperative approach to DH and go-around (manual and autopilot).	X	X	X	X
7.a.2.c	HUD/EFVS.	X	X	X	X
7.a.3	CAT III published approaches.				
7.a.3.a	Autopilot/autothrottle coupled approach to landing and roll-out (if applicable) guidance (manual and autoland).	X	X	X	X
7.a.3.b	Autopilot/autothrottle coupled approach to DH and go-around (manual and autopilot).	X	X	X	X
7.a.3.c	Autopilot/autothrottle coupled approach to land and roll-out (if applicable) guidance with one engine inoperative (manual and autoland).	X	X	X	X
7.a.3.d	Autopilot/autothrottle coupled approach to DH and go-around with one engine inoperative (manual and autopilot).	X	X	X	X
7.a.3.e	HUD/EFVS.	X	X	X	X
7.a.4	Autopilot/autothrottle coupled approach (to a landing or to a go-around):				
7.a.4.a	With generator failure.	X	X	X	X
7.a.4.b	With maximum tail wind component certified or authorized.	X	X	X	X
7.a.4.c	With maximum crosswind component demonstrated or authorized.	X	X	X	X
7.a.5	PAR approach, all engine(s) operating and with one or more engine(s) inoperative.	X	X	X	X
7.a.6	MLS, GBAS, all engine(s) operating and with one or more engine(s) inoperative.	X	X	X	X
7.b.	**Non-precision approach.**				
7.b.1	Surveillance radar approach, all engine(s) operating and with one or more engine(s) inoperative.	X	X	X	X
7.b.2	NDB approach, all engine(s) operating and with one or more engine(s) inoperative.	X	X	X	X
7.b.3	VOR, VOR/DME, TACAN approach, all engines(s) operating and with one or more engine(s) inoperative.	X	X	X	X
7.b.4	RNAV / RNP / GNSS (RNP at nominal and minimum authorized temperatures) approach, all engine(s) operating and with one or more engine(s) inoperative.	X	X	X	X
7.b.5	ILS LLZ (LOC), LLZ back course (or LOC-BC) approach, all engine(s) operating and with one or more engine(s) inoperative.	X	X	X	X
7.b.6	ILS offset localizer approach, all engine(s) operating and with one or more engine(s) inoperative.	X	X	X	X

Table A3A

Functions And Subjective Tests					
QPS REQUIREMENTS					
Entry Number	Operations Tasks	Simulator Level			
		A	B	C	D
7.c	**Approach procedures with vertical guidance (APV), e.g. SBAS, flight path vector.**				
7.c.1	APV/baro-VNAV approach, all engine(s) operating and with one or more engine(s) inoperative.			X	X
7.c.2	Area navigation (RNAV) approach procedures based on SBAS, all engine(s) operating and with one or more engine(s) inoperative.			X	X
8.	**Visual Approaches (Visual Segment) And Landings.** Flight simulators with visual systems, which permit completing a special approach procedure in accordance with applicable regulations, may be approved for that particular approach procedure.				
8.a.	Maneuvering, normal approach and landing, all engines operating with and without visual approach aid guidance.	X	X	X	X
8.b.	Approach and landing with one or more engines inoperative.	X	X	X	X
8.c.	Operation of landing gear, flap/slats and speedbrakes (normal and abnormal).	X	X	X	X
8.d.	Approach and landing with crosswind (max. demonstrated and gusting crosswind).	X	X	X	X
8.e.	Approach and landing with flight control system failures, reconfiguration modes, manual reversion and associated handling (most significant degradation which is probable).	X	X	X	X
8.e.1.	Approach and landing with trim malfunctions.	X	X	X	X
8.e.1.a	Longitudinal trim malfunction.	X	X	X	X
8.e.1.b	Lateral-directional trim malfunction.	X	X	X	X
8.f.	Approach and landing with standby (minimum) electrical/hydraulic power.	X	X	X	X
8.g.	Approach and landing from circling conditions (circling approach).	X	X	X	X
8.h.	Approach and landing from visual traffic pattern.	X	X	X	X
8.i.	Approach and landing from non-precision approach.	X	X	X	X
8.j.	Approach and landing from precision approach.	X	X	X	X
8.k.	Other				
9.	**Missed Approach.**				
9.a.	All engines, manual and autopilot.	X	X	X	X
9.b.	Engine(s) inoperative, manual and autopilot.	X	X	X	X
9.c.	Rejected landing	X	X	X	X
9.d.	With flight control system failures, reconfiguration modes, manual reversion and associated handling.	X	X	X	X
9.e.	Bounced landing			X	X
10.	**Surface Operations (landing, after-landing and post-flight).**				
10.a	**Landing roll and taxi.**				

Table A3A

Functions And Subjective Tests					
QPS REQUIREMENTS					
Entry Number	Operations Tasks	Simulator Level			
		A	B	C	D
10.a.1	HUD/EFVS.				
10.a.2.	Spoiler operation.	X	X	X	X
10.a.3.	Reverse thrust operation.	X	X	X	X
10.a.4.	Directional control and ground handling, both with and without reverse thrust.		X	X	X
10.a.5.	Reduction of rudder effectiveness with increased reverse thrust (rear pod-mounted engines).		X	X	X
10.a.6.	Brake and anti-skid operation				
10.a.6.a	Brake and anti-skid operation with dry, patchy wet, wet on rubber residue, and patchy icy conditions.			X	X
10.a.6.b	Brake and anti-skid operation with dry and wet conditions.				
10.a.6.c	Brake and anti-skid operation with dry conditions.	X	X		
10.a.6.d	Auto-braking system operation.	X	X	X	X
10.a.7	Other				
10.b	**Engine shutdown and parking.**				
10.b.1	Engine and systems operation.	X	X	X	X
10.b.2	Parking brake operation.	X	X	X	X
10.b.3	Other.				
11.	**Any Flight Phase.**				
11.a.	**Airplane and engine systems operation (where fitted).**				
11.a.1.	Air conditioning and pressurization (ECS).	X	X	X	X
11.a.2.	De-icing/anti-icing.	X	X	X	X
11.a.3.	Auxiliary power unit (APU).	X	X	X	X
11.a.4.	Communications.	X	X	X	X
11.a.5.	Electrical.	X	X	X	X
11.a.6.	Fire and smoke detection and suppression.	X	X	X	X
11.a.7.	Flight controls (primary and secondary).	X	X	X	X
11.a.8.	Fuel and oil	X	X	X	X
11.a.9.	Hydraulic				
11.a.10.	Pneumatic				
11.a.11.	Landing gear.	X	X	X	X
11.a.12.	Oxygen.	X	X	X	X
11.a.13.	Engine.	X	X	X	X
11.a.14.	Airborne radar.	X	X	X	X
11.a.15.	Autopilot and Flight Director.	X	X	X	X
11.a.16.	Terrain awareness warning systems and collision avoidance systems (e.g. EGPWS, GPWS, TCAS).	X	X	X	X
11.a.17.	Flight control computers including stability and control augmentation.	X	X	X	X
11.a.18.	Flight display systems.	X	X	X	X
11.a.19.	Flight management computers.	X	X	X	X
11.a.20.	Head-up displays (including EFVS, if appropriate).	X	X	X	X
11.a.21.	Navigation systems	X	X	X	X

Table A3A

Functions And Subjective Tests					
QPS REQUIREMENTS					
Entry Number	Operations Tasks	Simulator Level			
		A	B	C	D
11.a.22.	Stall warning/avoidance	X	X	X	X
11.a.23.	Wind shear avoidance/recovery guidance equipment	X	X	X	X
11.a.24.	Flight envelope protections	X	X	X	X
11.a.25.	Electronic flight bag	X	X	X	X
11.a.26.	Automatic checklists (normal, abnormal and emergency procedures).	X	X	X	X
11.a.27.	Runway alerting and advisory system.	X	X	X	X
11.a.28.	Other				
11.b.	**Airborne procedures.**				
11.b.1.	Holding.	X	X	X	X
11.b.2.	Air hazard avoidance (traffic, weather, including visual correlation).			X	X
11.b.3.	Windshear.				
11.b.3.a	Prior to take-off rotation.			X	X
11.b.3.b	At lift-off			X	X
11.b.3.c	During initial climb.			X	X
11.b.3.d	On final approach, below 150 m (500 ft) AGL.			X	X
11.b.4.	Effects of airframe ice.			X	X

Table A3B

Functions and Subjective Tests					
QPS REQUIREMENTS					
Entry Number	For Qualification At The Stated Level Class I Airport Models	Simulator Level			
		A	B	C	D
This table specifies the minimum airport model content and functionality to qualify a simulator at the indicated level. This table applies only to the airport models required for simulator qualification; i.e., one airport model for Level A and Level B simulators; three airport models for Level C and Level D simulators.					
Begin QPS Requirements					
1.	**Functional test content requirements for Level A and Level B simulators.** The following is the minimum airport model content requirement to satisfy visual capability tests, and provides suitable visual cues to allow completion of all functions and subjective tests described in this attachment for simulators at Levels A and B.				
1.a.	A minimum of one (1) representative airport model. This model identification must be acceptable to the sponsor's TPAA, selectable from the IOS, and listed on the SOQ.	X	X		
1.b.	The fidelity of the airport model must be sufficient for the aircrew to visually identify the airport; determine the position of the simulated airplane within a night visual scene; successfully accomplish take-offs, approaches, and landings; and maneuver around the airport on the ground as necessary.	X	X		
1.c.	Runways:	X	X		
1.c.1.	Visible runway number.	X	X		
1.c.2.	Runway threshold elevations and locations must be modeled to provide sufficient correlation with airplane systems (e.g., altimeter).	X	X		
1.c.3.	Runway surface and markings.	X	X		
1.c.4.	Lighting for the runway in use including runway edge and centerline.	X	X		
1.c.5.	Lighting, visual approach aid and approach lighting of appropriate colors.	X	X		
1.c.6.	Representative taxiway lights.	X	X		
2.a.	**Additional functional test content requirements**				
2.a.1	**Airport scenes**				
2.a.1.a	A minimum of three (3) real-world airport models to be consistent with published data used for airplane operations and capable of demonstrating all the visual system features below. Not all of the elements described in this section must be found in a single airport model. Each model should be in a different visual scene to permit assessment of FSTD automatic visual scene changes. The model identifications must be acceptable to the sponsor's TPAA, selectable from the IOS, and listed on the SOQ.			X	X
2.a.1.b	Reserved				
2.a.1.c	Reserved				
2.a.1.d	**Airport model content.** For circling approaches, all tests apply to the runway used for the initial approach and to the runway of intended landing. If all runways in an airport model used to meet the requirements of this attachment are not designated as "in use," then the "in use"	X	X	X	X

Table A3B

Functions and Subjective Tests					
QPS REQUIREMENTS					
Entry Number	For Qualification At The Stated Level Class I Airport Models	Simulator Level			
		A	B	C	D
	runways must be listed on the SOQ (e.g., KORD, Rwys 9R, 14L, 22R). Models of airports with more than one runway must have all significant runways not "in-use" visually depicted for airport and runway recognition purposes. The use of white or off white light strings that identify the runway threshold, edges, and ends for twilight and night scenes are acceptable for this requirement. Rectangular surface depictions are acceptable for daylight scenes. A visual system's capabilities must be balanced between providing airport models with an accurate representation of the airport and a realistic representation of the surrounding environment. Airport model detail must be developed using airport pictures, construction drawings and maps, or other similar data, or developed in accordance with published regulatory material; however, this does not require that such models contain details that are beyond the design capability of the currently qualified visual system. Only one "primary" taxi route from parking to the runway end will be required for each "in-use" runway.				
2.a.2	**Visual scene fidelity.**				
2.a.2.a	The visual scene should correctly represent the parts of the airport and its surroundings used in the training program.	**X**	**X**	**X**	**X**
2.a.2.b	Reserved				
2.a.2.c	Reserved				
2.a.3	**Runways and taxiways.**				
2.a.3.a	The airport runways and taxiways.	**X**	**X**	**X**	**X**
2.a.3.b	Reserved				
2.a.3.c	Reserved				
2.a.4	If appropriate to the airport, two parallel runways and one crossing runway displayed simultaneously; at least two runways should be capable of being lit simultaneously.			**X**	**X**
2.a.5	Runway threshold elevations and locations should be modelled to provide correlation with airplane systems (e.g. HUD, GPS, compass, altimeter).			**X**	**X**
2.a.6	Slopes in runways, taxiways, and ramp areas should not cause distracting or unrealistic effects, including pilot eye-point height variation.			**X**	**X**
2.a.7	**Runway surface and markings for each "in-use" runway should include the following, if appropriate:**				
2.a.7.a	Threshold markings.	**X**	**X**	**X**	**X**
2.a.7.b	Runway numbers.	**X**	**X**	**X**	**X**
2.a.7.c	Touchdown zone markings.	**X**	**X**	**X**	**X**
2.a.7.d	Fixed distance markings.	**X**	**X**	**X**	**X**
2.a.7.e	Edge markings.	**X**	**X**	**X**	**X**
2.a.7.f	Center line markings.	**X**	**X**	**X**	**X**
2.a.7.g	Distance remaining signs.	**X**	**X**	**X**	**X**

Table A3B

Functions and Subjective Tests					
QPS REQUIREMENTS					
Entry Number	**For Qualification At The Stated Level** **Class I Airport Models**	**Simulator Level**			
		A	**B**	**C**	**D**
2.a.7.h	Signs at intersecting runways and taxiways.	**X**	**X**	**X**	**X**
2.a.7.i	Windsock that gives appropriate wind cues.			**X**	**X**
2.a.8	**Runway lighting of appropriate colors, directionality, behavior and spacing for the "in-use" runway including the following:**				
2.a.8.a	Threshold lights.	**X**	**X**	**X**	**X**
2.a.8.b	Edge lights.	**X**	**X**	**X**	**X**
2.a.8.c	End lights.	**X**	**X**	**X**	**X**
2.a.8.d	Center line lights.	**X**	**X**	**X**	**X**
2.a.8.e	Touchdown zone lights.	**X**	**X**	**X**	**X**
2.a.8.f	Lead-off lights.	**X**	**X**	**X**	**X**
2.a.8.g	Appropriate visual landing aid(s) for that runway.	**X**	**X**	**X**	**X**
2.a.8.h	Appropriate approach lighting system for that runway.	**X**	**X**	**X**	**X**
2.a.9	**Taxiway surface and markings (associated with each "in-use" runway):**				
2.a.9.a	Edge markings	**X**	**X**	**X**	**X**
2.a.9.b	Center line markings.	**X**	**X**	**X**	**X**
2.a.9.c	Runway holding position markings.	**X**	**X**	**X**	**X**
2.a.9.d	ILS critical area markings.	**X**	**X**	**X**	**X**
2.a.9.e	All taxiway markings, lighting, and signage to taxi, as a minimum, from a designated parking position to a designated runway and return, after landing on the designated runway, to a designated parking position; a low visibility taxi route (e.g. surface movement guidance control system, follow-me truck, daylight taxi lights) should also be demonstrated for those operations authorized in low visibilities. The designated runway and taxi routing should be consistent with that airport for operations in low visibilities.				**X**
2.a.10	**Taxiway lighting of appropriate colors, directionality, behavior and spacing (associated with each "in-use" runway):**				
2.a.10.a	Edge lights.	**X**	**X**	**X**	**X**
2.a.10.b	Center line lights.	**X**	**X**	**X**	**X**
2.a.10.c	Runway holding position and ILS critical area lights.	**X**	**X**	**X**	**X**
2.a.11	**Required visual model correlation with other aspects of the airport environment simulation.**				
2.a.11.a	The airport model should be properly aligned with the navigational aids that are associated with operations at the runway "in-use".	**X**	**X**	**X**	**X**
2.a.11.b	The simulation of runway contaminants should be correlated with the displayed runway surface and lighting.				**X**
2.a.12	**Airport buildings, structures and lighting.**				
2.a.12.a	Buildings, structures and lighting:				
2.a.12.a.	The airport buildings, structures and lighting.			**X**	**X**
2.a.12.a.	Reserved				
2.a.12.a.	Reserved				
2.a.12.b	At least one useable gate, set at the appropriate height (required only for those airplanes that typically operate from terminal gates).			**X**	**X**
2.a.12.c	Representative moving and static gate clutter (e.g. other airplanes,			**X**	**X**

Table A3B

Functions and Subjective Tests					
QPS REQUIREMENTS					
Entry Number	**For Qualification At The Stated Level** **Class I Airport Models**	**Simulator Level**			
		A	**B**	**C**	**D**
	power carts, tugs, fuel trucks, additional gates).				
2.a.12.d	Gate/apron markings (e.g. hazard markings, lead-in lines, gate numbering), lighting and gate docking aids or a marshaller.			**X**	**X**
2.a.13	**Terrain and obstacles.**				
2.a.13.a	Terrain and obstacles within 46 km (25 NM) of the reference airport.			**X**	**X**
2.a.13.b	Reserved				
2.a.14	**Significant, identifiable natural and cultural features.**				
2.a.14.a	Significant, identifiable natural and cultural features within 46 km (25 NM) of the reference airport. *Note.— This refers to natural and cultural features that are typically used for pilot orientation in flight. Outlying airports not intended for landing need only provide a reasonable facsimile of runway orientation.*			**X**	**X**
2.a.14.b	Reserved				
2.a.14.c	Representative moving airborne traffic (including the capability to present air hazards – e.g. airborne traffic on a possible collision course).			**X**	**X**
2.b	**Visual scene management.**				
2.b.1	All airport runway, approach and taxiway lighting and cultural lighting intensity for any approach should be capable of being set to six (6) different intensities (0 to 5); all visual scene light points should fade into view appropriately.			**X**	**X**
2.b.2	Airport runway, approach and taxiway lighting and cultural lighting intensity for any approach should be set at an intensity representative of that used in training for the visibility set; all visual scene light points should fade into view appropriately.	**X**	**X**		
2.b.3	The directionality of strobe lights, approach lights, runway edge lights, visual landing aids, runway center line lights, threshold lights, and touchdown zone lights on the runway of intended landing should be realistically replicated.	**X**	**X**	**X**	**X**
2.c	**Visual feature recognition.** *Note.— The following are the minimum distances at which runway features should be visible. Distances are measured from runway threshold to an airplane aligned with the runway on an extended 3-degree glide slope in suitable simulated meteorological conditions. For circling approaches, all tests below apply both to the runway used for the initial approach and to the runway of intended landing.*				
2.c.1	Runway definition, strobe lights, approach lights, and runway edge white lights from 8 km (5 sm) of the runway threshold.	**X**	**X**	**X**	**X**
2.c.2	**Visual approach aids lights.**				
2.c.2.a	Visual approach aids lights from 8 km (5 sm) of the runway threshold.			**X**	**X**
2.c.2.b	Visual approach aids lights from 4.8 km (3 sm) of the runway threshold.	**X**	**X**		

Table A3B

Functions and Subjective Tests QPS REQUIREMENTS					
Entry Number	For Qualification At The Stated Level Class I Airport Models	Simulator Level			
		A	B	C	D
2.c.3	Runway center line lights and taxiway definition from 4.8 km (3 sm).	X	X	X	X
2.c.4	Threshold lights and touchdown zone lights from 3.2 km (2 sm).	X	X	X	X
2.c.5	Runway markings within range of landing lights for night scenes; as required by the surface resolution test on day scenes.	X	X	X	X
2.c.6	For circling approaches, the runway of intended landing and associated lighting should fade into view in a non-distracting manner.	X	X	X	X
2.d	**Selectable airport visual scene capability for:**				
2.d.1	Night.	X	X	X	X
2.d.2	Twilight.			X	X
2.d.3	Day.			X	X
2.d.4	Dynamic effects — the capability to present multiple ground and air hazards such as another airplane crossing the active runway or converging airborne traffic; hazards should be selectable via controls at the instructor station.			X	X
2.d.5	Illusions — operational visual scenes which portray representative physical relationships known to cause landing illusions, for example short runways, landing approaches over water, uphill or downhill runways, rising terrain on the approach path and unique topographic features. *Note.— Illusions may be demonstrated at a generic airport or at a specific airport.*				X
2.e	**Correlation with airplane and associated equipment.**				
2.e.1	Visual cues to relate to actual airplane responses.	X	X	X	X
2.e.2	**Visual cues during take-off, approach and landing.**				
2.e.2.a	Visual cues to assess sink rate and depth perception during landings.		X	X	X
2.e.2.b	Visual cueing sufficient to support changes in approach path by using runway perspective. Changes in visual cues during take-off, approach and landing should not distract the pilot.	X	X	X	X
2.e.3	Accurate portrayal of environment relating to airplane attitudes.	X	X	X	X
2.e.4	The visual scene should correlate with integrated airplane systems, where fitted (e.g. terrain, traffic and weather avoidance systems and HUD/EFVS).			X	X
2.e.5	The effect of rain removal devices should be provided.			X	X
2.f	**Scene quality.**				
2.f.1	**Quantization.**				
2.f.1.a	Surfaces and textural cues should be free from apparent quantization (aliasing).			X	X
2.f.1.b	Surfaces and textural cues should not create distracting quantization (aliasing).	X	X		

Table A3B

Functions and Subjective Tests QPS REQUIREMENTS					
Entry Number	For Qualification At The Stated Level Class I Airport Models	Simulator Level			
		A	B	C	D
2.f.2	System capable of portraying full color realistic textural cues.			X	X
2.f.3	The system light points should be free from distracting jitter, smearing or streaking.	X	X	X	X
2.f.4	System capable of providing focus effects that simulate rain.			X	X
2.f.5	System capable of providing light point perspective growth.			X	X
2.g	**Environmental effects.**				
2.g.1	The displayed scene should correspond to the appropriate surface contaminants and include runway lighting reflections for wet, partially obscured lights for snow, or suitable alternative effects.			X	X
2.g.2	Special weather representations which include the sound, motion and visual effects of light, medium and heavy precipitation near a thunderstorm on take-off, approach and landings at and below an altitude of 600 m (2 000 ft) above the airport surface and within a radius of 16 km (10 sm) from the airport.			X	X
2.g.3	One airport with a snow scene, if appropriate to the operator's area of operations, to include terrain snow and snow-covered taxiways and runways.			X	X
2.g.4	In-cloud effects such as variable cloud density, speed cues and ambient changes should be provided.			X	X
2.g.5	The effect of multiple cloud layers representing few, scattered, broken and overcast conditions giving partial or complete obstruction of the ground scene.			X	X
2.g.6	Gradual break-out to ambient visibility/RVR, defined as up to 10% of the respective cloud base or top, 20 ft ≤ transition layer ≤ 200 ft; cloud effects should be checked at and below a height of 600 m (2 000 ft) above the airport and within a radius of 16 km (10 sm) from the airport. Transition effects should be complete when the IOS cloud base or top is reached when exiting and start when entering the cloud, i.e. transition effects should occur within the IOS defined cloud layer.			X	X
2.g.7	Visibility and RVR measured in terms of distance. Visibility/RVR should be checked at and below a height of 600 m (2 000 ft) above the airport and within a radius of 16 km (10 sm) from the airport.	X	X	X	X
2.g.8	Patchy fog (sometimes referred to as patchy RVR) giving the effect of variable RVR. The lowest RVR should be that selected on the IOS, ie. variability is only > IOS RVR.			X	X
2.g.9	Effects of fog on airport lighting such as halos and defocus.			X	X
2.g.10	Effect of ownship lighting in reduced visibility, such as reflected glare, to include landing lights, strobes, and beacons.			X	X
2.g.11	Wind cues to provide the effect of blowing snow or sand across a dry runway or taxiway should be selectable from the instructor station.			X	X

Table A3B

Functions and Subjective Tests					
QPS REQUIREMENTS					
Entry Number	**For Qualification At The Stated Level** **Class I Airport Models**	**Simulator Level**			
		A	**B**	**C**	**D**
	End QPS Requirement				
	Begin Information				
3.	An example of being able to "combine two airport models to achieve two "in-use" runways: One runway designated as the "in use" runway in the first model of the airport, and the second runway designated as the "in use" runway in the second model of the same airport. For example, the clearance is for the ILS approach to Runway 27, Circle to Land on Runway 18 right. Two airport visual models might be used: the first with Runway 27 designated as the "in use" runway for the approach to runway 27, and the second with Runway 18 Right designated as the "in use" runway. When the pilot breaks off the ILS approach to runway 27, the instructor may change to the second airport visual model in which runway 18 Right is designated as the "in use" runway, and the pilot would make a visual approach and landing. This process is acceptable to the FAA as long as the temporary interruption due to the visual model change is not distracting to the pilot, does not cause changes in navigational radio frequencies, and does not cause undue instructor/evaluator time.				
4.	Sponsors are not required to provide every detail of a runway, but the detail that is provided should be correct within the capabilities of the system. **End Information**				

Table A3C

Functions and Subjective Tests					
QPS REQUIREMENTS					
Entry Number	**Additional Airport Models Beyond Minimum Required for Qualification Class II Airport Models**	**Simulator Level**			
		A	**B**	**C**	**D**
This table specifies the minimum airport model content and functionality necessary to add airport models to a simulator's model library, beyond those necessary for qualification at the stated level, without the necessity of further involvement of the NSPM or TPAA.					
	Begin QPS Requirements				
1.	**Airport model management.** The following is the minimum airport model management requirements for simulators at Levels A, B, C, and D.				
1.a.	The direction of strobe lights, approach lights, runway edge lights, visual landing aids, runway centerline lights, threshold lights, and touchdown zone lights on the "in-use" runway must be replicated.	**X**	**X**	**X**	**X**
2.	**Visual feature recognition.** The following are the minimum distances at which runway features must be visible for simulators at Levels A, B, C, and D. Distances are measured from runway threshold to an airplane aligned with the runway on an extended 3° glide-slope in simulated meteorological conditions that recreate the minimum distances for visibility. For circling approaches, all requirements of this section apply to the runway used for the initial approach and to the runway of intended landing.				
2.a.	Runway definition, strobe lights, approach lights, and runway edge white lights from 5 sm (8 km) from the runway threshold.	**X**	**X**	**X**	**X**
2.b.	Visual Approach Aid lights (VASI or PAPI) from 5 sm (8 km) from the runway threshold.			**X**	**X**
2.c.	Visual Approach Aid lights (VASI or PAPI) from 3 sm (5 km) from the runway threshold.	**X**	**X**		
2.d.	Runway centerline lights and taxiway definition from 3 sm (5 km) from the runway threshold.	**X**	**X**	**X**	**X**
2.e.	Threshold lights and touchdown zone lights from 2 sm (3 km) from the runway threshold.	**X**	**X**	**X**	**X**
2.f.	Runway markings within range of landing lights for night scenes and as required by the surface resolution requirements on day scenes.	**X**	**X**	**X**	**X**
2.g.	For circling approaches, the runway of intended landing and associated lighting must fade into view in a non-distracting manner.	**X**	**X**	**X**	**X**
3.	**Airport model content.** The following prescribes the minimum requirements for what must be provided in an airport model and identifies other aspects of the airport environment that must correspond with that model for simulators at Levels A, B, C, and D. The detail must be developed using airport pictures, construction drawings and maps, or other similar data, or developed in accordance with published regulatory material; however, this does not require that airport models contain details that are beyond the designed capability of the currently qualified visual system. For circling approaches, all requirements of this section apply to the runway used for the initial approach and to the runway of intended landing. Only one "primary" taxi route from parking to the runway end will be required for each "in-use" runway.				
3.a.	The surface and markings for each "in-use" runway:				
3.a.1.	Threshold markings.	**X**	**X**	**X**	**X**

Table A3C

Functions and Subjective Tests					
QPS REQUIREMENTS					
Entry Number	Additional Airport Models Beyond Minimum Required for Qualification Class II Airport Models	Simulator Level			
		A	B	C	D
3.a.2.	Runway numbers.	X	X	X	X
3.a.3.	Touchdown zone markings.	X	X	X	X
3.a.4.	Fixed distance markings.	X	X	X	X
3.a.5.	Edge markings.	X	X	X	X
3.a.6.	Centerline stripes.	X	X	X	X
3.b.	The lighting for each "in-use" runway.				
3.b.1.	Threshold lights.	X	X	X	X
3.b.2.	Edge lights.	X	X	X	X
3.b.3.	End lights.	X	X	X	X
3.b.4.	Centerline lights.	X	X	X	X
3.b.5.	Touchdown zone lights, if appropriate.	X	X	X	X
3.b.6.	Leadoff lights, if appropriate.	X	X	X	X
3.b.7.	Appropriate visual landing aid(s) for that runway.	X	X	X	X
3.b.8.	Appropriate approach lighting system for that runway.	X	X	X	X
3.c.	The taxiway surface and markings associated with each "in-use" runway:				
3.c.1.	Edge.	X	X	X	X
3.c.2.	Centerline.	X	X	X	X
3.c.3.	Runway hold lines.	X	X	X	X
3.c.4.	ILS critical area markings.	X	X	X	X
3.d.	The taxiway lighting associated with each "in-use" runway:				
3.d.1.	Edge.			X	X
3.d.2.	Centerline.	X	X	X	X
3.d.3.	Runway hold and ILS critical area lights.	X	X	X	X
4.	**Required model correlation with other aspects of the airport environment simulation.** The following are the minimum model correlation tests that must be conducted for simulators at Levels A, B, C, and D.				
4.a.	The airport model must be properly aligned with the navigational aids that are associated with operations at the "in-use" runway.	X	X	X	X
4.b.	Slopes in runways, taxiways, and ramp areas, if depicted in the visual scene, must not cause distracting or unrealistic effects.	X	X	X	X
5.	**Correlation with airplane and associated equipment.** The following are the minimum correlation comparisons that must be made for simulators at Levels A, B, C, and D.				
5.a.	Visual system compatibility with aerodynamic programming.	X	X	X	X
5.b.	Accurate portrayal of environment relating to flight simulator attitudes.	X	X	X	X
5.c.	Visual cues to assess sink rate and depth perception during landings.		X	X	X
5.d.	Visual effects for each visible, own-ship, airplane external light(s).		X	X	X
6.	**Scene quality.** The following are the minimum scene quality tests that must be conducted for simulators at Levels A, B, C, and D.				
6.a.	Surfaces and textural cues must be free of apparent and distracting quantization (aliasing).			X	X
6.b.	Correct color and realistic textural cues.			X	X

Table A3C

Functions and Subjective Tests					
QPS REQUIREMENTS					
Entry Number	**Additional Airport Models Beyond Minimum Required for Qualification Class II Airport Models**	**Simulator Level**			
		A	**B**	**C**	**D**
6.c.	Light points free from distracting jitter, smearing or streaking.	**X**	**X**	**X**	**X**
7.	**Instructor controls of the following:** The following are the minimum instructor controls that must be available in simulators at Levels A, B, C, and D.				
7.a.	Environmental effects, e.g., cloud base (if used), cloud effects, cloud density, visibility in statute miles/kilometers and RVR in feet/meters.	**X**	**X**	**X**	**X**
7.b.	Airport selection.	**X**	**X**	**X**	**X**
7.c.	Airport lighting including variable intensity.	**X**	**X**	**X**	**X**
7.d.	Dynamic effects including ground and flight traffic.			**X**	**X**
End QPS Requirements					
Begin Information					
8.	Sponsors are not required to provide every detail of a runway, but the detail that is provided must be correct within the capabilities of the system.	**X**	**X**	**X**	**X**
End Information					

Table A3D

Functions and Subjective Tests						
QPS REQUIREMENTS						INFORMATION
Entry Number	Motion System Effects	Simulator Level				Notes
		A	B	C	D	
This table specifies motion effects that are required to indicate when a flight crewmember must be able to recognize an event or situation. Where applicable, flight simulator pitch, side loading and directional control characteristics must be representative of the airplane.						
1.	**Taxiing effects such as lateral and directional cues resulting from steering and braking inputs.**			X	X	
2.	**Runway rumble, oleo deflection, ground speed, uneven runway, runway/taxiway centerline light characteristics, runway contamination with associated anti-skid and taxiway characteristics:** Procedure: After the airplane has been pre-set to the takeoff position and then released, taxi at various speeds with a smooth runway and note the general characteristics of the simulated runway rumble effects of oleo deflections. Repeat the maneuver with a runway roughness of 50%, then with maximum roughness. Note the associated motion vibrations affected by ground speed and runway roughness.		X	X	X	Different gross weights can also be selected, which may also affect the associated vibrations depending on airplane type. The associated motion effects for the above tests should also include an assessment of the effects of rolling over centerline lights, surface discontinuities of uneven runways, and various taxiway characteristics.
3.	**Buffets on the ground due to spoiler/speedbrake extension and reverse thrust:** Procedure: Perform a normal landing and use ground spoilers and reverse thrust – either individually or in combination – to decelerate the simulated airplane. Do not use wheel braking so that only the buffet due to the ground spoilers and thrust reversers is felt.		X	X	X	
4.	**Bumps associated with the landing gear:** Procedure: Perform a normal take-off paying special attention to the bumps that could be perceptible due to maximum oleo extension after lift-off. When the landing gear is extended or retracted, motion bumps can be felt when the gear locks into position.		X	X	X	
5.	**Buffet during extension and retraction of landing gear:** Procedure: Operate the landing gear. Check that the motion cues of		X	X	X	

Table A3D

Functions and Subjective Tests						
QPS REQUIREMENTS						INFORMATION
Entry Number	Motion System Effects	Simulator Level				Notes
		A	B	C	D	
	the buffet experienced represent the actual airplane.					
6.	**Buffet in the air due to flap and spoiler/speedbrake extension:** Procedure: Perform an approach and extend the flaps and slats with airspeeds deliberately in excess of the normal approach speeds. In cruise configuration, verify the buffets associated with the spoiler/speedbrake extension. The above effects can also be verified with different combinations of spoiler/speedbrake, flap, and landing gear settings to assess the interaction effects.		X	X	X	
7.	**Buffet due to atmospheric disturbances.**			X	X	
8.	**Approach to stall buffet:** Procedure: Conduct an approach-to-stall with engines at idle and a deceleration of 1 knot/second. Check that the motion cues of the buffet, including the level of buffet increase with decreasing speed, are representative of the actual airplane.		X	X	X	
9.	**Touchdown cues for main and nose gear:** Procedure: Conduct several normal approaches with various rates of descent. Check that the motion cues for the touchdown bumps for each descent rate are representative of the actual airplane.		X	X	X	
10.	**Nosewheel scuffing:** Procedure: Taxi at various ground speeds and manipulate the nosewheel steering to cause yaw rates to develop that cause the nosewheel to vibrate against the ground ("scuffing"). Evaluate the speed/nosewheel combination needed to produce scuffing and check that the resultant vibrations are representative of the actual airplane.		X	X	X	
11.	**Thrust effect with brakes set:** Procedure: Set the brakes on at the take-off point and increase the engine power until buffet is experienced. Evaluate its characteristics.		X	X	X	This effect is most discernible with wing-mounted engines.

Table A3D

Functions and Subjective Tests						
QPS REQUIREMENTS						INFORMATION
Entry Number	Motion System Effects	Simulator Level				Notes
		A	B	C	D	
	Confirm that the buffet increases appropriately with increasing engine thrust.					
12.	**Mach and maneuver buffet:** Procedure: With the simulated airplane trimmed in 1 g flight while at high altitude, increase the engine power so that the Mach number exceeds the documented value at which Mach buffet is experienced. Check that the buffet begins at the same Mach number as it does in the airplane (for the same configuration) and that buffet levels are representative of the actual airplane. For certain airplanes, maneuver buffet can also be verified for the same effects. Maneuver buffet can occur during turning flight at conditions greater than 1 g, particularly at higher altitudes.		X	X	X	
13.	**Tire failure dynamics:** Procedure: Simulate a single tire failure and a multiple tire failure.			X	X	The pilot may notice some yawing with a multiple tire failure selected on the same side. This should require the use of the rudder to maintain control of the airplane. Dependent on airplane type, a single tire failure may not be noticed by the pilot and should not have any special motion effect. Sound or vibration may be associated with the actual tire losing pressure.
14.	**Engine failures, malfunction, engine, and airframe structural damage:** Procedure: The characteristics of an engine malfunction as stipulated		X	X	X	

Table A3D

Functions and Subjective Tests						
QPS REQUIREMENTS						INFORMATION
Entry Number	Motion System Effects	Simulator Level				Notes
		A	B	C	D	
	in the malfunction definition document for the particular flight simulator must describe the special motion effects felt by the pilot. Note the associated engine instruments varying according to the nature of the malfunction and note the replication of the effects of the airframe vibration.					
15.	**Tail strikes, engine pod/propeller, wing strikes:** Procedure: Tail-strikes can be checked by over-rotation of the airplane at a speed below V_r while performing a takeoff. The effects can also be verified during a landing. Excessive banking of the airplane during its take-off/landing roll can cause a pod strike.		**X**	**X**	**X**	The motion effect should be felt as a noticeable bump. If the tail strike affects the airplane angular rates, the cueing provided by the motion system should have an associated effect.

Table A3E

Functions and Subjective Tests					
QPS REQUIREMENTS					
Entry Number	**Sound System**	**Simulator Level**			
		A	**B**	**C**	**D**
The following checks are performed during a normal flight profile with motion system ON.					
1.	Precipitation.			**X**	**X**
2.	Rain removal equipment.			**X**	**X**
3.	Significant airplane noises perceptible to the pilot during normal operations.			**X**	**X**
4.	Abnormal operations for which there are associated sound cues including, engine malfunctions, landing gear/tire malfunctions, tail and engine pod strike and pressurization malfunction.			**X**	**X**
5.	Sound of a crash when the flight simulator is landed in excess of limitations.			**X**	**X**

Table A3F

Functions and Subjective Tests					
QPS REQUIREMENTS					
Entry Number	Special Effects	Simulator Level			
		A	B	C	D
This table specifies the minimum special effects necessary for the specified simulator level.					
1.	**Braking Dynamics:** Representations of the dynamics of brake failure (flight simulator pitch, side-loading, and directional control characteristics representative of the airplane), including antiskid and decreased brake efficiency due to high brake temperatures (based on airplane related data), sufficient to enable pilot identification of the problem and implementation of appropriate procedures.			X	X
2.	**Effects of Airframe and Engine Icing:** **Required only for those airplanes authorized for operations in known icing conditions.** Procedure: With the simulator airborne, in a clean configuration, nominal altitude and cruise airspeed, autopilot on and auto-throttles off, engine and airfoil anti-ice/de-ice systems deactivated; activate icing conditions at a rate that allows monitoring of simulator and systems response. Icing recognition will include an increase in gross weight, airspeed decay, change in simulator pitch attitude, change in engine performance indications (other than due to airspeed changes), and change in data from pitot/static system. Activate heating, anti-ice, or de-ice systems independently. Recognition will include proper effects of these systems, eventually returning the simulated airplane to normal flight.			X	X

Table A3G

Functions and Subjective Tests QPS REQUIREMENTS					
Entry Number	Instructor Operating Station (IOS) (As appropriate)	Simulator Level			
		A	B	C	D
	Functions in this table are subject to evaluation only if appropriate for the airplane and/or the system is installed on the specific simulator.				
1.	**Simulator Power Switch(es)**	**X**	**X**	**X**	**X**
2.	**Airplane conditions.**				
2.a.	Gross weight, center of gravity, fuel loading and allocation	**X**	**X**	**X**	**X**
2.b.	Airplane systems status.	**X**	**X**	**X**	**X**
2.c.	Ground crew functions (e.g., ext. power, push back)	**X**	**X**	**X**	**X**
3.	**Airports.**				
3.a.	Number and selection.	**X**	**X**	**X**	**X**
3.b.	Runway selection.	**X**	**X**	**X**	**X**
3.c.	Runway surface condition (e.g., rough, smooth, icy, wet)			**X**	**X**
3.d.	Preset positions (e.g., ramp, gate, #1 for takeoff, takeoff position, over FAF)	**X**	**X**	**X**	**X**
3.e.	Lighting controls.	**X**	**X**	**X**	**X**
4.	**Environmental controls.**				
4.a	Visibility (statute miles (kilometers)).	**X**	**X**	**X**	**X**
4.b.	Runway visual range (in feet (meters)).	**X**	**X**	**X**	**X**
4.c.	Temperature.	**X**	**X**	**X**	**X**
4.d.	Climate conditions (e.g., ice, snow, rain).	**X**	**X**	**X**	**X**
4.e.	Wind speed and direction.	**X**	**X**	**X**	**X**
4.f.	Windshear.			**X**	**X**
4.g.	Clouds (base and tops).	**X**	**X**	**X**	**X**
5.	**Airplane system malfunctions** (Inserting and deleting malfunctions into the simulator).	**X**	**X**	**X**	**X**
6.	**Locks, Freezes, and Repositioning.**				
6.a.	Problem (all) freeze / release.	**X**	**X**	**X**	**X**
6.b.	Position (geographic) freeze / release.	**X**	**X**	**X**	**X**
6.c.	Repositioning (locations, freezes, and releases).	**X**	**X**	**X**	**X**
6.d.	Ground speed control.	**X**	**X**	**X**	**X**
7.	Remote IOS.	**X**	**X**	**X**	**X**
8.	**Sound Controls.** On / off / adjustment	**X**	**X**	**X**	**X**
9.	**Motion / Control Loading System.**				
9.a.	**On / off / emergency stop.**	**X**	**X**	**X**	**X**
10.	**Observer Seats / Stations.** Position / Adjustment / Positive restraint system.	**X**	**X**	**X**	**X**

Begin Information

1. Introduction

a. The following is an example test schedule for an Initial/Upgrade evaluation that covers the majority of the requirements set out in the Functions and Subjective test requirements. It is not intended that the schedule be followed line by line, rather, the example should be used as a guide for preparing a schedule that is tailored to the airplane, sponsor, and training task.

b. Functions and subjective tests should be planned. This information has been organized as a reference document with the considerations, methods, and evaluation notes for each individual aspect of the simulator task presented as an individual item. In this way the evaluator can design his or her own test plan, using the appropriate sections to provide guidance on method and evaluation criteria. Two aspects should be present in any test plan structure:

(1) An evaluation of the simulator to determine that it replicates the aircraft and performs reliably for an uninterrupted period equivalent to the length of a typical training session.

(2) The simulator should be capable of operating reliably after the use of training device functions such as repositions or malfunctions.

c. A detailed understanding of the training task will naturally lead to a list of objectives that the simulator should meet. This list will form the basis of the test plan. Additionally, once the test plan has been formulated, the initial conditions and the evaluation criteria should be established. The evaluator should consider all factors that may have an influence on the characteristics observed during particular training tasks in order to make the test plan successful.

2. Events

a. Initial Conditions.
(1) Airport.
(2) QNH.
(3) Temperature.
(4) Wind/Crosswind.
(5) Zero Fuel Weight/Fuel/Gross Weight/Center of Gravity.
b. Initial Checks.
(1) Documentation of Simulator.
(a) Simulator Acceptance Test Manuals.
(b) Simulator Approval Test Guide.
(c) Technical Logbook Open Item List.
(d) Daily Functional Pre-flight Check.
(2) Documentation of User/Carrier Flight Logs.
(a) Simulator Operating/Instructor Manual.
(b) Difference List (Aircraft/Simulator).
(c) Flight Crew Operating Manuals.
(d) Performance Data for Different Fields.
(e) Crew Training Manual.
(f) Normal/Abnormal/Emergency Checklists.
(3) Simulator External Checks.
(a) Appearance and Cleanliness.
(b) Stairway/Access Bridge.
(c) Emergency Rope Ladders.
(d) ''Motion On''/''Flight in Progress'' Lights.
(4) Simulator Internal Checks.
(a) Cleaning/Disinfecting Towels (for cleaning oxygen masks).
(b) Flight deck Layout (compare with difference list).
(5) Equipment.
(a) Quick Donning Oxygen Masks.
(b) Head Sets.
(c) Smoke Goggles.
(d) Sun Visors.
(e) Escape Rope.
(f) Chart Holders.
(g) Flashlights.
(h) Fire Extinguisher (inspection date).
(i) Crash Axe.
(j) Gear Pins.
c. Power Supply and APU Start Checks.
(1) Batteries and Static Inverter.
(2) APU Start with Battery.
(3) APU Shutdown using Fire Handle.
(4) External Power Connection.
(5) APU Start with External Power.
(6) Abnormal APU Start/Operation.
d. Flight deck Checks.
(1) Flight deck Preparation Checks.
(2) FMC Programming.
(3) Communications and Navigational Aids Checks.
e. Engine Start.
(1) Before Start Checks.
(2) Battery start with Ground Air Supply Unit.
(3) Engine Crossbleed Start.
(4) Normal Engine Start.
(5) Abnormal Engine Starts.
(6) Engine Idle Readings.
(7) After Start Checks.
f. Taxi Checks.
(1) Pushback/Powerback.
(2) Taxi Checks.
(3) Ground Handling Check:
(a) Power required to initiate ground roll.
(b) Thrust response.
(c) Nosewheel and Pedal Steering.
(d) Nosewheel Scuffing.
(e) Perform 180 degree turns.
(f) Brakes Response and Differential Braking using Normal, Alternate and Emergency.
(g) Brake Systems.
(h) Eye height and fore/aft position.
(4) Runway Roughness.
g. Visual Scene—Ground Assessment. Select 3 different airport models and perform the following checks with Day, Dusk and Night selected, as appropriate:
(1) Visual Controls.
(a) Daylight, Dusk, Night Scene Controls.
(b) Flight deck ''Daylight'' ambient lighting.
(c) Environment Light Controls.
(d) Runway Light Controls.
(e) Taxiway Light Controls.
(2) Airport Model Content.
(a) Ramp area for buildings, gates, airbridges, maintenance ground Equipment, parked aircraft.
(b) Daylight shadows, night time light pools.
(c) Taxiways for correct markings, taxiway/runway, marker boards, CAT I and II/III hold points, taxiway shape/grass areas, taxiway light (positions and colors).
(d) Runways for correct markings, lead-off lights, boards, runway slope, runway light positions, and colors, directionality of runway lights.
(e) Airport environment for correct terrain and significant features.
(f) Visual scene quantization (aliasing), color, and occulting levels.
(3) Ground Traffic Selection.
(4) Environment Effects.
(a) Low cloud scene.
(i) Rain:
(A) Runway surface scene.
(B) Windshield wiper—operation and sound.
(ii) Hail:
(A) Runway surface scene.
(B) Windshield wiper—operation and sound.
(b) Lightning/thunder.
(c) Snow/ice runway surface scene.
(d) Fog.
h. Takeoff. Select one or several of the following test cases:
(1) T/O Configuration Warnings.
(2) Engine Takeoff Readings.
(3) Rejected Takeoff (Dry/Wet/Icy Runway) and check the following:
(a) Autobrake function.
(b) Anti-skid operation.
(c) Motion/visual effects during deceleration.
(d) Record stopping distance (use runway plot or runway lights remaining).
Continue taxiing along the runway while applying brakes and check the following:
(e) Center line lights alternating red/white for 2000 feet/600 meters.
(f) Center line lights all red for 1000 feet/300 m.
(g) Runway end, red stop bars.
(h) Braking fade effect.
(i) Brake temperature indications.
(4) Engine Failure between VI and V2
(5) Normal Takeoff:
(a) During ground roll check the following:
(i) Runway rumble.
(ii) Acceleration cues.
(iii) Groundspeed effects.
(iv) Engine sounds.
(v) Nosewheel and rudder pedal steering.
(b) During and after rotation, check the following:
(i) Rotation characteristics.
(ii) Column force during rotation.
(iii) Gear uplock sounds/bumps.
(iv) Effect of slat/flap retraction during climbout.
(6) Crosswind Takeoff (check the following):
(a) Tendency to turn into or out of the wind.
(b) Tendency to lift upwind wing as airspeed increase.
(7) Windshear during Takeoff (check the following):
(a) Controllable during windshear encounter.
(b) Performance adequate when using correct techniques.
(c) Windshear Indications satisfactory.
(d) Motion cues satisfactory (particularly turbulence).
(8) Normal Takeoff with Control Malfunction
(9) Low Visibility T/O (check the following):
(a) Visual cues.
(b) Flying by reference to instruments.
(c) SID Guidance on LNAV.
i. Climb Performance. Select one or several of the following test cases:
(1) Normal Climb—Climb while maintaining recommended speed profile and note fuel, distance and time.
(2) Single Engine Climb—Trim aircraft in a zero wheel climb at V2.
Note: Up to 5° bank towards the operating engine(s) is permissible. Climb for 3 minutes and note fuel, distance, and time. Increase speed toward en route climb speed and retract flaps. Climb for 3 minutes and note fuel, distance, and time.
j. Systems Operation During Climb.
Check normal operation and malfunctions as appropriate for the following systems:
(1) Air conditioning/Pressurization/Ventilation.
(2) Autoflight.
(3) Communications.
(4) Electrical.
(5) Fuel.
(6) Icing Systems.
(7) Indicating and Recording systems.
(8) Navigation/FMS.
(9) Pneumatics.
k. Cruise Checks. Select one or several of the following test cases:
(1) Cruise Performance.
(2) High Speed/High Altitude Handling (check the following):
(a) Overspeed warning.
(b) High Speed buffet.
(c) Aircraft control satisfactory.

(d) Envelope limiting functions on Computer Controlled Aircraft.

Reduce airspeed to below level flight buffet onset speed, start a turn, and check the following:

(e) High Speed buffet increases with G loading.

Reduce throttles to idle and start descent, deploy the speedbrake, and check the following:

(f) Speedbrake indications.

(g) Symmetrical deployment.

(h) Airframe buffet.

(i) Aircraft response hands off.

(3) Yaw Damper Operation. Switch off yaw dampers and autopilot. Initiate a Dutch roll and check the following:

(a) Aircraft dynamics.

(b) Simulator motion effects.

Switch on yaw dampers, re-initiate a Dutch roll and check the following:

(c) Damped aircraft dynamics.

(4) APU Operation.

(5) Engine Gravity Feed.

(6) Engine Shutdown and Driftdown Check: FMC operation Aircraft performance.

(7) Engine Relight.

l. Descent. Select one of the following test cases:

(1) Normal Descent Descend while maintaining recommended speed profile and note fuel, distance And time.

(2) Cabin Depressurization/Emergency Descent.

m. Medium Altitude Checks. Select one or several of the following test cases:

(1) High Angle of Attack/Stall. Trim the aircraft at 1.4 Vs, establish 1 kt/sec^2 deceleration rate, and check the following—

(a) System displays/operation satisfactory.

(b) Handling characteristics satisfactory.

(c) Stall and Stick shaker speed.

(d) Buffet characteristics and onset speed.

(e) Envelope limiting functions on Computer Controlled Aircraft.

Recover to straight and level flight and check the following:

(f) Handling characteristics satisfactory.

(2) Turning Flight. Roll aircraft to left, establish a 30° to 45° bank angle, and check the following:

(a) Stick force required, satisfactory.

(b) Wheel requirement to maintain bank angle.

(c) Slip ball response, satisfactory.

(d) Time to turn 180°.

Roll aircraft from 45° bank one way to 45° bank the opposite direction while maintaining altitude and airspeed—check the following:

(e) Controllability during maneuver.

(3) Degraded flight controls.

(4) Holding Procedure (check the following:)

(a) FMC operation.

(b) Autopilot auto thrust performance.

(5) Storm Selection (check the following:)

(a) Weather radar controls.

(b) Weather radar operation.

(c) Visual scene corresponds with WXR pattern.

(Fly through storm center, and check the following:)

(d) Aircraft enters cloud.

(e) Aircraft encounters representative turbulence.

(f) Rain/hail sound effects evident.

As aircraft leaves storm area, check the following:

(g) Storm effects disappear.

(6) TCAS (check the following:)

(a) Traffic appears on visual display.

(b) Traffic appears on TCAS display(s).

As conflicting traffic approaches, take relevant avoiding action, and check the following:

(c) Visual and TCAS system displays.

n. Approach And Landing. Select one or several of the following test cases while monitoring flight control and hydraulic systems for normal operation and with malfunctions selected:

(1) Flaps/Gear Normal Operation. Check the following:

(a) Time for extension/retraction.

(b) Buffet characteristics.

(2) Normal Visual Approach and Landing.

Fly a normal visual approach and landing—check the following:

(a) Aircraft handling.

(b) Spoiler operation.

(c) Reverse thrust operation.

(d) Directional control on the ground.

(e) Touchdown cues for main and nosewheel.

(f) Visual cues.

(g) Motion cues.

(h) Sound cues.

(i) Brake and Anti-skid operation.

(3) Flaps/Gear Abnormal Operation or with hydraulic malfunctions.

(4) Abnormal Wing Flaps/Slats Landing.

(5) Manual Landing with Control Malfunction.

(a) Aircraft handling.

(b) Radio Aids and instruments.

(c) Airport model content and cues.

(d) Motion cues.

(e) Sound cues.

(6) Non-precision Approach—All Engines Operating.

(a) Aircraft handling.

(b) Radio Aids and instruments.

(c) Airport model content and cues.

(d) Motion cues.

(e) Sound cues.

(7) Circling Approach.

(a) Aircraft handling.

(c) Radio Aids and instruments.

(d) Airport model content and cues.

(e) Motion cues.

(f) Sound cues.

(8) Non-precision Approach—One Engine Inoperative.

(a) Aircraft handling.

(b) Radio Aids and instruments.

(c) Airport model content and cues.

(d) Motion cues.

(e) Sound cues.

(9) One Engine Inoperative Go-around.

(a) Aircraft handling.

(b) Radio Aids and instruments.

(c) Airport model content and cues.

(d) Motion cues.

(e) Sound cues.

(10) CAT I Approach and Landing with raw-data ILS.

(a) Aircraft handling.

(b) Radio Aids and instruments.

(c) Airport model content and cues.

(d) Motion cues.

(e) Sound cues.

(11) CAT I Approach and Landing with Limiting Crosswind.

(a) Aircraft handling.

(b) Radio Aids and instruments.

(c) Airport model content and cues.

(d) Motion cues.

(e) Sound cues.

(12) CAT I Approach with Windshear. Check the following:

(a) Controllable during windshear encounter.

(b) Performance adequate when using correct techniques.

(c) Windshear indications/warnings.

(d) Motion cues (particularly turbulence).

(13) CAT II Approach and Automatic Go-Around.

(14) CAT Ill Approach and Landing—System Malfunctions.

(15) CAT Ill Approach and Landing—1 Engine Inoperative.

(16) GPWS evaluation.

o. Visual Scene—In-Flight Assessment.

Select three (3) different visual models and perform the following checks with ''day,'' ''dusk,'' and ''night'' (as appropriate) selected. Reposition the aircraft at or below 2000 feet within 10 nm of the airfield. Fly the aircraft around the airport environment and assess control of the visual system and evaluate the Airport model content as described below:

(1) Visual Controls.

(a) Daylight, Dusk, Night Scene Controls.

(b) Environment Light Controls.

(c) Runway Light Controls.

(d) Taxiway Light Controls.

(e) Approach Light Controls.

(2) Airport model Content.

(a) Airport environment for correct terrain and significant features.

(b) Runways for correct markings, runway slope, directionality of runway lights.

(c) Visual scene for quantization (aliasing), color, and occulting.

Reposition the aircraft to a long, final approach for an ''ILS runway.'' Select flight freeze when the aircraft is 5-statute miles (sm)/8-kilometers (km) out and on the glide slope. Check the following:

(3) Airport model content.

(a) Airfield features.

(b) Approach lights.

(c) Runway definition.

(d) Runway definition.

(e) Runway edge lights and VASI lights.

(f) Strobe lights.

Release flight freeze. Continue flying the approach with NP engaged. Select flight freeze when aircraft is 3 sm/5 km out and on the glide slope. Check the following:

(4) Airport model Content.

(a) Runway centerline light.

(b) Taxiway definition and lights.

Release flight freeze and continue flying the approach with A/P engaged. Select flight freeze when aircraft is 2 sm/3 km out and on the glide slope. Check the following:

(5) Airport model content.

(a) Runway threshold lights.

(b) Touchdown zone lights.

At 200 ft radio altitude and still on glide slope, select Flight Freeze. Check the following:

(6) Airport model content.

(a) Runway markings.

Set the weather to Category I conditions and check the following:

(7) Airport model content.

(a) Visual ground segment.

Set the weather to Category II conditions, release Flight Freeze, re-select Flight.

Freeze at 100 feet radio altitude, and check the following:

(8) Airport model content.

(a) Visual ground segment.

Select night/dusk (twilight) conditions and check the following:

(9) Airport model content.

(a) Runway markings visible within landing light lobes.

Set the weather to Category III conditions, release Flight Freeze, re-select Flight Freeze at 50 feet radio altitude and check the following:

(10) Airport model content.

(a) Visual ground segment.

Set WX to a typical ''missed approach'' weather condition, release Flight Freeze, re-select Flight Freeze at 15 feet radio altitude, and check the following:

(11) Airport model content.

(a) Visual ground segment.

When on the ground, stop the aircraft. Set 0 feet RVR, ensure strobe/beacon tights are switched on and check the following:

(12) Airport model content.

(a) Visual effect of strobe and beacon.

Reposition to final approach, set weather to ''Clear,'' continue approach for an automatic landing, and check the following:

(13) Airport model content.

(a) Visual cues during flare to assess sink rate.

(b) Visual cues during flare to assess Depth perception.

(c) Flight deck height above ground.

p. After Landing Operations.

(1) After Landing Checks.

(2) Taxi back to gate. Check the following:

(a) Visual model satisfactory.

(b) Parking brake operation satisfactory.

(3) Shutdown Checks.

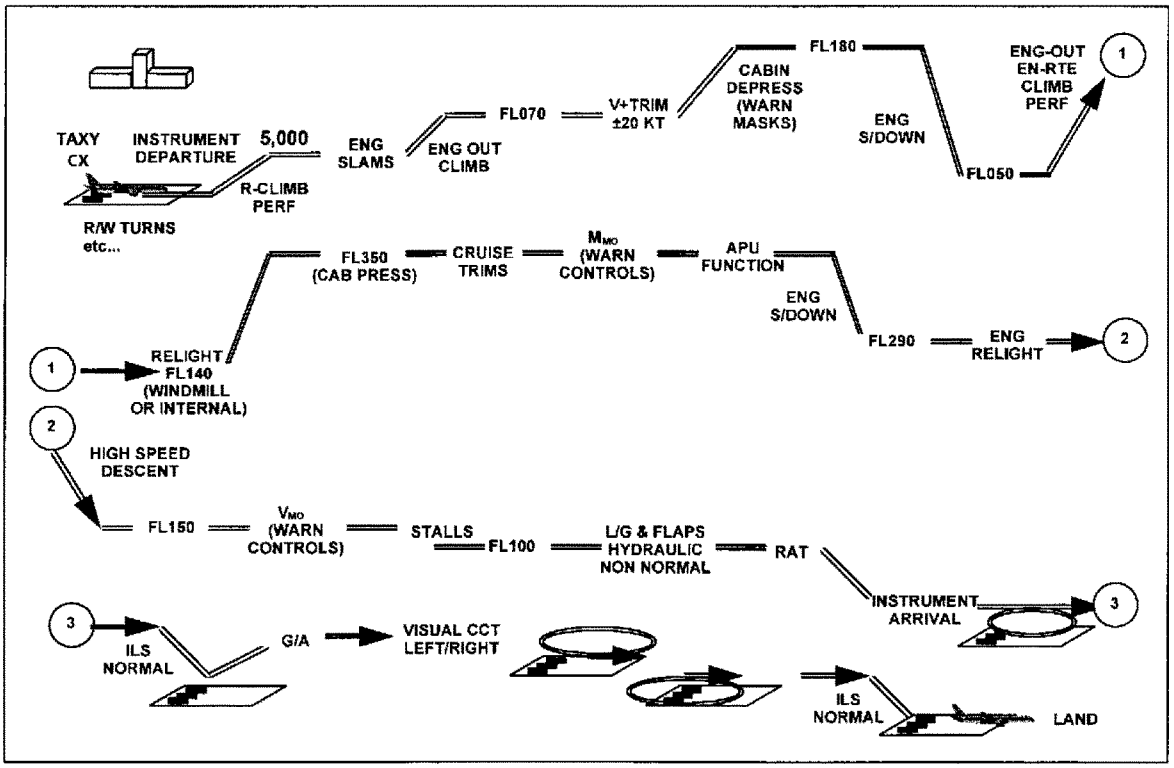
q. Crash Function.

(1) Gear-up Crash.

(2) Excessive rate of descent Crash.

(3) Excessive bank angle Crash.

Typical Subjective Continuing Qualification Evaluation Profile (2 hours)



Attachment 4 to Appendix A to Part 60—Sample Documents

Table of Contents

Title of Sample

Figure A4A—Sample Letter, Request for Initial, Upgrade, or Reinstatement Evaluation.

Figure A4B—Attachment: FFS Information Form

Figure A4C—Sample Letter of Compliance

Figure A4D—Sample Qualification Test Guide Cover Page

Figure A4E—Sample Statement of Qualification—Certificate

Figure A4F—Sample Statement of Qualification—Configuration List

Figure A4G—Sample Statement of Qualification—List of Qualified Tasks

Figure A4H—Sample Continuing Qualification Evaluation Requirements Page

Figure A4I—Sample MQTG Index of Effective FFS Directives

Attachment 4 to Appendix A to Part 60—
Figure A4A – Sample Letter , Request for Initial, Upgrade, or Reinstatement Evaluation INFORMATION

Date _____

Edward D. Cook, Ph.D.
Manager, National Simulator Program
Federal Aviation Administration
100 Hartsfield Centre Parkway, Suite 400
Atlanta, GA 30354

Dear Dr. Cook:

RE: Request for Initial/Upgrade Evaluation Date

This is to advise you of our intent to request an (initial or upgrade) evaluation of our (FFS Manufacturer), (Aircraft Type/Level) Full Flight Simulator (FFS), (FAA ID Number, if previously qualified), located in (City, State) at the (Facility) on (Proposed Evaluation Date). (The proposed evaluation date shall not be more than 180 days following the date of this letter.) The FFS will be sponsored by (Name of Training Center/Air Carrier), FAA Designator (4 Letter Code). The FFS will be sponsored as follows: (Select One)

☐ The FFS will be used within the sponsor's FAA approved training program and placed on the sponsor's Training/Operations Specifications.

☐ The FFS will be used for dry lease only.

We agree to provide the formal request for the evaluation to your staff as follows: (check one)

☐ For QTG tests run at the factory, not later, than 45 days prior to the proposed evaluation date with the additional "l/3 on-site" tests provided not later than 14 days prior to the proposed evaluation date.

☐ For QTG tests run on-site, not later than 30 days prior to the proposed evaluation date.

We understand that the formal request will contain the following documents:

1. Sponsor's Letter of Request (*Company Compliance Letter*).
2. Principal Operations Inspector (POI) or Training Center Program Manager's (TCPM) endorsement.
3. Complete QTG.

If we are unable to meet the above requirements, we understand this may result in a significant delay, perhaps 45 days or more, in rescheduling and completing the evaluation.

(The sponsor should add additional comments as necessary).

Please contact (Name Telephone and Fax Number of Sponsor's Contact) to confirm the date for this initial evaluation. We understand a member of your National Simulator Program staff will respond to this request within 14 days.

A copy of this letter of intent has been provided to (Name), the Principal Operations Inspector (POI) and/or Training Center Program Manager (TCPM).

Sincerely,

Attachment: FFS Information Form
cc: POI/TCPM

Attachment 4 to Appendix A to Part 60—
Figure A4B – Sample Letter , Request for Initial, Upgrade, or Reinstatement Evaluation
Attachment: FSTD Information Form
INFORMATION

Date: _____			
Section 1. FSTD Information and Characteristics			
Sponsor Name:	_____	**FSTD Location**:	
Address:	_____ _____	**Physical Address:**	_____ _____
City:	_____	**City:**	_____
State:	_____	**State:**	_____
Country:	_____	**Country:**	_____
ZIP:	_____	**ZIP:**	_____
Manager	_____		
Sponsor ID No: (Four Letter FAA Designator)	_____	**Nearest Airport:** (Airport Designator)	_____
Type of Evaluation Requested:	☐ **Initial** ☐ **Upgrade** ☐ **Continuing Qualification** ☐ **Special** ☐ **Reinstatement**		
Aircraft Make/model/series:	_____		
Initial Qualification: (If Applicable)	**Date:** _____ **Level** _____ MM/DD/YYYY	**Manufacturer's Identification or Serial Number**	_____
Upgrade Qualification: (If Applicable)	**Date:** _____ **Level** _____ MM/DD/YYYY	☐ **eMQTG**	
Qualification Basis:_____	☐ **A** ☐ **B** ☐ **Interim C** ☐ **C** ☐ **D** ☐ **6** ☐ **7** ☐ **Provisional Status**		
Other Technical Information:			
FAA FSTD ID No: (If Applicable)	_____	**FSTD Manufacturer:**	_____
Convertible FSTD:	☐ **Yes**:	**Date of Manufacture**:	_____ MM/DD/YYYY
Related FAA ID No. (If Applicable)	_____ _____ _____	**Sponsor FSTD ID No:** _____	
Engine model(s) and data revision: _____		**Source of aerodynamic model:** _____	
FMS identification and revision level: _____		**Source of aerodynamic coefficient data:** _____	
Visual system manufacturer/model: _____		**Aerodynamic data revision number:** _____	
Flight control data revision: _____		**Visual system display:** _____	
Mot ion system manufacturer/type: _____		**FSTD computer(s) identification:** _____	
National Aviation Authority (NAA): (If Applicable)	_____		
NAA FSTD ID No:	_____	**Last NAA Evaluation Date:**	_____
NAA Qualification Level:	_____		
NAA Qualification Basis:	_____		
Visual System Manufacturer and Type:	_____	**FSTD Seats Available:** _____	**Motion System Manufacturer and Type:** _____:

Attachment 4 to Appendix A to Part 60—
Figure A4B – Sample Letter , Request for Initial, Upgrade, or Reinstatement Evaluation
Attachment: FSTD Information Form
INFORMATION

Aircraft Equipment:	**Engine Type(s):**	**Flight Instrumentation:**	**Engine Instrumentation:**
	_____ _____	☐ EFIS ☐ HUD ☐ HGS ☐ EFVS ☐ TCAS ☐ GPWS ☐ Plain View ☐ GPS ☐ FMS Type: ___ ☐ WX Radar ☐ Other: ___	☐ EICAS ☐ FADEC ☐ Other: ___

Airport Models:	3.6.1 _____ Airport Designator	3.6.2_____ Airport Designator	3.6.3 _____ Airport Designator
Circle to Land:	3. 7.1 _____ Airport Designator	3. 7.2_____ Approach	3. 7.3 _____ Landing Runway
Visual Ground Segment	3.8.1 _____ Airport Designator	3.8 .2_____ Approach	3. 8.3 _____ Landing Runway

Section 2. Supplementary Information			
FAA Training Program Approval Authority:		☐ **POI** ☐ **TCPM** ☐ **Other:** _____	
Name:	_____	**Office:**	_____
Tel:	_____	**Fax:**	_____
Email:	_____		
FSTD Scheduling Person:			
Name:	_____		
Address 1:	_____	**Address 2**	_____
City:	_____	**State:**	_____
ZIP:	_____	**Email:**	_____
Tel:	_____	**Fax:**	_____
FSTD Technical Contact:			
Name:	_____		
Address 1:	_____	**Address 2**	_____
City:	_____	**State:**	_____
ZIP:	_____	**Email:**	_____
Tel:	_____	**Fax:**	_____

Section 3. Training, Testing and Checking Considerations		
Area/Function/Maneuver	**Requested**	**Remarks**
Private Pilot - Training / Checks: (142)	☐	_____
Commercial Pilot - Training /Checks:(142)	☐	_____
Multi-Engine Rating - Training / Checks (142)	☐	_____
Instrument Rating -Training / Checks (142)	☐	_____
Type Rating - Training / Checks (135/121/142)	☐	_____
Proficiency Checks (135/121/142)	☐	_____

Attachment 4 to Appendix A to Part 60—
Figure A4B – Sample Letter , Request for Initial, Upgrade, or Reinstatement Evaluation
Attachment: FSTD Information Form
INFORMATION

CAT I: (RVR 2400/1800 ft. DH200 ft)	☐	_____
CAT II: (RVR 1200 ft. DH 100 ft)	☐	_____
CAT III * (lowest minimum) _____ RVR _____ ft. * State CAT III (≤ 700 ft.), CAT IIIb (≤ 150 ft.), or CAT IIIc (0 ft.)	☐	_____
Circling Approach	☐	_____
Windshear Training:	☐	_____
Windshear Training IAW 121.409(d) (121 Turbojets Only)	☐	_____
Generic Unusual Attitudes and Recoveries within the Normal Flight Envelope	☐	_____
Specific Unusual Attitudes Recoveries	☐	_____
Auto-coupled Approach/Auto Go Around	☐	_____
Auto-land / Roll Out Guidance	☐	_____
TCAS/ACAS I / II	☐	_____
WX-Radar	☐	_____
HUD	☐	_____
HGS	☐	_____
EFVS	☐	_____
Future Air Navigation Systems	☐	_____
GPWS / EGPWS	☐	_____
ETOPS Capability	☐	_____
GPS	☐	_____
SMGCS	☐	_____
Helicopter Slope Landings	☐	_____
Helicopter External Load Operations	☐	_____
Helicopter Pinnacle Approach to Landings	☐	_____
Helicopter Night Vision Maneuvers	☐	_____
Helicopter Category A Takeoffs	☐	_____

Attachment 4 to Appendix A to Part 60—
Figure A4C – Sample Letter of Compliance
INFORMATION

(Date)

Mr. (Name of Training Program Approval Authority):
(Name of FAA FSDO)
(Address)
(City/State/Zip)

Dear Mr. (Name of TPAA):

RE: Letter of Compliance

(Operator Sponsor Name) requests evaluation of our (Aircraft Type) FFS for Level (__) qualification. The (FFS Manufacturer Name) FFS with (Visual System Manufacturer Name/Model) system is fully defined on the FFS Information page of the accompanying Qualification Test Guide (QTG). We have completed the tests of the FFS and certify that it meets all applicable requirements of FAR parts 121, 125, or 135), and the guidance of (AC 120-40B or 14 CFR Part 60). Appropriate hardware and software configuration control procedures have been established. Our Pilot(s), (Name(s)), who are qualified on (Aircraft Type) aircraft have assessed the FFS and have found that it conforms to the (Operator/Sponsor) (Aircraft Type) flight deck configuration and that the simulated systems and subsystems function equivalently to those in the aircraft. The above named pilot(s) have also assessed the performance and the flying qualities of the FFS and find that it represents the respective aircraft.

(Added Comments may be placed here)

Sincerely,
(Sponsor Representative)

cc:
FAA, National Simulator Program

Attachment 4 to Appendix A to Part 60—
Figure A4D – Sample Qualification Test Guide Cover Page
INFORMATION

SPONSOR NAME

SPONSOR ADDRESS

FAA QUALIFICATION TEST GUIDE

(SPECIFIC AIRPLANE MODEL)
for example
Stratos BA797-320A

(Type of Simulator)

(Simulator Identification Including Manufacturer, Serial Number, Visual System Used)

(Simulator Level)

(Qualification Performance Standard Used)

(Simulator Location)

FAA Initial Evaluation

Date: _____

_____ Date: _____
(Sponsor)

_____ Date: _____
Manager, National
Simulator Program, FAA

Attachment 4 to Appendix A to Part 60—
Figure A4E – Sample Statement of Qualification - Certificate
INFORMATION

Federal Aviation Administration

National Simulator Program

Certificate of Qualification

This is to certify that representatives of the National Simulator Program
Completed an evaluation of the

Go-Fast Airlines

Farnsworth Z-100 Full Flight Simulator

FAA Identification Number 999

And pursuant to 14 CFR Part 60 found it to meet its original qualification basis, AC 120-40B (MM/DD/YY)

The Master Qualification Test Guide and the attached
Configuration List and Restrictions List
Provide the Qualification Basis for this device to operate at

Level D

Until April 30, 2010

Unless sooner rescinded or extended by the National Simulator Program Manager

March 15, 2009	*B. Williamson*
(date)	(for the NSPM)

Attachment 4 to Appendix A to Part 60—
Figure A4F – Sample Statement of Qualification; Configuration List
INFORMATION

STATEMENT OF QUALIFICATION
CONFIGURATION LIST

Date: ____			
Section 1. FSTD Information and Characteristics			
Sponsor Name:	____	**FSTD Location:**	
Address:	____ ____	**Physical Address:**	____ ____
City:	____	**City:**	____
State:	____	**State:**	____
Country:	____	**Country:**	____
ZIP:	____	**ZIP:**	____
Manager	____		
Sponsor ID No: (Four Letter FAA Designator)	____	**Nearest Airport:** (Airport Designator)	____
Type of Evaluation Requested:	☐ **Initial** ☐ **Upgrade** ☐ **Continuing Qualification** ☐ **Special** ☐ **Reinstatement**		
Aircraft Make/model/series:	____		
Initial Qualification: (If Applicable)	**Date:** ____ **Level** ____ MM/DD/YYYY	**Manufacturer's Identification or Serial Number**	____
Upgrade Qualification: (If Applicable)	**Date:** ____ **Level** ____ MM/DD/YYYY	☐ **eMQTG**	
Qualification Basis: ____	☐ **A** ☐ **B** ☐ **Interim C** ☐ **C** ☐ **D** ☐ **6** ☐ **7** ☐ **Provisional Status**		
Other Technical Information:			
FAA FSTD ID No: (If Applicable)	____	**FSTD Manufacturer:**	____
Convertible FSTD:	☐ **Yes:**	**Date of Manufacture:**	____ MM/DD/YYYY
Related FAA ID No. (If Applicable)	____ ____ ____	**Sponsor FSTD ID No:**	____
Engine model(s) and data revision: ____		**Source of aerodynamic model:** ____	
FMS identification and revision level: ____		**Source of aerodynamic coefficient data:** ____	
Visual system manufacturer/model: ____		**Aerodynamic data revision number:** ____	
Flight control data revision: ____		**Visual system display:** ____	
Mot ion system manufacturer/type: ____		**FSTD computer(s) identification:** ____	
National Aviation Authority (NAA): (If Applicable)	____		
NAA FSTD ID No:	____	**Last NAA Evaluation Date:**	____
NAA Qualification Level:	____		
NAA Qualification Basis:	____		

Attachment 4 to Appendix A to Part 60—
Figure A4F – Sample Statement of Qualification; Configuration List
INFORMATION

Visual System Manufacturer and Type:	_____	**FSTD Seats Available:** ___	**Motion System Manufacturer and Type:**	_____:
Aircraft Equipment:	**Engine Type(s):** _____ _____	**Flight Instrumentation:** ☐ EFIS ☐ HUD ☐ HGS ☐ EFVS ☐ TCAS ☐ GPWS ☐ Plain View ☐ GPS ☐ FMS Type: ___ ☐ WX Radar ☐ Other: ___		**Engine Instrumentation:** ☐ EICAS ☐ FADEC ☐ Other: ___

Airport Models:	3.6.1 _____ Airport Designator	3.6.2_____ Airport Designator	3.6.3 _____ Airport Designator
Circle to Land:	3. 7.1 _____ Airport Designator	3. 7.2_____ Approach	3. 7.3 _____ Landing Runway
Visual Ground Segment	3.8.1 _____ Airport Designator	3.8 .2_____ Approach	3. 8.3 _____ Landing Runway

Section 2. Supplementary Information

FAA Training Program Approval Authority:		☐ **POI** ☐ **TCPM** ☐ **Other:** _____	
Name:	_____	**Office:**	_____
Tel:	_____	**Fax:**	_____
Email:	_____		

FSTD Scheduling Person:			
Name:	_____		
Address 1:	_____	**Address 2**	_____
City:	_____	**State:**	_____
ZIP:	_____	**Email:**	_____
Tel:	_____	**Fax:**	_____

FSTD Technical Contact:			
Name:	_____		
Address 1:	_____	**Address 2**	_____
City:	_____	**State:**	_____
ZIP:	_____	**Email:**	_____
Tel:	_____	**Fax:**	_____

Section 3. Training, Testing and Checking Considerations

Area/Function/Maneuver	**Requested**	**Remarks**
Private Pilot - Training / Checks: (142)	☐	_____
Commercial Pilot - Training /Checks:(142)	☐	_____
Multi-Engine Rating - Training / Checks (142)	☐	_____

Attachment 4 to Appendix A to Part 60—
Figure A4F – Sample Statement of Qualification; Configuration List
INFORMATION

Instrument Rating -Training / Checks (142)	☐	_____
Type Rating - Training / Checks (135/121/142)	☐	_____
Proficiency Checks (135/121/142)	☐	_____
CAT I: (RVR 2400/1800 ft. DH200 ft)	☐	_____
CAT II: (RVR 1200 ft. DH 100 ft)	☐	_____
CAT III * (lowest minimum) _____ RVR _____ ft. * State CAT III (≤ 700 ft.), CAT IIIb (≤ 150 ft.), or CAT IIIc (0 ft.)	☐	_____
Circling Approach	☐	_____
Windshear Training:	☐	_____
Windshear Training IAW 121.409(d) (121 Turbojets Only)	☐	_____
Generic Unusual Attitudes and Recoveries within the Normal Flight Envelope	☐	_____
Specific Unusual Attitudes Recoveries	☐	_____
Auto-coupled Approach/Auto Go Around	☐	_____
Auto-land / Roll Out Guidance	☐	_____
TCAS/ACAS I / II	☐	_____
WX-Radar	☐	_____
HUD	☐	_____
HGS	☐	_____
EFVS	☐	_____
Future Air Navigation Systems	☐	_____
GPWS / EGPWS	☐	_____
ETOPS Capability	☐	_____
GPS	☐	_____
SMGCS	☐	_____
Helicopter Slope Landings	☐	_____
Helicopter External Load Operations	☐	_____
Helicopter Pinnacle Approach to Landings	☐	_____
Helicopter Night Vision Maneuvers	☐	_____
Helicopter Category A Takeoffs	☐	_____

Attachment 4 to Appendix A to Part 60—
Figure A4G – Sample Statement of Qualification – List of Qualified Tasks
INFORMATION

STATEMENT of QUALIFICATION

List of Qualified Tasks

Go Fast Airline Training -- Farnsworth Z-100 -- Level D -- FAA ID# 999

The FFS is qualified to perform all of the Maneuvers, Procedures, Tasks, and Functions Listed in Appendix A, Attachment 1, Table A1B, Minimum FFS Requirements In Effect on [mm/dd/yyyy] except for the following listed Tasks or Functions.

Qualified for all tasks in Table A1B, for which the sponsor has requested qualification, except for the following: 3.e(1)(i) NDB approach 3.f. Recovery from Unusual Attitudes 4.3. Circling Approach
Additional tasks for which this FFS is qualified (i.e., in addition to the list in Table A1B) 1. Enhanced Visual System 2. Windshear Training IAW Section 121.409(d).
The airport visual models evaluated for qualification at this level are: 1. Atlanta Hartsfield International Airport (KATL) 2. Miami International Airport (KMIA) 3. Dallas/Ft. Worth Regional Airport (KDFW)

Attachment 4 to Appendix A to Part 60—
Figure A4H – Sample Continuing Qualification Evaluation Requirements Page
INFORMATION

Continuing Qualification Evaluation Requirements *Completed at conclusion of Initial Evaluation*	
Continuing qualification Evaluations to be conducted each _(fill in)__ months Allotting _____ hours of FTD time. Signed: _____ NSPM / Evaluation Team Leader	Continuing qualification evaluations are due as follows: _(month)__ and __(month)_ and __(month)_ (enter or strike out, as appropriate) _____ Date

Revision:	
Based on (enter reasoning):	
Continuing qualification Evaluations are to be conducted each _(fill in)__ months. Allotting _____ hours. Signed: _____ NSPM / Evaluation Team Leader	Continuing qualification evaluations are due as follows: _(month)__ and __(month)_ and __(month)_ (enter or strike out, as appropriate) _____ Date

Revision:	
Based on (enter reasoning):	
Continuing qualification Evaluations are to be conducted each _(fill in)__ months. Allotting _____ hours. Signed: _____ NSPM / Evaluation Team Leader	Continuing qualification evaluations are due as follows: _(month)__ and __(month)_ and __(month)_ (enter or strike out, as appropriate) _____ Date

(Repeat as Necessary)

Attachment 4 to Appendix A to Part 60—
Figure A4I – Sample MQTG Index of Effective FFS Directives
INFORMATION

Index of Effective FSTD Directives Filed in this Section			
Number	**Effective Date**	**Date of Notification**	**Details**

Continue as Necessary....

Attachment 5 to Appendix A to Part 60—
Simulator Qualification Requirements For Windshear Training Program Use

Begin QPS Requirements

1. Applicability

This attachment applies to all simulators, regardless of qualification level, that are used to satisfy the training requirements of an FAA- approved low-altitude windshear flight training program, or any FAA-approved training program that addresses windshear encounters.

2. Statement of Compliance and Capability (SOC)

a. The sponsor must submit an SOC confirming that the aerodynamic model is based on flight test data supplied by the airplane manufacturer or other approved data provider. The SOC must also confirm that any change to environmental wind parameters, including variances in those parameters for windshear conditions, once inserted for computation, result in the correct simulated performance. This statement must also include examples of environmental wind parameters currently evaluated in the simulator (such as crosswind takeoffs, crosswind approaches, and crosswind landings).

b. For simulators without windshear warning, caution, or guidance hardware in the original equipment, the SOC must also state that the simulation of the added hardware and/or software, including associated flight deck displays and annunciations, replicates the system(s) installed in the airplane. The statement must be accompanied by a block diagram depicting the input and output signal flow, and comparing the signal flow to the equipment installed in the airplane.

3. Models

The windshear models installed in the simulator software used for the qualification evaluation must do the following:

a. Provide cues necessary for recognizing windshear onset and potential performance degradation requiring a pilot to initiate recovery procedures. The cues must include all of the following, as appropriate for the portion of the flight envelope:

(1) Rapid airspeed change of at least ±15 knots (kts).

(2) Stagnation of airspeed during the takeoff roll.

(3) Rapid vertical speed change of at least ±500 feet per minute (fpm).

(4) Rapid pitch change of at least ±5°.

b. Be adjustable in intensity (or other parameter to achieve an intensity effect) to at least two (2) levels so that upon encountering the windshear the pilot may identify its presence and apply the recommended procedures for escape from such a windshear.

(1) If the intensity is lesser, the performance capability of the simulated airplane in the windshear permits the pilot to maintain a satisfactory flightpath; and

(2) If the intensity is greater, the performance capability of the simulated airplane in the windshear does not permit the pilot to maintain a satisfactory flightpath (crash). Note: The means used to accomplish the ''nonsurvivable'' scenario of paragraph 3.b.(2) of this attachment, that involve operational elements of the simulated airplane, must reflect the dispatch limitations of the airplane.

c. Be available for use in the FAA-approved windshear flight training program.

4. Demonstrations

a. The sponsor must identify one survivable takeoff windshear training model and one survivable approach windshear training model. The wind components of the survivable models must be presented in graphical format so that all components of the windshear are shown, including initiation point, variance in magnitude, and time or distance correlations. The simulator must be operated at the same gross weight, airplane configuration, and initial airspeed during the takeoff demonstration (through calm air and through the first selected survivable windshear), and at the same gross weight, airplane configuration, and initial airspeed during the approach demonstration (through calm air and through the second selected survivable windshear).

b. In each of these four situations, at an ''initiation point'' (i.e., where windshear onset is or should be recognized), the recommended procedures for windshear recovery are applied and the results are recorded as specified in paragraph 5 of this attachment.

c. These recordings are made without inserting programmed random turbulence. Turbulence that results from the windshear model is to be expected, and no attempt may be made to neutralize turbulence from this source.

d. The definition of the models and the results of the demonstrations of all four (4) cases described in paragraph 4.a of this attachment, must be made a part of the MQTG.

5. Recording Parameters

a. In each of the four MQTG cases, an electronic recording (time history) must be made of the following parameters:

(1) Indicated or calibrated airspeed.
(2) Indicated vertical speed.
(3) Pitch attitude.
(4) Indicated or radio altitude.
(5) Angle of attack.
(6) Elevator position.
(7) Engine data (thrust, N_1, or throttle position).
(8) Wind magnitudes (simple windshear model assumed).

b. These recordings must be initiated at least 10 seconds prior to the initiation point, and continued until recovery is complete or ground contact is made.

6. Equipment Installation and Operation

All windshear warning, caution, or guidance hardware installed in the simulator must operate as it operates in the airplane. For example, if a rapidly changing wind speed and/or direction would have caused a windshear warning in the airplane, the simulator must respond equivalently without instructor/evaluator intervention.

7. Qualification Test Guide

a. All QTG material must be forwarded to the NSPM.

b. A simulator windshear evaluation will be scheduled in accordance with normal procedures. Continuing qualification evaluation schedules will be used to the maximum extent possible.

c. During the on-site evaluation, the evaluator will ask the operator to run the performance tests and record the results. The results of these on-site tests will be compared to those results previously approved and placed in the QTG or MQTG, as appropriate.

d. QTGs for new (or MQTGs for upgraded) simulators must contain or reference the information described in paragraphs 2, 3, 4, and 5 of this attachment.

End QPS Requirements

Begin Information

8. Subjective Evaluation

The NSPM will fly the simulator in at least two of the available windshear scenarios to subjectively evaluate simulator performance as it encounters the programmed windshear conditions.

a. One scenario will include parameters that enable the pilot to maintain a satisfactory flightpath.

b. One scenario will include parameters that will not enable the pilot to maintain a satisfactory flightpath (crash).

c. Other scenarios may be examined at the NSPM's discretion.

9. Qualification Basis

The addition of windshear programming to a simulator in order to comply with the qualification for required windshear training does not change the original qualification basis of the simulator.

10. Demonstration Repeatability

For the purposes of demonstration repeatability, it is recommended that the simulator be flown by means of the simulator's autodrive function (for those simulators that have autodrive capability) during the demonstrations.

End Information

Attachment 6 to Appendix A to Part 60—FSTD Directives Applicable to Airplane Flight Simulators

Flight Simulation Training Device (FSTD) Directive

FSTD Directive 1. Applicable to all Full Flight Simulators (FFS), regardless of the original qualification basis and qualification date (original or upgrade), having Class II or Class III airport models available.

Agency: Federal Aviation Administration (FAA), DOT

Action: This is a retroactive requirement to have all Class II or Class III airport models meet current requirements.

Summary: Notwithstanding the authorization listed in paragraph 13b in Appendices A and C of this part, this FSTD Directive requires each certificate holder to ensure that by May 30, 2009, except for the airport model(s) used to qualify the simulator at the designated level, each airport model used by the certificate holder's instructors or evaluators for training, checking, or testing under this chapter in an FFS, meets the definition of a Class II or Class III airport model as defined in 14 CFR part 60. The completion of this requirement will not require a report, and the method used for keeping instructors and evaluators apprised of the airport models that meet Class II or Class III requirements on any given simulator is at the option of the certificate holder whose employees are using the FFS, but the method used must be available for review by the TPAA for that certificate holder.

Dates: FSTD Directive 1 becomes effective on May 30, 2008.

For Further Information Contact: National Simulator Program Manager, Air Transportation Division, AFS–205, P.O. Box 20636, Atlanta, Georgia 30320: telephone: (404) 474–5620; fax: (404) 474–5656.

Specific Requirements:

1. Part 60 requires that each FSTD be:

a. Sponsored by a person holding or applying for an FAA operating certificate under Part 119, Part 141, or Part 142, or holding or applying for an FAA-approved training program under Part 63, Appendix C, for flight engineers, and

b. Evaluated and issued an SOQ for a specific FSTD level.

2. FFSs also require the installation of a visual system that is capable of providing an out-of-the-flight-deck view of airport models. However, historically these airport models were not routinely evaluated or required to meet any standardized criteria. This has led to qualified simulators containing airport models being used to meet FAA-approved training, testing, or checking requirements with potentially incorrect or inappropriate visual references.

3. To prevent this from occurring in the future, by May 30, 2009, except for the airport model(s) used to qualify the simulator at the designated level, each certificate holder must assure that each airport model used for training, testing, or checking under this chapter in a qualified FFS meets definition of a Class II or Class III airport model as defined in Appendix F of this part.

4. These references describe the requirements for visual scene management and the minimum distances from which runway or landing area features must be visible for all levels of simulator. The airport model must provide, for each ''in-use runway'' or ''in-use landing area,'' runway or landing area surface and markings, runway or landing area lighting, taxiway surface and markings, and taxiway lighting. Additional requirements include correlation of the v airport models with other aspects of the airport environment, correlation of the aircraft and associated equipment, scene quality assessment features, and the control of these models the instructor must be able to exercise.

5. For circling approaches, all requirements of this section apply to the runway used for the initial approach and to the runway of intended landing.

6. The details in these models must be developed using airport pictures, construction drawings and maps, or other similar data, or developed in accordance with published regulatory material. However, this FSTD DIRECTIVE 1 does not require that airport models contain details that are beyond the initially designed capability of the visual system, as currently qualified. The recognized limitations to visual systems are as follows:

a. Visual systems not required to have runway numbers as a part of the specific runway marking requirements are:

(1) Link NVS and DNVS.
(2) Novoview 2500 and 6000.
(3) FlightSafety VITAL series up to, and including, VITAL III, but not beyond.
(4) Redifusion SP1, SP1T, and SP2.

b. Visual systems required to display runway numbers only for LOFT scenes are:

(1) FlightSafety VITAL IV.
(2) Redifusion SP3 and SP3T.
(3) Link-Miles Image II.

c. Visual systems not required to have accurate taxiway edge lighting are:

(1) Redifusion SP1.
(2) FlightSafety Vital IV.
(3) Link-Miles Image II and Image IIT
(4) XKD displays (even though the XKD image generator is capable of generating blue colored lights, the display cannot accommodate that color).

7. A copy of this Directive must be filed in the MQTG in the designated FSTD Directive Section, and its inclusion must be annotated on the Index of Effective FSTD Directives chart. See Attachment 4, Appendices A through D for a sample MQTG Index of Effective FSTD Directives chart.

Flight Simulation Training Device (FSTD) Directive

FSTD Directive 2. Applicable to all airplane Full Flight Simulators (FFS), regardless of the original qualification basis and qualification date (original or upgrade), used to conduct full stall training, upset recovery training, airborne icing training, and other flight training tasks as described in this Directive.

Agency: Federal Aviation Administration (FAA), DOT.

Action: This is a retroactive requirement for any FSTD being used to obtain training, testing, or checking credit in an FAA approved flight training program to meet current FSTD evaluation requirements for the specific training maneuvers as defined in this Directive.

Summary: Notwithstanding the authorization listed in paragraph 13b in Appendix A of this Part, this FSTD Directive requires that each FSTD sponsor conduct additional subjective and objective testing, conduct required modifications, and apply for additional FSTD qualification under § 60.16 to support continued qualification of the following flight training tasks where training, testing, or checking credit is being sought in a selected FSTD being used in an FAA approved flight training program:

a. Recognition of and Recovery from a Full Stall
b. Upset Recognition and Recovery
c. Airborne Icing (Engine and Airframe Ice Accretion)
d. Takeoff and Landing with Gusting Crosswinds
e. Recovery from a Bounced Landing

The FSTD sponsor may elect to apply for additional qualification for any, all, or none of the above defined training tasks for a particular FSTD. After [THE FAA WILL INSERT DATE 3 years FROM EFFECTIVE DATE OF THE FINAL RULE PUBLISHED IN THE **Federal Register**], any FSTD used to conduct the above training tasks must be evaluated and issued additional qualification by the National Simulator Program Manager (NSPM) as defined in this Directive.

Dates: FSTD Directive 2 becomes effective on [THE FAA WILL INSERT THE EFFECTIVE DATE OF THE FINAL RULE PUBLISHED IN THE **FEDERAL REGISTER**].

For Further Information Contact: Larry McDonald, Air Transportation Division/ National Simulator Program Branch, AFS–205, Federal Aviation Administration, P.O. Box 20636, Atlanta, GA 30320; telephone (404) 474–5620; email *larry.e.mcdonald@faa.gov*.

Specific Requirements

1. Part 60 requires that each FSTD be:

a. Sponsored by a person holding or applying for an FAA operating certificate under Part 119, Part 142, or Part 142, or holding or applying for an FAA-approved training program under Part 63, Appendix C, for flight engineers, and

b. Evaluated and issued a Statement of Qualification (SOQ) for a specific FSTD level.

2. The evaluation criteria contained in this Directive is intended to address specific training tasks that require additional evaluation to ensure adequate FSTD fidelity.

3. The requirements described in this Directive define additional qualification criteria for specific training tasks that are applicable only to those FSTDs that will be utilized to obtain training, testing, or checking credit in accordance with an FAA approved flight training program. In order to obtain additional qualification for the tasks described in this Directive, FSTD sponsors must request additional qualification in accordance with § 60.16 and the requirements of this Directive. FSTDs that are found to meet the requirements of this Directive will have their Statement of Qualification (SOQ) amended to reflect the additional training tasks that the FSTD has been qualified to conduct. The additional qualification requirements as defined in this Directive are divided into the following training tasks:

a. Section I—Additional Qualification Requirements for Full Stall Training Tasks
b. Section II—Additional Qualification Requirements for Upset Recognition and Recovery Training Tasks
c. Section III—Additional Qualification Requirements for Airborne Engine and Airframe Icing Training Tasks
d. Section IV—Additional Qualification Requirements for Takeoff and Landing Tasks in Gusting Crosswinds
e. Section V—Additional Qualification Requirements for Bounced Landing Training Tasks

4. A copy of this Directive (along with all required Statements of Compliance and objective test results) must be filed in the MQTG in the designated FSTD Directive Section, and its inclusion must be annotated on the Index of Effective FSTD Directives chart. See Attachment 4, Appendices A through D for a sample MQTG Index of Effective FSTD Directives chart.

Section I—Evaluation Requirements for Full Stall Training Tasks

1. This section applies to previously qualified Level C and Level D FSTDs being utilized to obtain training, testing, or checking credits at angles of attack beyond the first indication of a stall (such as stall warning system activation, stick shaker, etc.). Qualification of full stall maneuvers for Level A and Level B FSTDs in accordance with this Directive may be considered where the FSTD's motion and vibration cueing systems have been evaluated to provide adequate stall recognition and recovery cues to conduct the specific stall maneuvers described in Table A1A, Section 2.1.7.S.

2. The evaluation requirements in this Directive are intended to validate FSTD fidelity at angles of attack sufficient to identify the stall, to demonstrate aircraft performance degradation in the stall, and to train recovery techniques from a fully stalled flight condition.

3. This Directive contains additional objective and subjective testing that exceed the evaluation requirements of previously qualified FSTDs. Where aerodynamic modeling data and/or validation data is not available or insufficient to fully meet the requirements of this Directive, the NSPM may restrict FSTD qualification to certain stall maneuvers where adequate validation data exists.

4. By [THE FAA WILL INSERT DATE 3 years FROM EFFECTIVE DATE OF THE FINAL RULE PUBLISHED IN THE **Federal Register**], any FSTD being used to obtain training, testing, or checking credits for full stall training tasks in an FAA approved training program must be evaluated by the FSTD sponsor in accordance with the following sections of Appendix A of this Part:

a. Table A1A, General Requirements, Section 2.1.7.S (High Angle of Attack Maneuvers)
b. Table A2A, Objective Testing Requirements, Test 2.a.10 (Stick Pusher Force Calibration) [where applicable]
c. Table A2A, Objective Testing Requirements, Test 2.c.8.b (Stall Characteristics)
d. Table A3A, Functions and Subjective Testing Requirements, Test 6.a.2 (High Angle of Attack Maneuvers)
e. Attachment 7, Additional QPS Requirements for Stall Maneuver Evaluation

5. The validation data for the required stall characteristics tests may be derived from an approved engineering simulation data source or other data source acceptable to the FAA. An SOC must be provided by the validation data provider that the engineering simulation has been evaluated by an appropriate SME pilot in accordance with Table A1A, Section 2.1.7.S and Attachment 7. Where no flight test or engineering simulation validation data is available, baseline objective tests of the FSTD's performance may be acceptable where accompanied by an SME evaluation of each required objective test conditions.

6. Where qualification is being sought to conduct full stall training tasks in accordance with this Directive, the FSTD Sponsor must conduct the required evaluations and modifications as prescribed in this Directive and report compliance to the NSPM in accordance with § 60.23 using the NSP's standardized FSTD Sponsor Notification Form. At a minimum, this form must be accompanied with the following information:

a. A description of any modifications to the FSTD (in accordance with § 60.23) necessary to meet the requirements of this Directive.
b. Statement of Compliance (Aerodynamics and Stick Pusher System Modeling)—See Table A1A, Section 2.1.7.S and Attachment 7
c. Statement of Compliance (SME Pilot Evaluation)—See Table A1A, Section 2.1.7.S and Attachment 7
d. Copies of the required objective test results as described above in sections 4.b. and 4.c.

7. The NSPM will review each submission to determine if the requirements of this Directive have been met and respond to the FSTD Sponsor as described in § 60.23(c). This response, along with any noted restrictions, may serve as an interim update to the FSTD's Statement of Qualification (SOQ) until such time that a permanent change is made to the SOQ at the FSTD's next scheduled evaluation.

Section II—Evaluation Requirements for Upset Recovery Training Tasks

1. This section applies to previously qualified FSTDs being utilized to obtain training, testing, or checking credits for upset recognition and recovery training tasks as defined in Appendix A, Table A1A, Section 2.1.6.S. of this Part. Qualification of upset recovery maneuvers for Level A and Level B FSTDs in accordance with this Directive may be considered where the FSTD's motion and vibration cueing systems have been evaluated to provide adequate cues to conduct the

specific upset recovery maneuvers described in Table A1A, Section 2.1.6.S.

2. The requirements contained in this section are intended to define minimum standards for evaluating an FSTD for use in upset recognition and recovery training maneuvers that may exceed an aircraft's normal flight envelope. These standards include the evaluation of qualified training maneuvers against the FSTD's validation envelope and providing the instructor with minimum feedback tools for the purpose of determining if a training maneuver is conducted within FSTD validation limits and the aircraft's structural/performance limitations.

3. This Directive contains additional objective and subjective testing that exceeds the evaluation requirements of previously qualified FSTDs. Where aerodynamic modeling data and/or validation data is not available or insufficient to meet the requirements of this Directive, the NSPM may limit additional qualification to certain upset recovery maneuvers where adequate validation data exists.

4. By [THE FAA WILL INSERT DATE 3 years FROM EFFECTIVE DATE OF THE FINAL RULE PUBLISHED IN THE **Federal Register**], any FSTD being used to obtain training, testing, or checking credit for upset recognition and recovery training tasks in an FAA approved flight training program must be evaluated by the FSTD sponsor in accordance with the following sections of Appendix A of this Part:

a. Table A1A, General Requirements, Section 2.1.6.S. (Upset Recognition and Recovery)
b. Table A3A, Functions and Subjective Testing, Test 5.b.15. (Upset Recovery and Recovery Maneuvers)
c. Attachment 7, Additional QPS Requirements for Upset Recognition and Recovery Maneuver Evaluation

6. Where qualification is being sought to conduct upset recognition and recovery training tasks in accordance with this Directive, the FSTD Sponsor must conduct the required evaluations and modifications as prescribed in this Directive and report compliance to the NSPM in accordance with § 60.23 using the NSP's standardized FSTD Sponsor Notification Form. At a minimum, this form must be accompanied with the following information:

a. A description of any modifications to the FSTD (in accordance with § 60.23) necessary to meet the requirements of this Directive.
b. Statement of Compliance (FSTD Validation Envelope)—See Table A1A, Section 2.1.6.S and Attachment 7
c. A confirmation statement that the modified FSTD has been subjectively evaluated by a qualified pilot as described in § 60.16(a)(1)(iii).

7. The NSPM will review each submission to determine if the requirements of this Directive have been met and respond to the FSTD Sponsor as described in § 60.23(c). Additional NSPM conducted FSTD evaluations may be required before the modified FSTD is placed into service. This response, along with any noted restrictions, will serve as an interim update to the FSTD's Statement of Qualification (SOQ) until such time that a permanent change is made to the SOQ at the FSTD's next scheduled evaluation.

Section III—Evaluation Requirements for Engine and Airframe Icing Training Tasks

1. This section applies to previously qualified Level C and Level D FSTDs being utilized to obtain training, testing, or checking credits in maneuvers that demonstrate the effects of engine and airframe ice accretion.

2. The evaluation requirements in this section are intended to supersede and improve upon existing Level C and Level D FSTD evaluation requirements on the effects of engine and airframe icing. The requirements define a minimum level of fidelity required to adequately simulate the aircraft specific aerodynamic characteristics of an in-flight encounter with engine and airframe ice accretion as necessary to accomplish training objectives.

3. This Directive contains additional subjective testing that exceeds the evaluation requirements of previously qualified FSTDs. Where aerodynamic modeling data is not available or insufficient to meet the requirements of this Directive, the NSPM may limit qualified engine and airframe icing maneuvers where sufficient aerodynamic modeling data exists.

4. By [THE FAA WILL INSERT DATE 3 years FROM EFFECTIVE DATE OF THE FINAL RULE PUBLISHED IN THE **Federal Register**], any FSTD being used to conduct training tasks in engine and airframe icing must be evaluated by the FSTD sponsor in accordance with the following sections of Appendix A of this Part:

a. Table A1A, General Requirements, Section 2.1.5.S. (Engine and Airframe Icing)
b. Attachment 7, Additional QPS Requirements for Engine and Airframe Icing Evaluation (Paragraphs 1, 2, and 3). Objective demonstration testing is not required for previously qualified FSTDs.

5. Where continued qualification is being sought to conduct engine and airframe icing training tasks in accordance with this Directive, the FSTD Sponsor must conduct the required evaluations and modifications as prescribed in this Directive and report compliance to the NSPM in accordance with § 60.23 using the NSP's standardized FSTD Sponsor Notification Form. At a minimum, this form must be accompanied with the following information:

a. A description of any modifications to the FSTD (in accordance with § 60.23) necessary to meet the requirements of this Directive.
b. Statement of Compliance (Ice Accretion Model)—See Table A1A, Section 2.1.5.S and Attachment 7
c. A confirmation statement that the modified FSTD has been subjectively evaluated by a qualified pilot as described in § 60.16(a)(1)(iii).

6. The NSPM will review each submission to determine if the requirements of this Directive have been met and respond to the FSTD Sponsor as described in § 60.23(c). Additional NSPM conducted FSTD evaluations may be required before the modified FSTD is placed into service. This response, along with any noted restrictions, will serve as an interim update to the FSTD's Statement of Qualification (SOQ) until such time that a permanent change is made to the SOQ at the FSTD's next scheduled evaluation.

Section IV—Evaluation Requirements for Gusting Crosswinds During Takeoff and Landing

1. This section applies to previously qualified FSTDs that will be utilized to obtain training, testing, or checking credits in takeoff and landing tasks in gusting crosswinds as part of an FAA approved training program. The requirements of this Directive are applicable only to those Level B and higher FSTDs that are qualified to conduct takeoff and landing training tasks.

2. The evaluation requirements in this section are intended to introduce new evaluation requirements for gusting crosswinds during takeoff and landing training tasks and contains additional subjective testing that exceeds the evaluation requirements of previously qualified FSTDs.

3. By [THE FAA WILL INSERT DATE 3 years FROM EFFECTIVE DATE OF THE FINAL RULE PUBLISHED IN THE **Federal Register**], any FSTD that is utilized to conduct gusting crosswind takeoff and landing training tasks must be evaluated by the FSTD sponsor in accordance with the following sections of Appendix A of this Part:

a. Table A1A, General Requirements, Section 3.1.S.(2) (Ground Handling Characteristics)
b. Table A1A, General Requirements, Section 11.4.R.(1) (Atmosphere—Instructor Controls, Gusting Crosswind)
c. Table A3A, Functions and Subjective Testing Requirements, Test 3.a.3 (Takeoff, Crosswind—Maximum Demonstrated and Gusting Crosswind)
d. Table A3A, Functions and Subjective Testing Requirements, Test 8.d. (Approach and landing with crosswind—Maximum Demonstrated and Gusting Crosswind)

4. Where qualification is being sought to conduct gusting crosswind training tasks in accordance with this Directive, the FSTD Sponsor must conduct the required evaluations and modifications as prescribed in this Directive and report compliance to the NSPM in accordance with § 60.23 using the NSP's standardized FSTD Sponsor Notification Form. At a minimum, this form must be accompanied with the following information:

a. A description of any modifications to the FSTD (in accordance with § 60.23) necessary to meet the requirements of this Directive.
b. Statement of Compliance (Gusting Crosswind Profiles)—See Table A1A, Section 11.4.R.
c. A confirmation statement that the modified FSTD has been subjectively evaluated by a qualified pilot as described in § 60.16(a)(1)(iii).

5. The NSPM will review each submission to determine if the requirements of this Directive have been met and respond to the

FSTD Sponsor as described in § 60.23(c). Additional NSPM conducted FSTD evaluations may be required before the modified FSTD is placed into service. This response, along with any noted restrictions, will serve as an interim update to the FSTD's Statement of Qualification (SOQ) until such time that a permanent change is made to the SOQ at the FSTD's next scheduled evaluation.

Section V—Evaluation Requirements for Bounced Landing Recovery Training Tasks

1. This section applies to previously qualified FSTDs that will be utilized to obtain training, testing, or checking credits in bounced landing recovery as part of an FAA approved training program. The requirements of this Directive are applicable only to those Level B and higher FSTDs that are qualified to conduct takeoff and landing training tasks.

2. The evaluation requirements in this section are intended to introduce new evaluation requirements for bounced landing recovery training tasks and contains additional subjective testing that exceeds the evaluation requirements of previously qualified FSTDs.

3. By [THE FAA WILL INSERT DATE 3 years FROM EFFECTIVE DATE OF THE FINAL RULE PUBLISHED IN THE **Federal Register**], any FSTD that is utilized to conduct bounced landing training tasks must be evaluated by the FSTD sponsor in accordance with the following sections of Appendix A of this Part:

a. Table A1A, General Requirements, Section 3.1.S.(1) (Ground Reaction Characteristics)
b. Table A3A, Functions and Subjective Testing Requirements, Test 9.e. (Missed Approach—Bounced Landing)

4. Where qualification is being sought to conduct bounced landing training tasks in accordance with this Directive, the FSTD Sponsor must conduct the required evaluations and modifications as prescribed in this Directive and report compliance to the NSPM in accordance with § 60.23 using the NSP's standardized FSTD Sponsor Notification Form. At a minimum, this form must be accompanied with the following information:

a. A description of any modifications to the FSTD (in accordance with § 60.23) necessary to meet the requirements of this Directive.
b. A confirmation statement that the modified FSTD has been subjectively evaluated by a qualified pilot as described in § 60.16(a)(1)(iii).

5. The NSPM will review each submission to determine if the requirements of this Directive have been met and respond to the FSTD Sponsor as described in § 60.23(c). Additional NSPM conducted FSTD evaluations may be required before the modified FSTD is placed into service. This response, along with any noted restrictions, will serve as an interim update to the FSTD's Statement of Qualification (SOQ) until such time that a permanent change is made to the SOQ at the FSTD's next scheduled evaluation.

Attachment 7 to Appendix A to Part 60—Additional Simulator Qualification Requirements for Stall, Upset Recognition and Recovery, and Engine and Airframe Icing Training Tasks

Begin QPS Requirements

High Angle of Attack Model Evaluation (Table A1A, Section 2.1.7.S.)

1. Applicability: This attachment applies to all simulators that are used to satisfy training requirements for full stall maneuvers that are conducted at angles of attack beyond the activation of the stall warning system. This attachment is not applicable for those FSTDs that are only qualified for approach to stall maneuvers that cease after recovery from the first indication of the stall. The material in this section is intended to supplement the general requirements, objective testing requirements, and subjective testing requirements contained within Tables A1A, A2A, and A3A, respectively.

2. General Requirements: The requirements for high angle of attack modeling are intended to provide aircraft specific recognition cues and performance and handling qualities of a developing stall through the stall break and recovery. It is recognized, however, that strict time-history-based evaluation against flight test data may not adequately validate the aerodynamic model in an unstable flight regime, such as stalled flight, particularly in cases where significant deviations are seen in the aircraft's stability and control. As a result, the objective testing requirements defined in Table A2A do not prescribe strict tolerances on any parameter at angles of attack beyond the stall angle of attack. In lieu of mandating objective tolerances to flight test data at angles of attack at and beyond the stall, a Statement of Compliance (SOC) will be required to define the source data and methods used to develop the stall aerodynamic model which incorporates defined stall characteristics as applicable for the simulated aircraft type. In this flight regime (at angles of attack above the stall angle of attack), the aerodynamic modeling is expected to simulate aircraft ''type representative'' post-stall behavior to the extent that the training objectives can be accomplished. This SOC must also include verification that the stall model has been evaluated by a subject matter expert (SME) pilot acceptable to the FAA.

3. Statement of Compliance (Aerodynamic Model): At a minimum, the following must be addressed in the SOC:

a. Source Data and Modeling Methods: The SOC must identify the sources of data used to develop the aerodynamic model. Of particular interest is a mapping of test points in the form of alpha/beta envelope plot for a minimum of flaps up and flaps down aircraft configurations. For the flight test data, a list of the types of maneuvers used to define the aerodynamic model for angle of attack ranges greater than the first indication of stall must be provided per flap setting. In cases where limited data is available to model and/or validate the stall characteristics (e.g. safety issues involving the collection flight test data), the data provider is expected to make a reasonable attempt to develop a stall model through analytical methods and utilization of the best available data.

b. Validity Range: The FSTD Sponsor must declare the range of angle of attack and sideslip where the aerodynamic model remains valid. For full (aerodynamic) stall training tasks, model validation and/or analysis should be conducted through at least 10 degrees beyond the critical angle of attack. In cases where training is limited to the activation of a stall identification system (stick pusher), model validation may be conducted at a lower angle of attack range, but the FSTD Sponsor must specify and restrict the use of the FSTD to those maneuvers that have been appropriately validated.

c. Model Characteristics: Within the declared range of model validity, the SOC must address and the aerodynamic model must incorporate the following typical stall characteristics where applicable by aircraft type:

i. Degradation in static/dynamic lateral-directional stability
ii. Degradation in control response (pitch, roll, yaw)
iii. Uncommanded roll response
iv. Apparent randomness or non-repeatability
v. Changes in pitch stability
vi. Stall hysteresis
vii. Mach effects
viii. Stall buffet

An overview of the methodology used to address these features must be provided.

4. Statement of Compliance (SME Evaluation): The stall model must be evaluated by a subject matter expert (SME) pilot with knowledge of the cues necessary to accomplish the required training objectives and with experience in conducting stalls in the type of aircraft being simulated. In cases where such an SME pilot is not available, a pilot with experience in an aircraft with similar stall characteristics may be utilized. The SME pilot conducting the stall model evaluation must be acceptable to the NSPM. This evaluation may be conducted in the sponsor's FSTD or in an ''audited'' engineering simulation. The engineering simulation can then be used to provide objective checkout cases and subjective evaluation guidance material to the FSTD sponsor/operator for evaluation of the implemented model on the Sponsor's FSTD.

Final evaluation and approval of the Sponsor's FSTD must be accomplished by an SME pilot with knowledge of the training requirements to conduct the stall training tasks. Where available, documentation, including checkout documentation from an acceptable data provider, AFM documentation, or other source documentation related to stall training tasks for the simulated aircraft should be utilized. Particular emphasis should be placed upon recognition cues of an impending aerodynamic stall (such as the stall buffet, lateral/directional instability, etc.), stall break (g-break, pitch break, roll off departure, etc.), response of aircraft automation (such as autopilot and auto throttles), and the necessary control input required to execute an immediate recovery from the stall.

Upset Recognition and Recovery Evaluation (Table A1A, Section 2.1.6.S.)

1. Applicability: This attachment applies to all simulators that are used to satisfy training requirements for upset recognition and recovery maneuvers. For the purposes of this attachment (as defined in the Airplane Upset Recovery Training Aid), an aircraft upset is generally defined as an airplane unintentionally exceeding the following parameters normally experienced in line operations or training:

- Pitch attitude greater than 25 degrees nose up.
- Pitch attitude greater than 10 degrees nose down.
- Bank angles greater than 45 degrees.
- Within the above parameters, but flying at airspeeds inappropriate for the conditions.

FSTDs that will be used to conduct upset recognition and recovery training maneuvers in which the FSTD is either repositioned into an aircraft upset condition or an artificial stimulus (such as weather phenomena or system failures) is applied that could potentially result in a flightcrew entering an aircraft upset condition must be evaluated and qualified in accordance with this section.

2. General Requirements: The general requirement for upset recognition and recovery qualification in Table A1A defines three basic elements required for qualifying an FSTD for upset recognition and recovery maneuvers:

a. FSTD Validation Envelope: The FSTD validation envelope must be defined and utilized to determine if qualified upset recovery maneuvers can be executed while remaining within FSTD validation limits.

b. Instructor Feedback: In order to enhance the instructor's situational awareness, the FSTD must employ a method to provide a minimum set of feedback tools to determine if the FSTD remains within validation limits and the simulated aircraft remains within operating limits during a student's execution of an upset recovery maneuver.

c. Upset Scenarios: Where dynamic upset scenarios or aircraft system malfunctions are used to stimulate the FSTD into an aircraft upset condition, such external stimuli/malfunctions must be realistic and supported by data sources where available. Acceptable data sources may include studies of environmental phenomena, aircraft accident/incident data, aircraft manufacturer's data, or other relevant data sources.

3. Validation Envelopes: For the purposes of this attachment, the term ''flight envelope'' refers to the entire domain in which the FSTD is capable of being flown. This envelope can be further divided into three subdivisions (e.g. see Appendix 3–D of the *Airplane Upset Recovery Training Aid*):

- Flight Test Validated: This is the region of the flight envelope which has been validated with flight test data, typically by comparing the performance of the FSTD against the flight test data through tests incorporated in the QTG and other flight test data utilized to further extend the model beyond the minimum requirements. Within this region, there is high confidence that the simulator responds similarly to the aircraft. Note that this region is not strictly limited to what has been tested in the QTG; as long as the aerodynamic math model has been conformed to the flight test results, that portion of the math model can be considered to be within the Flight Test Validated region.
- Wind Tunnel and/or Analytical: This is the region of the flight envelope for which the FSTD has not been compared to flight test data, but for which there has been wind tunnel testing and/or the use of other reliable predictive methods (typically by the aircraft manufacturer) to define the aerodynamic model. Any extensions to the aerodynamic model that have been evaluated in accordance with the definition of a ''representative'' stall model (as described above in the stall maneuver section) must be clearly indicated. Within this region, there is moderate confidence that the simulator will respond similarly to the aircraft.
- Extrapolated: This is the region extrapolated beyond the flight test validated and wind tunnel/analytical regions. The extrapolation may be a linear extrapolation, a holding of the last value before the extrapolation began, or some other set of values. Whether this extrapolated data is provided by the aircraft or simulator manufacturer, it is a ''best guess'' only. Within this region, there is reduced confidence that the simulator will respond similarly to the aircraft. Brief excursions into this region may still retain a moderate confidence level in simulator fidelity; however, the instructor should be aware that the simulator's response may deviate from the actual aircraft.

4. Instructor Feedback Mechanism: For the instructor/evaluator to provide feedback to the student during URT maneuver training, additional information must be accessible that indicates the relative fidelity of the simulation, magnitude of student control inputs, and aircraft operational limits that could potentially affect the successful completion of the maneuver(s). At a minimum, the following must be available to the instructor/evaluator:

a. Simulator Validation Envelope: The FSTD must employ a method to record the FSTD's expected level of fidelity with respect to the designed validation envelope. This may be displayed as an ''alpha/beta'' crossplot on the Instructor Operating System (IOS) or other alternate method acceptable to the FAA to clearly convey the simulator's expected fidelity level during the maneuver.

b. Flight Control Inputs: The FSTD must employ a method for the instructor/evaluator to assess the student's flight control input used to execute the upset recovery maneuver. Parameters which may not be easily assessed visually from the instructor station, such as rudder pedal displacement and control forces, must be included in this feedback mechanism.

c. Aircraft Operational Limits: The FSTD must employ a method to provide the instructor/evaluator with information concerning the aircraft operating limitations (such as normal load factor and airspeed limits found on a V-n diagram) that may affect the successful completion of the maneuver.

End QPS Requirements

Begin Information

An example FSTD ''alpha/beta'' envelope display and IOS feedback mechanism are shown below in Figure 1 and Figure 2.

Figure 1 – Example FSTD Alpha/Beta Envelope Plot

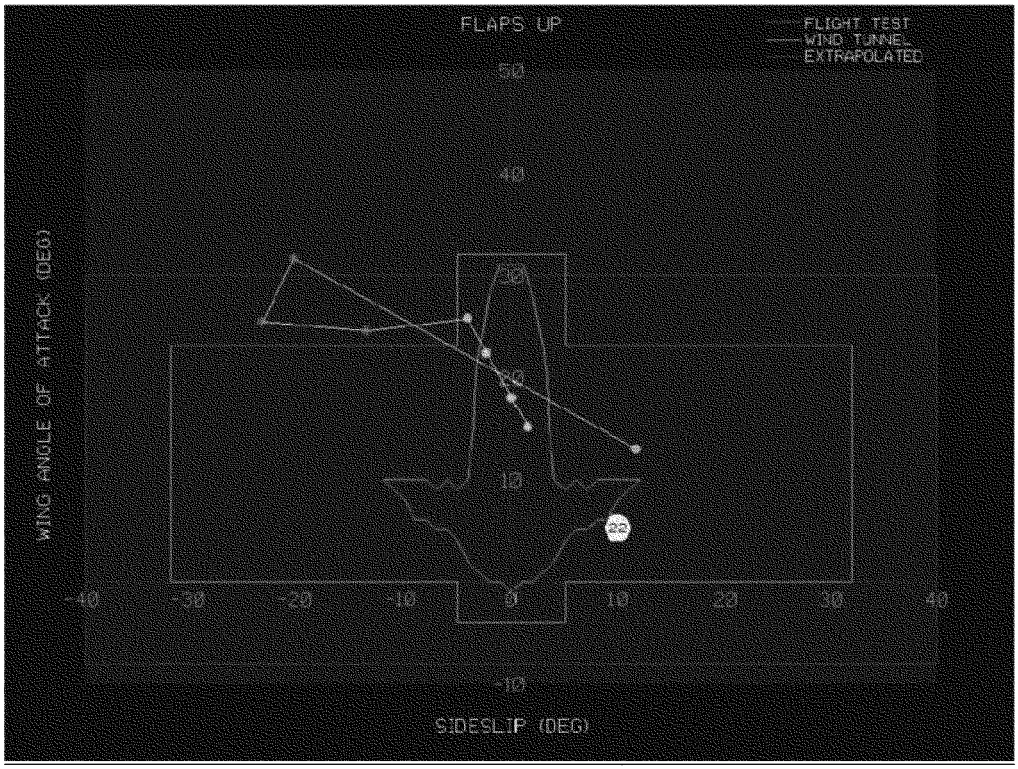
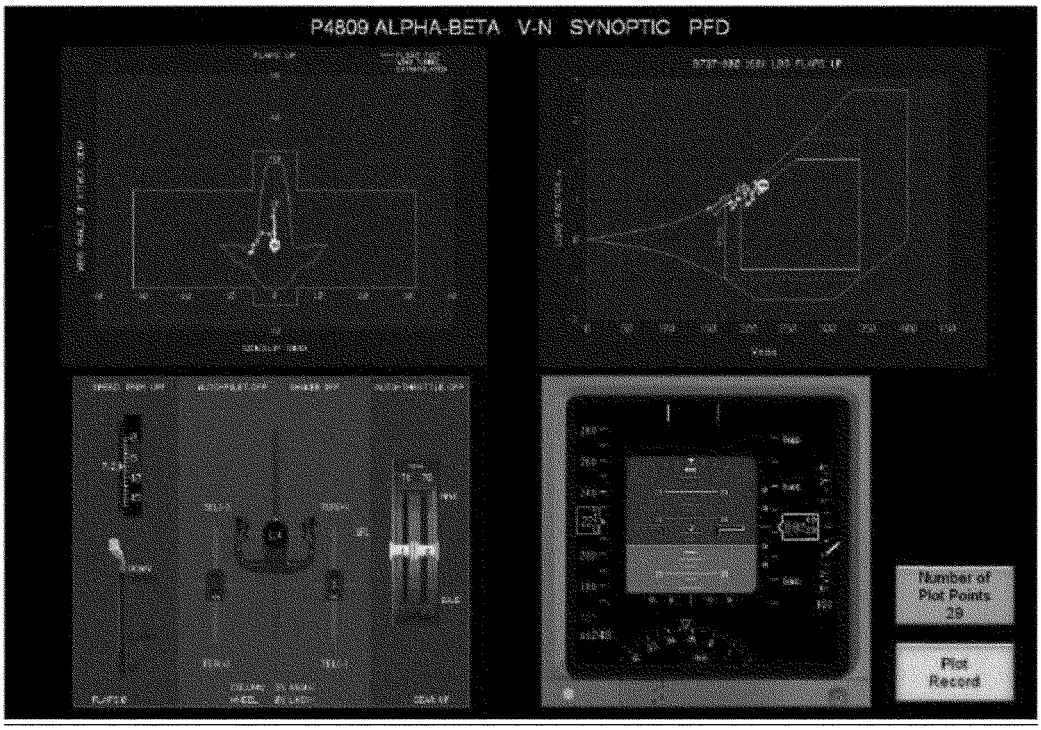


Figure 2 – Example IOS Instructor URT Feedback Display



End Information

Begin QPS Requirements

Engine and Airframe Icing Evaluation (Table A1A, Section 2.1.5.S.)

1. Applicability: This attachment applies to all simulators that are used to satisfy training requirements for engine and airframe ice accretion. New general requirements and objective requirements for simulator qualification have been developed to define aircraft specific icing models that support training objectives for the recognition and recovery from an in-flight ice accretion event.

2. General Requirements: The qualification of engine and airframe icing consists of the following elements that must be considered when developing ice accretion models for use in training:

a. Ice accretion models must be developed to account for training the specific skills required for recognition of ice accumulation and execution of the required response.

b. Ice accretion models must be developed in a manner to contain aircraft specific recognition cues as determined with aircraft OEM supplied data or other suitable analytical methods.

c. At least one qualified ice accretion model must be objectively tested to demonstrate that the model has been implemented correctly and generates the correct cues as necessary for training.

3. Statement of Compliance: The SOC as described in Table A1A, Section 2.1.5.S. must contain the following information to support FSTD qualification of aircraft specific ice accretion models:

a. A description of expected aircraft specific recognition cues and degradation effects due to a typical in-flight icing encounter. Typical cues may include loss of lift, decrease in stall angle of attack, change in pitching moment, decrease in control effectiveness, decrease in stall angle of attack, and changes in control forces in addition to any overall increase in drag. This description must be based upon relevant source data, such as aircraft OEM supplied data, accident/incident data, or other acceptable data source. Where a particular airframe has demonstrated vulnerabilities to a specific type of ice accretion (due to accident/incident history) which may require specific training, ice accretion models must be developed that address the training requirements.

b. A description of the data sources utilized to develop the qualified ice accretion models. Acceptable data sources may be, but are not limited to, flight test data, aircraft certification data, aircraft OEM engineering simulation data, or other analytical methods based upon established engineering principles.

4. Objective Demonstration Testing: The purpose of the objective demonstration test is to demonstrate that the ice accretion models as described in the Statement of Compliance have been implemented correctly and demonstrate the proper cues as defined in the approved data sources. At least one ice accretion model must be selected for testing and included in the Master Qualification Test Guide (MQTG). Two tests are required to demonstrate engine and airframe icing effects. One test will demonstrate the FSTDs baseline performance without icing, and the second test will demonstrate the aerodynamic effects of ice accretion relative to the baseline test.

a. Recorded Parameters: In each of the two required MQTG cases, a time history recording must be made of the following parameters:

i. Altitude
ii. Airspeed
iii. Normal Acceleration
iv. Engine Power/settings
v. Angle of Attack/Pitch attitude
vi. Bank Angle
vii. Flight control inputs
viii. Stall warning and stall buffet onset
ix. Other parameters as necessary to demonstrate the effects of ice accretions

b. Analysis: The FSTD sponsor must select an ice accretion model as identified in the SOC for testing. The selected maneuver must demonstrate the effects of ice accretion at high angles of attack from a trimmed condition through approach to stall and ''full'' stall as compared to a baseline (no ice build up) test. The ice accretion models must demonstrate the cues necessary to recognize the onset of ice accretion on the airframe, lifting surfaces, and engines and provide representative degradation in performance and handling qualities to the extent that a recovery can be executed. Typical recognition cues that may be present depending upon the simulated aircraft include:

i. Decrease in stall angle of attack
ii. Increase in stall warning speed
iii. Increase in stall buffet onset speed
iv. Changes in pitching moment
v. Changes in stall buffet characteristics
vi. Changes in control effectiveness or control forces
vii. Engine effects (power variation, vibration, etc.)

The demonstration test may be conducted by initializing and maintaining a fixed amount of ice accretion throughout the maneuver in order to consistently evaluate the aerodynamic effects.

End QPS Requirements

■ 7. Part 60 is amended by revising Appendix B to read as follows:

Appendix B to Part 60—Qualification Performance Standards for Airplane Flight Training Devices

Begin Information

This appendix establishes the standards for Airplane FTD evaluation and qualification at Level 4, Level 5, Level 6, or Level 7. The Flight Standards Service, NSPM, is responsible for the development, application, and implementation of the standards contained within this appendix. The procedures and criteria specified in this appendix will be used by the NSPM, or a person or persons assigned by the NSPM when conducting airplane FTD evaluations.

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7. Additional Responsibilities of the Sponsor (§ 60.9).
8. FTD Use (§ 60.11).
9. FTD Objective Data Requirements (§ 60.13).
10. Special Equipment and Personnel Requirements for Qualification of the FTD (§ 60.14).
11. Initial (and Upgrade) Qualification Requirements (§ 60.15).
12. Additional Qualifications for Currently Qualified FTDs (§ 60.16).
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18. Operations with Missing, Malfunctioning, or Inoperative Components (§ 60.25).
19. Automatic Loss of Qualification and Procedures for Restoration of Qualification (§ 60.27).
20. Other Losses of Qualification and Procedures for Restoration of Qualification (§ 60.29).
21. Record Keeping and Reporting (§ 60.31).
22. Applications, Logbooks, Reports, and Records: Fraud, Falsification, or Incorrect Statements (§ 60.33).
23. [Reserved]
24. Levels of FTD.
25. FTD Qualification on the Basis of a Bilateral Aviation Safety Agreement (BASA) (§ 60.37).
Attachment 1 to Appendix B to Part 60—General FTD Requirements.
Attachment 2 to Appendix B to Part 60—Flight Training Device (FTD) Objective Tests.
Attachment 3 to Appendix B to Part 60—Flight Training Device (FTD) Subjective Evaluation.
Attachment 4 to Appendix B to Part 60—Sample Documents.

End Information

1. Introduction

Begin Information

a. This appendix contains background information as well as regulatory and informative material as described later in this section. To assist the reader in determining what areas are required and what areas are permissive, the text in this appendix is divided into two sections: ''QPS Requirements'' and ''Information.'' The QPS Requirements sections contain details regarding compliance with the part 60 rule language. These details are regulatory, but are found only in this appendix. The Information sections contain material that is advisory in nature, and designed to give the user general information about the regulation.

b. Questions regarding the contents of this publication should be sent to the U.S. Department of Transportation, Federal Aviation Administration, Flight Standards Service, National Simulator Program Staff, AFS–205, 100 Hartsfield Centre Parkway, Suite 400, Atlanta, Georgia, 30354. Telephone contact numbers for the NSP are: phone, 404–832–4700; fax, 404–761–8906. The general email address for the NSP office is: *9-aso-avs-sim-team@faa.gov*. The NSP Internet Web site address is: *http://www.faa.gov/about/initiatives/nsp/*. On this Web site you will find an NSP personnel list with telephone and email contact information for each NSP staff member, a list of qualified flight simulation devices, ACs, a description of the qualification process, NSP policy, and an NSP ''In-Works'' section. Also linked from this site are additional information sources, handbook bulletins, frequently asked questions, a listing and text of the Federal Aviation Regulations, Flight Standards Inspector's handbooks, and other FAA links.

c. The NSPM encourages the use of electronic media for all communication, including any record, report, request, test, or statement required by this appendix. The electronic media used must have adequate security provisions and be acceptable to the NSPM. The NSPM recommends inquiries on system compatibility, and minimum system requirements are also included on the NSP Web site.

d. Related Reading References.

(1) 14 CFR part 60.

(2) 14 CFR part 61.

(3) 14 CFR part 63.

(4) 14 CFR part 119.

(5) 14 CFR part 121.

(6) 14 CFR part 125.

(7) 14 CFR part 135.

(8) 14 CFR part 141.

(9) 14 CFR part 142.

(10) AC 120–28, as amended, Criteria for Approval of Category III Landing Weather Minima.

(11) AC 120–29, as amended, Criteria for Approving Category I and Category II Landing Minima for part 121 operators.

(12) AC 120–35, as amended, Line Operational Simulations: Line-Oriented Flight Training, Special Purpose Operational Training, Line Operational Evaluation.

(13) AC 120–41, as amended, Criteria for Operational Approval of Airborne Wind Shear Alerting and Flight Guidance Systems.

(14) AC 120–45, as amended, Airplane Flight Training Device Qualification.

(14) AC 120–57, as amended, Surface Movement Guidance and Control System (SMGCS).

(15) AC 150/5300–13, as amended, Airport Design.

(16) AC 150/5340–1, as amended, Standards for Airport Markings.

(17) AC 150/5340–4, as amended, Installation Details for Runway Centerline Touchdown Zone Lighting Systems.

(18) AC 150/5340–19, as amended, Taxiway Centerline Lighting System.

(19) AC 150/5340–24, as amended, Runway and Taxiway Edge Lighting System.

(20) AC 150/5345–28, as amended, Precision Approach Path Indicator (PAPI) Systems.

(21) International Air Transport Association document, ''Flight Simulator Design and Performance Data Requirements,'' as amended.

(22) AC 25–7, as amended, Flight Test Guide for Certification of Transport Category Airplanes.

(23) AC 23–8A, as amended, Flight Test Guide for Certification of Part 23 Airplanes.

(24) International Civil Aviation Organization (ICAO) Manual of Criteria for the Qualification of Flight Simulators, as amended.

(25) Airplane Flight Simulator Evaluation Handbook, Volume I, as amended and Volume II, as amended, The Royal Aeronautical Society, London, UK.

(26) FAA Publication FAA–S–8081 series (Practical Test Standards for Airline Transport Pilot Certificate, Type Ratings, Commercial Pilot, and Instrument Ratings).

(27) The FAA Aeronautical Information Manual (AIM). An electronic version of the AIM is on the internet at *http://www.faa.gov/atpubs*.

(28) Aeronautical Radio, Inc. (ARINC) document number 436, titled *Guidelines For Electronic Qualification Test Guide* (as amended).

(29) Aeronautical Radio, Inc. (ARINC) document 610, *Guidance for Design and Integration of Aircraft Avionics Equipment in Simulators* (as amended).

End Information

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2. Applicability (§§ 60.1 and 60.2)

Begin Information

No additional regulatory or informational material applies to § 60.1, Applicability, or to § 60.2, Applicability of sponsor rules to persons who are not sponsors and who are engaged in certain unauthorized activities.

3. Definitions (§ 60.3)

See Appendix F of this part for a list of definitions and abbreviations from part 1, part 60, and the QPS appendices of part 60.

4. Qualification Performance Standards (§ 60.4)

No additional regulatory or informational material applies to § 60.4, Qualification Performance Standards.

5. Quality Management System (§ 60.5)

Additional regulatory material and informational material regarding Quality Management Systems for FTDs may be found in Appendix E of this part.

End Information

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6. Sponsor Qualification Requirements. (§ 60.7)

Begin Information

a. The intent of the language in § 60.7(b) is to have a specific FTD, identified by the sponsor, used at least once in an FAA-approved flight training program for the airplane simulated during the 12-month period described. The identification of the specific FTD may change from one 12-month period to the next 12-month period as long as that sponsor sponsors and uses at least one FTD at least once during the prescribed period. There is no minimum number of hours or minimum FTD periods required.

b. The following examples describe acceptable operational practices:

(1) Example One.

(a) A sponsor is sponsoring a single, specific FTD for its own use, in its own facility or elsewhere—this single FTD forms the basis for the sponsorship. The sponsor uses that FTD at least once in each 12-month period in that sponsor's FAA-approved flight training program for the airplane simulated. This 12-month period is established according to the following schedule:

(i) If the FTD was qualified prior to May 30, 2008, the 12-month period begins on the date of the first continuing qualification evaluation conducted in accordance with § 60.19 after May 30, 2008, and continues for each subsequent 12-month period;

(ii) A device qualified on or after May 30, 2008, will be required to undergo an initial or upgrade evaluation in accordance with § 60.15. Once the initial or upgrade evaluation is complete, the first continuing qualification evaluation will be conducted within 6 months. The 12 month continuing qualification evaluation cycle begins on that date and continues for each subsequent 12-month period.

(b) There is no minimum number of hours of FTD use required.

(c) The identification of the specific FTD may change from one 12-month period to the next 12-month period as long as that sponsor sponsors and uses at least one FTD at least once during the prescribed period.

(2) Example Two.

(a) A sponsor sponsors an additional number of FTDs, in its facility or elsewhere. Each additionally sponsored FTD must be—

(i) Used by the sponsor in the sponsor's FAA-approved flight training program for the airplane simulated (as described in § 60.7(d)(1));

OR

(ii) Used by another FAA certificate holder in that other certificate holder's FAA-approved flight training program for the airplane simulated (as described in § 60.7(d)(1)). This 12-month period is established in the same manner as in example one.

OR

(iii) Provided a statement each year from a qualified pilot, (after having flown the airplane, not the subject FTD or another FTD, during the preceding 12-month period) stating that the subject FTD's performance and handling qualities represent the airplane (as described in § 60.7(d)(2)). This statement is provided at least once in each 12-month period established in the same manner as in example one.

(b) There is no minimum number of hours of FTD use required.

(3) Example Three.

(a) A sponsor in New York (in this example, a Part 142 certificate holder) establishes ''satellite'' training centers in Chicago and Moscow.

(b) The satellite function means that the Chicago and Moscow centers must operate under the New York center's certificate (in accordance with all of the New York center's practices, procedures, and policies; e.g., instructor and/or technician training/checking requirements, record keeping, QMS program).

(c) All of the FTDs in the Chicago and Moscow centers could be dry-leased (i.e., the certificate holder does not have and use FAA-approved flight training programs for the FTDs in the Chicago and Moscow centers) because—

(i) Each FTD in the Chicago center and each FTD in the Moscow center is used at least once each 12-month period by another FAA certificate holder in that other certificate holder's FAA-approved flight training program for the airplane (as described in § 60.7(d)(1));

OR

(ii) A statement is obtained from a qualified pilot (having flown the airplane, not the subject FTD or another FTD during the preceding 12-month period) stating that the performance and handling qualities of each FTD in the Chicago and Moscow centers represents the airplane (as described in § 60.7(d)(2)).

End Information

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7. Additional Responsibilities of the Sponsor (§ 60.9)

Begin Information

The phrase ''as soon as practicable'' in § 60.9(a) means without unnecessarily disrupting or delaying beyond a reasonable time the training, evaluation, or experience being conducted in the FTD.

8. FTD Use (§ 60.11)

No additional regulatory or informational material applies to § 60.11, FTD use.

End Information

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9. FTD Objective Data Requirements (§ 60.13)

Begin QPS Requirements

a. Flight test data used to validate FTD performance and handling qualities must have been gathered in accordance with a flight test program containing the following:

(1) A flight test plan consisting of:

(a) The maneuvers and procedures required for aircraft certification and simulation programming and validation.

(b) For each maneuver or procedure—

(i) The procedures and control input the flight test pilot and/or engineer used.

(ii) The atmospheric and environmental conditions.

(iii) The initial flight conditions.

(iv) The airplane configuration, including weight and center of gravity.

(v) The data to be gathered.

(vi) All other information necessary to recreate the flight test conditions in the FTD.

(2) Appropriately qualified flight test personnel.

(3) An understanding of the accuracy of the data to be gathered using appropriate alternative data sources, procedures, and instrumentation that is traceable to a recognized standard as described in Attachment 2, Table B2F of this appendix.

(4) Appropriate and sufficient data acquisition equipment or system(s), including appropriate data reduction and analysis methods and techniques, acceptable to the FAA's Aircraft Certification Service.

b. The data, regardless of source, must be presented:

(1) In a format that supports the FTD validation process;

(2) In a manner that is clearly readable and annotated correctly and completely;

(3) With resolution sufficient to determine compliance with the tolerances set forth in Attachment 2, Table B2A, Appendix B;

(4) With any necessary guidance information provided; and

(5) Without alteration, adjustments, or bias. Data may be corrected to address known data calibration errors provided that an explanation of the methods used to correct the errors appears in the QTG. The corrected data may be re-scaled, digitized, or otherwise manipulated to fit the desired presentation.

c. After completion of any additional flight test, a flight test report must be submitted in support of the validation data. The report must contain sufficient data and rationale to support qualification of the FTD at the level requested.

d. As required by § 60.13(f), the sponsor must notify the NSPM when it becomes aware that an addition to or a revision of the flight related data or airplane systems related data is available if this data is used to program and operate a qualified FTD. The data referred to in this sub-section are those data that are used to validate the performance, handling qualities, or other characteristics of the aircraft, including data related to any relevant changes occurring after the type certification is issued. The sponsor must—

(1) Within 10 calendar days, notify the NSPM of the existence of this data; and

(2) Within 45 calendar days, notify the NSPM of—

(i) The schedule to incorporate this data into the FTD; or

(ii) The reason for not incorporating this data into the FTD.

e. In those cases where the objective test results authorize a ''snapshot test'' or a ''series of snapshot test results'' in lieu of a time-history result, the sponsor or other data provider must ensure that a steady state condition exists at the instant of time captured by the ''snapshot.'' The steady state condition must exist from 4 seconds prior to, through 1 second following, the instant of time captured by the snap shot.

End QPS Requirements

Begin Information

f. The FTD sponsor is encouraged to maintain a liaison with the manufacturer of the aircraft being simulated (or with the holder of the aircraft type certificate for the aircraft being simulated if the manufacturer is no longer in business), and if appropriate, with the person having supplied the aircraft data package for the FTD in order to facilitate the notification described in this paragraph.

g. It is the intent of the NSPM that for new aircraft entering service, at a point well in advance of preparation of the QTG, the sponsor should submit to the NSPM for approval, a descriptive document (see Appendix A, Table A2C, Sample Validation Data Roadmap for Airplanes) containing the plan for acquiring the validation data, including data sources. This document should clearly identify sources of data for all required tests, a description of the validity of these data for a specific engine type and thrust rating configuration, and the revision levels of all avionics affecting the performance or flying qualities of the aircraft. Additionally, this document should provide other information such as the rationale or explanation for cases where data or data parameters are missing, instances where engineering simulation data are used, or where flight test methods require further explanations. It should also provide a brief narrative describing the cause and effect of any deviation from data requirements. The aircraft manufacturer may provide this document.

h. There is no requirement for any flight test data supplier to submit a flight test plan or program prior to gathering flight test data. However, the NSPM notes that inexperienced data gatherers often provide data that is irrelevant, improperly marked, or lacking adequate justification for selection. Other problems include inadequate information regarding initial conditions or test maneuvers. The NSPM has been forced to refuse these data submissions as validation data for an FTD evaluation. It is for this reason that the NSPM recommends that any data supplier not previously experienced in this area review the data necessary for programming and for validating the performance of the FTD and discuss the flight test plan anticipated for acquiring such data with the NSPM well in advance of commencing the flight tests.

i. The NSPM will consider, on a case-by-case basis, whether to approve supplemental validation data derived from flight data recording systems such as a Quick Access Recorder or Flight Data Recorder.

End Information

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10. Special Equipment and Personnel Requirements for Qualification of the FTD (§ 60.14)

Begin Information

a. In the event that the NSPM determines that special equipment or specifically qualified persons will be required to conduct an evaluation, the NSPM will make every attempt to notify the sponsor at least one (1) week, but in no case less than 72 hours, in advance of the evaluation. Examples of special equipment include flight control measurement devices, accelerometers, or oscilloscopes. Examples of specially qualified personnel include individuals

specifically qualified to install or use any special equipment when its use is required.

b. Examples of a special evaluation include an evaluation conducted after: An FTD is moved; at the request of the TPAA; or as a result of comments received from users of the FTD that raise questions about the continued qualification or use of the FTD.

End Information

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11. Initial (and Upgrade) Qualification Requirements (§ 60.15)

Begin QPS Requirement

a. In order to be qualified at a particular qualification level, the FTD must:

(1) Meet the general requirements listed in Attachment 1 of this appendix;

(2) Meet the objective testing requirements listed in Attachment 2 of this appendix (Level 4 FTDs do not require objective tests); and

(3) Satisfactorily accomplish the subjective tests listed in Attachment 3 of this appendix.

b. The request described in § 60.15(a) must include all of the following:

(1) A statement that the FTD meets all of the applicable provisions of this part and all applicable provisions of the QPS.

(2) A confirmation that the sponsor will forward to the NSPM the statement described in § 60.15(b) in such time as to be received no later than 5 business days prior to the scheduled evaluation and may be forwarded to the NSPM via traditional or electronic means.

(3) Except for a Level 4 FTD, a QTG, acceptable to the NSPM, that includes all of the following:

(a) Objective data obtained from aircraft testing or another approved source.

(b) Correlating objective test results obtained from the performance of the FTD as prescribed in the appropriate QPS.

(c) The result of FTD subjective tests prescribed in the appropriate QPS.

(d) A description of the equipment necessary to perform the evaluation for initial qualification and the continuing qualification evaluations.

c. The QTG described in paragraph a(3) of this section, must provide the documented proof of compliance with the FTD objective tests in Attachment 2, Table B2A of this appendix.

d. The QTG is prepared and submitted by the sponsor, or the sponsor's agent on behalf of the sponsor, to the NSPM for review and approval, and must include, for each objective test:

(1) Parameters, tolerances, and flight conditions;

(2) Pertinent and complete instructions for conducting automatic and manual tests;

(3) A means of comparing the FTD test results to the objective data;

(4) Any other information as necessary to assist in the evaluation of the test results;

(5) Other information appropriate to the qualification level of the FTD.

e. The QTG described in paragraphs (a)(3) and (b) of this section, must include the following:

(1) A QTG cover page with sponsor and FAA approval signature blocks (see Attachment 4, Figure B4C, of this appendix, for a sample QTG cover page).

(2) A continuing qualification evaluation requirements page. This page will be used by the NSPM to establish and record the frequency with which continuing qualification evaluations must be conducted and any subsequent changes that may be determined by the NSPM in accordance with § 60.19. See Attachment 4, Figure B4G, of this appendix, for a sample Continuing Qualification Evaluation Requirements page.

(3) An FTD information page that provides the information listed in this paragraph, if applicable (see Attachment 4, Figure B4B, of this appendix, for a sample FTD information page). For convertible FTDs, the sponsor must submit a separate page for each configuration of the FTD.

(a) The sponsor's FTD identification number or code.

(b) The airplane model and series being simulated.

(c) The aerodynamic data revision number or reference.

(d) The source of the basic aerodynamic model and the aerodynamic coefficient data used to modify the basic model.

(e) The engine model(s) and its data revision number or reference.

(f) The flight control data revision number or reference.

(g) The flight management system identification and revision level.

(h) The FTD model and manufacturer.

(i) The date of FTD manufacture.

(j) The FTD computer identification.

(k) The visual system model and manufacturer, including display type.

(l) The motion system type and manufacturer, including degrees of freedom.

(4) A Table of Contents.

(5) A log of revisions and a list of effective pages.

(6) List of all relevant data references.

(7) A glossary of terms and symbols used (including sign conventions and units).

(8) Statements of compliance and capability (SOCs) with certain requirements.

(9) Recording procedures or equipment required to accomplish the objective tests.

(10) The following information for each objective test designated in Attachment 2 of this appendix, as applicable to the qualification level sought:

(a) Name of the test.

(b) Objective of the test.

(c) Initial conditions.

(d) Manual test procedures.

(e) Automatic test procedures (if applicable).

(f) Method for evaluating FTD objective test results.

(g) List of all relevant parameters driven or constrained during the automatic test(s).

(h) List of all relevant parameters driven or constrained during the manual test(s).

(i) Tolerances for relevant parameters.

(j) Source of Validation Data (document and page number).

(k) Copy of the Validation Data (if located in a separate binder, a cross reference for the identification and page number for pertinent data location must be provided).

(l) FTD Objective Test Results as obtained by the sponsor. Each test result must reflect the date completed and must be clearly labeled as a product of the device being tested.

f. A convertible FTD is addressed as a separate FTD for each model and series airplane to which it will be converted and for the FAA qualification level sought. The NSPM will conduct an evaluation for each configuration. If a sponsor seeks qualification for two or more models of an airplane type using a convertible FTD, the sponsor must provide a QTG for each airplane model, or a QTG for the first airplane model and a supplement to that QTG for each additional airplane model. The NSPM will conduct evaluations for each airplane model.

g. The form and manner of presentation of objective test results in the QTG must include the following:

(1) The sponsor's FTD test results must be recorded in a manner acceptable to the NSPM, that allows easy comparison of the FTD test results to the validation data (e.g., use of a multi-channel recorder, line printer, cross plotting, overlays, transparencies).

(2) FTD results must be labeled using terminology common to airplane parameters as opposed to computer software identifications.

(3) Validation data documents included in a QTG may be photographically reduced only if such reduction will not alter the graphic scaling or cause difficulties in scale interpretation or resolution.

(4) Scaling on graphical presentations must provide the resolution necessary to evaluate the parameters shown in Attachment 2, Table B2A of this appendix.

(5) Tests involving time histories, data sheets (or transparencies thereof) and FTD test results must be clearly marked with appropriate reference points to ensure an accurate comparison between FTD and airplane with respect to time. Time histories recorded via a line printer are to be clearly identified for cross-plotting on the airplane data. Over-plots may not obscure the reference data.

h. The sponsor may elect to complete the QTG objective and subjective tests at the manufacturer's facility or at the sponsor's training facility. If the tests are conducted at the manufacturer's facility, the sponsor must repeat at least one-third of the tests at the sponsor's training facility in order to substantiate FTD performance. The QTG must be clearly annotated to indicate when and where each test was accomplished. Tests conducted at the manufacturer's facility and at the sponsor's training facility must be conducted after the FTD is assembled with systems and sub-systems functional and operating in an interactive manner. The test results must be submitted to the NSPM.

i. The sponsor must maintain a copy of the MQTG at the FTD location.

j. All FTDs for which the initial qualification is conducted after May 30, 2014, must have an electronic MQTG (eMQTG) including all objective data obtained from airplane testing, or another approved source (reformatted or digitized), together with correlating objective test results obtained from the performance of the FTD

(reformatted or digitized) as prescribed in this appendix. The eMQTG must also contain the general FTD performance or demonstration results (reformatted or digitized) prescribed in this appendix, and a description of the equipment necessary to perform the initial qualification evaluation and the continuing qualification evaluations. The eMQTG must include the original validation data used to validate FTD performance and handling qualities in either the original digitized format from the data supplier or an electronic scan of the original time-history plots that were provided by the data supplier. A copy of the eMQTG must be provided to the NSPM.

k. All other FTDs (not covered in subparagraph ''j'') must have an electronic copy of the MQTG by and after May 30, 2014. An electronic copy of the copy of the MQTG must be provided to the NSPM. This may be provided by an electronic scan presented in a Portable Document File (PDF), or similar format acceptable to the NSPM.

l. During the initial (or upgrade) qualification evaluation conducted by the NSPM, the sponsor must also provide a person knowledgeable about the operation of the aircraft and the operation of the FTD.

End QPS Requirements

Begin Information

m. Only those FTDs that are sponsored by a certificate holder as defined in Appendix F will be evaluated by the NSPM. However, other FTD evaluations may be conducted on a case-by-case basis as the Administrator deems appropriate, but only in accordance with applicable agreements.

n. The NSPM will conduct an evaluation for each configuration, and each FTD must be evaluated as completely as possible. To ensure a thorough and uniform evaluation, each FTD is subjected to the general FTD requirements in Attachment 1 of this appendix, the objective tests listed in Attachment 2 of this appendix, and the subjective tests listed in Attachment 3 of this appendix. The evaluations described herein will include, but not necessarily be limited to the following:

(1) Airplane responses, including longitudinal and lateral-directional control responses (see Attachment 2 of this appendix);

(2) Performance in authorized portions of the simulated airplane's operating envelope, to include tasks evaluated by the NSPM in the areas of surface operations, takeoff, climb, cruise, descent, approach and landing, as well as abnormal and emergency operations (see Attachment 2 of this appendix);

(3) Control checks (see Attachment 1 and Attachment 2 of this appendix);

(4) Flight deck configuration (see Attachment 1 of this appendix);

(5) Pilot, flight engineer, and instructor station functions checks (see Attachment 1 and Attachment 3 of this appendix);

(6) Airplane systems and sub-systems (as appropriate) as compared to the airplane simulated (see attachment 1 and attachment 3 of this appendix);

(7) FTD systems and sub-systems, including force cueing (motion), visual, and aural (sound) systems, as appropriate (see Attachment 1 and Attachment 2 of this appendix); and

(8) Certain additional requirements, depending upon the qualification level sought, including equipment or circumstances that may become hazardous to the occupants. The sponsor may be subject to Occupational Safety and Health Administration requirements.

o. The NSPM administers the objective and subjective tests, which include an examination of functions. The tests include a qualitative assessment of the FTD by an NSP pilot. The NSP evaluation team leader may assign other qualified personnel to assist in accomplishing the functions examination and/or the objective and subjective tests performed during an evaluation when required.

(1) Objective tests provide a basis for measuring and evaluating FTD performance and determining compliance with the requirements of this part.

(2) Subjective tests provide a basis for:

(a) Evaluating the capability of the FTD to perform over a typical utilization period;

(b) Determining that the FTD satisfactorily simulates each required task;

(c) Verifying correct operation of the FTD controls, instruments, and systems; and

(d) Demonstrating compliance with the requirements of this part.

p. The tolerances for the test parameters listed in Attachment 2 of this appendix reflect the range of tolerances acceptable to the NSPM for FTD validation and are not to be confused with design tolerances specified for FTD manufacture. In making decisions regarding tests and test results, the NSPM relies on the use of operational and engineering judgment in the application of data (including consideration of the way in which the flight test was flown and way the data was gathered and applied) data presentations, and the applicable tolerances for each test.

q. In addition to the scheduled continuing qualification evaluation, each FTD is subject to evaluations conducted by the NSPM at any time without prior notification to the sponsor. Such evaluations would be accomplished in a normal manner (i.e., requiring exclusive use of the FTD for the conduct of objective and subjective tests and an examination of functions) if the FTD is not being used for flight crewmember training, testing, or checking. However, if the FTD were being used, the evaluation would be conducted in a nonexclusive manner. This nonexclusive evaluation will be conducted by the FTD evaluator accompanying the check airman, instructor, Aircrew Program Designee (APD), or FAA inspector aboard the FTD along with the student(s) and observing the operation of the FTD during the training, testing, or checking activities.

r. Problems with objective test results are handled as follows:

(1) If a problem with an objective test result is detected by the NSP evaluation team during an evaluation, the test may be repeated or the QTG may be amended.

(2) If it is determined that the results of an objective test do not support the qualification level requested but do support a lower level, the NSPM may qualify the FTD at a lower level. For example, if a Level 6 evaluation is requested, but the FTD fails to meet the spiral stability test tolerances, it could be qualified at Level 5.

s. After an FTD is successfully evaluated, the NSPM issues an SOQ to the sponsor. The NSPM recommends the FTD to the TPAA, who will approve the FTD for use in a flight training program. The SOQ will be issued at the satisfactory conclusion of the initial or continuing qualification evaluation and will list the tasks for which the FTD is qualified, referencing the tasks described in Table B1B in attachment 1 of this appendix. However, it is the sponsor's responsibility to obtain TPAA approval prior to using the FTD in an FAA-approved flight training program.

t. Under normal circumstances, the NSPM establishes a date for the initial or upgrade evaluation within ten (10) working days after determining that a complete QTG is acceptable. Unusual circumstances may warrant establishing an evaluation date before this determination is made. A sponsor may schedule an evaluation date as early as 6 months in advance. However, there may be a delay of 45 days or more in rescheduling and completing the evaluation if the sponsor is unable to meet the scheduled date. See Attachment 4, Figure B4A, Sample Request for Initial, Upgrade, or Reinstatement Evaluation, of this appendix.

u. The numbering system used for objective test results in the QTG should closely follow the numbering system set out in Attachment 2, FTD Objective Tests, Table B2A, of this appendix.

v. Contact the NSPM or visit the NSPM Web site for additional information regarding the preferred qualifications of pilots used to meet the requirements of § 60.15(d).

w. Examples of the exclusions for which the FTD might not have been subjectively tested by the sponsor or the NSPM and for which qualification might not be sought or granted, as described in § 60.15(g)(6), include engine out maneuvers or circling approaches.

12. Additional Qualifications for Currently Qualified FTDs (§ 60.16)

No additional regulatory or informational material applies to § 60.16, Additional Qualifications for a Currently Qualified FTD.

End Information

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13. Previously Qualified FTDs (§ 60.17)

Begin QPS Requirements

a. In instances where a sponsor plans to remove an FTD from active status for a period of less than two years, the following procedures apply:

(1) The NSPM must be notified in writing and the notification must include an estimate of the period that the FTD will be inactive;

(2) Continuing Qualification evaluations will not be scheduled during the inactive period;

(3) The NSPM will remove the FTD from the list of qualified FTDs on a mutually established date not later than the date on which the first missed continuing

qualification evaluation would have been scheduled;

(4) Before the FTD is restored to qualified status, it must be evaluated by the NSPM. The evaluation content and the time required to accomplish the evaluation is based on the number of continuing qualification evaluations and sponsor-conducted quarterly inspections missed during the period of inactivity.

(5) The sponsor must notify the NSPM of any changes to the original scheduled time out of service;

b. FTDs qualified prior to May 30, 2008, and replacement FTD systems, are not required to meet the general FTD requirements, the objective test requirements, and the subjective test requirements of Attachments 1, 2, and 3 of this appendix as long as the FTD continues to meet the test requirements contained in the MQTG developed under the original qualification basis.

c. [Reserved]

d. FTDs qualified prior to May 30, 2008, may be updated. If an evaluation is deemed appropriate or necessary by the NSPM after such an update, the evaluation will not require an evaluation to standards beyond those against which the FTD was originally qualified.

End QPS Requirements

Begin Information

e. Other certificate holders or persons desiring to use an FTD may contract with FTD sponsors to use FTDs previously qualified at a particular level for an airplane type and approved for use within an FAA-approved flight training program. Such FTDs are not required to undergo an additional qualification process, except as described in § 60.16.

f. Each FTD user must obtain approval from the appropriate TPAA to use any FTD in an FAA-approved flight training program.

g. The intent of the requirement listed in § 60.17(b), for each FTD to have an SOQ within 6 years, is to have the availability of that statement (including the configuration list and the limitations to authorizations) to provide a complete picture of the FTD inventory regulated by the FAA. The issuance of the statement will not require any additional evaluation or require any adjustment to the evaluation basis for the FTD.

h. Downgrading of an FTD is a permanent change in qualification level and will necessitate the issuance of a revised SOQ to reflect the revised qualification level, as appropriate. If a temporary restriction is placed on an FTD because of a missing, malfunctioning, or inoperative component or on-going repairs, the restriction is not a permanent change in qualification level. Instead, the restriction is temporary and is removed when the reason for the restriction has been resolved.

i. The NSPM will determine the evaluation criteria for an FTD that has been removed from active status for a prolonged period. The criteria will be based on the number of continuing qualification evaluations and quarterly inspections missed during the period of inactivity. For example, if the FTD were out of service for a 1 year period, it would be necessary to complete the entire QTG, since all of the quarterly evaluations would have been missed. The NSPM will also consider how the FTD was stored, whether parts were removed from the FTD and whether the FTD was disassembled.

j. The FTD will normally be requalified using the FAA-approved MQTG and the criteria that was in effect prior to its removal from qualification. However, inactive periods of 2 years or more will require re-qualification under the standards in effect and current at the time of requalification.

End Information

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14. Inspection, Continuing Qualification, Evaluation, and Maintenance Requirements (§ 60.19).

Begin QPS Requirement

a. The sponsor must conduct a minimum of four evenly spaced inspections throughout the year. The objective test sequence and content of each inspection in this sequence must be developed by the sponsor and must be acceptable to the NSPM.

b. The description of the functional preflight check must be contained in the sponsor's QMS.

c. Record ''functional preflight'' in the FTD discrepancy log book or other acceptable location, including any item found to be missing, malfunctioning, or inoperative.

d. During the continuing qualification evaluation conducted by the NSPM, the sponsor must also provide a person knowledgeable about the operation of the aircraft and the operation of the FTD.

End QPS Requirements

Begin Information

e. The sponsor's test sequence and the content of each quarterly inspection required in § 60.19(a)(1) should include a balance and a mix from the objective test requirement areas listed as follows:

(1) Performance.

(2) Handling qualities.

(3) Motion system (where appropriate).

(4) Visual system (where appropriate).

(5) Sound system (where appropriate).

(6) Other FTD systems.

f. If the NSP evaluator plans to accomplish specific tests during a normal continuing qualification evaluation that requires the use of special equipment or technicians, the sponsor will be notified as far in advance of the evaluation as practical; but not less than 72 hours. Examples of such tests include latencies, control sweeps, or motion or visual system tests.

g. The continuing qualification evaluations described in § 60.19(b) will normally require 4 hours of FTD time. However, flexibility is necessary to address abnormal situations or situations involving aircraft with additional levels of complexity (e.g., computer controlled aircraft). The sponsor should anticipate that some tests may require additional time. The continuing qualification evaluations will consist of the following:

(1) Review of the results of the quarterly inspections conducted by the sponsor since the last scheduled continuing qualification evaluation.

(2) A selection of approximately 8 to 15 objective tests from the MQTG that provide an adequate opportunity to evaluate the performance of the FTD. The tests chosen will be performed either automatically or manually and should be able to be conducted within approximately one-third (⅓) of the allotted FTD time.

(3) A subjective evaluation of the FTD to perform a representative sampling of the tasks set out in attachment 3 of this appendix. This portion of the evaluation should take approximately two-thirds (⅔) of the allotted FTD time.

(4) An examination of the functions of the FTD may include the motion system, visual system, sound system as applicable, instructor operating station, and the normal functions and simulated malfunctions of the airplane systems. This examination is normally accomplished simultaneously with the subjective evaluation requirements.

h. The requirement established in § 60.19(b)(4) regarding the frequency of NSPM-conducted continuing qualification evaluations for each FTD is typically 12 months. However, the establishment and satisfactory implementation of an approved QMS for a sponsor will provide a basis for adjusting the frequency of evaluations to exceed 12-month intervals.

15. Logging FTD Discrepancies (§ 60.20)

No additional regulatory or informational material applies to § 60.20. Logging FTD Discrepancies.

16. Interim Qualification of FTDs for New Airplane Types or Models (§ 60.21)

No additional regulatory or informational material applies to § 60.21, Interim Qualification of FTDs for New Airplane Types or Models.

End Information

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17. Modifications to FTDs (§ 60.23)

Begin QPS Requirements

a. The notification described in § 60.23(c)(2) must include a complete description of the planned modification, with a description of the operational and engineering effect the proposed modification will have on the operation of the FTD and the results that are expected with the modification incorporated.

b. Prior to using the modified FTD:

(1) All the applicable objective tests completed with the modification incorporated, including any necessary updates to the MQTG (e.g., accomplishment of FSTD Directives) must be acceptable to the NSPM; and

(2) The sponsor must provide the NSPM with a statement signed by the MR that the factors listed in § 60.15(b) are addressed by the appropriate personnel as described in that section.

End QPS Requirements

Begin Information

c. FSTD Directives are considered modification of an FTD. See Attachment 4 of this appendix for a sample index of effective FSTD Directives.

d. Examples of MQTG changes that do not require notification under § 60.23(a) are limited to repagination, correction of typographical or grammatical errors, typesetting, or presenting additional parameters on existing test result formats. All changes regardless of nature should be reported in the MQTG revision history.

End Information

18. Operation With Missing, Malfunctioning, or Inoperative Components (§ 60.25)

Begin Information

a. The sponsor's responsibility with respect to § 60.25(a) is satisfied when the sponsor fairly and accurately advises the user of the current status of an FTD, including any missing, malfunctioning, or inoperative (MMI) component(s).

b. It is the responsibility of the instructor, check airman, or representative of the administrator conducting training, testing, or checking to exercise reasonable and prudent judgment to determine if any MMI component is necessary for the satisfactory completion of a specific maneuver, procedure, or task.

c. If the 29th or 30th day of the 30-day period described in § 60.25(b) is on a Saturday, a Sunday, or a holiday, the FAA will extend the deadline until the next business day.

d. In accordance with the authorization described in § 60.25(b), the sponsor may develop a discrepancy prioritizing system to accomplish repairs based on the level of impact on the capability of the FTD. Repairs having a larger impact on the FTD's ability to provide the required training, evaluation, or flight experience will have a higher priority for repair or replacement.

End Information

19. Automatic Loss of Qualification and Procedures for Restoration of Qualification (§ 60.27)

Begin Information

If the sponsor provides a plan for how the FTD will be maintained during its out-of-service period (e.g., periodic exercise of mechanical, hydraulic, and electrical systems; routine replacement of hydraulic fluid; control of the environmental factors in which the FTD is to be maintained) there is a greater likelihood that the NSPM will be able to determine the amount of testing that required for requalification.

End Information

20. Other Losses of Qualification and Procedures for Restoration of Qualification (§ 60.29.)

Begin Information

If the sponsor provides a plan for how the FTD will be maintained during its out-of-service period (e.g., periodic exercise of mechanical, hydraulic, and electrical systems; routine replacement of hydraulic fluid; control of the environmental factors in which the FTD is to be maintained) there is a greater likelihood that the NSPM will be able to determine the amount of testing that required for requalification.

End Information

21. Recordkeeping and Reporting (§ 60.31.)

Begin QPS Requirements

a. FTD modifications can include hardware or software changes. For FTD modifications involving software programming changes, the record required by § 60.31(a)(2) must consist of the name of the aircraft system software, aerodynamic model, or engine model change, the date of the change, a summary of the change, and the reason for the change.

b. If a coded form for record keeping is used, it must provide for the preservation and retrieval of information with appropriate security or controls to prevent the inappropriate alteration of such records after the fact.

End QPS Requirements

22. Applications, Logbooks, Reports, and Records: Fraud, Falsification, or Incorrect Statements (§ 60.33)

Begin Information

No additional regulatory or informational material applies to § 60.33, Applications, Logbooks, Reports, and Records: Fraud, Falsification, or Incorrect Statements.

End Information

23. [Reserved]

24. Levels of FTD

Begin Information

a. The following is a general description of each level of FTD. Detailed standards and tests for the various levels of FTDs are fully defined in Attachments 1 through 3 of this appendix.

(1) Level 4. A device that may have an open airplane-specific flight deck area, or an enclosed airplane-specific flight deck and at least one operating system. Air/ground logic is required (no aerodynamic programming required). All displays may be flat/LCD panel representations or actual representations of displays in the aircraft. All controls, switches, and knobs may be touch sensitive activation (not capable of manual manipulation of the flight controls) or may physically replicate the aircraft in control operation.

(2) Level 5. A device that may have an open airplane-specific flight deck area, or an enclosed airplane-specific flight deck; generic aerodynamic programming; at least one operating system; and control loading that is representative of the simulated airplane only at an approach speed and configuration. All displays may be flat/LCD panel representations or actual representations of displays in the aircraft. Primary and secondary flight controls (e.g., rudder, aileron, elevator, flaps, spoilers/speed brakes, engine controls, landing gear, nosewheel steering, trim, brakes) must be physical controls. All other controls, switches, and knobs may be touch sensitive activation.

(3) Level 6. A device that has an enclosed airplane-specific flight deck; airplane-specific aerodynamic programming; all applicable airplane systems operating; control loading that is representative of the simulated airplane throughout its ground and flight envelope; and significant sound representation. All displays may be flat/LCD panel representations or actual representations of displays in the aircraft, but all controls, switches, and knobs must physically replicate the aircraft in control operation.

(4) Level 7. A Level 7 device is one that has an enclosed airplane-specific flight deck and aerodynamic program with all applicable airplane systems operating and control loading that is representative of the simulated airplane throughout its ground and flight envelope and significant sound representation. All displays may be flat/LCD panel representations or actual representations of displays in the aircraft, but all controls, switches, and knobs must physically replicate the aircraft in control operation. It also has a visual system that provides an out-of-the-flight deck view, providing cross-flight deck viewing (for both pilots simultaneously) of a field-of-view of at least 200° horizontally and 40° vertically.

End Information

25. FTD Qualification on the Basis of a Bilateral Aviation Safety Agreement (BASA) (§ 60.37)

Begin Information

No additional regulatory or informational material applies to § 60.37, FTD Qualification on the Basis of a Bilateral Aviation Safety Agreement (BASA).

End Information

Attachment 1 to Appendix B to Part 60—General FTD Requirements

Begin QPS Requirements

1. Requirements

a. Certain requirements included in this appendix must be supported with an SOC as

defined in Appendix F, which may include objective and subjective tests. The requirements for SOCs are indicated in the ''General FTD Requirements'' column in Table B1A of this appendix.

b. Table B1A describes the requirements for the indicated level of FTD. Many devices include operational systems or functions that exceed the requirements outlined in this section. In any event, all systems will be tested and evaluated in accordance with this appendix to ensure proper operation.

End QPS Requirements

Begin Information

2. Discussion

a. This attachment describes the general requirements for qualifying Level 4 through Level 7 FTDs. The sponsor should also consult the objectives tests in Attachment 2 of this appendix and the examination of functions and subjective tests listed in Attachment 3 of this appendix to determine the complete requirements for a specific level FTD.

b. The material contained in this attachment is divided into the following categories:

(1) General Flight deck Configuration.

(2) Programming.

(3) Equipment Operation.

(4) Equipment and facilities for instructor/evaluator functions.

(5) Motion System.

(6) Visual System.

(7) Sound System.

c. Table B1A provides the standards for the General FTD Requirements.

d. Table B1B provides the tasks that the sponsor will examine to determine whether the FTD satisfactorily meets the requirements for flight crew training, testing, and experience, and provides the tasks for which the simulator may be qualified.

e. Table B1C provides the functions that an instructor/check airman must be able to control in the simulator.

f. It is not required that all of the tasks that appear on the List of Qualified Tasks (part of the SOQ) be accomplished during the initial or continuing qualification evaluation.

End Information

Table B1A - Minimum FTD Requirements						
	QPS REQUIREMENTS	**FTD Level**				**INFORMATION**
Entry Number	**General FTD Requirements**	**4**	**5**	**6**	**7**	**Notes**
1.	**FEATURE GENERAL REQUIREMENT** **FLIGHT DECK LAYOUT & STRUCTURE**					
1.S	**An enclosed full scale replica of the airplane cockpit/flight deck, which will have fully functional controls, instruments and switches to support the approved use.** **Anything not required to be accessed by the flight crew during normal, abnormal, emergency and, where applicable, non-normal operations does not need to be functional.**			**X**	**X**	
1.R	The FTD must have equipment (e.g., instruments, panels, systems, circuit breakers, and controls) simulated sufficiently for the authorized training/checking events to be accomplished. The installed equipment must be located in a spatially correct location and may be in a flight deck or an open flight deck area. Additional equipment required for the authorized training/checking events must be available in the FTD, but may be located in a suitable location as near as practical to the spatially correct position. Actuation of equipment must replicate the appropriate function in the airplane. Fire axes, landing gear pins, and any similar purpose instruments need only be represented in silhouette.	**X**	**X**			
1.G	**Reserved**					
	FEATURE TECHNICAL REQUIREMENT COCKPIT/FLIGHT DECK LAYOUT & STRUCTURE					
1.1	COCKPIT/FLIGHT DECK STRUCTURE					
1.1.S.a	Reserved					
1.1.S.b	An enclosed, full scale replica of the cockpit/flight deck of the airplane being simulated except the enclosure need only extend to the aft end of the cockpit/flight deck area.			**X**	**X**	
1.1.S.c	An enclosed, full scale replica of the cockpit/flight deck of the airplane being simulated including all: structure and panels; primary and secondary flight controls; engine and propeller controls, as applicable; equipment and systems with associated controls and observable indicators; circuit breakers; flight instruments; navigation, communications and similar use equipment; caution and warning systems and emergency equipment. The tactile feel, technique, effort, travel and direction required to manipulate the preceding, as applicable, must replicate those in the airplane. As applicable, equipment for operation of the cockpit/flight deck windows must be included but the actual windows need not be operable. Additional required flight crew member duty stations and those bulkheads aft of the pilots' seats containing items such as switches, circuit breakers, supplementary radio panels, etc., to which the flight crew may require access during any event after pre-flight cockpit/flight deck preparation is complete, are also considered part of the cockpit/flight deck and must replicate the airplane. *Note.— The cockpit/flight deck, for flight simulation purposes, consists of all that space forward of a cross section of the fuselage at the most extreme aft setting of the flight crew members' seats or if applicable, to that cross section*			**X**	**X**	Airplane observer seats are not considered to be additional flight crew member duty stations and may be omitted. The use of electronically displayed images with physical overlay or masking for FSTD instruments and/or instrument panels is acceptable provided: – all instruments and instrument panel layouts are dimensionally correct with differences, if any, being imperceptible to the pilot; – instruments replicate those of the airplane including full instrument functionality and embedded logic;

Table B1A - Minimum FTD Requirements						
	QPS REQUIREMENTS	FTD Level				INFORMATION
Entry Number	General FTD Requirements	4	5	6	7	Notes
	immediately aft of additional flight crew member seats and/or required bulkheads.					– instruments displayed are free of quantization (stepping); – instrument display characteristics replicate those of the airplane including: resolution, colors, luminance, brightness, fonts, fill patterns, line styles and symbology; – overlay or masking, including bezels and bugs, as applicable, replicates the airplane panel(s); – instrument controls and switches replicate and operate with the same technique, effort, travel and in the same direction as those in the airplane; – instrument lighting replicates that of the airplane and is operated from the FSTD control for that lighting and, if applicable, is at a level commensurate with other lighting operated by that same control; – as applicable, instruments should have faceplates that replicate those in the airplane.
1.1.R	Reserved					
1.1.G	Reserved					
1.2	SEATING					
1.2.1.S	Flight crew member seats must replicate those in the airplane being simulated.			X	X	
1.2.1.R	Reserved					
1.2.1.G	Reserved					
1.2.2.S.a	Reserved					
1.2.2.S.b	In addition to the flight crew member seats, there must be one instructor station seat, and two suitable seats for an observer and an FAA inspector.				X	At least one seat should have a system to permit selective monitoring of all flight crew member and instructor communications.
1.2.2.R	Reserved					
1.2.2.G	Reserved					

Table B1A - Minimum FTD Requirements						
	QPS REQUIREMENTS	FTD Level				INFORMATION
Entry Number	General FTD Requirements	4	5	6	7	Notes
1.3	COCKPIT/FLIGHT DECK LIGHTING					
1.3.S.a	Cockpit/flight deck lighting must replicate that in the airplane				X	
1.3.S.b	The lighting environment for panels and instruments must be sufficient for the operation being conducted.			X		Back-lighted panels and instruments may be installed but are not required.
1.3.R	The lighting environment for panels and instruments must be sufficient for the operation being conducted.	X	X			Back-lighted panels and instruments may be installed but are not required.
1.3.G	Reserved					
2.	**FEATURE GENERAL REQUIREMENT** **FLIGHT MODEL**					
2.S	**Aerodynamic and engine modeling for all combinations of drag and thrust, including the effects of change in airplane attitude, sideslip, altitude, temperature, gross mass, center of gravity location and configuration to support the approved use.** **Must address ground effect, mach effect, aeroelastic representations, non-linearities due to sideslip, effects of airframe icing, forward and reverse dynamic thrust effect on control surfaces.** **Realistic airplane mass properties, including mass, center of gravity and moments of inertia as a function of payload and fuel loading must be implemented.** **Extended envelope modeling to the extent necessary for full stall training and upset recovery training.**				X	
2.S1	The FTD must provide the proper effect of aerodynamic changes for the combinations of drag and thrust normally encountered in flight. This must include the effect of change in airplane attitude, thrust, drag, altitude, temperature, and configuration. An SOC is required.			X		
2.R	The FTD must provide the proper effect of aerodynamic changes for the combinations of drag and thrust normally encountered in flight. This must include the effect of change in airplane attitude, thrust, drag, altitude, temperature, and configuration. Level 5 requires only generic aerodynamic programming. An SOC is required.		X			
2.G	**Reserved**					
	FEATURE TECHNICAL REQUIREMENT FLIGHT MODEL					
2.1	FLIGHT DYNAMICS MODEL					
2.1.1.S	Flight dynamics model that accounts for various combinations of drag and thrust normally encountered in flight supported by type-specific flight test data, including the effect of change in airplane attitude, sideslip, thrust, drag, altitude, temperature, gross mass, moments of inertia, center of gravity location and configuration to support the approved use.				X	
2.1.2.S	Aerodynamic modeling that includes, for airplanes issued an original type certificate after 30 June 1980, Mach effect, normal and reverse dynamic thrust effect on control surfaces, aeroelastic effect and representations of non-linearities due to side-slip based on airplane flight test data provided by the airplane manufacturer.				X	SOC required. Mach effect, aeroelastic representations and non-linearities due to side-slip are normally included in the flight simulator aerodynamic model. The SOC

Table B1A - Minimum FTD Requirements						
	QPS REQUIREMENTS	FTD Level				INFORMATION
Entry Number	General FTD Requirements	4	5	6	7	Notes
						should address each of these items. Separate tests for thrust effects and an SOC are required.
2.1.3.S	Aerodynamic modeling to include ground effect derived from type-specific flight test data. For example: round-out, flare and touchdown. This requires data on lift, drag, pitching moment, trim and power in ground effect.				X	SOC required. See Attachment 2, paragraph 5 and test 2.f for further information on ground effect.
2.1.4.S	Aerodynamic modeling for the effects of reverse thrust on directional control.				X	Tests required. See Attachment 2, tests 2.e.8 and 2.e.9 (directional control).
2.1.5.S	Engine and Airframe Icing Modeling that includes the effects of icing, where appropriate, on the airframe, aerodynamics, and the engine(s). Icing models must simulate the aerodynamic degradation effects of ice accretion on the airplane lifting surfaces including loss of lift, decrease in stall angle of attack, change in pitching moment, decrease in control effectiveness, and changes in control forces in addition to any overall increase in drag. Aircraft systems (such as the stall protection system and autoflight system) must respond properly to detected ice accretion consistent with the simulated aircraft. Aircraft OEM data or other acceptable analytical methods must be utilized to develop ice accretion models that are representative of the simulated aircraft's performance degradation in a typical in-flight icing encounter. SOC and tests required. See objective testing requirements.				X	SOC should be provided describing the effects which provide training in the specific skills required for recognition of icing phenomena and execution of recovery. The SOC should describe the source data and any analytical methods used to develop ice accretion models including verification that these effects have been tested. Icing effects simulation models are only required for those airplanes authorized for operations in icing conditions. Icing simulation models should be developed to provide training in the specific skills required for recognition of ice accumulation and execution of the required response. See Attachment 7 of Appendix A for further guidance material.
2.1.6.S	Reserved					
2.1.7.S	Reserved					
2.1.R	Reserved					
2.1.G	Reserved					
2.2	MASS PROPERTIES					
2.2.S	Type specific implementation of airplane mass properties, including mass, center of gravity and moments of inertia as a function of payload and fuel loading. The effects of pitch attitude and of fuel slosh on the aircraft center of gravity must be simulated.				X	SOC required. SOC should include a range of tabulated target values to enable a demonstration of the mass properties model to be conducted from the instructor's station. The SOC should include the effects of fuel slosh on center of gravity.
2.2.S1	Level 6 requires the effects of changes in gross weight and center of gravity. An SOC is required.			X		

Table B1A - Minimum FTD Requirements						
	QPS REQUIREMENTS	FTD Level				INFORMATION
Entry Number	General FTD Requirements	4	5	6	7	Notes
2.2.R	Reserved					
2.2.G	Reserved					
3.	**FEATURE GENERAL REQUIREMENT GROUND REACTION AND HANDLING CHARACTERISTICS**					
3.S	**Represents ground reaction and handling characteristics of the airplane during surface operations to support the approved use. Brake and tire failure dynamics (including antiskid) and decreased brake efficiency must be specific to the aircraft simulated. Stopping and directional control forces must be representative for all environmental runway conditions.**				**X**	
3.R	**Reserved**					
3.G	**Reserved**					
	FEATURE TECHNICAL REQUIREMENT GROUND REACTION AND HANDLING CHARACTERISTICS					
3.1	GROUND REACTION AND HANDLING CHARACTERISTICS					
3.1.S	Airplane type specific ground handling simulation to include: (1) Ground reaction. Reaction of the airplane upon contact with the runway during take-off, landing and ground operations to include strut deflections, tire friction, side forces, environmental effects and other appropriate data, such as weight and speed, necessary to identify the flight condition and configuration. Ground reaction modeling must properly simulate the effects of a bounced or skipped landing (to include tail strike) as appropriate for the simulated aircraft and conditions; and (2) Ground handling characteristics. Steering inputs to include crosswind, gusting crosswind, braking, thrust reversing, deceleration and turning radius. Ground handling must react properly to crosswind and gusting crosswind up to the aircraft's maximum demonstrated crosswind component. SOC required.				**X**	Tests required.
3.1.R	Reserved					
3.1.G	Reserved					
3.2	RUNWAY CONDITIONS					
3.2.S	Stopping and directional control forces for at least the following runway conditions based on airplane related data: (1) dry; (2) wet; (3) icy; (4) patchy wet;				**X**	Objective tests required for (1), (2) and (3). See Attachment 2, tests 1.e (stopping). Subjective tests for (4), (5) and (6). See Attachment 3.

Table B1A - Minimum FTD Requirements						
	QPS REQUIREMENTS	FTD Level				INFORMATION
Entry Number	General FTD Requirements	4	5	6	7	Notes
	(5) patchy icy; and (6) wet on rubber residue in touchdown zone. SOC required.					
3.2.R	Reserved					
3.2.G	Reserved					
3.3	BRAKE AND TIRE FAILURES					
3.3.S	Brake and tire failure dynamics (including anti-skid) and decreased braking efficiency due to brake temperatures.				X	SOC required. Subjective tests required for decreased braking efficiency due to brake temperature, if applicable.
3.3.R	Reserved					
3.3.G	Reserved					
4.	**FEATURE GENERAL REQUIREMENT AIRPLANE SYSTEMS (ATA)**					
4.S	**Airplane systems must be replicated with sufficient functionality for flight crew operation to support the approved use. System functionality must enable all normal, abnormal, and emergency operating procedures to be accomplished. To include communications, navigation, caution and warning equipment corresponding to the airplane. Circuit breakers required for operations must be functional.**				X	
4.S1,S2,R	**Installed systems must simulate the applicable airplane system operation, both on the ground and in flight. Installed systems must be operative to the extent that applicable normal, abnormal, and emergency operating procedures included in the sponsor's training programs can be accomplished.**	X	X	X		
4.G	**Reserved**					
	FEATURE TECHNICAL REQUIREMENT AIRPLANE SYSTEMS (ATA)					
4.1	NORMAL, ABNORMAL AND EMERGENCY SYSTEMS OPERATION					
4.1.S	All airplane systems represented in the FSTD must simulate the specific airplane type system operation including system interdependencies, both on the ground and in flight. Systems must be operative to the extent that all normal, abnormal and emergency operating procedures can be accomplished.				X	Airplane system operation should be predicated on, and traceable to, the system data supplied by either the airplane manufacturer, original equipment manufacturer or alternative approved data for the airplane system or component. Once activated, proper systems operation should result from system management by the crew member and not require any further input from the instructor's controls.

Table B1A - Minimum FTD Requirements						
	QPS REQUIREMENTS	FTD Level				INFORMATION
Entry Number	General FTD Requirements	4	5	6	7	Notes
4.1.S1	Installed systems must simulate the applicable airplane system operation, both on the ground and in flight. Installed systems must be operative to the extent that applicable normal, abnormal, and emergency operating procedures included in the sponsor's training programs can be accomplished. Level 6 must simulate all applicable airplane flight, navigation, and systems operation.			X		
4.1.S2	Installed systems must simulate the applicable airplane system operation, both on the ground and in flight. Installed systems must be operative to the extent that applicable normal, abnormal, and emergency operating procedures included in the sponsor's training programs can be accomplished. Level 5 must have at least functional flight and navigational controls, displays, and instrumentation.		X			
4.1.R	Installed systems must simulate the applicable airplane system operation, both on the ground and in flight. Installed systems must be operative to the extent that applicable normal, abnormal, and emergency operating procedures included in the sponsor's training programs can be accomplished. Level 4 must have at least one airplane system installed and functional.	X				
4.1.G	Reserved					
4.2	CIRCUIT BREAKERS					
4.2.S,S1	Circuit breakers that affect procedures and/or result in observable cockpit/flight deck indications must be functionally accurate.			X	X	
4.2.R	Reserved					
4.2.G	Reserved					
4.3	INSTRUMENT INDICATIONS					
4.3.S	All relevant instrument indications involved in the simulation of the airplane must automatically respond to control movement by a flight crew member or to atmospheric disturbance and also respond to effects resulting from icing.				X	Numerical values should be presented in the appropriate units.
4.3.S1,S2	All relevant instrument indications involved in the simulation of the airplane must automatically respond to control movement or external disturbances to the simulated airplane; e.g., turbulence or winds.		X	X		
4.3.G	N/A.					
4.4	COMMUNICATIONS, NAVIGATION AND CAUTION AND WARNING SYSTEMS					
4.4.S	Communications, navigation, and caution and warning equipment corresponding to that installed in a specific airplane type must operate within the tolerances prescribed for the applicable airborne equipment.				X	
4.4.S1	Navigation equipment must be installed and operate within the tolerances applicable for the airplane. Level 6 must also include communication equipment (inter-phone and air/ground) like that in the airplane and, if appropriate to the operation being conducted, an oxygen mask microphone system.			X		
4.4.S2	Navigation equipment must be installed and operate within the tolerances applicable for the airplane. Level 5 need have only that navigation equipment necessary to fly an instrument approach.		X			
4.4.G	N/A.					
4.5	ANTI-ICING SYSTEMS					
4.5.S,S1	Operation of anti-icing systems corresponding to those installed in the specific airplane type must operate with appropriate effects upon ice formation on airframe, engines and instrument sensors.			X	X	

Table B1A - Minimum FTD Requirements						
	QPS REQUIREMENTS	FTD Level				INFORMATION
Entry Number	General FTD Requirements	4	5	6	7	Notes
4.5.R	Reserved					
4.5.G	N/A.					
5.	**FEATURE GENERAL REQUIREMENT** **FLIGHT CONTROLS AND FORCES**					
5.S	**Control forces and control travel must correspond to that of the airplane to support the approved use.** **Control displacement must generate the same effect as the airplane under the same flight conditions.** **Control feel dynamics must replicate the airplane simulated.**				**X**	
5.S1	**Control forces and control travel must correspond to that of the airplane to support the approved use.** **Control displacement must generate the same effect as the airplane under the same flight conditions.**			**X**		
5.R	**Control forces and control travel must correspond to that of the airplane to support the approved use.**		**X**			
5.G	**Reserved**					
	FEATURE TECHNICAL REQUIREMENT FLIGHT CONTROLS AND FORCES					
5.1	CONTROL FORCES AND TRAVEL					Testing of position versus force is not applicable if forces are generated solely by use of airplane hardware in the FSTD.
5.1.S	Control forces, control travel and surface position must correspond to that of the type-specific airplane being replicated. Control travel, forces and surfaces must react in the same manner as in the airplane under the same flight and system conditions.				**X**	Active Force feedback required if appropriate to the airplane installation.
5.1.S1	The FTD must provide control forces and control travel that corresponds to the airplane being simulated. Control forces must react in the same manner as in the airplane under the same flight conditions.			**X**		
5.1.R	The FTD must provide control forces and control travel of sufficient precision to manually fly an instrument approach.		**X**			
5.1.G	Reserved					
5.2	CONTROL FEEL DYNAMICS					
5.2.S	Control feel dynamics must replicate the airplane simulated.				**X**	See Appendix A (Attachment 2), paragraph 4 for a discussion of acceptable methods of validating control dynamics. Tests required. See Attachment 2, tests 2.b.1 through 2.b.3 (dynamic control checks).
5.2.S1,R,G	N/A.					
5.3	CONTROL SYSTEM OPERATION					
5.3.S,S1	Control systems must replicate airplane operation for the normal and any non-normal modes including back-up systems and must reflect failures of associated systems. Appropriate cockpit indications and messages must be replicated.			**X**	**X**	
5.3.R	Reserved					

Table B1A - Minimum FTD Requirements						
	QPS REQUIREMENTS	FTD Level				INFORMATION
Entry Number	General FTD Requirements	4	5	6	7	Notes
5.3.G	Reserved					
6.	**FEATURE GENERAL REQUIREMENT SOUND CUES**					
6.S	**N/A.**					
6.R	**Significant sounds perceptible to the flight crew during flight operations to support the approved use. Comparable engine, airframe and environmental sounds. The volume control must have an indication of sound level setting.**				**X**	Objective tests required
6.R1	The FTD must simulate significant flight deck sounds resulting from pilot actions that correspond to those heard in the airplane.			**X**		
	FEATURE TECHNICAL REQUIREMENT SOUND CUES					
6.1	SOUND SYSTEM					
6.1.R	Significant cockpit/flight deck sounds during normal and abnormal operations corresponding to those of the airplane, including engine and airframe sounds as well as those which result from pilot or instructor-induced actions. SOC required. Tests required.				**X**	See Attachment 2.
6.1.R1	Significant cockpit/flight deck sounds during normal and abnormal operations corresponding to those of the airplane, including engine and airframe sounds as well as those which result from pilot or instructor-induced actions.			**X**		
6.1.G	Reserved					
6.2	CRASH SOUNDS					
6.2.R	The sound of a crash when the simulated airplane exceeds limitations.				**X**	
6.2.G	Reserved					
6.3	ENVIRONMENTAL SOUNDS					
6.3.R	Significant environmental sounds must be coordinated with the simulated weather.				**X**	
6.3.G	Reserved					
6.4	SOUND VOLUME					
6.4.R	The volume control must have an indication of sound level setting which meets all qualification requirements. Full volume must correspond to actual volume levels in the approved data set. When full volume is not selected, an indication of abnormal setting must be provided to the instructor.				**X**	The abnormal setting should consist of an annunciation on a main IOS page which is always visible to the instructor.
6.4.G	Reserved					
6.5	SOUND DIRECTIONALITY					
6.5.R,	Sound must be directionally representative. SOC required.				**X**	

Table B1A - Minimum FTD Requirements						
	QPS REQUIREMENTS	FTD Level				INFORMATION
Entry Number	General FTD Requirements	4	5	6	7	Notes
6.5.G	Reserved					
7.	**FEATURE GENERAL REQUIREMENT** **VISUAL DISPLAY CUE**					
7.S	**Reserved**					
7.R	**Continuous field of view with textured representation of all ambient conditions for each pilot, to support the approved use.** **Horizontal and vertical field of view to support the most demanding maneuvers requiring a continuous view of the runway.** **A minimum of 200° horizontal and 40° vertical field of view.**				**X**	
7.R1	**The FTD may have a visual system, if desired, although it is not required. If a visual system is installed, it must meet the following criteria (R1):**	**X**	**X**	**X**		
7.R1	**If a visual system is installed and additional training, testing, or checking credits are being sought on the basis of having a visual system, a visual system meeting the standards set out for at least a Level A FFS (see Appendix A of this part) will be required. A "direct-view," non-collimated visual system (with the other requirements for a Level A visual system met) may be considered satisfactory for those installations where the visual system design "eye point" is appropriately adjusted for each pilot's position such that the parallax error is at or less than 10° simultaneously for each pilot.** **An SOC is required.**			**X**		Directly projected, non-collimated visual displays may prove to be unacceptable for dual pilot applications.
7.G	**Reserved**					
	FEATURE TECHNICAL REQUIREMENT VISUAL CUES					
7.1	DISPLAY					
7.1.1	DISPLAY GEOMETRY AND FIELD OF VIEW					
7.1.1.S	Reserved					
7.1.1.R	Continuous visual field of view providing each pilot with 200° horizontal and 40° vertical field of view. Collimation is not required but parallax effects must be minimized (not greater than 10° for each pilot when aligned for the point midway between the left and right seat eyepoints).				**X**	See Attachment 2 – Test 4.a.1. The system should have the capability to align the view to the pilot flying. Installed alignment should be confirmed in an SOC. (This would generally be results from acceptance testing).
7.1.1.R1	The visual system must provide at least a field-of-view of 18° vertical / 24° horizontal for the pilot flying. The minimum distance from the pilot's eye position to the surface of a direct view display may not be less than the distance to any front instrument panel and provide for a maximum parallax error of 10 degrees per pilot. An SOC is required	**X**	**X**	**X**		
7.1.1.G	Reserved					

Table B1A - Minimum FTD Requirements						
	QPS REQUIREMENTS	FTD Level				INFORMATION
Entry Number	General FTD Requirements	4	5	6	7	Notes
7.1.2	DISPLAY RESOLUTION					
7.1.2.S	Reserved					
7.1.2.R	Display resolution demonstrated by a test pattern of objects shown to occupy a visual angle of not greater than 4 arc minutes in the visual display used on a scene from the pilot's eye point. SOC required containing calculations confirming resolution.				X	See Attachment 2 (visual scene quality) – Test 4.a.3.
7.1.2.R1	The visual system must provide for a minimum resolution of 5 arc-minutes for both computed and displayed pixel size. An SOC is required.	X	X	X		
7.1.2.G	Reserved					
7.1.3	LIGHT-POINT SIZE					
7.1.3.S	Reserved					
7.1.3.R	Light-point size — not greater than 8 arc minutes. SOC required confirming test pattern represents lights used for airport lighting.				X	See Attachment 2 – Test 4.a.4.
7.1.3.G	Reserved					
7.1.4	DISPLAY CONTRAST RATIO					
7.1.4.S	Reserved					
7.1.4.R	Display Contrast ratio — not less than 5:1.				X	See Attachment 2 (surface contrast ratio) – Test 4.a.5.
7.1.4.G	Reserved					
7.1.5	LIGHT-POINT CONTRAST RATIO					
7.1.5.S	Reserved					
7.1.5.R	Light-point contrast ratio — not less than 10:1.				X	See Attachment 2 (light-point contrast ratio) – Test 4.a.6.
7.1.5.G	Reserved					
7.1.6	LIGHT-POINT BRIGHTNESS					
7.1.6.S	Reserved					
7.1.6.R	Light-point brightness – not less than 20 cd/m^2 (5.8 foot-lamberts).				X	See Attachment 2 (light-point brightness) – Test 4.a.7.
7.1.6.G	Reserved					
7.1.7	DISPLAY BRIGHTNESS					
7.1.7.S	Reserved					
7.1.7.R	Display brightness must be demonstrated using a raster drawn test pattern. The surface brightness must not be less than 14 cd/m^2 (4.1 foot-lamberts).				X	See Appendix B – Test 4.a.8.
7.1.7.G	Reserved					
7.1.8	BLACK LEVEL AND SEQUENTIAL CONTRAST (**Light valve systems only**)					

Table B1A - Minimum FTD Requirements						
	QPS REQUIREMENTS	FTD Level				INFORMATION
Entry Number	General FTD Requirements	4	5	6	7	Notes
7.1.8.S	Reserved					
7.1.8.R	Suitable to support the approved use.				X	
7.1.8.G	Reserved					
7.1.9	MOTION BLUR (**Light valve systems only**)					
7.1.9.S	Reserved					
7.1.9.R	Suitable to support the approved use.				X	
7.1.9.G	Reserved					
7.1.10	SPECKLE TEST (**Laser systems only**)					
7.1.10.S	Reserved					
7.1.10.R	Suitable to support the approved use.				X	
7.1.10.G	Reserved					
7.2	ADDITIONAL DISPLAY SYSTEMS					
7.2.1	HEAD-UP DISPLAY (where fitted)					
7.2.1.S	Reserved					
7.2.1.R	The system must be shown to perform its intended function for each operation and phase of flight. An active display (repeater) of all parameters displayed on the pilot's combiner must be located on the instructor operating station (IOS), or other location approved by the NSPM. Display format of the repeater must represent that of the combiner. SOC required.				X	See Attachment 2 – Test 4.b Only the one HUD can be used by the pilot flying due to alignment display issues. Alternatively the HUD may be presented as part of the visual scene.
7.2.1.G	N/A.					
7.2.2	ENHANCED FLIGHT VISION SYSTEM (EFVS) (Where fitted)					
7.2.2.S	Reserved					
7.2.2.R	The EFVS simulator hardware/software, including associated cockpit displays and annunciation, must function the same or equivalent to the EFVS system installed in the airplane. A minimum of one airport must be modeled for EFVS operation. The model must include an ILS and a non-precision approach (with VNAV if required for that airplane type).				X	See Attachment 2 – Test 4.c Only the one EFVS can be used by the pilot flying due to alignment display issues. Alternatively the EFVS may be presented as part of the visual scene.
7.2.2.G	N/A.					
7.3	VISUAL GROUND SEGMENT					
7.3.S	Reserved					
7.3.R	A test is required to demonstrate that the visibility is correct on final approach in CAT II conditions and the positioning of the airplane is correct relative to the runway.				X	See Attachment 2 – Test 4.d.
7.3.G	Reserved					
8.	**FEATURE GENERAL REQUIREMENT**					

Table B1A - Minimum FTD Requirements						
	QPS REQUIREMENTS	FTD Level				INFORMATION
Entry Number	General FTD Requirements	4	5	6	7	Notes
	MOTION CUES (not required)					
8.R	**The FTD may have a motion system, if desired, although it is not required. If a motion system is installed and additional training, testing, or checking credits are being sought on the basis of having a motion system, the motion system operation may not be distracting and must be coupled closely to provide integrated sensory cues. The motion system must also respond to abrupt input at the pilot's position within the allotted time, but not before the time when the airplane responds under the same conditions.**		**X**	**X**	**X**	The motion system standards set out in part 60, Appendix A for at least Level A simulators is acceptable.
8.R	**If a motion system is installed, it must be measured by latency tests or transport delay tests and may not exceed 300 milliseconds. Instrument response may not occur prior to motion onset.**			**X**	**X**	The motion system standards set out in part 60, Appendix A for at least Level A simulators is acceptable.
9.	**Reserved**					
10	**FEATURE GENERAL REQUIREMENT ENVIRONMENT — NAVIGATION**					
10.S	**Navigational data with the corresponding approach facilities to support the approved use. Navigation aids must be usable within range or line-of-sight without restriction, as applicable to the geographic area. A complete navigational database is required for at least 3 airport models**				**X**	
10.S1	**Navigational data with the corresponding approach facilities to support the approved use. Navigation aids must be usable within range or line-of-sight without restriction, as applicable to the geographic area. A complete navigational database is required for at least 1 airport model**			**X**		
10.R	**N/A.**					
10.G	**N/A.**					
	FEATURE TECHNICAL REQUIREMENT ENVIRONMENT - NAVIGATION					
10.1	NAVIGATION DATABASE					
10.1.S,S1	Navigation database sufficient to support simulated airplane systems for real world operations.			**X**	**X**	
10.1.R	N/A.					
10.1.G	N/A.					
10.2	MINIMUM AIRPORT REQUIREMENT					
10.2.S	Complete navigation database for at least 3 airports with corresponding precision and non-precision approach procedures, including regular updates.				**X**	Regular updates means navigation database updates as mandated by the NAA.
10.2.S1	Complete navigation database for at least 1 airport with corresponding precision and non-precision approach procedures, including regular updates.			**X**		
10.2.R	N/A.					
10.2.G	N/A.					
10.3	INSTRUCTOR CONTROLS					

Table B1A - Minimum FTD Requirements						
	QPS REQUIREMENTS	FTD Level				INFORMATION
Entry Number	General FTD Requirements	4	5	6	7	Notes
10.3.S,S1	Instructor controls of internal and external navigational aids.			X	X	E.g. airplane ILS glideslope receiver failure compared to ground facility glideslope failure.
10.3.R	N/A.					
10.3.G	N/A.					
10.4	ARRIVAL / DEPARTURE FEATURES					
10.4.S,S1	Navigational data with all the corresponding standard arrival and departure procedures.			X	X	
10.4.R	N/A.					
10.4.G	N/A.					
10.5	NAVIGATION AIDS RANGE					
10.5.S,S1	Navigation aids must be usable within range or line-of-sight without restriction, as applicable to the geographic area.			X	X	Replication of the geographic environment with its specific limitations.
10.5.R	N/A.					
10.5.G	N/A.					
11	**FEATURE GENERAL REQUIREMENT** **ENVIRONMENT – ATMOSPHERE AND WEATHER**					
11.S	**N/A.**					
11.R	**Fully integrated dynamic environment simulation including a representative atmosphere with weather effects to support the approved use.** **The environment must be synchronized with appropriate airplane and simulation features to provide integrity. Environment simulation must include thunderstorms, wind shear, turbulence, microbursts and appropriate types of precipitation.**				X	
11.G	**Basic atmospheric model, pressure, temperature, and winds to support the approved use.** **The environment must be synchronized with appropriate airplane and simulation features to provide integrity.**			X		
	FEATURE TECHNICAL REQUIREMENT ENVIRONMENT – ATMOSPHERE AND WEATHER					
11.1	STANDARD ATMOSPHERE					
11.1.S	N/A.					
11.1.R,G	Simulation of the standard atmosphere including instructor control over key parameters.			X	X	
11.2	WIND SHEAR					
11.2.S	N/A.					
11.2.R	If the aircraft being simulated is one of the aircraft listed in § 121.358, Low-altitude windshear system equipment requirements, the simulator must employ windshear models that provide training for recognition of windshear phenomena and the execution of recovery procedures. Models must be available to the instructor/evaluator for the following critical phases of flight: (1) Prior to takeoff rotation. (2) At liftoff.				X	Refer to Attachment 2 – Test 2.g. The QTG should reference the FAA *Wind Shear Training Aid* or present alternate airplane-related data, including the

Table B1A - Minimum FTD Requirements						
	QPS REQUIREMENTS	FTD Level				INFORMATION
Entry Number	General FTD Requirements	4	5	6	7	Notes
	(3) During initial climb. (4) On final approach, below 500 ft AGL. The QTG must reference the FAA Windshear Training Aid or present alternate airplane related data, including the implementation method(s) used. If the alternate method is selected, wind models from the Royal Aerospace Establishment (RAE), the Joint Airport Weather Studies (JAWS) Project and other recognized sources may be implemented, but must be supported and properly referenced in the QTG. Only those simulators meeting these requirements may be used to satisfy the training requirements of part 121 pertaining to a certificate holder's approved low-altitude windshear flight training program as described in § 121.409. The addition of realistic levels of turbulence associated with each required windshear profile must be available and selectable to the instructor. In addition to the four basic windshear models required for qualification, at least two additional "complex" windshear models must be available to the instructor which represent the complexity of actual windshear encounters. These models must be available in the takeoff and landing configurations and must consist of independent variable winds in multiple simultaneous components. The Windshear Training Aid provides two such example "complex" windshear models that may be used to satisfy this requirement. Any proposed alternate wind models used to meet this requirement must be properly supported and referenced in the Master QTG. Instructor Operating Station (IOS): All required windshear models must be selectable and clearly labeled on the Instructor Operating Station (IOS). Additionally, all IOS selectable windshear models must employ a method, such as a simulator preset, to ensure that the FFS is properly configured for use in training. This method must address variables such as windshear intensity, aircraft configurations (weights, flap settings, etc.), and ambient conditions to ensure that the proper windshear recognition cues and training objectives are present as originally qualified.					implementation method(s) used. If the alternate method is selected, wind models from the Royal Aeroplane Establishment (RAE) *Wind Shear Training*, the *Joint Airport Weather Studies (JAWS) Project* and other recognized sources may be implemented, but should be supported and properly referenced in the QTG. For Level 7FTDs, windshear training tasks may only be qualified for aircraft equipped with a synthetic stall warning system and the qualified windshear profile(s) are evaluated to ensure is the synthetic stall warning (and not the stall buffet) is first indication of the stall.
11.2.G	N/A					
11.3	WEATHER EFFECTS					
11.3.S	N/A.					
11.3.R	The following weather effects as observed on the visual system must be simulated and respective instructor controls provided.				X	
	(1) Multiple cloud layers with adjustable bases, tops, sky coverage and scud effect.					
	(2) Storm cells activation and/or deactivation.					
	(3) Visibility and runway visual range (RVR), including fog and patchy fog effect.					Objective test required. Refer to Attachment 2 – Test 4.d.
	(4) Effects on ownship external lighting.					
	(5) Effects on airport lighting (including variable intensity and fog effects).					
	(6) Surface contaminants (including wind blowing effect).					
	(7) Variable precipitation effects (rain, hail, snow).					
	(8) In-cloud airspeed effect.					
	(9) Gradual visibility changes entering and breaking out of cloud.					
11.3 G	N/A					

Table B1A - Minimum FTD Requirements						
	QPS REQUIREMENTS	FTD Level				INFORMATION
Entry Number	General FTD Requirements	4	5	6	7	Notes
11.4	INSTRUCTOR CONTROLS					
11.4.S	N/A.					
11.4.R	The following features must be simulated with appropriate instructor controls provided:				X	
	(1) surface wind speed, direction and gusts. Realistic gusting crosswind profiles must be available to the instructor that have been tuned in intensity and variation to require pilot intervention to avoid runway departure during takeoff or landing roll; An SOC is required describing source data used to construct gusting crosswind profiles.					Programmed gusting crosswind intensity and rate of change should be based upon data sources such as the FAA Windshear Training Aid or other acceptable source data. Additional tuning of the gusting crosswind profile(s) by a subject matter expert pilot in order to achieve the required training objectives is encouraged.
	(2) intermediate and high altitude wind speed and direction;					
	(3) thunderstorms and microbursts; and					
	(4) turbulence.					For devices without motion, effects should be simulated on the instruments.
11.4.G	Environmental controls.			X		Controls for temperature, climate conditions, wind speed and direction.
12	**FEATURE GENERAL REQUIREMENT ENVIRONMENT – AIRPORTS AND TERRAIN**					
12.S	**N/A.**					
12.R	**Specific airport models with topographical features to support the approved use. When the FTD is being used by an instructor, or evaluator for the purposes of training, testing, or checking under this chapter, only Class I, Class II, or Class III models may be used by the instructor or evaluator. See Appendix A, Attachment 3, Paragraph 1 for additional QPS requirements concerning airport model usage.** **Correct terrain modeling, runway orientation, markings, lighting, dimensions and taxiways. Visual terrain and EGPWS databases must be matched to support training to avoid CFIT accidents.** **Where the device is required to perform low visibility operations, at least one airport scene with functionality to support the required approval type, e.g. low visibility taxi route with marker boards, stop bars, runway guard lights plus the required approach and runway lighting.**				X	Class I airport model requirements for Level 7 FTDs are defined in Table B3B of this Appendix. Class II airport model requirements are defined in Table A3C of Appendix A. Class III airport model requirements are defined in Appendix F of this Part. Additional information concerning the usage of Class III airport models can be found in Appendix A, Attachment 3 of the Part.
12.R1	**The FTD may have a visual system, if desired, although it is not required. If a visual system is installed, the visual scene content must not be distracting and must be modeled to the extent to support the approved use.**	X	X	X		
12.R(S)	**Reserved**					
12.G	**Reserved**					
12.G(S)	**Reserved**					

Table B1A - Minimum FTD Requirements						
	QPS REQUIREMENTS	FTD Level				INFORMATION
Entry Number	General FTD Requirements	4	5	6	7	Notes
12.1	VISUAL CUES					
12.1.1R(S) G(S)	Reserved					
12.1.1R	Visual cues to assess sink rate and depth perception during take-off and landing must be provided. This must include: (1) surface on runways, taxiways, and ramps; (2) terrain features; and (3) highly detailed and accurate surface depiction of the terrain surface within an approximate area from 400 m (1/4 sm) before the runway approach end to 400 m (1/4 sm) beyond the runway departure end with a total width of approximately 400 m (1/4 sm) including the width of the runway.				X	
12.1.1G	Reserved					
12.2	VISUAL EFFECTS					
12.2.1R	The system must provide visual effects for: (1) light poles; (2) raised edge lights as appropriate; and (3) glow associated with approach lights in low visibility before physical lights are seen.				X	
12.3	ENVIRONMENT ATTITUDE					
12.3.1R	The FSTD must provide for accurate portrayal of the visual environment relating to the FSTD attitude.				X	Visual attitude versus FSTD attitude is a comparison of pitch and roll of the horizon as displayed in the visual scene compared to the display on the attitude indicator. Required for initial qualification only (SOC acceptable).
12.4	AIRPORT SCENES					
12.4.1R	The system must include at least 3 designated real-world airports available in daylight, twilight (dusk or dawn) and night illumination states.				X	The designated real-world airports should be part of the approved training program.
12.4.1G	Reserved					
12.4.2.1R	Daylight Capability. SOC required for system capability.				X	System objective tests are required. See Attachment 2 (visual scene quality) — Test 4.a.
12.4.2.2R	The system must provide full-color presentations and sufficient surfaces with appropriate textural cues to successfully accomplish a visual approach, landing and airport movement (taxi).				X	
12.4.2.3R	Surface shading effects must be consistent with simulated sun position.				X	This does not imply continuous time of day.

Table B1A - Minimum FTD Requirements						
	QPS REQUIREMENTS	FTD Level				INFORMATION
Entry Number	General FTD Requirements	4	5	6	7	Notes
12.4.2.4R	Total scene content comparable in detail to that produced by 10 000 visible textured surfaces and 6 000 visible lights must be provided.				X	
12.4.2.4G	Reserved					
12.4.2.5R	The system must have sufficient capacity to display 16 simultaneously moving objects.				X	
12.4.3.1R	Twilight (dusk) capability.				X	
12.4.3.2R	The system must provide twilight (or dusk) visual scenes with full color presentations of reduced ambient intensity and typical terrain characteristics such as fields, roads and bodies of water and surfaces illuminated by representative ownship lighting (e.g. landing lights) sufficient to successfully accomplish visual approach, landing and airport movement (taxi).				X	
12.4.3.3R	Total scene content comparable in detail to that produced by 10 000 visible textured surfaces and 15 000 visible lights must be provided.				X	
12.4.3.3R	Scenes must include self-illuminated objects such as road networks, ramp lighting and airport signage, to conduct a visual approach, landing and airport movement (taxi).				X	
12.4.3.4R	The system must include a definable horizon.				X	If provided, directional horizon lighting should have correct orientation and be consistent with surface shading effects.
12.4.3.6R	The system must have sufficient capacity to display 16 simultaneously moving objects.				X	
12.4.4R	Night capability.				X	
12.4.4.1R	The system must provide at night all features applicable to the twilight scene, as defined above, with the addition of the need to portray reduced ambient intensity that removes ground cues that are not self-illuminating or illuminated by airplane lights (e.g. landing lights).				X	
12.5	AIRPORT CLUTTER					
12.5.1R	Airport models must include representative static and dynamic clutter such as gates, airplanes, and ground handling equipment.				X	Clutter need not be dynamic unless required (e.g. ATC correlation).
12.6	DATABASE CURRENCY					
12.6.1R	Reserved					
12.7	Reserved					
12.8	Reserved					
12.9	LOW VISIBILITY TRAINING					
12.9.1R	The system must include at least one airport scene with functionality to support the required approval type, e.g. low visibility taxi route with marker boards, stop bars, runway guard lights plus the required approach and runway lighting.				X	
13	**FEATURE GENERAL REQUIREMENT MISCELLANEOUS**					
13.S	**N/A.**				X	
13.S1	**N/A.**					
13.R	**N/A.**					
13.G	**N/A.**					
13	FEATURE TECHNICAL REQUIREMENT					

Table B1A - Minimum FTD Requirements						
	QPS REQUIREMENTS	FTD Level				INFORMATION
Entry Number	General FTD Requirements	4	5	6	7	Notes
	MISCELLANEOUS					
13.1	INSTRUCTOR OPERATING STATION					
13.1S,S1	The instructor station must provide an adequate view of the pilots' panels and forward windows.	X	X	X	X	
13.1G	N/A.					
13.2	INSTRUCTOR CONTROLS					
13.2 S,S1	Instructor controls must be provided for all required system variables, freezes, resets and for insertion of malfunctions to simulate abnormal or emergency conditions. The effects of these malfunctions must be sufficient to correctly exercise the procedures in relevant operating manuals.	X	X	X	X	
13.3	SELF–DIAGNOSTIC TESTING					
13.3S,S1	Self-diagnostic testing of the FSTD must be available to determine the integrity of hardware and software operation and to provide a means for quickly and effectively conducting daily testing of the FSTD software and hardware. An SOC is required	X	X	X	X	
13.4	COMPUTER CAPACITY					
13.4 S,S1	Sufficient FSTD computer capacity, accuracy, resolution and dynamic response must be provided to fully support the overall FSTD fidelity needed to meet the qualification level sought. An SOC is required.	X	X	X	X	
13.5	AUTOMATIC TESTING FACILITIES					
13.5S	Automatic QTG/validation testing of FSTD hardware and software to determine compliance with the validation requirements must be available.			X	X	Evidence of testing should include test identification, FSTD number, date, time, conditions, tolerances, and the appropriate dependent variables portrayed in comparison with the airplane standard.
13.5 R,G	Reserved					
13.6	UPDATES TO FSTD HARDWARE AND SOFTWARE					
13.6S	Timely permanent update of FSTD hardware and software must be conducted subsequent to airplane modification where it affects training, sufficient for the qualification type sought.			X	X	
13.6G	Reserved					
13.7	DAILY PRE-FLIGHT DOCUMENTATION					
13.7 S,S1	Daily pre-flight documentation either in the daily log or in a location easily accessible for review is required.	X	X	X	X	
13.8	SYSTEM INTEGRATION					
13.8	System Integration. Relative response of the visual system, cockpit/flight deck instruments and initial motion system coupled closely to provide integrated sensory cues. Visual scene changes from steady state disturbance (i.e. the start of the scan of the first video field containing different information) must occur within the system dynamic response limit of 100 milliseconds (ms). Motion onset must also occur within the system dynamic response limit of 100 ms. While motion onset must occur before the start of the scan of the first video field containing different information, it needs to occur					Test required. See Attachment 2, Transport delay – Test 6.a. Latency test may be used as an alternate means of compliance in place of the transport delay test.

Table B1A - Minimum FTD Requirements						
	QPS REQUIREMENTS	FTD Level				INFORMATION
Entry Number	General FTD Requirements	4	5	6	7	Notes
	before the end of the scan of the same video field. The test to determine compliance with these requirements must include simultaneously recording the output from the pilot's pitch, roll and yaw controllers, the output from the accelerometer attached to the motion system platform located at an acceptable location near the pilots' seats, the output signal to the visual system display (including visual system analogue delays) and the output signal to the pilot's attitude indicator or an equivalent test approved by the NSPM.					Appendix A, Attachment 2, Paragraph 15 provides guidance for transport delay test methodology and also latency.
13.8S	Transport delay: A transport delay test may be used to demonstrate that the FSTD system response does not exceed 100 ms. Where EFVS systems are installed, they must respond within + or - 30 ms from the visual system, and not before the motion response.				X	Results required for instruments, motion and visual systems. Additional transport delay test results are required where HUD systems are installed, which are simulated and not actual airplane systems. Where a visual system's mode of operation (daylight, twilight and night) can affect performance, additional tests are required. An SOC is required where the visual system's mode of operation does not affect performance, precluding the need to submit additional tests.
13.8S1	Transport delay: A transport delay test may be used to demonstrate that the FSTD system response does not exceed 300 ms. Where EFVS systems are installed, they must respond within + or - 30 ms from the visual system, and not before the motion response.		X	X		Results required for instruments, motion and visual systems. Additional transport delay test results are required where HUD systems are installed, which are simulated and not actual airplane systems. Where a visual system's mode of operation (daylight, twilight and night) can affect performance, additional tests are required. An SOC is required where the visual system's mode of operation does not affect performance, precluding the need to submit additional tests.
13.8 R,G	Reserved					

Table B1B

Table of Tasks vs. FTD Level						
QPS REQUIREMENTS						INFORMATION
Entry Number	Subjective Requirements In order to be qualified at the FTD qualification level indicated, the FTD must be able to perform at least the tasks associated with that level of qualification. See Notes 1 and 2 at the end of the Table	FTD Level				Notes
		4	5	6	7	
1. Preflight Procedures.						
1.a.	Preflight Inspection (flight deck only)	**A**	**A**	**X**	**X**	
1.b.	Engine Start	**A**	**A**	**X**	**X**	
1.c.	Taxiing				**T**	
1.d.	Pre-takeoff Checks	**A**	**A**	**X**	**X**	
2. Takeoff and Departure Phase.						
2.a.	Normal and Crosswind Takeoff				**T**	
2.b.	Instrument Takeoff				**T**	
2.c.	Engine Failure During Takeoff				**T**	
2.d.	Rejected Takeoff (requires visual system)			**A**	**X**	
2.e.	Departure Procedure		**X**	**X**	**X**	
3. Inflight Maneuvers.						
3.a.	Steep Turns		**X**	**X**	**X**	
3.b	Approaches to Stalls		**A**	**X**	**X**	Approach to stall maneuvers qualified only where the aircraft does not exhibit stall buffet as the first indication of the stall.
3.c.	Engine Failure—Multiengine Airplane		**A**	**X**	**X**	
3.d.	Engine Failure—Single-Engine Airplane		**A**	**X**	**X**	
3.e.	Specific Flight Characteristics incorporated into the user's FAA approved flight training program.	**A**	**A**	**A**	**A**	
3.f.	Windshear Recovery				**T**	For Level 7 FTD, windshear recovery may be qualified at the Sponsor's option. See Table B1A for specific requirements and limitations.
4. Instrument Procedures.						
4.a.	Standard Terminal Arrival / Flight Management System Arrivals Procedures		**A**	**X**	**X**	
4.b.	Holding		**A**	**X**	**X**	
4.c.	Precision Instrument					
4.c.1.	All engines operating.		**A**	**X**	**X**	e.g., Autopilot, Manual (Flt. Dir. Assisted), Manual (Raw Data)
4.c.2.	One engine inoperative.				**T**	e.g., Manual (Flt. Dir. Assisted), Manual (Raw Data)

Table B1B

Table of Tasks vs. FTD Level						
QPS REQUIREMENTS						**INFORMATION**
Entry Number	**Subjective Requirements** In order to be qualified at the FTD qualification level indicated, the FTD must be able to perform at least the tasks associated with that level of qualification. See Notes 1 and 2 at the end of the Table	**FTD Level**				**Notes**
		4	**5**	**6**	**7**	
4.d.	Non-precision Instrument Approach		**A**	**X**	**X**	e.g., NDB, VOR, VOR/DME, VOR/TAC, RNAV, LOC, LOC/BC, ADF, and SDF.
4.e.	Circling Approach (requires visual system)			**A**	**X**	Specific authorization required.
4.f.	Missed Approach					
4.f.1.	Normal.		**A**	**X**	**X**	
4.f.2.	One engine Inoperative.				**T**	
5. Landings and Approaches to Landings.						
5.a.	Normal and Crosswind Approaches and Landings				**T**	
5.b.	Landing From a Precision / Non-Precision Approach				**T**	
5.c.	Approach and Landing with (Simulated) Engine Failure – Multiengine Airplane				**T**	
5.d.	Landing From Circling Approach				**T**	
5.e.	Rejected Landing				**T**	
5.f.	Landing From a No Flap or a Nonstandard Flap Configuration Approach				**T**	
6. Normal and Abnormal Procedures.						
6.a.	Engine (including shutdown and restart)	**A**	**A**	**X**	**X**	
6.b.	Fuel System	**A**	**A**	**X**	**X**	
6.c.	Electrical System	**A**	**A**	**X**	**X**	
6.d.	Hydraulic System	**A**	**A**	**X**	**X**	
6.e.	Environmental and Pressurization Systems	**A**	**A**	**X**	**X**	
6.f.	Fire Detection and Extinguisher Systems	**A**	**A**	**X**	**X**	
6.g.	Navigation and Avionics Systems	**A**	**A**	**X**	**X**	
6.h.	Automatic Flight Control System, Electronic Flight Instrument System, and Related Subsystems	**A**	**A**	**X**	**X**	
6.i.	Flight Control Systems	**A**	**A**	**X**	**X**	
6.j.	Anti-ice and Deice Systems	**A**	**A**	**X**	**X**	
6.k.	Aircraft and Personal Emergency Equipment	**A**	**A**	**X**	**X**	
7. Emergency Procedures.						
7.a.	Emergency Descent (Max. Rate)		**A**	**X**	**X**	
7.b.	Inflight Fire and Smoke Removal		**A**	**X**	**X**	
7.c.	Rapid Decompression		**A**	**X**	**X**	
7.d.	Emergency Evacuation	**A**	**A**	**X**	**X**	
8. Postflight Procedures.						

Table B1B

Table of Tasks vs. FTD Level						
QPS REQUIREMENTS						**INFORMATION**
Entry Number	**Subjective Requirements** In order to be qualified at the FTD qualification level indicated, the FTD must be able to perform at least the tasks associated with that level of qualification. See Notes 1 and 2 at the end of the Table	**FTD Level**				**Notes**
		4	**5**	**6**	**7**	
8.a.	After-Landing Procedures		**A**	**X**	**X**	
8.b.	Parking and Securing		**A**	**X**	**X**	

Note 1: An "A" in the table indicates that the system, task, or procedure, although not required to be present, may be examined if the appropriate airplane system is simulated in the FTD and is working properly.

Note 2: Items not installed or not functional on the FTD and not appearing on the SOQ Configuration List, are not required to be listed as exceptions on the SOQ.

Note 3: A "T" in the table indicates that the FTD may only be qualified for initial or recurrent qualification training. These tasks may not be qualified for proficiency testing or checking credits in an FAA approved flight training program.

Table B1C

Table of FTD System Tasks						
QPS REQUIREMENTS						**INFORMATION**
Entry Number	**Subjective Requirements** In order to be qualified at the FTD qualification level indicated, the FTD must be able to perform at least the tasks associated with that level of qualification.	**FTD Level**				**Notes**
		4	**5**	**6**	**7**	
1. Instructor Operating Station (IOS), as appropriate.						
1.a.	Power switch(es).	**X**	**X**	**X**	**X**	
1.b.	Airplane conditions.	**A**	**X**	**X**	**X**	e.g., GW, CG, Fuel loading and Systems.
1.c.	Airports / Runways.	**X**	**X**	**X**	**X**	e.g., Selection, Surface, Presets, Lighting controls.
1.d.	Environmental controls.	**X**	**X**	**X**	**X**	e.g., Clouds, Visibility, RVR, Temp, Wind, Ice, Snow, Rain, and Windshear.
1.e.	Airplane system malfunctions (Insertion / deletion)	**A**	**X**	**X**	**X**	
1.f.	Locks, Freezes, and Repositioning.	**X**	**X**	**X**	**X**	
2. Sound Controls.						
2.a.	On / off / adjustment	**X**	**X**	**X**	**X**	
3. Motion / Control Loading System.						
3.a.	On / off / emergency stop.	**A**	**A**	**A**	**A**	
4. Observer Seats / Stations.						
4.a.	Position / Adjustment / Positive restraint system.	**X**	**X**	**X**	**X**	

Note 1: An "A" in the table indicates that the system, task, or procedure, although not required to be present, may be examined if the appropriate system is in the FTD and is working properly.

Attachment 2 to Appendix B to Part 60—Flight Training Device (FTD) Objective Tests

Begin Information

1. Discussion

a. For the purposes of this attachment, the flight conditions specified in the Flight Conditions Column of Table B2A, are defined as follows:

(1) Ground—on ground, independent of airplane configuration;

(2) Take-off—gear down with flaps/slats in any certified takeoff position;

(3) First segment climb—gear down with flaps/slats in any certified takeoff position (normally not above 50 ft AGL);

(4) Second segment climb—gear up with flaps/slats in any certified takeoff position (normally between 50 ft and 400 ft AGL);

(5) Clean—flaps/slats retracted and gear up;

(6) Cruise—clean configuration at cruise altitude and airspeed;

(7) Approach—gear up or down with flaps/slats at any normal approach position as recommended by the airplane manufacturer; and

(8) Landing—gear down with flaps/slats in any certified landing position.

b. The format for numbering the objective tests in Appendix A, Attachment 2, Table A2A, and the objective tests in Appendix B, Attachment 2, Table B2A, is identical. However, each test required for FFSs is not necessarily required for FTDs. Also, each test required for FTDs is not necessarily required for FFSs. Therefore, when a test number (or series of numbers) is not required, the term ''Reserved'' is used in the table at that location. Following this numbering format provides a degree of commonality between the two tables and substantially reduces the potential for confusion when referring to objective test numbers for either FFSs or FTDs.

c. The reader is encouraged to review the Airplane Flight Simulator Evaluation Handbook, Volumes I and II, published by the Royal Aeronautical Society, London, UK, and FAA AC 25–7, as amended, Flight Test Guide for Certification of Transport Category Airplanes, and AC 23–8, as amended, Flight Test Guide for Certification of Part 23 Airplanes, for references and examples regarding flight testing requirements and techniques.

d. If relevant winds are present in the objective data, the wind vector should be clearly noted as part of the data presentation, expressed in conventional terminology, and related to the runway being used for the test.

e. A Level 4 FTD does not require objective tests and therefore, Level 4 is not addressed in the following table.

End Information

Begin QPS Requirements

2. Test Requirements

a. The ground and flight tests required for qualification are listed in Table B2A Objective Tests. Computer generated FTD test results must be provided for each test except where an alternate test is specifically authorized by the NSPM. If a flight condition or operating condition is required for the test but does not apply to the airplane being simulated or to the qualification level sought, it may be disregarded (e.g., an engine out missed approach for a single-engine airplane; a maneuver using reverse thrust for an airplane without reverse thrust capability). Each test result is compared against the validation data described in § 60.13, and in Appendix B. The results must be produced on an appropriate recording device acceptable to the NSPM and must include FTD number, date, time, conditions, tolerances, and appropriate dependent variables portrayed in comparison to the validation data. Time histories are required unless otherwise indicated in Table B2A. All results must be labeled using the tolerances and units given.

b. Table B2A in this attachment sets out the test results required, including the parameters, tolerances, and flight conditions for FTD validation. Tolerances are provided for the listed tests because mathematical modeling and acquisition and development of reference data are often inexact. All tolerances listed in the following tables are applied to FTD performance. When two tolerance values are given for a parameter, the less restrictive may be used unless otherwise indicated. In those cases where a tolerance is expressed only as a percentage, the tolerance percentage applies to the maximum value of that parameter within its normal operating range as measured from the neutral or zero position unless otherwise indicated.

c. Certain tests included in this attachment must be supported with a SOC. In Table B2A, requirements for SOCs are indicated in the ''Test Details'' column.

d. When operational or engineering judgment is used in making assessments for flight test data applications for FTD validity, such judgment may not be limited to a single parameter. For example, data that exhibit rapid variations of the measured parameters may require interpolations or a ''best fit'' data section. All relevant parameters related to a given maneuver or flight condition must be provided to allow overall interpretation. When it is difficult or impossible to match FTD to airplane data throughout a time history, differences must be justified by providing a comparison of other related variables for the condition being assessed.

e. It is not acceptable to program the FTD so that the mathematical modeling is correct only at the validation test points. Unless noted otherwise, tests must represent airplane performance and handling qualities at operating weights and centers of gravity (CG) typical of normal operation. If a test is supported by aircraft data at one extreme weight or CG, another test supported by aircraft data at mid-conditions or as close as possible to the other extreme is necessary. Certain tests that are relevant only at one extreme CG or weight condition need not be repeated at the other extreme. The results of the tests for Level 6 are expected to be indicative of the device's performance and handling qualities throughout all of the following:

(1) The airplane weight and CG envelope;

(2) The operational envelope; and

(3) Varying atmospheric ambient and environmental conditions—including the extremes authorized for the respective airplane or set of airplanes.

f. When comparing the parameters listed to those of the airplane, sufficient data must also be provided to verify the correct flight condition and airplane configuration changes. For example, to show that control force is within the parameters for a static stability test, data to show the correct airspeed, power, thrust or torque, airplane configuration, altitude, and other appropriate datum identification parameters must also be given. If comparing short period dynamics, normal acceleration may be used to establish a match to the airplane, but airspeed, altitude, control input, airplane configuration, and other appropriate data must also be given. If comparing landing gear change dynamics, pitch, airspeed, and altitude may be used to establish a match to the airplane, but landing gear position must also be provided. All airspeed values must be properly annotated (e.g., indicated versus calibrated). In addition, the same variables must be used for comparison (e.g., compare inches to inches rather than inches to centimeters).

g. The QTG provided by the sponsor must clearly describe how the FTD will be set up and operated for each test. Each FTD subsystem may be tested independently, but overall integrated testing of the FTD must be accomplished to assure that the total FTD system meets the prescribed standards. A manual test procedure with explicit and detailed steps for completing each test must also be provided.

h. For previously qualified FTDs, the tests and tolerances of this attachment may be used in subsequent continuing qualification evaluations for any given test if the sponsor has submitted a proposed MQTG revision to the NSPM and has received NSPM approval.

i. FTDs are evaluated and qualified with an engine model simulating the airplane data supplier's flight test engine. For qualification of alternative engine models (either variations of the flight test engines or other manufacturer's engines) additional tests with the alternative engine models may be required. This attachment contains guidelines for alternative engines.

j. Testing Computer Controlled Aircraft (CCA) simulators, or other highly augmented airplane simulators, flight test data is required for the Normal (N) and/or Non-normal (NN) control states, as indicated in this attachment. Where test results are independent of control state, Normal or Non-normal control data may be used. All tests in Table B2A require test results in the Normal control state unless specifically noted otherwise in the Test Details section following the CCA designation. The NSPM will determine what tests are appropriate for airplane simulation data. When making this determination, the NSPM may require other levels of control state degradation for specific airplane tests. Where Non-normal control states are required, test data must be provided for one or more Non-normal control states, and must include the least augmented

state. Where applicable, flight test data must record Normal and Non-normal states for:

(1) Pilot controller deflections or electronically generated inputs, including location of input; and

(2) Flight control surface positions unless test results are not affected by, or are independent of, surface positions.

k. Tests of handling qualities must include validation of augmentation devices. FTDs for highly augmented airplanes will be validated both in the unaugmented configuration (or failure state with the maximum permitted degradation in handling qualities) and the augmented configuration. Where various levels of handling qualities result from failure states, validation of the effect of the failure is necessary. Requirements for testing will be mutually agreed to between the sponsor and the NSPM on a case-by-case basis.

l. Some tests will not be required for airplanes using airplane hardware in the FTD flight deck (e.g., ''side stick controller''). These exceptions are noted in Section 2 ''Handling Qualities'' in Table B2A of this attachment. However, in these cases, the sponsor must provide a statement that the airplane hardware meets the appropriate manufacturer's specifications and the sponsor must have supporting information to that fact available for NSPM review.

m. For objective test purposes, see Appendix F of this part for the definitions of ''Near maximum,'' ''Light,'' and ''Medium'' gross weight.

End QPS Requirements

Begin Information

n. In those cases where the objective test results authorize a ''snapshot test'' or a ''series of snapshot test results'' in lieu of a time-history result, the sponsor or other data provider must ensure that a steady state condition exists at the instant of time captured by the ''snapshot.'' The steady state condition must exist from 4 seconds prior to, through 1 second following, the instant of time captured by the snap shot.

o. Refer to AC 120–27, ''Aircraft Weight and Balance;'' and FAA–H–8083–1, ''Aircraft Weight and Balance Handbook'' for more information.

End Information

Table B2A

Flight Training Device (FTD) Objective Tests								
QPS REQUIREMENTS								INFORMATION
Test		Tolerance	Flight Conditions	Test Details	FTD Level			Notes
Entry Number	Title				5	6	7	
1. Performance.								
1.a.	**Taxi.**							
1.a.1	Minimum radius turn.	±0.9 m (3 ft) or ±20% of airplane turn radius.	Ground.	Plot both main and nose gear loci and key engine parameter(s). Data for no brakes and the minimum thrust required to maintain a steady turn except for airplanes requiring asymmetric thrust or braking to achieve the minimum radius turn.			X	
1.a.2	Rate of turn versus nosewheel steering angle (NWA).	±10% or ±2°/s of turn rate.	Ground.	Record for a minimum of two speeds, greater than minimum turning radius speed with one at a typical taxi speed, and with a spread of at least 5 kt.			X	
1.b.	**Takeoff.**			*Note.— All airplane manufacturer commonly-used certificated take-off flap settings must be demonstrated at least once either in minimum unstick speed (1.b.3), normal take-off (1.b.4), critical engine failure on take-off (1.b.5) or crosswind take-off (1.b.6).*				
1.b.1	Ground acceleration time and distance.	±1.5 s or ±5% of time; and ±61 m (200 ft) or ±5% of distance. For Level 6 FTD: ±1.5 s or ±5% of time.	Takeoff.	Acceleration time and distance must be recorded for a minimum of 80% of the total time from brake release to V_r. Preliminary aircraft certification data may be used.		X	X	May be combined with normal takeoff (1.b.4.) or rejected takeoff (1.b.7.). Plotted data should be shown using appropriate scales for each portion of the maneuver. For Level 6 FTD, this test is required only if RTO training credit is sought.
1.b.2	Minimum control speed, ground (V_{mcg}) using aerodynamic controls only per applicable airworthiness requirement or alternative engine inoperative test to demonstrate ground control characteristics.	±25% of maximum airplane lateral deviation reached or ±1.5 m (5 ft). For airplanes with reversible flight control systems: ±10% or ±2.2 daN (5 lbf) rudder pedal force.	Takeoff.	Engine failure speed must be within ±1 kt of airplane engine failure speed. Engine thrust decay must be that resulting from the mathematical model for the engine applicable to the FSTD under test. If the modeled engine is not the same as the airplane manufacturer's flight test engine, a further test may be run with the same initial conditions using the thrust from the flight test data as the driving parameter. To ensure only aerodynamic control, nosewheel steering must be disabled (i.e. castored) or the nosewheel held slightly off the ground.			X	If a V_{mcg} test is not available, an acceptable alternative is a flight test snap engine deceleration to idle at a speed between V_1 and V_1-10 kt, followed by control of heading using aerodynamic control only and recovery should be achieved with the main gear on the ground.

Table B2A

Flight Training Device (FTD) Objective Tests								
QPS REQUIREMENTS								INFORMATION
Test		Tolerance	Flight Conditions	Test Details	FTD Level			Notes
Entry Number	Title				5	6	7	
1.b.3	Minimum unstick speed (V_{mu}) or equivalent test to demonstrate early rotation take-off characteristics.	±3 kt airspeed. ±1.5° pitch angle.	Takeoff.	Record time history data from 10 knots before start of rotation until at least 5 seconds after the occurrence of main gear lift-off.			X	V_{mu} is defined as the minimum speed at which the last main landing gear leaves the ground. Main landing gear strut compression or equivalent air/ground signal should be recorded. If a V_{mu} test is not available, alternative acceptable flight tests are a constant high-attitude takeoff run through main gear lift-off or an early rotation takeoff. If either of these alternative solutions is selected, aft body contact/tail strike protection functionality, if present on the airplane, should be active.
1.b.4	Normal take-off.	±3 kt airspeed. ±1.5° pitch angle. ±1.5° AOA. ±6 m (20 ft) height. For airplanes with reversible flight control systems: ±2.2 daN (5 lbf) or ±10% of column force.	Takeoff.	Data required for near maximum certificated takeoff weight at mid center of gravity location and light takeoff weight at an aft center of gravity location. If the airplane has more than one certificated take-off configuration, a different configuration must be used for each weight. Record takeoff profile from brake release to at least 61 m (200 ft) AGL.			X	The test may be used for ground acceleration time and distance (1.b.1). Plotted data should be shown using appropriate scales for each portion of the maneuver.
1.b.5	Critical engine failure on take-off.	±3 kt airspeed. ±1.5° pitch angle. ±1.5° AOA. ±6 m (20 ft) height.	Takeoff.	Record takeoff profile to at least 61 m (200 ft) AGL. Engine failure speed must be within ±3 kt of airplane data.			X	

Table B2A

Flight Training Device (FTD) Objective Tests								
QPS REQUIREMENTS								INFORMATION
Test		Tolerance	Flight Conditions	Test Details	FTD Level			Notes
Entry Number	Title				5	6	7	
		±2° roll angle. ±2° side-slip angle. ±3° heading angle. For airplanes with reversible flight control systems: ±2.2 daN (5 lbf) or ±10% of column force; ±1.3 daN (3 lbf) or ±10% of wheel force; and ±2.2 daN (5 lbf) or ±10% of rudder pedal force.		Test at near maximum takeoff weight				
1.b.6	Crosswind take-off.	± 3 kt airspeed. ±1.5° pitch angle. ±1.5° AOA. ±6 m (20 ft) height. ±2° roll angle. ±2° side-slip angle. ±3° heading angle. Correct trends at ground speeds below 40 kt for rudder/pedal and heading angle. For airplanes with reversible flight control systems:	Takeoff.	Record takeoff profile from brake release to at least 61 m (200 ft) AGL. This test requires test data, including wind profile, for a crosswind component of at least 60% of the airplane performance data value measured at 10 m (33 ft) above the runway. Wind components must be provided as headwind and crosswind values with respect to the runway.			**X**	In those situations where a maximum crosswind or a maximum demonstrated crosswind is not known, contact the NSPM.

Table B2A

Flight Training Device (FTD) Objective Tests								
QPS REQUIREMENTS								INFORMATION
Test		Tolerance	Flight Conditions	Test Details	FTD Level			Notes
Entry Number	Title				5	6	7	
		±2.2 daN (5 lbf) or ±10% of column force; ±1.3 daN (3 lbf) or ±10% of wheel force; and ±2.2 daN (5 lbf) or ±10% of rudder pedal force.						
1.b.7.	Rejected Takeoff.	±5% of time or ±1.5 s. ±7.5% of distance or ±76 m (250 ft). For Level 6 FTD: ±5% of time or ±1.5 s.	Takeoff.	Record at mass near maximum takeoff weight. Speed for reject must be at least 80% of V_1. Maximum braking effort, auto or manual. Where a maximum braking demonstration is not available, an acceptable alternative is a test using approximately 80% braking and full reverse, if applicable. Time and distance must be recorded from brake release to a full stop.		X	X	Autobrakes will be used where applicable.
1.b.8.	Dynamic Engine Failure After Takeoff.	±2°/s or ±20% of body angular rates.	Takeoff.	Engine failure speed must be within ±3 kt of airplane data. Engine failure may be a snap deceleration to idle. Record hands-off from 5 s before engine failure to +5 s or 30° roll angle, whichever occurs first. **CCA**: Test in Normal and Non-normal control state.			X	For safety considerations, airplane flight test may be performed out of ground effect at a safe altitude, but with correct airplane configuration and airspeed.
1.c.	**Climb.**							
1.c.1.	Normal Climb, all engines operating.	±3 kt airspeed. ±0.5 m/s (100 ft/ min) or ±5% of rate of climb.	Clean.	Flight test data are preferred; however, airplane performance manual data are an acceptable alternative. Record at nominal climb speed and mid initial climb altitude.	X	X	X	

Table B2A

Flight Training Device (FTD) Objective Tests								
QPS REQUIREMENTS								INFORMATION
Test		Tolerance	Flight Conditions	Test Details	FTD Level			Notes
Entry Number	Title				5	6	7	
				FSTD performance is to be recorded over an interval of at least 300 m (1 000 ft).				
1.c.2.	One-engine-inoperative 2nd segment climb.	±3 kt airspeed. ±0.5 m/s (100 ft/ min) or ±5% of rate of climb, but not less than airplane performance data requirements.	2nd segment climb.	Flight test data is preferred; however, airplane performance manual data is an acceptable alternative. Record at nominal climb speed. FSTD performance is to be recorded over an interval of at least 300 m (1 000 ft). Test at WAT (weight, altitude or temperature) limiting condition.			X	
1.c.3.	One Engine Inoperative En route Climb.	±10% time, ±10% distance, ±10% fuel used	Clean	Flight test data or airplane performance manual data may be used. Test for at least a 1550 m (5 000 ft) segment.			X	
1.c.4.	One Engine Inoperative Approach Climb for airplanes with icing accountability if provided in the airplane performance data for this phase of flight.	±3 kt airspeed. ±0.5 m/s (100 ft/ min) or ±5% rate of climb, but not less than airplane performance data.	Approach	Flight test data or airplane performance manual data may be used. FSTD performance to be recorded over an interval of at least 300 m (1 000 ft). Test near maximum certificated landing weight as may be applicable to an approach in icing conditions.			X	Airplane should be configured with all anti-ice and de-ice systems operating normally, gear up and go-around flap. All icing accountability considerations, in accordance with the airplane performance data for an approach in icing conditions, should be applied.
1.d.	**Cruise / Descent.**							
1.d.1.	Level flight acceleration	±5% Time	Cruise	Time required to increase airspeed a minimum of 50 kt, using maximum continuous thrust rating or equivalent. For airplanes with a small operating speed range, speed change may be reduced to 80% of operational speed change.			X	

Table B2A

Flight Training Device (FTD) Objective Tests								
QPS REQUIREMENTS								INFORMATION
Test		Tolerance	Flight Conditions	Test Details	FTD Level			Notes
Entry Number	Title				5	6	7	
1.d.2.	Level flight deceleration.	±5% Time	Cruise	Time required to decrease airspeed a minimum of 50 kt, using idle power. For airplanes with a small operating speed range, speed change may be reduced to 80% of operational speed change.			X	
1.d.3.	Cruise performance.	±.05 EPR or ±3% N1 or ±5% of torque. ±5% of fuel flow.	Cruise.	The test may be a single snapshot showing instantaneous fuel flow, or a minimum of two consecutive snapshots with a spread of at least 3 minutes in steady flight.			X	
1.d.4.	Idle descent.	±3 kt airspeed. ±1.0 m/s (200 ft/min) or ±5% of rate of descent.	Clean.	Idle power stabilized descent at normal descent speed at mid altitude. FSTD performance to be recorded over an interval of at least 300 m (1 000 ft).			X	
1.d.5.	Emergency descent.	±5 kt airspeed. ±1.5 m/s (300 ft/min) or ±5% of rate of descent.	As per airplane performance data.	FSTD performance to be recorded over an interval of at least 900 m (3 000 ft).			X	Stabilized descent to be conducted with speed brakes extended if applicable, at mid altitude and near V_{mo} or according to emergency descent procedure.
1.e.	**Stopping.**							
1.e.1.	Deceleration time and distance, manual wheel brakes, dry runway, no reverse thrust.	±1.5 s or ±5% of time. For distances up to 1 220 m (4 000 ft), the smaller of ±61 m (200 ft) or ±10% of distance. For distances greater than 1 220 m (4 000 ft), ±5% of distance.	Landing.	Time and distance must be recorded for at least 80% of the total time from touchdown to a full stop. Position of ground spoilers and brake system pressure must be plotted (if applicable). Data required for medium and near maximum certificated landing weight. Engineering data may be used for the medium weight condition.			X	
1.e.2.	Deceleration time and distance, reverse thrust, no wheel brakes, dry runway.	±1.5 s or ±5% of time; and the smaller of ±61 m	Landing	Time and distance must be recorded for at least 80% of the total time from initiation of reverse thrust to full thrust reverser minimum operating speed.			X	

Table B2A

Flight Training Device (FTD) Objective Tests								
QPS REQUIREMENTS								INFORMATION
Test		Tolerance	Flight Conditions	Test Details	FTD Level			Notes
Entry Number	Title				5	6	7	
		(200 ft) or ±10% of distance.		Position of ground spoilers must be plotted (if applicable). Data required for medium and near maximum certificated landing weight. Engineering data may be used for the medium weight condition.				
1.e.3.	Stopping distance, wheel brakes, wet runway.	±61 m (200 ft) or ±10% of distance.	Landing.	Either flight test or manufacturer's performance manual data must be used, where available. Engineering data, based on dry runway flight test stopping distance and the effects of contaminated runway braking coefficients, are an acceptable alternative.			**X**	
1.e.4.	Stopping distance, wheel brakes, icy runway.	±61 m (200 ft) or ±10% of distance.	Landing.	Either flight test or manufacturer's performance manual data must be used, where available. Engineering data, based on dry runway flight test stopping distance and the effects of contaminated runway braking coefficients, are an acceptable alternative.			**X**	
1.f.	**Engines.**							
1.f.1.	Acceleration.	±10% Ti or ±0.25 s; and ±10% Tt or ±0.25 s. For Level 5 FTD: ±1 s	Approach or landing	Total response is the incremental change in the critical engine parameter from idle power to go-around power.	**X**	**X**	**X**	See Appendix F of this part for definitions of T_i and T_t.
1.f.2.	Deceleration.	±10% Ti or ±0.25 s; and ±10% Tt or ±0.25 s. For Level 5 FTD: ±1 s	Ground	Total response is the incremental change in the critical engine parameter from maximum take-off power to idle power.	**X**	**X**	**X**	See Appendix F of this part for definitions of T_i and T_t.
2. Handling Qualities.								
	Note 1.— Pitch, roll and yaw controller position versus force or time must be measured at the control. An alternative method in lieu of external test fixtures at the flight controls would be to have recording and measuring instrumentation built into the FSTD. The force and position data from this instrumentation could be directly recorded and matched to the airplane data. Provided the instrumentation was verified by using external measuring equipment while conducting the static control checks, or equivalent means, and that evidence of the satisfactory comparison is included in the MQTG, the instrumentation could be used for both initial and recurrent evaluations for the measurement of all required control checks. Verification of the instrumentation by							Contact the NSPM for clarification of any issue regarding airplanes with reversible controls.

Table B2A

Flight Training Device (FTD) Objective Tests								
QPS REQUIREMENTS								INFORMATION
Test		Tolerance	Flight Conditions	Test Details	FTD Level			Notes
Entry Number	Title				5	6	7	
	using external measuring equipment should be repeated if major modifications and/or repairs are made to the control loading system. Such a permanent installation could be used without any time being lost for the installation of external devices. Static and dynamic flight control tests must be accomplished at the same feel or impact pressures as the validation data where applicable. *Note 2.— FSTD testing from the second set of pilot controls is only required if both sets of controls are not mechanically interconnected on the FSTD. A rationale is required from the data provider if a single set of data is applicable to both sides. If controls are mechanically interconnected in the FSTD, a single set of tests is sufficient.*							
2.a.	**Static Control Tests.**							
2.a.1.a.	Pitch controller position versus force and surface position calibration.	±0.9 daN (2 lbf) breakout. ±2.2 daN (5 lbf) or ±10% of force. ±2° elevator angle.	Ground.	Record results for an uninterrupted control sweep to the stops.		X	X	Test results should be validated with in-flight data from tests such as longitudinal static stability, stalls, etc.
2.a.1.b.	Pitch controller position versus force	±0.9 daN (2 lbf) breakout. ±2.2 daN (5 lbf) or ±10% of force.	As determined by sponsor	Record results during initial qualification evaluation for an uninterrupted control sweep to the stops. The recorded tolerances apply to subsequent comparisons on continuing qualification evaluations.	X			Applicable only on continuing qualification evaluations. The intent is to design the control feel for Level 5 to be able to manually fly an instrument approach; and not to compare results to flight test or other such data.
2.a.2.a.	Roll controller position versus force and surface position calibration.	±0.9 daN (2 lbf) breakout. ±1.3 daN (3 lbf) or ±10% of force. ±2° aileron angle. ±3° spoiler angle.	Ground.	Record results for an uninterrupted control sweep to the stops.		X	X	Test results should be validated with in-flight data from tests such as engine-out trims, steady state side-slips, etc.
2.a.2.b.	Roll controller position versus force	±0.9 daN (2 lbf) breakout. ±1.3 daN (3 lbf) or ±10% of force.	As determined by sponsor	Record results during initial qualification evaluation for an uninterrupted control sweep to the stops. The recorded tolerances apply to subsequent comparisons on continuing qualification evaluations.	X			Applicable only on continuing qualification evaluations. The intent is to design the control feel for Level 5 to be able to manually fly an instrument approach; and not to compare results to flight test or other such

Table B2A

Flight Training Device (FTD) Objective Tests								
QPS REQUIREMENTS								INFORMATION
Test		Tolerance	Flight Conditions	Test Details	FTD Level			Notes
Entry Number	Title				5	6	7	
								data.
2.a.3.a.	Rudder pedal position versus force and surface position calibration.	±2.2 daN (5 lbf) breakout. ±2.2 daN (5 lbf) or ±10% of force. ±2° rudder angle.	Ground.	Record results for an uninterrupted control sweep to the stops.		X	X	Test results should be validated with in-flight data from tests such as engine-out trims, steady state side-slips, etc.
2.a.3.b.	Rudder pedal position versus force	±2.2 daN (5 lbf) breakout. ±2.2 daN (5 lbf) or ±10% of force. ±2° rudder angle.	As determined by sponsor	Record results during initial qualification evaluation for an uninterrupted control sweep to the stops. The recorded tolerances apply to subsequent comparisons on continuing qualification evaluations.	X			Applicable only on continuing qualification evaluations. The intent is to design the control feel for Level 5 to be able to manually fly an instrument approach; and not to compare results to flight test or other such data.
2.a.4.a.	Nosewheel Steering Controller Force and Position Calibration.	±0.9 daN (2 lbf) breakout. ±1.3 daN (3 lbf) or ±10% of force. ±2° NWA.	Ground.	Record results of an uninterrupted control sweep to the stops.			X	
2.a.4.b.	Nosewheel Steering Controller Force	±0.9 daN (2 lbf) breakout. ±1.3 daN (3 lbf) or ±10% of force.	Ground.	Record results of an uninterrupted control sweep to the stops.		X		
2.a.5.	Rudder Pedal Steering Calibration.	±2° NWA.	Ground.	Record results of an uninterrupted control sweep to the stops.		X	X	
2.a.6.	Pitch Trim Indicator vs. Surface Position Calibration.	±0.5° trim angle.	Ground.			X	X	The purpose of the test is to compare the FTD surface position and indicator against the software value.
2.a.7.	Pitch Trim Rate.	±10% of trim rate (°/s) or ±0.1°/s trim rate.	Ground and approach.	Trim rate to be checked at pilot primary induced trim rate (ground) and autopilot or pilot primary trim rate in-flight at go-around flight conditions. For CCA, representative flight test conditions must			X	

Table B2A

Flight Training Device (FTD) Objective Tests								
QPS REQUIREMENTS								INFORMATION
Test		Tolerance	Flight Conditions	Test Details	FTD Level			Notes
Entry Number	Title				5	6	7	
				be used.				
2.a.8.	Alignment of cockpit throttle lever versus selected engine parameter.	When matching engine parameters: ±5° of TLA. When matching detents: ±3% N1 or ±.03 EPR or ±3% torque, or equivalent. Where the levers do not have angular travel, a tolerance of ±2 cm (±0.8 in) applies.	Ground.	Simultaneous recording for all engines. The tolerances apply against airplane data. For airplanes with throttle detents, all detents to be presented and at least one position between detents/ endpoints (where practical). For airplanes without detents, end points and at least three other positions are to be presented.		X	X	Data from a test airplane or engineering test bench are acceptable, provided the correct engine controller (both hardware and software) is used. In the case of propeller-driven airplanes, if an additional lever, usually referred to as the propeller lever, is present, it should also be checked. This test may be a series of snapshot tests.
2.a.9.a.	Brake pedal position versus force and brake system pressure calibration.	±2.2 daN (5 lbf) or ±10% of force. ±1.0 MPa (150 psi) or ±10% of brake system pressure.	Ground.	Relate the hydraulic system pressure to pedal position in a ground static test. Both left and right pedals must be checked.			X	FTD computer output results may be used to show compliance.
2.a.9.b.	Brake pedal position versus force	±2.2 daN (5 lbf) or ±10% of force.	Ground.	Two data points are required: zero and maximum deflection. Computer output results may be used to show compliance.		X		FTD computer output results may be used to show compliance.
2.a.10	Stick Pusher System Force Calibration	±10% or ±5 lb (2.2 daN)) Stick/Column force	Ground or Flight	Test is intended to validate the stick/column transient forces as a result of a stick pusher system activation to prevent an aerodynamic stall. This test may be conducted in an on-ground condition through stimulation of the stall protection system in a manner that generates a stick pusher response that is representative of an in-flight condition.		X	X	Aircraft manufacturer design data may be utilized as validation data as determined acceptable by the NSPM. Test requirement may be met through column force validation testing in conjunction with the Stall Characteristics test (2.c.8).
2.b.	**Dynamic Control Tests.**							
	Note.— Tests 2.b.1, 2.b.2 and 2.b.3 are not applicable for FSTDs where the control forces are completely generated within the airplane controller unit installed in the FSTD. Power setting may be that required for level flight unless otherwise specified. See paragraph 4 of Appendix A, Attachment 2.							

Table B2A

Flight Training Device (FTD) Objective Tests								
QPS REQUIREMENTS								INFORMATION
Test		Tolerance	Flight Conditions	Test Details	FTD Level			Notes
Entry Number	Title				5	6	7	
2.b.1.	Pitch Control.	**For underdamped systems**: $T(P_0)$ ±10% of P_0 or ±0.05 s. $T(P_1)$ ±20% of P_1 or ±0.05 s. $T(P_2)$ ±30% of P_2 or ±0.05 s. $T(P_n)$ ±10*(n+1)% of P_n or ±0.05 s. $T(A_n)$ ±10% of A_{max}, where A_{max} is the largest amplitude or ±0.5% of the total control travel (stop to stop). $T(A_d)$ ±5% of A_d = residual band or ±0.5% of the maximum control travel = residual band. ±1 significant overshoots (minimum of 1 significant overshoot). Steady state position within residual band. *Note 1.— Tolerances should not be applied on period or amplitude after the last significant overshoot.*	Takeoff, Cruise, and Landing.	Data must be for normal control displacements in both directions (approximately 25% to 50% of full throw or approximately 25% to 50% of maximum allowable pitch controller deflection for flight conditions limited by the maneuvering load envelope). Tolerances apply against the absolute values of each period (considered independently).			X	n = the sequential period of a full oscillation. Refer to paragraph 4 of Appendix A, Attachment 2.

Table B2A

Flight Training Device (FTD) Objective Tests								
QPS REQUIREMENTS								INFORMATION
Test		Tolerance	Flight Conditions	Test Details	FTD Level			Notes
Entry Number	Title				5	6	7	
		Note 2.— Oscillations within the residual band are not considered significant and are not subject to tolerances. **For overdamped and critically damped systems only**, the following tolerance applies: $T(P_0)$ ±10% of P_0 or ±0.05 s.						
2.b.2.	Roll Control.	Same as 2.b.1.	Takeoff, Cruise, and Landing.	Data must be for normal control displacement (approximately 25% to 50% of full throw or approximately 25% to 50% of maximum allowable roll controller deflection for flight conditions limited by the maneuvering load envelope).			**X**	Refer to paragraph 4 of Appendix A, Attachment 2.
2.b.3.	Yaw Control.	Same as 2.b.1.	Takeoff, Cruise, and Landing.	Data must be for normal control displacement (approximately 25% to 50% of full throw).			**X**	Refer to paragraph 4 of Appendix A, Attachment 2.
2.b.4.	Small Control Inputs – Pitch.	±0.15°/s body pitch rate or ±20% of peak body pitch rate applied throughout the time history.	Approach or Landing.	Control inputs must be typical of minor corrections made while established on an ILS approach (approximately 0.5 to 2°/s pitch rate). Test in both directions. Show time history data from 5 s before until at least 5 s after initiation of control input. If a single test is used to demonstrate both directions, there must be a minimum of 5 s before control reversal to the opposite direction. **CCA**: Test in normal and non-normal control state.			**X**	

Table B2A

Flight Training Device (FTD) Objective Tests								
QPS REQUIREMENTS								INFORMATION
Test		Tolerance	Flight Conditions	Test Details	FTD Level			Notes
Entry Number	Title				5	6	7	
2.b.5.	Small Control Inputs – Roll.	±0.15°/s body roll rate or ±20% of peak body roll rate applied throughout the time history.	Approach or landing.	Control inputs must be typical of minor corrections made while established on an ILS approach (approximately 0.5 to 2°/s roll rate). Test in one direction. For airplanes that exhibit non-symmetrical behavior, test in both directions. Show time history data from 5 s before until at least 5 s after initiation of control input. If a single test is used to demonstrate both directions, there must be a minimum of 5 s before control reversal to the opposite direction. **CCA**: Test in normal and non-normal control state.			X	
2.b.6.	Small Control Inputs – Yaw.	±0.15°/s body yaw rate or ±20% of peak body yaw rate applied throughout the time history.	Approach or landing.	Control inputs must be typical of minor corrections made while established on an ILS approach (approximately 0.5 to 2°/s yaw rate). Test in both directions. Show time history data from 5 s before until at least 5 s after initiation of control input. If a single test is used to demonstrate both directions, there must be a minimum of 5 s before control reversal to the opposite direction. **CCA:** Test in normal and non-normal control state.			X	
2.c.	**Longitudinal Control Tests.**							
	Power setting is that required for level flight unless otherwise specified.							
2.c.1.a.	Power Change Dynamics.	±3 kt airspeed. ±30 m (100 ft) altitude. ±1.5° or ±20% of pitch angle.	Approach.	Power change from thrust for approach or level flight to maximum continuous or go-around power.			X	

Table B2A

Flight Training Device (FTD) Objective Tests								
QPS REQUIREMENTS								INFORMATION
Test		Tolerance	Flight Conditions	Test Details	FTD Level			Notes
Entry Number	Title				5	6	7	
				Time history of uncontrolled free response for a time increment equal to at least 5 s before initiation of the power change to the completion of the power change + 15 s. **CCA:** Test in normal and non-normal control mode				
2.c.1.b.	Power Change Force.	±5 lb (2.2 daN) or, ±20% pitch control force.	Approach.	May be a series of snapshot test results. Power change dynamics test as described in test 2.c.1.a. will be accepted. **CCA:** Test in Normal and Non-normal control mode.	**X**	**X**		
2.c.2.a.	Flap/Slat Change Dynamics.	±3 kt airspeed. ±30 m (100 ft) altitude. ±1.5° or ±20% of pitch angle.	Takeoff through initial flap retraction, and approach to landing.	Time history of uncontrolled free response for a time increment equal to at least 5 s before initiation of the reconfiguration change to the completion of the reconfiguration change + 15 s. **CCA:** Test in normal and non-normal control mode			**X**	
2.c.2.b.	Flap/Slat Change Force.	±5 lb (2.2 daN) or, ±20% pitch control force.	Takeoff through initial flap retraction, and approach to landing.	May be a series of snapshot test results. Flap/Slat change dynamics test as described in test 2.c.2.a. will be accepted. **CCA:** Test in Normal and Non-normal control mode.	**X**	**X**		
2.c.3.	Spoiler/Speedbrake Change Dynamics.	±3 kt airspeed. ±30 m (100 ft) altitude. ±1.5° or ±20% of pitch angle.	Cruise.	Time history of uncontrolled free response for a time increment equal to at least 5 s before initiation of the configuration change to the completion of the configuration change +15 s. Results required for both extension and retraction. **CCA:** Test in normal and non-normal control mode			**X**	
2.c.4.a.	Gear Change Dynamics.	±3 kt airspeed. ±30 m (100 ft) altitude.	Takeoff (retraction), and Approach (extension).	Time history of uncontrolled free response for a time increment equal to at least 5 s before initiation of the configuration change to the completion of the configuration change			**X**	

Table B2A

Flight Training Device (FTD) Objective Tests								
QPS REQUIREMENTS								INFORMATION
Test		Tolerance	Flight Conditions	Test Details	FTD Level			Notes
Entry Number	Title				5	6	7	
		±1.5° or ±20% of pitch angle.		+ 15 s. **CCA:** Test in normal and non-normal control mode				
2.c.4.b.	Gear Change Force.	±5 lb (2.2 daN) or, ±20% pitch control force.	Takeoff (retraction) and Approach (extension).	May be a series of snapshot test results. Gear change dynamics test as described in test 2.c.4.a. will be accepted. **CCA:** Test in Normal and Non-normal control mode.	**X**	**X**		
2.c.5.	Longitudinal Trim.	±1° elevator angle. ±0.5° stabilizer angle. ±1° pitch angle. ±5% of net thrust or equivalent.	Cruise, Approach, and Landing.	Steady-state wings level trim with thrust for level flight. This test may be a series of snapshot tests. Level 5 FTD may use equivalent stick and trim controllers in lieu of elevator and trim surface. **CCA**: Test in normal or non-normal control mode, as applicable.	**X**	**X**	**X**	
2.c.6.	Longitudinal Maneuvering Stability (Stick Force/g).	±2.2 daN (5 lbf) or ±10% of pitch controller force. Alternative method: ±1° or ±10% of the change of elevator angle.	Cruise, Approach, and Landing.	Continuous time history data or a series of snapshot tests may be used. Test up to approximately 30° of roll angle for approach and landing configurations. Test up to approximately 45° of roll angle for the cruise configuration. Force tolerance not applicable if forces are generated solely by the use of airplane hardware in the FSTD. Alternative method applies to airplanes which do not exhibit stick-force-per-g characteristics. **CCA:** Test in normal or non-normal control mode		**X**	**X**	
2.c.7.	Longitudinal Static Stability.	±2.2 daN (5 lbf) or ±10% of pitch controller force. Alternative method:	Approach.	Data for at least two speeds above and two speeds below trim speed. The speed range must be sufficient to demonstrate stick force versus speed characteristics.	**X**	**X**	**X**	

Table B2A

Flight Training Device (FTD) Objective Tests								
QPS REQUIREMENTS								INFORMATION
Test		Tolerance	Flight Conditions	Test Details	FTD Level			Notes
Entry Number	Title				5	6	7	
		±1° or ±10% of the change of elevator angle.		This test may be a series of snapshot tests. Force tolerance is not applicable if forces are generated solely by the use of airplane hardware in the FSTD. Alternative method applies to airplanes which do not exhibit speed stability characteristics. Level 5 must exhibit positive static stability, but need not comply with the numerical tolerance. **CCA:** Test in normal or non-normal control mode, as applicable.				
2.c.8	Approach to Stall Characteristics (actuation of stall warning device)	±3 kt airspeed for initial buffet, stall warning, and stall speeds. Control inputs must be plotted and demonstrate correct trend and magnitude. ±2.0° pitch angle ±2.0° angle of attack ±2.0° bank angle ±2.0° sideslip angle Additionally, for those simulators with reversible flight control systems: ±10% or ±5 lb (2.2 daN)) Stick/Column force (prior to "g break" only).	Second Segment Climb, High Altitude Cruise (Near Performance Limited Condition), and Approach or Landing	Each of the following stall entry methods must be demonstrated in at least one of the three required flight conditions: ▪ Stall entry at wings level (1g) ▪ Stall entry in turning flight of at least 25° bank angle (accelerated stall) ▪ Stall entry in a power-on condition (required only for turboprop aircraft) The required cruise condition must be conducted in a flaps-up (clean) configuration. The second segment climb and approach/landing conditions must be conducted at different flap settings. For airplanes that exhibit stall buffet as the first indication of a stall, for qualification of this task, the FTD must be equipped with a vibration system that meets the applicable subjective and objective requirements in Appendix A of this Part.		**X**	**X**	Tests may be conducted at centers of gravity typically required for airplane certification stall testing.
2.c.9.a.	Phugoid Dynamics.	±10% of period. ±10% of time to one half or double amplitude or	Cruise.	Test must include three full cycles or that necessary to determine time to one half or double amplitude, whichever is less.		**X**	**X**	

Table B2A

Flight Training Device (FTD) Objective Tests								
QPS REQUIREMENTS								INFORMATION
Test		Tolerance	Flight Conditions	Test Details	FTD Level			Notes
Entry Number	Title				5	6	7	
		±0.02 of damping ratio.		**CCA:** Test in non-normal control mode.				
2.c.9.b.	Phugoid Dynamics.	±10% period, Representative damping.	Cruise.	The test must include whichever is less of the following: Three full cycles (six overshoots after the input is completed), or the number of cycles sufficient to determine representative damping. **CCA:** Test in Non-normal control mode.	**X**			
2.c.10	Short Period Dynamics.	±1.5° pitch angle or ±2°/s pitch rate. ±0.1 g normal acceleration	Cruise.	**CCA:** Test in normal and non-normal control mode.		**X**	**X**	
2.c.11.	**(Reserved)**							
2.d.	**Lateral Directional Tests.**							
	Power setting is that required for level flight unless otherwise specified.							
2.d.1.	Minimum control speed, air (V_{mca}) or landing (V_{mcl}), per applicable airworthiness requirement or low speed engine-inoperative handling characteristics in the air.	±3 kt airspeed.	Takeoff or Landing (whichever is most critical in the airplane).	Takeoff thrust must be set on the operating engine(s). Time history or snapshot data may be used. **CCA**: Test in normal or non-normal control state, as applicable.			**X**	Minimum speed may be defined by a performance or control limit which prevents demonstration of V_{mca} or V_{mcl} in the conventional manner.
2.d.2.	Roll Response (Rate).	±2°/s or ±10% of roll rate. For airplanes with reversible flight control systems (Level 7 FTD only): ±1.3 daN (3 lbf) or ±10% of wheel force.	Cruise, and Approach or Landing.	Test with normal roll control displacement (approximately one-third of maximum roll controller travel). This test may be combined with step input of flight deck roll controller test 2.d.3.	**X**	**X**	**X**	
2.d.3.	Step input of flight deck roll controller.	±2° or ±10% of roll angle.	Approach or Landing.	This test may be combined with roll response (rate) test 2.d.2.		**X**	**X**	With wings level, apply a step roll control input using approximately one-third of the

Table B2A

Flight Training Device (FTD) Objective Tests								
QPS REQUIREMENTS								INFORMATION
Test		Tolerance	Flight Conditions	Test Details	FTD Level			Notes
Entry Number	Title				5	6	7	
				CCA: Test in normal and non-normal control mode				roll controller travel. When reaching approximately 20° to 30° of bank, abruptly return the roll controller to neutral and allow approximately 10 seconds of airplane free response.
2.d.4.a.	Spiral Stability.	Correct trend and ±2° or ±10% of roll angle in 20 s. If alternate test is used: correct trend and ±2° aileron angle.	Cruise, and Approach or Landing.	Airplane data averaged from multiple tests may be used. Test for both directions. As an alternative test, show lateral control required to maintain a steady turn with a roll angle of approximately 30°. **CCA:** Test in non-normal control mode.			**X**	
2.d.4.b.	Spiral Stability.	Correct trend and ±3° or ±10% of roll angle in 30 s. If alternate test is used: correct trend and ±2° aileron angle.	Cruise	Airplane data averaged from multiple tests may be used. Test for both directions. As an alternative test, show lateral control required to maintain a steady turn with a roll angle of approximately 30°. **CCA:** Test in non-normal control mode.		**X**		
2.d.4.c.	Spiral Stability.	Correct trend	Cruise	Airplane data averaged from multiple tests may be used. **CCA:** Test in non-normal control mode.	**X**			
2.d.5.	Engine Inoperative Trim.	±1° rudder angle or ±1° tab angle or equivalent rudder pedal. ±2° side-slip angle.	Second Segment Climb, and Approach or Landing.	This test may consist of snapshot tests.			**X**	Test should be performed in a manner similar to that for which a pilot is trained to trim an engine failure condition. 2nd segment climb test should be at takeoff thrust. Approach or landing test should be at thrust for level flight.
2.d.6.a.	Rudder Response.	±2°/s or ±10% of yaw	Approach or Landing.	Test with stability augmentation on and off.		**X**	**X**	

Table B2A

Flight Training Device (FTD) Objective Tests								
QPS REQUIREMENTS								INFORMATION
Test		Tolerance	Flight Conditions	Test Details	FTD Level			Notes
Entry Number	Title				5	6	7	
		rate.		Test with a step input at approximately 25% of full rudder pedal throw. **CCA:** Test in normal and non-normal control mode				
2.d.6.b.	Rudder Response.	Roll rate ±2°/sec, bank angle ±3°.	Approach or Landing.	May be roll response to a given rudder deflection. **CCA:** Test in Normal and Non-normal control states.	**X**			May be accomplished as a yaw response test, in which case the procedures and requirements of test 2.d.6.a. will apply.
2.d.7.	Dutch Roll	±0.5 s or ±10% of period. ±10% of time to one half or double amplitude or +.02 of damping ratio. (Level 7 FTD only): +1 s or ±20% of time difference between peaks of roll angle and side-slip angle.	Cruise, and Approach or Landing.	Test for at least six cycles with stability augmentation off. **CCA:** Test in non-normal control mode.		**X**	**X**	
2.d.8.	Steady State Sideslip.	For a given rudder position: ±2° roll angle; ±1° side-slip angle; ±2° or ±10% of aileron angle; and ±5° or ±10% of spoiler or equivalent roll controller position or force.	Approach or Landing.	This test may be a series of snapshot tests using at least two rudder positions (in each direction for propeller-driven airplanes), one of which must be near maximum allowable rudder. (Level 5 and Level 6 FTD only): Sideslip angle is matched only for repeatability and only on continuing qualification evaluations.	**X**	**X**	**X**	

Table B2A

Flight Training Device (FTD) Objective Tests								
QPS REQUIREMENTS								INFORMATION
Test		Tolerance	Flight Conditions	Test Details	FTD Level			Notes
Entry Number	Title				5	6	7	
		For airplanes with reversible flight control systems (Level 7 FTD only): ±1.3 daN (3 lbf) or ±10% of wheel force. ±2.2 daN (5 lbf) or ±10% of rudder pedal force.						
2.e.	**Landings.**							
2.e.1.	Normal Landing.	±3 kt airspeed. ±1.5° pitch angle. ±1.5° AOA. ±3 m (10 ft) or ±10% of height. For airplanes with reversible flight control systems: ±2.2 daN (5 lbf) or ±10% of column force.	Landing.	Test from a minimum of 61 m (200 ft) AGL to nosewheel touchdown. **CCA:** Test in normal and non-normal control mode, if applicable.			X	Two tests should be shown, including two normal landing flaps (if applicable) one of which should be near maximum certificated landing mass, the other at light or medium mass.
2.e.2.	Minimum Flap Landing.	±3 kt airspeed. ±1.5° pitch angle. ±1.5° AOA. ±3 m (10 ft) or ±10% of height.	Minimum Certified Landing Flap Configuration.	Test from a minimum of 61 m (200 ft) AGL to nosewheel touchdown. Test at near maximum certificated landing weight.			X	

Table B2A

Flight Training Device (FTD) Objective Tests								
QPS REQUIREMENTS								INFORMATION
Test		Tolerance	Flight Conditions	Test Details	FTD Level			Notes
Entry Number	Title				5	6	7	
		For airplanes with reversible flight control systems: ±2.2 daN (5 lbf) or ±10% of column force.						
2.e.3.	Crosswind Landing.	±3 kt airspeed. ±1.5° pitch angle. ±1.5° AOA. ±3 m (10 ft) or ±10% of height. ±2° roll angle. ±2° side-slip angle. ±3° heading angle. For airplanes with reversible flight control systems: ±2.2 daN (5 lbf) or ±10% of column force. ±1.3 daN (3 lbf) or ±10% of wheel force. ±2.2 daN (5 lbf) or ±10% of rudder pedal force.	Landing.	Test from a minimum of 61 m (200 ft) AGL to a 50% decrease in main landing gear touchdown speed. It requires test data, including wind profile, for a crosswind component of at least 60% of airplane performance data value measured at 10 m (33 ft) above the runway. Wind components must be provided as headwind and crosswind values with respect to the runway.			**X**	In those situations where a maximum crosswind or a maximum demonstrated crosswind is not known, contact the NSPM.
2.e.4.	One Engine Inoperative Landing.	±3 kt airspeed. ±1.5° pitch angle.	Landing.	Test from a minimum of 61 m (200 ft) AGL to a 50% decrease in main landing gear touchdown speed.			**X**	

Table B2A

Flight Training Device (FTD) Objective Tests								
QPS REQUIREMENTS								INFORMATION
Test		Tolerance	Flight Conditions	Test Details	FTD Level			Notes
Entry Number	Title				5	6	7	
		±1.5° AOA. ±3 m (10 ft) or ±10% of height. ±2° roll angle. ±2° side-slip angle. ±3° heading angle.						
2.e.5.	Autopilot landing (if applicable).	±1.5 m (5 ft) flare height. ±0.5 s or ± 10% of Tf. ±0.7 m/s (140 ft/min) rate of descent at touchdown. ±3 m (10 ft) lateral deviation during roll-out.	Landing.	If autopilot provides roll-out guidance, record lateral deviation from touchdown to a 50% decrease in main landing gear touchdown speed. Time of autopilot flare mode engage and main gear touchdown must be noted.			**X**	See Appendix F of this part for definition of T_f.
2.e.6.	All-engine autopilot go-around.	±3 kt airspeed. ±1.5° pitch angle. ±1.5° AOA.	As per airplane performance data.	Normal all-engine autopilot go-around must be demonstrated (if applicable) at medium weight.			**X**	
2.e.7.	One engine inoperative go around.	±3 kt airspeed. ±1.5° pitch angle. ±1.5° AOA. ±2° roll angle. ±2° side-slip angle.	As per airplane performance data.	Engine inoperative go-around required near maximum certificated landing weight with critical engine inoperative. Provide one test with autopilot (if applicable) and one without autopilot. **CCA**: Non-autopilot test to be conducted in non-normal mode.			**X**	
2.e.8.	Directional control	±5 kt airspeed.	Landing.	Apply rudder pedal input in both directions using			**X**	

Table B2A

Flight Training Device (FTD) Objective Tests								
QPS REQUIREMENTS								INFORMATION
Test		Tolerance	Flight Conditions	Test Details	FTD Level			Notes
Entry Number	Title				5	6	7	
	(rudder effectiveness) with symmetric reverse thrust.	±2°/s yaw rate.		full reverse thrust until reaching full thrust reverser minimum operating speed.				
2.e.9.	Directional control (rudder effectiveness) with asymmetric reverse thrust.	±5 kt airspeed. ±3° heading angle.	Landing.	With full reverse thrust on the operating engine(s), maintain heading with rudder pedal input until maximum rudder pedal input or thrust reverser minimum operation speed is reached.			X	
2.f.	**Ground Effect.**							
	Test to demonstrate Ground Effect.	±1° elevator angle. ±0.5° stabilizer angle. ±5% of net thrust or equivalent. ±1° AOA. ±1.5 m (5 ft) or ±10% of height. ±3 kt airspeed. ±1° pitch angle.	Landing.	A rationale must be provided with justification of results. **CCA:** Test in normal or non-normal control mode, as applicable.			X	See paragraph on Ground Effect in this attachment for additional information.
2.g.	**Windshear**							
	Four tests, two takeoffs and two landing, with one of each conducted in still air and the other with windshear active to demonstrate windshear models.	See Attachment 5 of Appendix A.	Takeoff and Landing.	Requires windshear models that provide training in the specific skills needed to recognize windshear phenomena and to execute recovery procedures. See Attachment 5 of this Appendix A for tests, tolerances, and procedures.			X	Tests required only for those Level 7 FTDs qualified for windshear training tasks.
2.h.	**Flight Maneuver and Envelope Protection Functions.**							
	Note. — The requirements of 2.h are only applicable to computer-controlled airplanes. Time history results of response to control inputs during entry into each envelope protection function (i.e. with normal and degraded control states if their function is different) are required. Set thrust as required to reach the envelope protection function.							
2.h.1.	Overspeed.	±5 kt airspeed.	Cruise.				X	

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Flight Training Device (FTD) Objective Tests								
QPS REQUIREMENTS								INFORMATION
Test		Tolerance	Flight Conditions	Test Details	FTD Level			Notes
Entry Number	Title				5	6	7	
2.h.2.	Minimum Speed.	±3 kt airspeed.	Takeoff, Cruise, and Approach or Landing.				X	
2.h.3.	Load Factor.	±0.1g normal load factor	Takeoff, Cruise.				X	
2.h.4.	Pitch Angle.	±1.5° pitch angle	Cruise, Approach.				X	
2.h.5.	Bank Angle.	±2° or ±10% bank angle	Approach.				X	
2.h.6.	Angle of Attack.	±1.5° angle of attack	Second Segment Climb, and Approach or Landing.				X	
2.i.	Engine and Airframe Icing Effects Demonstration (Aerodynamic Stall)		Takeoff, Approach, or Landing	Time history of a full stall and initiation of the recovery. Tests are intended to demonstrate representative aerodynamic effects caused by in-flight ice accretion. Flight test validation data is not required. Two tests are required to demonstrate engine and airframe icing effects. One test will demonstrate the FSTDs baseline performance without ice accretion, and the second test will demonstrate the aerodynamic effects of ice accretion relative to the baseline test. The test must utilize the icing model(s) as described in the required Statement of Compliance in Table B1A, Section 2.1.5.S. Test must include rationale that describes the icing effects being demonstrated. Icing effects must include, but are not limited to the following effects as applicable to the particular airplane: ▪ Decrease in stall angle of attack ▪ Changes in pitching moment ▪ Decrease in control effectiveness ▪ Changes in control forces ▪ Increase in drag ▪ Change in stall buffet characteristics and onset. ▪ Engine effects (power reduction/variation, vibration, etc.)			X	Tests will be evaluated for representative effects on relevant aerodynamic parameters such as angle of attack, control inputs, and thrust/power settings. Plotted parameters must include: • Altitude • Airspeed • Normal acceleration • Engine power • Angle of attack • Pitch attitude • Bank angle • Flight control inputs • Stall warning and stall buffet onset
3. Reserved								
4. Visual System.								

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Flight Training Device (FTD) Objective Tests								
QPS REQUIREMENTS								INFORMATION
Test		Tolerance	Flight Conditions	Test Details	FTD Level			Notes
Entry Number	Title				5	6	7	
4.a.	**Visual scene quality**							
4.a.1.	Continuous cross-cockpit visual field of view.	Visual display providing each pilot with a minimum of 200° horizontal and 40° vertical continuous field of view.	Not applicable.	Required as part of MQTG but not required as part of continuing evaluations.			X	Field of view should be measured using a visual test pattern filling the entire visual scene (all channels) consisting of a matrix of black and white 5° squares. Installed alignment should be confirmed in an SOC (this would generally consist of results from acceptance testing).
4.a.2.	System Geometry	Geometry of image must have no distracting discontinuities.	Not applicable				X	
4.a.3	Surface resolution (object detection).	Not greater than 4 arc minutes.	Not applicable.				X	Resolution will be demonstrated by a test of objects shown to occupy the required visual angle in each visual display used on a scene from the pilot's eyepoint. The object will subtend 4 arc minutes to the eye. This may be demonstrated using threshold bars for a horizontal test. A vertical test should also be demonstrated. The subtended angles should be confirmed by calculations in an SOC.
4.a.4	Light point size.	Not greater than 8 arc minutes.	Not applicable.				X	Light point size should be measured using a test pattern consisting of a centrally located single row of white light points displayed as both a horizontal and vertical row. It should be possible to move the

Table B2A

Flight Training Device (FTD) Objective Tests								
QPS REQUIREMENTS								INFORMATION
Test		Tolerance	Flight Conditions	Test Details	FTD Level			Notes
Entry Number	Title				5	6	7	
								light points relative to the eyepoint in all axes. At a point where modulation is just discernible in each visual channel, a calculation should be made to determine the light spacing. An SOC is required to state test method and calculation.
4.a.5	Raster surface contrast ratio.	Not less than 5:1.	Not applicable.				X	Surface contrast ratio should be measured using a raster drawn test pattern filling the entire visual scene (all channels). The test pattern should consist of black and white squares, 5° per square, with a white square in the center of each channel. Measurement should be made on the center bright square for each channel using a 1° spot photometer. This value should have a minimum brightness of 7 cd/m^2 (2 ft-lamberts). Measure any adjacent dark squares. The contrast ratio is the bright square value divided by the dark square value. *Note 1. — During contrast ratio testing, FSTD aft-cab and flight deck ambient light levels should be as low as possible.* *Note 2. — Measurements should be taken at the center of*

Table B2A

Flight Training Device (FTD) Objective Tests								
QPS REQUIREMENTS								INFORMATION
Test		Tolerance	Flight Conditions	Test Details	FTD Level			Notes
Entry Number	Title				5	6	7	
								squares to avoid light spill into the measurement device.
4.a.6	Light point contrast ratio.	Not less than 10:1.	Not applicable.				**X**	Light point contrast ratio should be measured using a test pattern demonstrating an area of greater than 1° area filled with white light points and should be compared to the adjacent background. *Note. — Light point modulation should be just discernible on calligraphic systems but will not be discernable on raster systems.* Measurements of the background should be taken such that the bright square is just out of the light meter FOV. *Note. — During contrast ratio testing, FSTD aft-cab and flight deck ambient light levels should be as low as practical.*
4.a.7	Light point brightness.	Not less than 20 cd/m^2 (5.8 ft-lamberts).	Not applicable.				**X**	Light points should be displayed as a matrix creating a square. On calligraphic systems the light points should just merge. On raster systems the light points should overlap such that the square is continuous (individual light points will not be visible).
4.a.8	Surface brightness.	Not less than 14 cd/m^2 (4.1 ft-lamberts) on the	Not applicable.				**X**	Surface brightness should be measured on a white raster,

Table B2A

Flight Training Device (FTD) Objective Tests								
QPS REQUIREMENTS								INFORMATION
Test		Tolerance	Flight Conditions	Test Details	FTD Level			Notes
Entry Number	Title				5	6	7	
		display.						measuring the brightness using the 1° spot photometer. Light points are not acceptable. Use of calligraphic capabilities to enhance raster brightness is acceptable.
4.b	**Head-Up Display (HUD)**							
4.b.1	Static Alignment.	Static alignment with displayed image. HUD bore sight must align with the center of the displayed image spherical pattern. Tolerance +/- 6 arc min.					**X**	Alignment requirement only applies to the pilot flying.
4.b.2	System display.	All functionality in all flight modes must be demonstrated.					**X**	A statement of the system capabilities should be provided and the capabilities demonstrated
4.b.3	HUD attitude versus FSTD attitude indicator (pitch and roll of horizon).	Pitch and roll align with aircraft instruments.	Flight				**X**	
4.c	**Enhanced Flight Vision System (EFVS)**							
4.c.1	Registration test.	Alignment between EFVS display and out of the window image must represent the alignment typical of the aircraft and system type.	Takeoff point and on approach at 200 ft.				**X**	Alignment requirement only applies to the pilot flying. *Note. The effects of the alignment tolerance in 4.b.1 should be taken into account.*
4.c.2	EFVS RVR and visibility calibration.	The scene represents the EFVS view at 350 m	Flight				**X**	Infra-red scene representative of both 350 m (1 200 ft), and

Table B2A

Flight Training Device (FTD) Objective Tests								
QPS REQUIREMENTS								INFORMATION
Test		Tolerance	Flight Conditions	Test Details	FTD Level			Notes
Entry Number	Title				5	6	7	
		(1200 ft) and 1609 m (1 sm) RVR including correct light intensity.						1 609 m (1 sm) RVR. Visual scene may be removed.
4.c.3	Thermal crossover.	Demonstrate thermal crossover effects during day to night transition.	Day and night				X	The scene will correctly represent the thermal characteristics of the scene during a day to night transition.
4.d	**Visual ground segment**							
4.d.1	Visual ground segment (VGS).	Near end: the correct number of approach lights within the computed VGS must be visible. Far end: ±20% of the computed VGS. The threshold lights computed to be visible must be visible in the FSTD.	Trimmed in the landing configuration at 30 m (100 ft) wheel height above touchdown zone on glide slope at an RVR setting of 300 m (1 000 ft) or 350 m (1 200 ft).	This test is designed to assess items impacting the accuracy of the visual scene presented to a pilot at DH on an ILS approach. These items include: 1) RVR/Visibility; 2) glide slope (G/S) and localizer modeling accuracy (location and slope) for an ILS; 3) for a given weight, configuration and speed representative of a point within the airplane's operational envelope for a normal approach and landing; and 4) Radio altimeter. *Note. — If non-homogeneous fog is used, the vertical variation in horizontal visibility should be described and included in the slant range visibility calculation used in the VGS computation.*			X	Pre-position for this test is encouraged but may be achieved via manual or autopilot control to the desired position.
4.e	**Visual System Capacity**							
4.e.1	System capacity – Day mode.	Not less than: 10 000 visible textured surfaces, 6 000 light points, 16 moving models.	Not applicable				X	Demonstrated through use of a visual scene rendered with the same image generator modes used to produce scenes for training. The required surfaces, light

Table B2A

Flight Training Device (FTD) Objective Tests								
QPS REQUIREMENTS								INFORMATION
Test		Tolerance	Flight Conditions	Test Details	FTD Level			Notes
Entry Number	Title				5	6	7	
								points, and moving models should be displayed simultaneously.
4.e.2	System capacity – Twilight/night mode.	Not less than: 10 000 visible textured surfaces, 15 000 light points, 16 moving models.	Not applicable				X	Demonstrated through use of a visual scene rendered with the same image generator modes used to produce scenes for training. The required surfaces, light points, and moving models should be displayed simultaneously.
5. Sound System. The sponsor will not be required to repeat the airplane tests (i.e., tests 5.a.1. through 5.a.8. (or 5.b.1. through 5.b.9.) and 5.c., as appropriate) during continuing qualification evaluations if frequency response and background noise test results are within tolerance when compared to the initial qualification evaluation results, and the sponsor shows that no software changes have occurred that will affect the airplane test results. If the frequency response test method is chosen and fails, the sponsor may elect to fix the frequency response problem and repeat the test or the sponsor may elect to repeat the airplane tests. If the airplane tests are repeated during continuing qualification evaluations, the results may be compared against initial qualification evaluation results or airplane master data. All tests in this section must be presented using an unweighted 1/3-octave band format from band 17 to 42 (50 Hz to 16 kHz). A minimum 20 second average must be taken at the location corresponding to the airplane data set. The airplane and flight simulator results must be produced using comparable data analysis techniques.								
5.a.	**Turbo-jet airplanes.**							All tests in this section should be presented using an unweighted 1/3-octave band format from at least band 17 to 42 (50 Hz to 16 kHz). A measurement of minimum 20 s should be taken at the location corresponding to the approved data set. The approved data set and FSTD results should be produced using comparable data analysis techniques. Refer to paragraph 7 of Appendix A, Attachment 2.

Table B2A

Flight Training Device (FTD) Objective Tests								
QPS REQUIREMENTS								INFORMATION
Test		Tolerance	Flight Conditions	Test Details	FTD Level			Notes
Entry Number	Title				5	6	7	
5.a.1.	Ready for engine start.	Initial evaluation: Subjective assessment of 1/3 octave bands. Recurrent evaluation: cannot exceed ±5 dB difference on three consecutive bands when compared to initial evaluation and the average of the absolute differences between initial and recurrent evaluation results cannot exceed 2 dB.	Ground.	Normal condition prior to engine start. The APU must be on if appropriate.			**X**	
5.a.2.	All engines at idle.	Initial evaluation: Subjective assessment of 1/3 octave bands. Recurrent evaluation: cannot exceed ±5 dB difference on three consecutive bands when compared to initial evaluation and the average of the absolute differences between initial and recurrent evaluation results cannot exceed 2 dB.	Ground.	Normal condition prior to takeoff.			**X**	
5.a.3.	All engines at maximum allowable thrust with brakes set.	Initial evaluation: Subjective assessment of 1/3 octave bands. Recurrent evaluation: cannot exceed ±5 dB difference on three consecutive bands when compared to initial evaluation and the average of the absolute	Ground.	Normal condition prior to takeoff.			**X**	

Table B2A

Flight Training Device (FTD) Objective Tests								
QPS REQUIREMENTS								INFORMATION
Test		Tolerance	Flight Conditions	Test Details	FTD Level			Notes
Entry Number	Title				5	6	7	
		differences between initial and recurrent evaluation results cannot exceed 2 dB.						
5.a.4.	Climb	Initial evaluation: Subjective assessment of 1/3 octave bands. Recurrent evaluation: cannot exceed ±5 dB difference on three consecutive bands when compared to initial evaluation and the average of the absolute differences between initial and recurrent evaluation results cannot exceed 2 dB.	En-route climb.	Medium altitude.			X	
5.a.5.	Cruise	Initial evaluation: Subjective assessment of 1/3 octave bands. Recurrent evaluation: cannot exceed ±5 dB difference on three consecutive bands when compared to initial evaluation and the average of the absolute differences between initial and recurrent evaluation results cannot exceed 2 dB.	Cruise.	Normal cruise configuration.			X	
5.a.6.	Speed brake/spoilers extended (as appropriate).	Initial evaluation: Subjective assessment of 1/3 octave bands. Recurrent evaluation: cannot exceed ±5 dB difference on three	Cruise.	Normal and constant speed brake deflection for descent at a constant airspeed and power setting.			X	

Table B2A

Flight Training Device (FTD) Objective Tests								
QPS REQUIREMENTS								INFORMATION
Test		Tolerance	Flight Conditions	Test Details	FTD Level			Notes
Entry Number	Title				5	6	7	
		consecutive bands when compared to initial evaluation and the average of the absolute differences between initial and recurrent evaluation results cannot exceed 2 dB.						
5.a.7	Initial approach.	Initial evaluation: Subjective assessment of 1/3 octave bands. Recurrent evaluation: cannot exceed ±5 dB difference on three consecutive bands when compared to initial evaluation and the average of the absolute differences between initial and recurrent evaluation results cannot exceed 2 dB.	Approach.	Constant airspeed, gear up, flaps/slats as appropriate.			X	
5.a.8	Final approach.	Initial evaluation: Subjective assessment of 1/3 octave bands. Recurrent evaluation: cannot exceed ±5 dB difference on three consecutive bands when compared to initial evaluation and the average of the absolute differences between initial and recurrent evaluation results cannot exceed 2 dB.	Landing.	Constant airspeed, gear down, landing configuration flaps.			X	

Table B2A

Flight Training Device (FTD) Objective Tests								
QPS REQUIREMENTS								INFORMATION
Test		Tolerance	Flight Conditions	Test Details	FTD Level			Notes
Entry Number	Title				5	6	7	
5.b	**Propeller-driven airplanes**							All tests in this section should be presented using an unweighted 1/3-octave band format from at least band 17 to 42 (50 Hz to 16 kHz). A measurement of minimum 20 s should be taken at the location corresponding to the approved data set. Refer to paragraph 7 of Appendix A, Attachment 2.
5.b.1.	Ready for engine start.	Initial evaluation: Subjective assessment of 1/3 octave bands. Recurrent evaluation: cannot exceed ±5 dB difference on three consecutive bands when compared to initial evaluation and the average of the absolute differences between initial and recurrent evaluation results cannot exceed 2 dB.	Ground.	Normal condition prior to engine start. The APU must be on if appropriate.			X	
5.b.2	All propellers feathered, if applicable.	Initial evaluation: Subjective assessment of 1/3 octave bands. Recurrent evaluation: cannot exceed ±5 dB difference on three consecutive bands when compared to initial evaluation and the average of the absolute differences between	Ground.	Normal condition prior to take-off.			X	

Table B2A

Flight Training Device (FTD) Objective Tests								
QPS REQUIREMENTS								INFORMATION
Test		Tolerance	Flight Conditions	Test Details	FTD Level			Notes
Entry Number	Title				5	6	7	
		initial and recurrent evaluation results cannot exceed 2 dB.						
5.b.3.	Ground idle or equivalent.	Initial evaluation: Subjective assessment of 1/3 octave bands. Recurrent evaluation: cannot exceed ±5 dB difference on three consecutive bands when compared to initial evaluation and the average of the absolute differences between initial and recurrent evaluation results cannot exceed 2 dB.	Ground.	Normal condition prior to takeoff.			X	
5.b.4	Flight idle or equivalent.	Initial evaluation: Subjective assessment of 1/3 octave bands. Recurrent evaluation: cannot exceed ±5 dB difference on three consecutive bands when compared to initial evaluation and the average of the absolute differences between initial and recurrent evaluation results cannot exceed 2 dB.	Ground.	Normal condition prior to takeoff.			X	
5.b.5	All engines at maximum allowable power with brakes set.	Initial evaluation: Subjective assessment of 1/3 octave bands. Recurrent evaluation: cannot exceed ±5 dB difference on three consecutive bands when	Ground.	Normal condition prior to takeoff.			X	

Table B2A

Flight Training Device (FTD) Objective Tests								
QPS REQUIREMENTS								INFORMATION
Test		Tolerance	Flight Conditions	Test Details	FTD Level			Notes
Entry Number	Title				5	6	7	
		compared to initial evaluation and the average of the absolute differences between initial and recurrent evaluation results cannot exceed 2 dB.						
5.b.6	Climb.	Initial evaluation: Subjective assessment of 1/3 octave bands. Recurrent evaluation: cannot exceed ±5 dB difference on three consecutive bands when compared to initial evaluation and the average of the absolute differences between initial and recurrent evaluation results cannot exceed 2 dB.	En-route climb.	Medium altitude.			X	
5.b.7	Cruise	Initial evaluation: Subjective assessment of 1/3 octave bands. Recurrent evaluation: cannot exceed ±5 dB difference on three consecutive bands when compared to initial evaluation and the average of the absolute differences between initial and recurrent evaluation results cannot exceed 2 dB.	Cruise.	Normal cruise configuration.			X	
5.b.8	Initial approach.	Initial evaluation: Subjective assessment of 1/3 octave bands.	Approach.	Constant airspeed, gear up, flaps extended as appropriate, RPM as per operating manual.			X	

Table B2A

Flight Training Device (FTD) Objective Tests								
QPS REQUIREMENTS								INFORMATION
Test		Tolerance	Flight Conditions	Test Details	FTD Level			Notes
Entry Number	Title				5	6	7	
		Recurrent evaluation: cannot exceed ±5 dB difference on three consecutive bands when compared to initial evaluation and the average of the absolute differences between initial and recurrent evaluation results cannot exceed 2 dB.						
5.b.9	Final approach.	Initial evaluation: Subjective assessment of 1/3 octave bands. Recurrent evaluation: cannot exceed ±5 dB difference on three consecutive bands when compared to initial evaluation and the average of the absolute differences between initial and recurrent evaluation results cannot exceed 2 dB.	Landing.	Constant airspeed, gear down, landing configuration flaps, RPM as per operating manual.			X	
5.c.	**Special cases.**	Initial evaluation: Subjective assessment of 1/3 octave bands. Recurrent evaluation: cannot exceed ±5 dB difference on three consecutive bands when compared to initial evaluation and the average of the absolute differences between initial and recurrent evaluation results cannot exceed 2 dB.	As appropriate.				X	This applies to special steady-state cases identified as particularly significant to the pilot, important in training, or unique to a specific airplane type or model.

Table B2A

Flight Training Device (FTD) Objective Tests								
QPS REQUIREMENTS								INFORMATION
Test		Tolerance	Flight Conditions	Test Details	FTD Level			Notes
Entry Number	Title				5	6	7	
5.d	**FSTD background noise**	Initial evaluation: background noise levels must fall below the sound levels described in Appendix A, Attachment 2, Paragraph 7.c (5). Recurrent evaluation: ±3 dB per 1/3 octave band compared to initial evaluation.		Results of the background noise at initial qualification must be included in the QTG document and approved by the NSPM. The measurements are to be made with the simulation running, the sound muted and a dead cockpit.			X	The simulated sound will be evaluated to ensure that the background noise does not interfere with training. Refer to paragraph 7 of this Appendix A, Attachment 2. This test should be presented using an unweighted 1/3 octave band format from band 17 to 42 (50 Hz to 16 kHz).
5.e	**Frequency response**	Initial evaluation: not applicable. Recurrent evaluation: cannot exceed ±5 dB difference on three consecutive bands when compared to initial evaluation and the average of the absolute differences between initial and recurrent evaluation results cannot exceed 2 dB.					X	Only required if the results are to be used during continuing qualification evaluations in lieu of airplane tests. The results must be approved by the NSPM during the initial qualification. This test should be presented using an unweighted 1/3 octave band format from band 17 to 42 (50 Hz to 16 kHz).
6	**SYSTEMS INTEGRATION**							
6.a.	**System response time**							
6.a.1	Transport delay.	100 milliseconds or less after controller movement.	Pitch, roll and yaw.				X	One separate test is required in each axis. Where EFVS systems are installed, the EFVS response should be within + or - 30 ms from visual system response,

Table B2A

Flight Training Device (FTD) Objective Tests								
QPS REQUIREMENTS								INFORMATION
Test		Tolerance	Flight Conditions	Test Details	FTD Level			Notes
Entry Number	Title				5	6	7	
								and not before motion system response. *Note.— The delay from the airplane EFVS electronic elements should be added to the 30 ms tolerance before comparison with visual system reference as described in Attachment G of this Part.*
6.a.2	Transport delay.	300 milliseconds or less after controller movement.	Pitch, roll and yaw.		**X**	**X**		

Begin Information

3. For Additional Information on the Following Topics, Please Refer to Appendix A, Attachment 2, and the Indicated Paragraph Within That Attachment

- Control Dynamics, paragraph 4.
- Motion System, paragraph 6.
- Sound System, paragraph 7.
- Engineering Simulator Validation Data, paragraph 9.
- Validation Test Tolerances, paragraph 11.
- Validation Data Road Map, paragraph 12.
- Acceptance Guidelines for Alternative Engines Data, paragraph 13.
- Acceptance Guidelines for Alternative Avionics, paragraph 14.
- Transport Delay Testing, paragraph 15.
- Continuing Qualification Evaluation Validation Data Presentation, paragraph 16.

End Information

4. Alternative Objective Data for FTD Level 5

Begin QPS Requirements

a. This paragraph (including the following tables) is relevant only to FTD Level 5. It is provided because this level is required to simulate the performance and handling characteristics of a set of airplanes with similar characteristics, such as normal airspeed/altitude operating envelope and the same number and type of propulsion systems (engines).

b. Tables B2B through B2E reflect FTD performance standards that are acceptable to the FAA. A sponsor must demonstrate that a device performs within these parameters, as applicable. If a device does not meet the established performance parameters for some or for all of the applicable tests listed in Tables B2B through B2E, the sponsor may use NSP accepted flight test data for comparison purposes for those tests.

c. Sponsors using the data from Tables B2B through B2E must comply with the following:

(1) Submit a complete QTG, including results from all of the objective tests appropriate for the level of qualification sought as set out in Table B2A. The QTG must highlight those results that demonstrate the performance of the FTD is within the allowable performance ranges indicated in Tables B2B through B2E, as appropriate.

(2) The QTG test results must include all relevant information concerning the conditions under which the test was conducted; e.g., gross weight, center of gravity, airspeed, power setting, altitude (climbing, descending, or level), temperature, configuration, and any other parameter that impacts the conduct of the test.

(3) The test results become the validation data against which the initial and all subsequent continuing qualification evaluations are compared. These subsequent evaluations will use the tolerances listed in Table B2A.

(4) Subjective testing of the device must be performed to determine that the device performs and handles like an airplane within the appropriate set of airplanes.

End QPS Requirements

Begin Information

d. The reader is encouraged to consult the Airplane Flight Simulator Evaluation Handbook, Volumes I and II, published by the Royal Aeronautical Society, London, UK, and AC 25–7, Flight Test Guide for Certification of Transport Category Airplanes, and AC 23–8A, Flight Test Guide for Certification of Part 23 Airplanes, as amended, for references and examples regarding flight testing requirements and techniques.

End Information

Table B2B

Alternative Data Source for FTD Level 5		
Small, Single Engine (Reciprocating) Airplane		
QPS REQUIREMENT The performance parameters in this table must be used to program the FTD if flight test data is not used to program the FTD.		
Applicable Test		**Authorized Performance Range**
Entry Number	**Title and Procedure**	
1.	**Performance.**	
1.c	**Climb.**	
1.c.1.	Normal climb with nominal gross weight, at best rate-of-climb airspeed.	Climb rate = 500 - 1200 fpm (2.5 - 6 m/sec).
1.f.	**Engines.**	
1.f.1.	Acceleration; idle to takeoff power.	2 - 4 Seconds.
1.f.2.	Deceleration; takeoff power to idle.	2 - 4 Seconds.
2.	**Handling Qualities.**	
2.c.	**Longitudinal Tests.**	
2.c.1.	Power change force.	
	a) Trim for straight and level flight at 80% of normal cruise airspeed with necessary power. Reduce power to flight idle. Do not change trim or configuration. After stabilized, record column force necessary to maintain original airspeed.	5 - 15 lbs (2.2 - 6.6 daN) of force (Pull).
	OR	
	b) Trim for straight and level flight at 80% of normal cruise airspeed with necessary power. Add power to maximum setting. Do not change trim or configuration. After stabilized, record column force necessary to maintain original airspeed.	5 - 15 lbs (2.2 - 6.6 daN) of force (Push).
2.c.2.	Flap/slat change force.	
	a) Trim for straight and level flight with flaps fully retracted at a constant airspeed within the flaps-extended airspeed range. Do not adjust trim or power. Extend the flaps to 50% of full flap travel. After stabilized, record stick force necessary to maintain original airspeed.	5 - 15 lbs (2.2 - 6.6 daN) of force (Pull).
	OR	
	b) Trim for straight and level flight with flaps extended to 50% of full flap travel, at a constant airspeed within the flaps-extended airspeed range. Do not adjust trim or power. Retract the flaps to zero. After stabilized, record stick force necessary to maintain original airspeed.	5 - 15 lbs (2.2 - 6.6 daN) of force (Push).

Table B2B

Alternative Data Source for FTD Level 5 Small, Single Engine (Reciprocating) Airplane QPS REQUIREMENT The performance parameters in this table must be used to program the FTD if flight test data is not used to program the FTD.		
Applicable Test		**Authorized Performance Range**
Entry Number	**Title and Procedure**	
2.c.4.	Gear change force.	
	a) Trim for straight and level flight with landing gear retracted at a constant airspeed within the landing gear-extended airspeed range. Do not adjust trim or power. Extend the landing gear. After stabilized, record stick force necessary to maintain original airspeed.	2 - 12 lbs (0.88 - 5.3 daN) of force (Pull).
	OR	
	b) Trim for straight and level flight with landing gear extended, at a constant airspeed within the landing gear-extended airspeed range. Do not adjust trim or power. Retract the landing gear. After stabilized, record stick force necessary to maintain original airspeed.	2 - 12 lbs (0.88 - 5.3 daN) of force (Push).
2.c.5.	Longitudinal trim.	Must be able to trim longitudinal stick force to "zero" in each of the following configurations: cruise; approach; and landing.
2.c.7.	Longitudinal static stability.	Must exhibit positive static stability.
2.c.8.	Stall warning (actuation of stall warning device) with nominal gross weight; wings level; and a deceleration rate of not more than three (3) knots per second.	
	a) Landing configuration.	40 - 60 knots; ± 5° of bank.
	b) Clean configuration.	Landing configuration speed + 10 - 20%.
2.c.9.b.	Phugoid dynamics.	Must have a phugoid with a period of 30 - 60 seconds. May not reach ½ or double amplitude in less than 2 cycles.
2.d.	**Lateral Directional Tests.**	
2.d.2.	Roll response (rate). Roll rate must be measured through at least 30° of roll. Aileron control must be deflected 1/3 (33.3 percent) of maximum travel.	Must have a roll rate of 4° - 25°/second.
2.d.4.b.	Spiral stability. Cruise configuration and normal cruise airspeed. Establish a 20° - 30° bank. When stabilized, neutralize the aileron control and release. Must be completed in both directions of turn.	Initial bank angle (± 5°) after 20 seconds.
2.d.6.b.	Rudder response.	2° - 6° /second yaw rate.

Table B2B

Alternative Data Source for FTD Level 5		
Small, Single Engine (Reciprocating) Airplane		
QPS REQUIREMENT The performance parameters in this table must be used to program the FTD if flight test data is not used to program the FTD.		
Applicable Test		**Authorized Performance Range**
Entry Number	**Title and Procedure**	
	Use 25 percent of maximum rudder deflection. (Applicable to approach or landing configuration.)	
2.d.7.	Dutch roll, yaw damper off. (Applicable to cruise and approach configurations.)	A period of 2 - 5 seconds; and ½ - 2 cycles.
2.d.8.	Steady state sideslip. Use 50 percent rudder deflection. (Applicable to approach and landing configurations.)	2° - 10° of bank; 4° - 10° of sideslip; and 2° -10° of aileron.
6.	FTD System Response Time.	
6.a.	Latency. Flight deck instrument systems response to an abrupt pilot controller input. One test is required in each axis (pitch, roll, yaw).	300 milliseconds or less.

Table B2C

Alternative Data Source for FTD Level 5 Small, Multi-Engine (Reciprocating) Airplane QPS REQUIREMENT The performance parameters in this table must be used to program the FTD if flight test data is not used to program the FTD.		
Applicable Test		**Authorized Performance Range**
Entry Number	**Title and Procedure**	
1.	**Performance.**	
1.c	**Climb.**	
1.c.1.	Normal climb with nominal gross weight, at best rate-of-climb airspeed.	Climb airspeed = 95 – 115 knots. Climb rate = 500 – 1500 fpm (2.5 – 7.5 m/sec)
1.f.	**Engines.**	
1.f.1.	Acceleration; idle to takeoff power.	2 - 5 Seconds.
1.f.2.	Deceleration; takeoff power to idle.	2 - 5 Seconds.
2.	**Handling Qualities.**	
2.c.	**Longitudinal Tests.**	
2.c.1.	Power change force.	
	a) Trim for straight and level flight at 80% of normal cruise airspeed with necessary power. Reduce power to flight idle. Do not change trim or configuration. After stabilized, record column force necessary to maintain original airspeed.	10 - 25 lbs (2.2 - 6.6 daN) of force (Pull).
	OR	
	b) Trim for straight and level flight at 80% of normal cruise airspeed with necessary power. Add power to maximum setting. Do not change trim or configuration. After stabilized, record column force necessary to maintain original airspeed.	5 - 15 lbs (2.2 - 6.6 daN) of force (Push).
2.c.2.	Flap/slat change force.	
	a) Trim for straight and level flight with flaps fully retracted at a constant airspeed within the flaps-extended airspeed range. Do not adjust trim or power. Extend the flaps to 50% of full flap travel. After stabilized, record stick force necessary to maintain original airspeed.	5 - 15 lbs (2.2 - 6.6 daN) of force (Pull).

Table B2C

Alternative Data Source for FTD Level 5		
Small, Multi-Engine (Reciprocating) Airplane		
QPS REQUIREMENT The performance parameters in this table must be used to program the FTD if flight test data is not used to program the FTD.		
Applicable Test		**Authorized Performance Range**
Entry Number	**Title and Procedure**	
	OR	
	b) Trim for straight and level flight with flaps extended to 50% of full flap travel, at a constant airspeed within the flaps-extended airspeed range. Do not adjust trim or power. Retract the flaps to zero. After stabilized, record stick force necessary to maintain original airspeed.	5 - 15 lbs (2.2 - 6.6 daN) of force (Push).
2.c.4.	Gear change force.	
	a) Trim for straight and level flight with landing gear retracted at a constant airspeed within the landing gear-extended airspeed range. Do not adjust trim or power. Extend the landing gear. After stabilized, record stick force necessary to maintain original airspeed.	2 - 12 lbs (0.88 - 5.3 daN) of force (Pull).
	OR	
	b) Trim for straight and level flight with landing gear extended, at a constant airspeed within the landing gear-extended airspeed range. Do not adjust trim or power. Retract the landing gear. After stabilized, record stick force necessary to maintain original airspeed.	2 - 12 lbs (0.88 - 5.3 daN) of force (Push).
2.c.4.	Longitudinal trim.	Must be able to trim longitudinal stick force to "zero" in each of the following configurations: cruise; approach; and landing.
2.c.7.	Longitudinal static stability.	Must exhibit positive static stability.
2.c.8.	Stall warning (actuation of stall warning device) with nominal gross weight; wings level; and a deceleration rate of not more than three (3) knots per second.	
	a) Landing configuration.	60 - 90 knots; ± 5° of bank.
	b) Clean configuration.	Landing configuration speed + 10 - 20%.
2.c.9.b.	Phugoid dynamics.	Must have a phugoid with a period of 30 - 60 seconds. May not reach

Table B2C

Alternative Data Source for FTD Level 5		
Small, Multi-Engine (Reciprocating) Airplane		
QPS REQUIREMENT The performance parameters in this table must be used to program the FTD if flight test data is not used to program the FTD.		
Applicable Test		**Authorized Performance Range**
Entry Number	**Title and Procedure**	
		½ or double amplitude in less than 2 cycles.
2.d.	**Lateral Directional Tests.**	
2.d.2.	Roll response. Roll rate must be measured through at least 30° of roll. Aileron control must be deflected 1/3 (33.3 percent) of maximum travel.	Must have a roll rate of 4° - 25° /second.
2.d.4.b.	Spiral stability. Cruise configuration and normal cruise airspeed. Establish a 20° - 30° bank. When stabilized, neutralize the aileron control and release. Must be completed in both directions of turn.	Initial bank angle (± 5°) after 20 seconds.
2.d.6.b.	Rudder response. Use 25 percent of maximum rudder deflection. (Applicable to approach or landing configuration.)	3° - 6° /second yaw rate.
2.d.7.	Dutch roll, yaw damper off. (Applicable to cruise and approach configurations.)	A period of 2 - 5 seconds; and ½ - 2 cycles.
2.d.8.	Steady state sideslip. Use 50 percent rudder deflection. (Applicable to approach and landing configurations.)	2° - 10° of bank; 4 - 10 degrees of sideslip; and 2° -10° of aileron.
6.	**FTD System Response Time.**	
6.a.	Flight deck instrument systems response to an abrupt pilot controller input. One test is required in each axis (pitch, roll, yaw).	300 milliseconds or less.

Table B2D

Alternative Data Source for FTD Level 5		
Small, Single Engine (Turbo-Propeller) Airplane		
QPS REQUIREMENT The performance parameters in this table must be used to program the FTD if flight test data is not used to program the FTD.		
Applicable Test		**Authorized Performance Range**
Entry Number	**Title and Procedure**	
1.	**Performance.**	
1.c	**Climb.**	
1.c.1.	Normal climb with nominal gross weight, at best rate-of-climb airspeed.	Climb airspeed = 95 – 115 knots. Climb rate = 800 – 1800 fpm (4 - 9 m/sec)
1.f.	**Engines.**	
1.f.1.	Acceleration; idle to takeoff power.	4 - 8 Seconds.
1.f.2.	Deceleration; takeoff power to idle.	3 - 7 Seconds.
2.	**Handling Qualities.**	
2.c.	**Longitudinal Tests.**	
2.c.1.	Power change force.	
	a) Trim for straight and level flight at 80% of normal cruise airspeed with necessary power. Reduce power to flight idle. Do not change trim or configuration. After stabilized, record column force necessary to maintain original airspeed.	8 lbs (3.5 daN) of Push force – 8 lbs (3.5 daN) of Pull force.
	OR	
	b) Trim for straight and level flight at 80% of normal cruise airspeed with necessary power. Add power to maximum setting. Do not change trim or configuration. After stabilized, record column force necessary to maintain original airspeed.	12 - 22 lbs (5.3 – 9.7 daN) of force (Push).
2.c.2.	Flap/slat change force.	
	a) Trim for straight and level flight with flaps fully retracted at a constant airspeed within the flaps-extended airspeed range. Do not adjust trim or power. Extend the flaps to 50% of full flap travel. After stabilized, record stick force necessary to maintain original airspeed.	5 - 15 lbs (2.2 - 6.6 daN) of force (Pull).
	OR	

Table B2D

Alternative Data Source for FTD Level 5		
Small, Single Engine (Turbo-Propeller) Airplane		
QPS REQUIREMENT The performance parameters in this table must be used to program the FTD if flight test data is not used to program the FTD.		
Applicable Test		**Authorized Performance Range**
Entry Number	**Title and Procedure**	
	b) Trim for straight and level flight with flaps extended to 50% of full flap travel, at a constant airspeed within the flaps-extended airspeed range. Do not adjust trim or power. Retract the flaps to zero. After stabilized, record stick force necessary to maintain original airspeed.	5 - 15 lbs (2.2 - 6.6 daN) of force (Push).
2.c.4.	Gear change force.	
	a) Trim for straight and level flight with landing gear retracted at a constant airspeed within the landing gear-extended airspeed range. Do not adjust trim or power. Extend the landing gear. After stabilized, record stick force necessary to maintain original airspeed.	2 - 12 lbs (0.88 - 5.3 daN) of force (Pull).
	OR	
	b) Trim for straight and level flight with landing gear extended, at a constant airspeed within the landing gear-extended airspeed range. Do not adjust trim or power. Retract the landing gear. After stabilized, record stick force necessary to maintain original airspeed.	2 - 12 lbs (0.88 - 5.3 daN) of force (Push).
2.b.5.	Longitudinal trim.	Must be able to trim longitudinal stick force to "zero" in each of the following configurations: cruise; approach; and landing.
2.c.7.	Longitudinal static stability.	Must exhibit positive static stability.
2.c.8.	Stall warning (actuation of stall warning device) with nominal gross weight; wings level; and a deceleration rate of not more than three (3) knots per second.	
	a) Landing configuration.	60 - 90 knots; ± 5° of bank.
	b) Clean configuration.	Landing configuration speed + 10 - 20%.
2.c.8.b.	Phugoid dynamics.	Must have a phugoid with a period of 30 - 60 seconds. May not reach ½ or double amplitude in less than 2 cycles.
2.d.	**Lateral Directional Tests.**	
2.d.2.	Roll response. Roll rate must be measured through at least 30° of roll. Aileron control must be deflected 1/3 (33.3 percent) of maximum travel.	Must have a roll rate of 4° - 25° /second.
2.d.4.b.	Spiral stability.	Initial bank angle (± 5°) after 20 seconds.

Table B2D

Alternative Data Source for FTD Level 5 Small, Single Engine (Turbo-Propeller) Airplane QPS REQUIREMENT The performance parameters in this table must be used to program the FTD if flight test data is not used to program the FTD.		
Applicable Test		**Authorized Performance Range**
Entry Number	**Title and Procedure**	
	Cruise configuration and normal cruise airspeed. Establish a 20° - 30° bank. When stabilized, neutralize the aileron control and release. Must be completed in both directions of turn.	
2.d.6.b.	Rudder response. Use 25 percent of maximum rudder deflection. (Applicable to approach or landing configuration.)	3° - 6° /second yaw rate.
2.d.7.	Dutch roll, yaw damper off. (Applicable to cruise and approach configurations.)	A period of 2 - 5 seconds; and ½ - 3 cycles.
2.d.8.	Steady state sideslip. Use 50 percent rudder deflection. (Applicable to approach and landing configurations.)	2° - 10° of bank; 4° - 10° of sideslip; and 2° -10° of aileron.
6.	**FTD System Response Time.**	
6.a.	Flight deck instrument systems response to an abrupt pilot controller input. One test is required in each axis (pitch, roll, yaw).	300 milliseconds or less.

Table B2E

Alternative Data Source for FTD Level 5 Multi-Engine (Turbo-Propeller) Airplane QPS REQUIREMENT The performance parameters in this table must be used to program the FTD if flight test data is not used to program the FTD.		
Applicable Test		**Authorized Performance Range**
Entry Number	**Title and Procedure**	
1.	**Performance.**	
1.c	**Climb.**	
1.b.1.	Normal climb with nominal gross weight, at best rate-of-climb airspeed.	Climb airspeed = 120 – 140 knots. Climb rate = 1000 – 3000 fpm (5 - 15 m/sec)
1.f.	**Engines.**	
1.f.1.	Acceleration; idle to takeoff power.	2 - 6 Seconds.
1.f.2.	Deceleration; takeoff power to idle.	1 - 5 Seconds.
2.	**Handling Qualities.**	
2.c.	**Longitudinal Tests.**	
2.c.1.	Power change force.	
	a) Trim for straight and level flight at 80% of normal cruise airspeed with necessary power. Reduce power to flight idle. Do not change trim or configuration. After stabilized, record column force necessary to maintain original airspeed.	8 lbs (3.5 daN) of Push force to 8 lbs (3.5 daN) of Pull force.
	OR	
	b) Trim for straight and level flight at 80% of normal cruise airspeed with necessary power. Add power to maximum setting. Do not change trim or configuration. After stabilized, record column force necessary to maintain original airspeed.	12 - 22 lbs (5.3 – 9.7 daN) of force (Push).
2.c.2.	Flap/slat change force.	
	a) Trim for straight and level flight with flaps fully retracted at a constant airspeed within the flaps-extended airspeed range. Do not adjust trim or power. Extend the flaps to 50% of full flap travel. After stabilized, record stick force necessary to maintain original airspeed.	5 - 15 lbs (2.2 - 6.6 daN) of force (Pull).
	OR	
	b) Trim for straight and level flight with flaps extended to 50% of full flap travel, at a constant airspeed within the flaps-extended airspeed range. Do not adjust trim or power. Retract the flaps to zero. After stabilized, record stick force necessary to maintain original airspeed.	5 - 15 lbs (2.2 - 6.6 daN) of force (Push).

Table B2E

Alternative Data Source for FTD Level 5		
Multi-Engine (Turbo-Propeller) Airplane		
QPS REQUIREMENT The performance parameters in this table must be used to program the FTD if flight test data is not used to program the FTD.		
Applicable Test		**Authorized Performance Range**
Entry Number	**Title and Procedure**	
2.c.4.	Gear change force.	
	a) Trim for straight and level flight with landing gear retracted at a constant airspeed within the landing gear-extended airspeed range. Do not adjust trim or power. Extend the landing gear. After stabilized, record stick force necessary to maintain original airspeed.	2 - 12 lbs (0.88 - 5.3 daN) of force (Pull).
	OR	
	b) Trim for straight and level flight with landing gear extended, at a constant airspeed within the landing gear-extended airspeed range. Do not adjust trim or power. Retract the landing gear. After stabilized, record stick force necessary to maintain original airspeed.	2 - 12 lbs (0.88 - 5.3 daN) of force (Push).
2.b.5.	Longitudinal trim.	Must be able to trim longitudinal stick force to "zero" in each of the following configurations: cruise; approach; and landing.
2.c.7.	Longitudinal static stability.	Must exhibit positive static stability.
2.c.8.	Stall warning (actuation of stall warning device) with nominal gross weight; wings level; and a deceleration rate of not more than three (3) knots per second.	
	a) Landing configuration.	80 - 100 knots; ± 5° of bank.
	b) Clean configuration.	Landing configuration speed + 10 - 20%.
2.c.8.b.	Phugoid dynamics.	Must have a phugoid with a period of 30 - 60 seconds. May not reach ½ or double amplitude in less than 2 cycles.
2.d.	**Lateral Directional Tests.**	
2.d.2.	Roll response. Roll rate must be measured through at least 30° of roll. Aileron control must be deflected 1/3 (33.3 percent) of maximum travel.	Must have a roll rate of 4-25 degrees/second.
2.d.4.b.	Spiral stability. Cruise configuration and normal cruise airspeed. Establish a 20° - 30° bank. When stabilized, neutralize the aileron control and release. Must be completed in both directions of turn.	Initial bank angle (± 5°) after 20 seconds.
2.d.6.b.	Rudder response.	3° - 6° /second yaw rate.

Table B2E

Alternative Data Source for FTD Level 5 Multi-Engine (Turbo-Propeller) Airplane QPS REQUIREMENT The performance parameters in this table must be used to program the FTD if flight test data is not used to program the FTD.		
Applicable Test		**Authorized Performance Range**
Entry Number	**Title and Procedure**	
	Use 25 percent of maximum rudder deflection. (Applicable to approach or landing configuration.)	
2.d.7.	Dutch roll, yaw damper off. (Applicable to cruise and approach configurations.)	A period of 2 - 5 seconds; and ½ - 2 cycles.
2.d.8.	Steady state sideslip. Use 50 percent rudder deflection. (Applicable to approach and landing configurations.)	2° - 10° of bank; 4° - 10° of sideslip; and 2° -10° of aileron.
6.	**FTD System Response Time.**	
6.a.	Flight deck instrument systems response to an abrupt pilot controller input. One test is required in each axis (pitch, roll, yaw).	300 milliseconds or less.

End QPS Requirements

Begin QPS Requirements

5. Alternative Data Sources, Procedures, and Instrumentation: Level 6 FTD Only

a. Sponsors are not required to use the alternative data sources, procedures, and instrumentation. However, a sponsor may choose to use one or more of the alternative sources, procedures, and instrumentation described in Table B2F.

End QPS Requirements

Begin Information

b. It has become standard practice for experienced FTD manufacturers to use such techniques as a means of establishing data bases for new FTD configurations while awaiting the availability of actual flight test data; and then comparing this new data with the newly available flight test data. The results of such comparisons have, as reported by some recognized and experienced simulation experts, become increasingly consistent and indicate that these techniques, applied with appropriate experience, are becoming dependably accurate for the development of aerodynamic models for use in Level 6 FTDs.

c. In reviewing this history, the NSPM has concluded that, with proper care, those who are experienced in the development of aerodynamic models for FTD application can successfully use these modeling techniques to acceptably alter the method by which flight test data may be acquired and, when applied to Level 6 FTDs, does not compromise the quality of that simulation.

d. The information in the table that follows (Table of Alternative Data Sources, Procedures, and Information: Level 6 FTD Only) is presented to describe an acceptable alternative to data sources for Level 6 FTD modeling and validation, and an acceptable alternative to the procedures and instrumentation found in the flight test methods traditionally accepted for gathering modeling and validation data.

(1) Alternative data sources that may be used for part or all of a data requirement are the Airplane Maintenance Manual, the Airplane Flight Manual (AFM), Airplane Design Data, the Type Inspection Report (TIR), Certification Data or acceptable supplemental flight test data.

(2) The NSPM recommends that use of the alternative instrumentation noted in Table B2F be coordinated with the NSPM prior to employment in a flight test or data gathering effort.

e. The NSPM position regarding the use of these alternative data sources, procedures, and instrumentation is based on three primary preconditions and presumptions regarding the objective data and FTD aerodynamic program modeling.

(1) Data gathered through the alternative means does not require angle of attack (AOA) measurements or control surface position measurements for any flight test. AOA can be sufficiently derived if the flight test program insures the collection of acceptable level, unaccelerated, trimmed flight data. Angle of attack may be validated by conducting the three basic ''fly-by'' trim tests. The FTD time history tests should begin in level, unaccelerated, and trimmed flight, and the results should be compared with the flight test pitch angle.

(2) A simulation controls system model should be rigorously defined and fully mature. It should also include accurate gearing and cable stretch characteristics (where applicable) that are determined from actual aircraft measurements. Such a model does not require control surface position measurements in the flight test objective data for Level 6 FTD applications.

f. Table B2F is not applicable to Computer Controlled Aircraft FTDs.

g. Utilization of these alternate data sources, procedures, and instrumentation does not relieve the sponsor from compliance with the balance of the information contained in this document relative to Level 6 FTDs.

h. The term ''inertial measurement system'' allows the use of a functional global positioning system (GPS).

End Information

TABLE B2F

Alternative Data Sources, Procedures, and Intrumentation Level 6 FTD		
QPS Requirements The standards in this table are required if the data gathering methods described in paragraph 9 of Appendix B are not used.		Information
Objective test reference No. and title	Alternative data sources, procedures, and instrumentation	Notes
1.b.1. Performance. Takeoff. Ground acceleration time.	Data may be acquired through a synchronized video recording of a stop watch and the calibrated airplane airspeed indicator. Hand-record the flight conditions and airplane configuration.	This test is required only if RTO is sought.
1.b.7. Performance. Takeoff. Rejected takeoff ..	Data may be acquired through a synchronized video recording of a stop watch and the calibrated airplane airspeed indicator. Hand-record the flight conditions and airplane configuration.	This test is required only if RTO is sought.
1.c.1. Performance. Climb. Normal climb all engines operating.	Data may be acquired with a synchronized video of calibrated airplane instruments and engine power throughout the climb range.	
1.f.1. Performance. Engines. Acceleration	Data may be acquired with a synchronized video recording of engine instruments and throttle position.	
1.f.2. Performance. Engines. Deceleration	Data may be acquired with a synchronized video recording of engine instruments and throttle position.	
2.a.1.a. Handling qualities. Static control tests. Pitch controller position vs. force and surface position calibration.	Surface position data may be acquired from flight data recorder (FDR) sensor or, if no FDR sensor, at selected, significant column positions (encompassing significant column position data points), acceptable to the NSPM, using a control surface protractor on the ground. Force data may be acquired by using a hand held force gauge at the same column position data points.	For airplanes with reversible control systems, surface position data acquisition should be accomplished with winds less than 5 kts.

TABLE B2F—Continued

Alternative Data Sources, Procedures, and Intrumentation Level 6 FTD		
QPS Requirements The standards in this table are required if the data gathering methods described in paragraph 9 of Appendix B are not used.		Information
Objective test reference No. and title	Alternative data sources, procedures, and instrumentation	Notes
2.a.2.a. Handling qualities. Static control tests. Wheel position vs. force and surface position calibration.	Surface position data may be acquired from flight data recorder (FDR) sensor or, if no FDR sensor, at selected, significant wheel positions (encompassing significant wheel position data points), acceptable to the NSPM, using a control surface protractor on the ground. Force data may be acquired by using a hand held force gauge at the same wheel position data points.	For airplanes with reversible control systems, surface position data acquisition should be accomplished with winds less than 5 kts.
2.a.3.a. Handling qualities. Static control tests. Rudder pedal position vs. force and surface position calibration.	Surface position data may be acquired from flight data recorder (FDR) sensor or, if no FDR sensor, at selected, significant rudder pedal positions (encompassing significant rudder pedal position data points), acceptable to the NSPM, using a control surface protractor on the ground. Force data may be acquired by using a hand held force gauge at the same rudder pedal position data points.	For airplanes with reversible control systems, surface position data acquisition should be accomplished with winds less than 5 kts.
2.a.4. Handling qualities. Static control tests. Nosewheel steering force.	Breakout data may be acquired with a hand held force gauge. The remainder of the force to the stops may be calculated if the force gauge and a protractor are used to measure force after breakout for at least 25% of the total displacement capability.	
2.a.5. Handling qualities. Static control tests. Rudder pedal steering calibration.	Data may be acquired through the use of force pads on the rudder pedals and a pedal position measurement device, together with design data for nosewheel position.	
2.a.6. Handling qualities. Static control tests. Pitch trim indicator vs. surface position calibration.	Data may be acquired through calculations.	
2.a.8. Handling qualities. Static control tests. Alignment of power lever angle vs. selected engine parameter (e.g., EPR, N_1, Torque, Manifold pressure).	Data may be acquired through the use of a temporary throttle quadrant scale to document throttle position. Use a synchronized video to record steady state instrument readings or hand-record steady state engine performance readings.	
2.a.9. Handling qualities. Static control tests. Brake pedal position vs. force.	Use of design or predicted data is acceptable. Data may be acquired by measuring deflection at ''zero'' and at ''maximum''.	
2.c.1. Handling qualities. Longitudinal control tests. Power change force.	Data may be acquired by using an inertial measurement system and a synchronized video of the calibrated airplane instruments, throttle position, and the force/position measurements of flight deck controls.	Power change dynamics test is acceptable using the same data acquisition methodology.
2.c.2. Handling qualities. Longitudinal control tests. Flap/slat change force.	Data may be acquired by using an inertial measurement system and a synchronized video of calibrated airplane instruments, flap/slat position, and the force/position measurements of flight deck controls.	Flap/slat change dynamics test is acceptable using the same data acquisition methodology.
2.c.4. Handling qualities. Longitudinal control tests. Gear change force.	Data may be acquired by using an inertial measurement system and a synchronized video of the calibrated airplane instruments, gear position, and the force/position measurements of flight deck controls.	Gear change dynamics test is acceptable using the same data acquisition methodology.
2.c.5. Handling qualities. Longitudinal control tests. Longitudinal trim.	Data may be acquired through use of an inertial measurement system and a synchronized video of flight deck controls position (previously calibrated to show related surface position) and engine instrument readings.	

TABLE B2F—Continued

Alternative Data Sources, Procedures, and Intrumentation Level 6 FTD		
QPS Requirements The standards in this table are required if the data gathering methods described in paragraph 9 of Appendix B are not used.		Information
Objective test reference No. and title	Alternative data sources, procedures, and instrumentation	Notes
2.c.6. Handling qualities. Longitudinal control tests. Longitudinal maneuvering stability (stick force/g).	Data may be acquired through the use of an inertial measurement system and a synchronized video of the calibrated airplane instruments; a temporary, high resolution bank angle scale affixed to the attitude indicator; and a wheel and column force measurement indication.	
2.c.7. Handling qualities. Longitudinal control tests. Longitudinal static stability.	Data may be acquired through the use of a synchronized video of the airplane flight instruments and a hand held force gauge.	
2.c.8. Handling qualities. Longitudinal control tests. Stall Warning (activation of stall warning device).	Data may be acquired through a synchronized video recording of a stop watch and the calibrated airplane airspeed indicator. Hand-record the flight conditions and airplane configuration.	Airspeeds may be cross checked with those in the TIR and AFM.
2.c.9.a. Handling qualities. Longitudinal control tests. Phugoid dynamics.	Data may be acquired by using an inertial measurement system and a synchronized video of the calibrated airplane instruments and the force/position measurements of flight deck controls.	
2.c.10. Handling qualities. Longitudinal control tests. Short period dynamics.	Data may be acquired by using an inertial measurement system and a synchronized video of the calibrated airplane instruments and the force/position measurements of flight deck controls.	
2.c.11. Handling qualities. Longitudinal control tests. Gear and flap/slat operating times.	May use design data, production flight test schedule, or maintenance specification, together with an SOC.	
2.d.2. Handling qualities. Lateral directional tests. Roll response (rate).	Data may be acquired by using an inertial measurement system and a synchronized video of the calibrated airplane instruments and the force/position measurements of flight deck lateral controls.	
2.d.3. Handling qualities. Lateral directional tests. (a) Roll overshoot. OR (b) Roll response to flight deck roll controller step input.	Data may be acquired by using an inertial measurement system and a synchronized video of the calibrated airplane instruments and the force/position measurements of flight deck lateral controls.	
2.d.4. Handling qualities. Lateral directional tests. Spiral stability.	Data may be acquired by using an inertial measurement system and a synchronized video of the calibrated airplane instruments; the force/position measurements of flight deck controls; and a stop watch.	
2.d.6.a. Handling qualities. Lateral directional tests. Rudder response.	Data may be acquired by using an inertial measurement system and a synchronized video of the calibrated airplane instruments; the force/position measurements of rudder pedals.	
2.d.7. Handling qualities. Lateral directional tests. Dutch roll, (yaw damper OFF).	Data may be acquired by using an inertial measurement system and a synchronized video of the calibrated airplane instruments and the force/position measurements of flight deck controls.	
2.d.8. Handling qualities. Lateral directional tests. Steady state sideslip.	Data may be acquired by using an inertial measurement system and a synchronized video of the calibrated airplane instruments and the force/position measurements of flight deck controls.	

Attachment 3 to Appendix B to Part 60—Flight Training Device (FTD) Subjective Evaluation

Begin Information

1. Discussion

a. The subjective tests provide a basis for evaluating the capability of the FTD to perform over a typical utilization period. The items listed in the Table of Functions and Subjective Tests are used to determine whether the FTD competently simulates each required maneuver, procedure, or task; and verifying correct operation of the FTD controls, instruments, and systems. The tasks do not limit or exceed the authorizations for use of a given level of FTD as described on the SOQ or as approved by the TPAA. All items in the following paragraphs are subject to examination.

b. All simulated airplane systems functions will be assessed for normal and, where appropriate, alternate operations. Simulated airplane systems are listed separately under ''Any Flight Phase'' to ensure appropriate attention to systems checks. Operational navigation systems (including inertial navigation systems, global positioning systems, or other long-range systems) and the associated electronic display systems will be evaluated if installed. The NSP pilot will include in his report to the TPAA, the effect of the system operation and any system limitation.

c. At the request of the TPAA, the NSP Pilot may assess the FTD for a special aspect of a sponsor's training program during the functions and subjective portion of an evaluation. Such an assessment may include a portion of a specific operation (e.g., a Line Oriented Flight Training (LOFT) scenario) or special emphasis items in the sponsor's training program. Unless directly related to a requirement for the qualification level, the results of such an evaluation would not affect the qualification of the FTD.

End Information

Table B3A

Functions And Subjective Tests					
QPS REQUIREMENTS					
Entry Number	Operations Tasks	FTD Level			
		4	5	6	7
	Tasks in this table are subject to evaluation if appropriate for the airplane simulated as indicated in the SOQ Configuration List or the level of simulator qualification involved. Items not installed or not functional on the simulator and, therefore, not appearing on the SOQ Configuration List, are not required to be listed as exceptions on the SOQ.				
1.	**Preparation For Flight**				
1.a.	**Pre-flight.** Accomplish a functions check of all switches, indicators, systems, and equipment (where installed for Level 5 FTD) at all crew members' and instructors' stations and determine that:				
1.a.1	The flight deck design and functions are identical to that of the airplane simulated.			X	X
1.a.2	The flight deck (or flight deck area) design and functions replicate the appropriate airplane.		X		
1.a.3	Reserved				
2.	**Surface Operations (pre-flight).**				
2.a.	**Engine Start. (if installed for Level 5 FTD)**				
2.a.1.	Normal start.		X	X	X
2.a.2.	Alternate start procedures.		X	X	X
2.a.3.	Abnormal starts and shutdowns (e.g., hot/hung start, tail pipe fire).		X	X	X
2.b.	**Taxi.**				
2.b.1	Pushback/powerback (powerback requires visual system)			X	X
2.b.2.	Thrust response.				X
2.b.3.	Power lever friction.				X
2.b.4.	Ground handling.				X
2.b.5.	Nosewheel scuffing.				
2.b.6.	Taxi aids (e.g. taxi camera, moving map)				X
2.b.7.	Low visibility (taxi route, signage, lighting, markings, etc.)				X
2.c.	**Brake Operation**				
2.c.1.	Brake operation (normal and alternate/emergency).				X
2.c.2.	Brake fade (if applicable).				X
2.d	**Other**				X
3.	**Take-off.**				
3.a.	**Normal.**				
3.a.1.	Airplane/engine parameter relationships, including run-up.			X	X
3.a.2.	Nosewheel and rudder steering.			X	X
3.a.3.	Crosswind (maximum demonstrated and gusting crosswind).				X
3.a.4.	Special performance				
3.a.4.a	Reduced V_1				X
3.a.4.b	Maximum engine de-rate.				X
3.a.4.c	Soft surface.				X
3.a.4.d	Short field/short take-off and landing (STOL) operations.				X
3.a.4.e	Obstacle (performance over visual obstacle).				X
3.a.5.	Low visibility take-off.				X
3.a.6.	Landing gear, wing flap leading edge device operation.			X	X

Table B3A

Functions And Subjective Tests					
QPS REQUIREMENTS					
Entry Number	Operations Tasks	FTD Level			
		4	5	6	7
3.a.7.	Contaminated runway operation.				X
3.b.	Abnormal/emergency.				
3.b.1.	Rejected Take-off.			X	X
3.b.2.	Rejected special performance (e.g., reduced V_1, max de-rate, short field operations).				X
3.b.3.	Rejected take-off with contaminated runway.				X
3.b.4.	Takeoff with a propulsion system malfunction (allowing an analysis of causes, symptoms, recognition, and the effects on aircraft performance and handling) at the following points: (i) Prior to V1 decision speed. (ii) Between V1 and Vr (rotation speed). (iii) Between Vr and 500 feet above ground level.				X
3.b.5.	Flight control system failures, reconfiguration modes, manual reversion and associated handling.				X
4.	**Climb.**				
4.a.	Normal.		X	X	X
4.b.	One or more engines inoperative.				X
4.c.	Approach climb in icing (for airplanes with icing accountability).				X
5.	**Cruise.**				
5.a.	**Performance characteristics (speed vs. power, configuration, and attitude)**				
5.a.1.	Straight and level flight.		X	X	X
5.a.2.	Change of airspeed.		X	X	X
5.a.3.	High altitude handling.			X	X
5.a.4.	High Mach number handling (Mach tuck, Mach buffet) and recovery (trim change).			X	X
5.a.5.	Overspeed warning (in excess of V_{mo} or M_{mo}).			X	X
5.a.6.	High IAS handling.			X	X
5.b.	**Maneuvers.**				
5.b.1.	High angle of attack, approach to stalls, and stall warning (take-off, cruise, approach, and landing configuration) including reaction of the autoflight system and stall protection system.			X	X
5.b.2.	Slow flight			X	X
5.b.3.	Reserved				X
5.b.4.	Flight envelope protection (high angle of attack, bank limit, overspeed, etc.).				X
5.b.5.	Turns with/without speedbrake/spoilers deployed.				X
5.b.6.	Normal and standard rate turns.		X	X	X
5.b.7.	Steep turns			X	X
5.b.8.	Performance turn				X
5.b.9.	In flight engine shutdown and restart (assisted and windmill).			X	X
5.b.10.	Maneuvering with one or more engines inoperative, as appropriate.				X
5.b.11.	Specific flight characteristics (e.g., direct lift control).			X	X

Table B3A

Functions And Subjective Tests					
QPS REQUIREMENTS					
Entry Number	Operations Tasks	FTD Level			
		4	5	6	7
5.b.12.	Flight control system failures, reconfiguration modes, manual reversion and associated handling.			X	X
5.b.13	Gliding to a forced landing.				X
5.b.14	Visual resolution and FSTD handling and performance for the following:				
5.b.14.a	Terrain accuracy for forced landing area selection.				X
5.b.14.b	Terrain accuracy for VFR Navigation.				X
5.b.14.c	Eights on pylons (visual resolution).				X
5.b.14.d	Turns about a point.				X
5.b.14.e	S-turns about a road or section line.				X
5.b.15	Reserved				
6.	**Descent.**				
6.a.	Normal.		X	X	X
6.b.	Maximum rate/emergency (clean and with speedbrake, etc.).			X	X
6.c.	With autopilot.			X	X
6.d.	Flight control system failures, reconfiguration modes, manual reversion and associated handling.			X	X
7.	**Instrument Approaches And Landing.** Those instrument approach and landing tests relevant to the simulated airplane type are selected from the following list. Some tests are made with limiting wind velocities, under windshear conditions, and with relevant system failures, including the failure of the Flight Director. If Standard Operating Procedures allow use autopilot for non-precision approaches, evaluation of the autopilot will be included. Level 5 and Level 6 FTDs are not authorized to credit the landing maneuver. For Level 5 FTD, approaches are evaluated as applicable for the systems installed.				
7.a.	**Precision approach (Approach only for Level 5 and Level 6 FTDs)**				
7.a.1	CAT I published approaches.				
7.a.1.a	Manual approach with/without flight director including landing.		X	X	X
7.a.1.b	Autopilot/autothrottle coupled approach and manual landing.		X	X	X
7.a.1.c	Autopilot/autothrottle coupled approach, engine(s) inoperative.				X
7.a.1.d	Manual approach, engine(s) inoperative.				X
7.a.1.e	HUD/EFVS.				X
7.a.2	CAT II published approaches.				
7.a.2.a	Autopilot/autothrottle coupled approach to DH and landing (manual and autoland).		X	X	X
7.a.2.b	Autopilot/autothrottle coupled approach with one-engine-inoperative approach to DH and go-around (manual and autopilot).				X
7.a.2.c	HUD/EFVS.				X
7.a.3	CAT III published approaches.				
7.a.3.a	Autopilot/autothrottle coupled approach to landing and roll-out (if applicable) guidance (manual and autoland).				X

Table B3A

Functions And Subjective Tests QPS REQUIREMENTS					
Entry Number	Operations Tasks	FTD Level			
		4	5	6	7
7.a.3.b	Autopilot/autothrottle coupled approach to DH and go-around (manual and autopilot).		X	X	X
7.a.3.c	Autopilot/autothrottle coupled approach to land and roll-out (if applicable) guidance with one engine inoperative (manual and autoland).				X
7.a.3.d	Autopilot/autothrottle coupled approach to DH and go-around with one engine inoperative (manual and autopilot).				X
7.a.3.e	HUD/EFVS.				X
7.a.4	Autopilot/autothrottle coupled approach (to a landing or to a go-around):				
7.a.4.a	With generator failure.			X	X
7.a.4.b	With maximum tail wind component certified or authorized.			X	X
7.a.4.c	With maximum crosswind component demonstrated or authorized.			X	X
7.a.5	PAR approach, all engine(s) operating and with one or more engine(s) inoperative. (engine inoperative required only for Level 7 FTD)		X	X	X
7.a.6	MLS, GBAS, all engine(s) operating and with one or more engine(s) inoperative. (engine inoperative required only for Level 7 FTD)		X	X	X
7.b.	**Non-precision approach (Engine inoperative required only for Level 7 FTD)**				
7.b.1	Surveillance radar approach, all engine(s) operating and with one or more engine(s) inoperative.		X	X	X
7.b.2	NDB approach, all engine(s) operating and with one or more engine(s) inoperative.		X	X	X
7.b.3	VOR, VOR/DME, TACAN approach, all engines(s) operating and with one or more engine(s) inoperative.		X	X	X
7.b.4	RNAV / RNP / GNSS (RNP at nominal and minimum authorized temperatures) approach, all engine(s) operating and with one or more engine(s) inoperative.		X	X	X
7.b.5	ILS LLZ (LOC), LLZ back course (or LOC-BC) approach, all engine(s) operating and with one or more engine(s) inoperative.		X	X	X
7.b.6	ILS offset localizer approach, all engine(s) operating and with one or more engine(s) inoperative.		X	X	X
7.c	**Approach procedures with vertical guidance (APV), e.g. SBAS, flight path vector (Engine inoperative required only for Level 7 FTD)**				
7.c.1	APV/baro-VNAV approach, all engine(s) operating and with one or more engine(s) inoperative.		X	X	X
7.c.2	Area navigation (RNAV) approach procedures based on SBAS, all engine(s) operating and with one or more engine(s) inoperative.		X	X	X
8.	**Visual Approaches (Visual Segment) And Landings.**				

Table B3A

Functions And Subjective Tests						
QPS REQUIREMENTS						
Entry Number	Operations Tasks	FTD Level				
		4	5	6	7	
8.a.	Maneuvering, normal approach and landing, all engines operating with and without visual approach aid guidance.				X	
8.b.	Approach and landing with one or more engines inoperative.				X	
8.c.	Operation of landing gear, flap/slats and speedbrakes (normal and abnormal).				X	
8.d.	Approach and landing with crosswind (max. demonstrated and gusting crosswind).				X	
8.e.	Approach and landing with flight control system failures, reconfiguration modes, manual reversion and associated handling (most significant degradation which is probable).				X	
8.e.1.	Approach and landing with trim malfunctions.				X	
8.e.1.a	Longitudinal trim malfunction.				X	
8.e.1.b	Lateral-directional trim malfunction.				X	
8.f.	Approach and landing with standby (minimum) electrical/hydraulic power.				X	
8.g.	Approach and landing from circling conditions (circling approach).				X	
8.h.	Approach and landing from visual traffic pattern.				X	
8.i.	Approach and landing from non-precision approach.				X	
8.j.	Approach and landing from precision approach.				X	
9.	**Missed Approach.**					
9.a.	All engines, manual and autopilot.			X	X	
9.b.	Engine(s) inoperative, manual and autopilot.				X	
9.c.	Rejected landing				X	
9.d.	With flight control system failures, reconfiguration modes, manual reversion and associated handling.				X	
9.e.	Bounced landing				X	
10.	**Surface Operations (landing, after-landing and post-flight).**					
10.a	**Landing roll and taxi.**					
10.a.1	HUD/EFVS.				X	
10.a.2.	Spoiler operation.				X	
10.a.3.	Reverse thrust operation.				X	
10.a.4.	Directional control and ground handling, both with and without reverse thrust.				X	
10.a.5.	Reduction of rudder effectiveness with increased reverse thrust (rear pod-mounted engines).				X	
10.a.6.	Brake and anti-skid operation					
10.a.6.a	Brake and anti-skid operation with dry, patchy wet, wet on rubber residue, and patchy icy conditions.				X	
10.a.6.b	Brake and anti-skid operation with dry and wet conditions.					
10.a.6.c	Brake and anti-skid operation with dry conditions.					
10.a.6.d	Auto-braking system operation.				X	
10.b	**Engine shutdown and parking.**					

Table B3A

Functions And Subjective Tests					
QPS REQUIREMENTS					
Entry Number	Operations Tasks	FTD Level			
		4	5	6	7
10.b.1	Engine and systems operation.			X	X
10.b.2	Parking brake operation.			X	X
11.	**Any Flight Phase.**				
11.a.	**Airplane and engine systems operation (where fitted). For Level 5 FTD, airplane and engine system operation is evaluated as applicable for the systems installed.**				
11.a.1.	Air conditioning and pressurization (ECS).		X	X	X
11.a.2.	De-icing/anti-icing.		X	X	X
11.a.3.	Auxiliary power unit (APU).		X	X	X
11.a.4.	Communications.		X	X	X
11.a.5.	Electrical.		X	X	X
11.a.6.	Fire and smoke detection and suppression.		X	X	X
11.a.7.	Flight controls (primary and secondary).		X	X	X
11.a.8.	Fuel and oil		X	X	X
11.a.9.	Hydraulic		X	X	X
11.a.10.	Pneumatic		X	X	X
11.a.11.	Landing gear.		X	X	X
11.a.12.	Oxygen.		X	X	X
11.a.13.	Engine.		X	X	X
11.a.14.	Airborne radar.				X
11.a.15.	Autopilot and Flight Director.		X	X	X
11.a.16.	Terrain awareness warning systems and collision avoidance systems (e.g. EGPWS, GPWS, TCAS).		X	X	X
11.a.17.	Flight control computers including stability and control augmentation.		X	X	X
11.a.18.	Flight display systems.		X	X	X
11.a.19.	Flight management computers.		X	X	X
11.a.20.	Head-up displays (including EFVS, if appropriate).				X
11.a.21.	Navigation systems		X	X	X
11.a.22.	Stall warning/avoidance		X	X	X
11.a.23.	Wind shear avoidance/recovery guidance equipment				X
11.a.24.	Flight envelope protections		X	X	X
11.a.25.	Electronic flight bag		X	X	X
11.a.26.	Automatic checklists (normal, abnormal and emergency procedures).		X	X	X
11.a.27.	Runway alerting and advisory system.				X
11.b.	**Airborne procedures**				
11.b.1.	Holding.			X	X
11.b.2.	Air hazard avoidance (traffic, weather, including visual correlation).				X
11.b.3.	Windshear (where qualified)				X
11.b.3.a	Prior to take-off rotation.				X
11.b.3.b	At lift-off				X
11.b.3.c	During initial climb.				X

Table B3A

Functions And Subjective Tests					
QPS REQUIREMENTS					
Entry Number	Operations Tasks	FTD Level			
		4	5	6	7
11.b.3.d	On final approach, below 150 m (500 ft) AGL.				X
11.b.4.	Effects of airframe ice.			X	X
12.	Level 4 FTDs are required to have at least one operational system. The NSPM will accomplish a functions check of all installed systems, switches, indicators, and equipment at all crewmembers' and instructors' stations, and determine that the flight deck (or flight deck area) design and functions replicate the appropriate airplane.	X			

End QPS Requirements

Table B3B

Functions And Subjective Tests		
QPS REQUIREMENTS		
Entry Number	For Qualification at Level 7 FTD Class I Airport Models	

This table specifies the minimum airport model content and functionality to qualify a simulator at the indicated level. This table applies only to the airport models required for FTD qualification.	
Begin QPS Requirements	
1.	**Reserved**
2.a.	**Functional test content requirements**
2.a.1	**Airport scenes**
2.a.1.a	A minimum of three (3) real-world airport models to be consistent with published data used for airplane operations and capable of demonstrating all the visual system features below. Not all of the elements described in this section must be found in a single airport model. Each model should be in a different visual scene to permit assessment of FSTD automatic visual scene changes. The model identifications must be acceptable to the sponsor's TPAA, selectable from the IOS, and listed on the SOQ.
2.a.1.b	Reserved
2.a.1.c	Reserved
2.a.1.d	**Airport model content.** For circling approaches, all tests apply to the runway used for the initial approach and to the runway of intended landing. If all runways in an airport model used to meet the requirements of this attachment are not designated as "in use," then the "in use" runways must be listed on the SOQ (e.g., KORD, Rwys 9R, 14L, 22R). Models of airports with more than one runway must have all significant runways not "in-use" visually depicted for airport and runway recognition purposes. The use of white or off white light strings that identify the runway threshold, edges, and ends for twilight and night scenes are acceptable for this requirement. Rectangular surface depictions are acceptable for daylight scenes. A visual system's capabilities must be balanced between providing airport models with an accurate representation of the airport and a realistic representation of the surrounding environment. Airport model detail must be developed using airport pictures, construction drawings and maps, or other similar data, or developed in accordance with published regulatory material; however, this does not require that such models contain details that are beyond the design capability of the currently qualified visual system. Only one "primary" taxi route from parking to the runway end will be required for each "in-use" runway.
2.a.2	**Visual scene fidelity.**
2.a.2.a	The visual scene should correctly represent the parts of the airport and its surroundings used in the training program.
2.a.2.b	Reserved
2.a.2.c	Reserved
2.a.3	**Runways and taxiways.**
2.a.3.a	Reserved
2.a.3.b	Representative runways and taxiways.
2.a.3.c	Reserved
2.a.4	Reserved
2.a.5	Runway threshold elevations and locations should be modeled to provide correlation with airplane systems (e.g. HUD, GPS, compass, altimeter).
2.a.6	Reserved

Table B3B

Functions And Subjective Tests		
QPS REQUIREMENTS		
Entry Number	For Qualification at Level 7 FTD Class I Airport Models	

2.a.7	**Runway surface and markings for each "in-use" runway should include the following, if appropriate:**
2.a.7.a	Threshold markings.
2.a.7.b	Runway numbers.
2.a.7.c	Touchdown zone markings.
2.a.7.d	Fixed distance markings.
2.a.7.e	Edge markings.
2.a.7.f	Center line markings.
2.a.7.g	Reserved
2.a.7.h	Reserved
2.a.7.i	Windsock that gives appropriate wind cues.
2.a.8	**Runway lighting of appropriate colors, directionality, behavior and spacing for the "in-use" runway including the following:**
2.a.8.a	Threshold lights.
2.a.8.b	Edge lights.
2.a.8.c	End lights.
2.a.8.d	Center line lights.
2.a.8.e	Touchdown zone lights.
2.a.8.f	Lead-off lights.
2.a.8.g	Appropriate visual landing aid(s) for that runway.
2.a.8.h	Appropriate approach lighting system for that runway.
2.a.9	**Taxiway surface and markings (associated with each "in-use" runway):**
2.a.9.a	Edge markings
2.a.9.b	Center line markings.
2.a.9.c	Runway holding position markings.
2.a.9.d	ILS critical area markings.
2.a.9.e	Reserved
2.a.10	**Taxiway lighting of appropriate colors, directionality, behavior and spacing (associated with each "in-use" runway):**
2.a.10.a	Edge lights.
2.a.10.b	Center line lights.
2.a.10.c	Runway holding position and ILS critical area lights.
2.a.11	**Required visual model correlation with other aspects of the airport environment simulation.**
2.a.11.a	The airport model should be properly aligned with the navigational aids that are associated with operations at the runway "in-use".
2.a.11.b	Reserved
2.a.12	**Airport buildings, structures and lighting.**
2.a.12.a	Buildings, structures and lighting:
2.a.12.a.	Reserved
2.a.12.a.	Representative airport buildings, structures and lighting.
2.a.12.a.	Reserved
2.a.12.b	Reserved

Table B3B

Functions And Subjective Tests		
QPS REQUIREMENTS		
Entry Number	For Qualification at Level 7 FTD Class I Airport Models	

2.a.12.c	Representative moving and static gate clutter (e.g. other airplanes, power carts, tugs, fuel trucks, additional gates).
2.a.12.d	Reserved
2.a.13	**Terrain and obstacles.**
2.a.13.a	Reserved
2.a.13.b	Representative depiction of terrain and obstacles within 46 km (25 NM) of the reference airport.
2.a.14	**Significant, identifiable natural and cultural features.**
2.a.14.a	Reserved
2.a.14.b	Representative depiction of significant and identifiable natural and cultural features within 46 km (25 NM) of the reference airport. *Note.— This refers to natural and cultural features that are typically used for pilot orientation in flight. Outlying airports not intended for landing need only provide a reasonable facsimile of runway orientation.*
2.a.14.c	Representative moving airborne traffic (including the capability to present air hazards – e.g. airborne traffic on a possible collision course).
2.b	**Visual scene management.**
2.b.1	Reserved
2.b.2	Airport runway, approach and taxiway lighting and cultural lighting intensity for any approach should be set at an intensity representative of that used in training for the visibility set; all visual scene light points should fade into view appropriately.
2.b.3	Reserved
2.c	**Visual feature recognition.** *Note.— The following are the minimum distances at which runway features should be visible. Distances are measured from runway threshold to an airplane aligned with the runway on an extended 3-degree glide slope in suitable simulated meteorological conditions. For circling approaches, all tests below apply both to the runway used for the initial approach and to the runway of intended landing.*
2.c.1	Runway definition, strobe lights, approach lights, and runway edge white lights from 8 km (5 sm) of the runway threshold.
2.c.2	**Visual approach aids lights.**
2.c.2.a	Reserved
2.c.2.b	Visual approach aids lights from 4.8 km (3 sm) of the runway threshold.
2.c.3	Runway center line lights and taxiway definition from 4.8 km (3 sm).
2.c.4	Threshold lights and touchdown zone lights from 3.2 km (2 sm).
2.c.5	Reserved
2.c.6	For circling approaches, the runway of intended landing and associated lighting should fade into view in a non-distracting manner.
2.d	**Selectable airport visual scene capability for:**
2.d.1	Night.
2.d.2	Twilight.
2.d.3	Day.
2.d.4	Dynamic effects — the capability to present multiple ground and air hazards such as another airplane crossing the active runway or converging airborne traffic; hazards should be selectable via controls at the instructor station.

Table B3B

Functions And Subjective Tests		
QPS REQUIREMENTS		
Entry Number	For Qualification at Level 7 FTD Class I Airport Models	

2.d.5	Reserved
2.e	**Correlation with airplane and associated equipment.**
2.e.1	Visual cues to relate to actual airplane responses.
2.e.2	**Visual cues during take-off, approach and landing.**
2.e.2.a	Visual cues to assess sink rate and depth perception during landings.
2.e.2.b	Reserved
2.e.3	Accurate portrayal of environment relating to airplane attitudes.
2.e.4	The visual scene should correlate with integrated airplane systems, where fitted (e.g. terrain, traffic and weather avoidance systems and HUD/EFVS).
2.e.5	Reserved
2.f	**Scene quality.**
2.f.1	**Quantization.**
2.f.1.a	Surfaces and textural cues should be free from apparent quantization (aliasing).
2.f.1.b	Reserved
2.f.2	System capable of portraying full color realistic textural cues.
2.f.3	The system light points should be free from distracting jitter, smearing or streaking.
2.f.4	Reserved
2.f.5	System capable of providing light point perspective growth.
2.g	**Environmental effects.**
2.g.1	Reserved
2.g.2	Reserved
2.g.3	Reserved
2.g.4	Reserved
2.g.5	Reserved
2.g.6	Reserved
2.g.7	Visibility and RVR measured in terms of distance. Visibility/RVR should be checked at and below a height of 600 m (2 000 ft) above the airport and within a radius of 16 km (10 sm) from the airport.
2.g.8	Reserved
2.g.9	Reserved
2.g.10	Reserved
2.g.11	Reserved
	End QPS Requirement

	Begin Information
3.	An example of being able to "combine two airport models to achieve two "in-use" runways: One runway designated as the "in use" runway in the first model of the airport, and the second runway designated as the "in use" runway in the second model of the same airport. For example, the clearance is for the ILS approach to Runway 27, Circle to Land on Runway 18 right. Two airport visual models might be used: the first with Runway 27 designated as the "in use" runway for the approach to runway 27, and the second with Runway 18 Right designated as the "in use" runway. When the pilot breaks off the ILS approach to runway 27, the instructor may change to the second airport visual model in which runway 18 Right is designated as the "in use" runway, and the pilot would make a

Table B3B

Functions And Subjective Tests		
QPS REQUIREMENTS		
Entry Number	**For Qualification at Level 7 FTD** **Class I Airport Models**	
	visual approach and landing. This process is acceptable to the FAA as long as the temporary interruption due to the visual model change is not distracting to the pilot, does not cause changes in navigational radio frequencies, and does not cause undue instructor/evaluator time.	
4.	Sponsors are not required to provide every detail of a runway, but the detail that is provided should be correct within the capabilities of the system. **End Information**	

Table B3C

Functions and Subjective Tests					
QPS REQUIREMENTS					
Entry Number	**Sound System**	**FTD Level**			
		4	**5**	**6**	**7**
The following checks are performed during a normal flight profile.					
1.	Precipitation.				**X**
2.	Reserved				
3.	Significant airplane noises perceptible to the pilot during normal operations.			**X**	**X**
4.	Abnormal operations for which there are associated sound cues including, engine malfunctions, landing gear/tire malfunctions, tail and engine pod strike and pressurization malfunction.				**X**
5.	Sound of a crash when the flight simulator is landed in excess of limitations.				**X**

Table B3D

Functions and Subjective Tests					
QPS REQUIREMENTS					
Entry Number	Special Effects	FTD Level			
		4	5	6	7
This table specifies the minimum special effects necessary for the specified simulator level.					
1.	**Braking Dynamics:** Representations of the dynamics of brake failure (flight simulator pitch, side-loading, and directional control characteristics representative of the airplane), including antiskid and decreased brake efficiency due to high brake temperatures (based on airplane related data), sufficient to enable pilot identification of the problem and implementation of appropriate procedures.				X
2.	**Effects of Airframe and Engine Icing:** **Required only for those airplanes authorized for operations in known icing conditions.** Procedure: With the simulator airborne, in a clean configuration, nominal altitude and cruise airspeed, autopilot on and auto-throttles off, engine and airfoil anti-ice/de-ice systems deactivated; activate icing conditions at a rate that allows monitoring of simulator and systems response. Icing recognition will include an increase in gross weight, airspeed decay, change in simulator pitch attitude, change in engine performance indications (other than due to airspeed changes), and change in data from pitot/static system. Activate heating, anti-ice, or de-ice systems independently. Recognition will include proper effects of these systems, eventually returning the simulated airplane to normal flight.				X

Table B3E

Functions and Subjective Tests QPS REQUIREMENTS					
Entry Number	Instructor Operating Station (IOS) (As appropriate)	FTD Level			
		4	5	6	7
	Functions in this table are subject to evaluation only if appropriate for the airplane and/or the system is installed on the specific simulator.				
1.	**Simulator Power Switch(es)**		X	X	X
2.	**Airplane conditions.**				
2.a.	Gross weight, center of gravity, fuel loading and allocation			X	X
2.b.	Airplane systems status.			X	X
2.c.	Ground crew functions (e.g., ext. power, push back)			X	X
3.	**Airports.**				
3.a.	Number and selection.			X	X
3.b.	Runway selection.			X	X
3.c.	Runway surface condition (e.g., rough, smooth, icy, wet)			X	X
3.d.	Preset positions (e.g., ramp, gate, #1 for takeoff, takeoff position, over FAF)		X	X	X
3.e.	Lighting controls.				X
4.	**Environmental controls.**				
4.a	Visibility (statute miles (kilometers)).				X
4.b.	Runway visual range (in feet (meters)).				X
4.c.	Temperature.			X	X
4.d.	Climate conditions (e.g., ice, snow, rain).			X	X
4.e.	Wind speed and direction.			X	X
4.f.	Windshear.				X
4.g.	Clouds (base and tops).				X
5.	**Airplane system malfunctions** (Inserting and deleting malfunctions into the simulator).		X	X	X
6.	**Locks, Freezes, and Repositioning.**				
6.a.	Problem (all) freeze / release.			X	X
6.b.	Position (geographic) freeze / release.			X	X
6.c.	Repositioning (locations, freezes, and releases).			X	X
6.d.	Ground speed control.			X	X
7.	Remote IOS. (if installed)			X	X
8.	**Sound Controls.** On / off / adjustment			X	X
9.	**Control Loading System.**				
9.a.	**On / off / emergency stop.**			X	X
10.	**Observer Seats / Stations.** Position / Adjustment			X	X

Attachment 4 to Appendix B to Part 60—Sample Documents

Begin Information

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Title of Sample

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Figure B4G—Sample Statement of Qualification—List of Qualified Tasks
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Attachment 4 to Appendix B to Part 60—
Figure B4A – Sample Letter, Request for Initial, Upgrade, or Reinstatement Evaluation.
INFORMATION

Date _____

Edward D. Cook, Ph.D.
Manager, National Simulator Program
Federal Aviation Administration
100 Hartsfield Centre Parkway. Suite 400
Atlanta, GA 30354

Dear Dr. Cook:

RE: Request for Initial/Upgrade Evaluation Date

This is to advise you of our intent to request an (initial or upgrade) evaluation of our (FTD Manufacturer), (Aircraft Type/Level) Flight Training Device (FTD), (FAA ID Number, if previously qualified), located in (City, State) at the (Facility) on (Proposed Evaluation Date). (The proposed evaluation date shall not be more than 180 days following the date of this letter.) The FTD will be sponsored by (Name of Training Center/Air Carrier), FAA Designator (4 Letter Code). The FTD will be sponsored as follows; (Select One)

☐ The FTD will be used within the sponsor's FAA approved training program and placed on the sponsor's Training/Operations Specifications.

☐ The FTD will be used for dry lease only.

We agree to provide the formal request for the evaluation to your staff as follows: (check one)

☐ For QTG tests run at the factory, not later, than 45 days prior to the proposed evaluation date with the additional "l/3 on-site" tests provided not later than 14 days prior to the proposed evaluation date.

☐ For QTG tests run on-site, not later than 30 days prior to the proposed evaluation date.

We understand that the formal request will contain the following documents:

4. Sponsor's Letter of Request (*Company Compliance Letter*).
5. Principal Operations Inspector (POI) or Training Center Program Manager's (TCPM) endorsement.
6. Complete QTG.

If we are unable to meet the above requirements, we understand this may result in a significant delay, perhaps 45 days or more, in rescheduling and completing the evaluation.

(The sponsor should add additional comments as necessary).

Please contact (Name Telephone and Fax Number of Sponsor's Contact) to confirm the date for this initial evaluation. We understand a member of your National Simulator Program staff will respond to this request within 14 days.

A copy of this letter of intent has been provided to (Name), the Principal Operations Inspector (POI) and/or Training Center Program Manager (TCPM).

Sincerely,

Attachment: FTD Information and Characteristics Form
cc: POI/TCPM

Attachment 4 to Appendix B to Part 60—
Figure B4B – Sample Letter , Request for Initial, Upgrade, or Reinstatement Evaluation
Attachment: FSTD Information Form
INFORMATION

Date: ____			
Section 1. FSTD Information and Characteristics			
Sponsor Name:	____	**FSTD Location:**	
Address:	____ ____	**Physical Address:**	____ ____
City:	____	**City:**	____
State:	____	**State:**	____
Country:	____	**Country:**	____
ZIP:	____	**ZIP:**	____
Manager	____		
Sponsor ID No: (Four Letter FAA Designator)	____	**Nearest Airport:** (Airport Designator)	____
Type of Evaluation Requested:	☐ **Initial** ☐ **Upgrade** ☐ **Continuing Qualification** ☐ **Special** ☐ **Reinstatement**		
Aircraft Make/model/series:	____		
Initial Qualification: (If Applicable)	**Date:** ____ **Level** ____ MM/DD/YYYY	**Manufacturer's Identification or Serial Number**	____
Upgrade Qualification: (If Applicable)	**Date:** ____ **Level** ____ MM/DD/YYYY	☐ **eMQTG**	
Qualification Basis: ____	☐ **A** ☐ **6**	☐ **B** ☐ **7**	☐ **Interim C** ☐ **Provisional Status** ☐ **C** ☐ **D**
Other Technical Information:			
FAA FSTD ID No: (If Applicable)	____	**FSTD Manufacturer:**	____
Convertible FSTD:	☐ **Yes:**	**Date of Manufacture:**	____ MM/DD/YYYY
Related FAA ID No. (If Applicable)	____ ____ ____	**Sponsor FSTD ID No:** ____	
Engine model(s) and data revision: ____		**Source of aerodynamic model:** ____	
FMS identification and revision level: ____		**Source of aerodynamic coefficient data:** ____	
Visual system manufacturer/model: ____		**Aerodynamic data revision number:** ____	
Flight control data revision: ____		**Visual system display:** ____	
Mot ion system manufacturer/type: ____		**FSTD computer(s) identification:** ____	
National Aviation Authority (NAA): (If Applicable)	____		
NAA FSTD ID No:	____	**Last NAA Evaluation Date:**	____
NAA Qualification Level:	____		
NAA Qualification Basis:	____		
Visual System Manufacturer and Type:	____	**FSTD Seats Available:** ____ ____	**Motion System Manufacturer and Type:** ____ :

Attachment 4 to Appendix B to Part 60—
Figure B4B – Sample Letter , Request for Initial, Upgrade, or Reinstatement Evaluation
Attachment: FSTD Information Form
INFORMATION

Aircraft Equipment:	Engine Type(s):	Flight Instrumentation:	Engine Instrumentation:
	____ ____	☐ EFIS ☐ HUD ☐ HGS ☐ EFVS ☐ TCAS ☐ GPWS ☐ Plain View ☐ GPS ☐ FMS Type: ___ ☐ WX Radar ☐ Other: ___	☐ EICAS ☐ FADEC ☐ Other: ___

Airport Models:	3.6.1 _____ Airport Designator	3.6.2_____ Airport Designator	3.6.3 _____ Airport Designator
Circle to Land:	3. 7.1 _____ Airport Designator	3. 7.2_____ Approach	3. 7.3 _____ Landing Runway
Visual Ground Segment	3.8.1 _____ Airport Designator	3.8 .2_____ Approach	3. 8.3 _____ Landing Runway

Section 2. Supplementary Information			
FAA Training Program Approval Authority:		☐ POI ☐ TCPM ☐ Other:	
Name:	_____	**Office:**	_____
Tel:	_____	**Fax:**	_____
Email:	_____		
FSTD Scheduling Person:			
Name:	_____		
Address 1:	_____	**Address 2**	_____
City:	_____	**State:**	_____
ZIP:	_____	**Email:**	_____
Tel:	_____	**Fax:**	_____
FSTD Technical Contact:			
Name:	_____		
Address 1:	_____	**Address 2**	_____
City:	_____	**State:**	_____
ZIP:	_____	**Email:**	_____
Tel:	_____	**Fax:**	_____

Section 3. Training, Testing and Checking Considerations		
Area/Function/Maneuver	**Requested**	**Remarks**
Private Pilot - Training / Checks: (142)	☐	_____
Commercial Pilot - Training /Checks:(142)	☐	_____
Multi-Engine Rating - Training / Checks (142)	☐	_____
Instrument Rating -Training / Checks (142)	☐	_____
Type Rating - Training / Checks (135/121/142)	☐	_____
Proficiency Checks (135/121/142)	☐	_____

Attachment 4 to Appendix B to Part 60—
Figure B4B – Sample Letter , Request for Initial, Upgrade, or Reinstatement Evaluation
Attachment: FSTD Information Form
INFORMATION

CAT I: (RVR 2400/1800 ft. DH200 ft)	☐	_____
CAT II: (RVR 1200 ft. DH 100 ft)	☐	_____
CAT III * (lowest minimum) _____ RVR _____ ft. * State CAT III (≤ 700 ft.), CAT IIIb (≤ 150 ft.), or CAT IIIc (0 ft.)	☐	_____
Circling Approach	☐	_____
Windshear Training:	☐	_____
Windshear Training IAW 121.409(d) (121 Turbojets Only)	☐	_____
Generic Unusual Attitudes and Recoveries within the Normal Flight Envelope	☐	_____
Specific Unusual Attitudes Recoveries	☐	_____
Auto-coupled Approach/Auto Go Around	☐	_____
Auto-land / Roll Out Guidance	☐	_____
TCAS/ACAS I / II	☐	_____
WX-Radar	☐	_____
HUD	☐	_____
HGS	☐	_____
EFVS	☐	_____
Future Air Navigation Systems	☐	_____
GPWS / EGPWS	☐	_____
ETOPS Capability	☐	_____
GPS	☐	_____
SMGCS	☐	_____
Helicopter Slope Landings	☐	_____
Helicopter External Load Operations	☐	_____
Helicopter Pinnacle Approach to Landings	☐	_____
Helicopter Night Vision Maneuvers	☐	_____
Helicopter Category A Takeoffs	☐	_____

Attachment 4 to Appendix B to Part 60—
Figure B4C – Sample Letter of Compliance
INFORMATION

(Date)

Mr. (Name of Training Program Approval Authority):
(Name of FAA FSDO)
(Address)
(City/State/Zip)

Dear Mr. (Name of TPAA):

RE: Letter of Compliance

(Operator Sponsor Name) requests evaluation of our (Aircraft Type) FTD for Level (__) qualification. The (FTD Manufacturer Name) FTD with (Visual System Manufacturer Name/Model) system is fully defined on the FTD Information page of the accompanying Qualification Test Guide (QTG). We have completed the tests of the FTD and certify that it meets all applicable requirements of FAR parts 121, 125, or 135), and the guidance of (AC 120-40B or 14 CFR Part 60). Appropriate hardware and software configuration control procedures have been established. Our Pilot(s), (Name(s)), who are qualified on (Aircraft Type) aircraft have assessed the FTD and have found that it conforms to the (Operator/Sponsor) (Aircraft Type) flight deck configuration and that the simulated systems and subsystems function equivalently to those in the aircraft. The above named pilot(s) have also assessed the performance and the flying qualities of the FTD and find that it represents the respective aircraft.

(Added Comments may be placed here)

Sincerely,
(Sponsor Representative)

cc:
FAA, National Simulator Program

Attachment 4 to Appendix B to Part 60—
Figure B4D – Sample Qualification Test Guide Cover Page
INFORMATION

SPONSOR NAME

SPONSOR ADDRESS

FAA QUALIFICATION TEST GUIDE

(SPECIFIC AIRPLANE MODEL)
for example
Stratos BA797-320A

(Type of FTD)

(FTD Identification Including Manufacturer, Serial Number, Visual System Used)

(FTD Level)

(Qualification Performance Standard Used)

(FTD Location)

FAA Initial Evaluation

Date: _____

_____ Date: _____
(Sponsor)

_____ Date: _____
Manager, National
Simulator Program, FAA

Attachment 4 to Appendix B to Part 60—
Figure B4E – Sample Statement of Qualification - Certificate
INFORMATION

Federal Aviation Administration
National Simulator Program

Certificate of Qualification

This is to certify that representatives of the National Simulator Program Completed an evaluation of the

Go-Fast Airlines
Farnsworth Z-100 Flight Training Device

FAA Identification Number 998

And pursuant to 14 CFR Part 60 found it to meet its original qualification basis, AC 120-45A (MM/DD/YY)

The Master Qualification Test Guide and the attached Configuration List and Restrictions List Provide the Qualification Basis for this device to operate at

Level 6

Until March 31, 2010

Unless sooner rescinded or extended by the National Simulator Program Manager

February 15, *2009* (date)

B. Williamson (for the NSPM)

Attachment 4 to Appendix B to Part 60—
Figure B4F – Sample Statement of Qualification; Configuration List
INFORMATION

CERTIFICATE OF QUALIFICATION
CONFIGURATION LIST

Date: _____			
Section 1. FSTD Information and Characteristics			
Sponsor Name:	_____	**FSTD Location:**	
Address:	_____ _____	**Physical Address:**	_____ _____
City:	_____	**City:**	_____
State:	_____	**State:**	_____
Country:	_____	**Country:**	_____
ZIP:	_____	**ZIP:**	_____
Manager	_____		
Sponsor ID No: (Four Letter FAA Designator)	_____	**Nearest Airport:** (Airport Designator)	_____
Type of Evaluation Requested:	☐ **Initial** ☐ **Upgrade** ☐ **Continuing Qualification** ☐ **Special** ☐ **Reinstatement**		
Aircraft Make/model/series:	_____		
Initial Qualification: (If Applicable)	**Date:** _____ **Level** _____ MM/DD/YYYY	**Manufacturer's Identification or Serial Number**	_____
Upgrade Qualification: (If Applicable)	**Date:** _____ **Level** _____ MM/DD/YYYY	☐ **eMQTG**	
Qualification Basis:_____	☐ **A** ☐ **B** ☐ **Interim C** ☐ **C** ☐ **D** ☐ **6** ☐ **7** ☐ **Provisional Status**		
Other Technical Information:			
FAA FSTD ID No: (If Applicable)	_____	**FSTD Manufacturer:**	_____
Convertible FSTD:	☐ **Yes:**	**Date of Manufacture:**	_____ MM/DD/YYYY
Related FAA ID No. (If Applicable)	_____ _____ _____	**Sponsor FSTD ID No:**	_____
Engine model(s) and data revision: _____		**Source of aerodynamic model:** _____	
FMS identification and revision level: _____		**Source of aerodynamic coefficient data:** _____	
Visual system manufacturer/model: _____		**Aerodynamic data revision number:** _____	
Flight control data revision: _____		**Visual system display:** _____	
Mot ion system manufacturer/type: _____		**FSTD computer(s) identification:** _____	
National Aviation Authority (NAA): (If Applicable)	_____		
NAA FSTD ID No:	_____	**Last NAA Evaluation Date:**	_____
NAA Qualification Level:	_____		
NAA Qualification Basis:	_____		

Attachment 4 to Appendix B to Part 60—
Figure B4F – Sample Statement of Qualification; Configuration List

INFORMATION

Visual System Manufacturer and Type:	_____	**FSTD Seats Available:** ___	**Motion System Manufacturer and Type:**	_____:

Aircraft Equipment:	**Engine Type(s):** ____ ____	**Flight Instrumentation:** ☐ EFIS ☐ HUD ☐ HGS ☐ EFVS ☐ TCAS ☐ GPWS ☐ Plain View ☐ GPS ☐ FMS Type: ___ ☐ WX Radar ☐ Other: ___	**Engine Instrumentation:** ☐ EICAS ☐ FADEC ☐ Other: ___

Airport Models:	3.6.1 _____ Airport Designator	3.6.2_____ Airport Designator	3.6.3 _____ Airport Designator
Circle to Land:	3. 7.1 _____ Airport Designator	3. 7.2_____ Approach	3. 7.3 _____ Landing Runway
Visual Ground Segment	3.8.1 _____ Airport Designator	3.8 .2_____ Approach	3. 8.3 _____ Landing Runway

Section 2. Supplementary Information

FAA Training Program Approval Authority:		☐ **POI** ☐ **TCPM** ☐ **Other**: _____	
Name:	_____	**Office:**	_____
Tel:	_____	**Fax:**	_____
Email:	_____		

FSTD Scheduling Person:			
Name:	_____		
Address 1:	_____	**Address 2**	_____
City:	_____	**State:**	_____
ZIP:	_____	**Email:**	_____
Tel:	_____	**Fax:**	_____

FSTD Technical Contact:			
Name:	_____		
Address 1:	_____	**Address 2**	_____
City:	_____	**State:**	_____
ZIP:	_____	**Email:**	_____
Tel:	_____	**Fax:**	_____

Section 3. Training, Testing and Checking Considerations

Area/Function/Maneuver	Requested	Remarks
Private Pilot - Training / Checks: (142)	☐	_____
Commercial Pilot - Training /Checks:(142)	☐	_____
Multi-Engine Rating - Training / Checks (142)	☐	_____

Attachment 4 to Appendix B to Part 60—
Figure B4F – Sample Statement of Qualification; Configuration List

INFORMATION

Instrument Rating -Training / Checks (142)	☐	_____
Type Rating - Training / Checks (135/121/142)	☐	_____
Proficiency Checks (135/121/142)	☐	_____
CAT I: (RVR 2400/1800 ft. DH200 ft)	☐	_____
CAT II: (RVR 1200 ft. DH 100 ft)	☐	_____
CAT III * (lowest minimum) _____ RVR _____ ft. * State CAT III (≤ 700 ft.), CAT IIIb (≤ 150 ft.), or CAT IIIc (0 ft.)	☐	_____
Circling Approach	☐	_____
Windshear Training:	☐	_____
Windshear Training IAW 121.409(d) (121 Turbojets Only)	☐	_____
Generic Unusual Attitudes and Recoveries within the Normal Flight Envelope	☐	_____
Specific Unusual Attitudes Recoveries	☐	_____
Auto-coupled Approach/Auto Go Around	☐	_____
Auto-land / Roll Out Guidance	☐	_____
TCAS/ACAS I / II	☐	_____
WX-Radar	☐	_____
HUD	☐	_____
HGS	☐	_____
EFVS	☐	_____
Future Air Navigation Systems	☐	_____
GPWS / EGPWS	☐	_____
ETOPS Capability	☐	_____
GPS	☐	_____
SMGCS	☐	_____
Helicopter Slope Landings	☐	_____
Helicopter External Load Operations	☐	_____
Helicopter Pinnacle Approach to Landings	☐	_____
Helicopter Night Vision Maneuvers	☐	_____
Helicopter Category A Takeoffs	☐	_____

Attachment 4 to Appendix B to Part 60—
Figure B4G – Sample Statement of Qualification;– List of Qualified Tasks
INFORMATION

CERTIFICATE OF QUALIFICATION
List of Qualified Tasks

Go Fast Airline Training -- Farnsworth Z-100 -- Level D -- FAA ID# 999

The FTD is qualified to perform all of the tasks listed in Appendix 1, Table B1B for its assigned level of qualification *except* for the following listed tasks.

Qualified for all tasks in Table B1B, for which the sponsor has requested qualification, except for the following:	
4.e.	Circling Approach
6. (a)	Emergency Descent (maximum rate)
6. (b)	Inflight Fire and Smoke Removal
6. (c)	Rapid Decompression
6. (d)	Emergency Evacuation

Additional tasks for which this FTD is qualified (i.e., in addition to the list in Table B1B):
NONE

Attachment 4 to Appendix B to Part 60—
Figure B4H – Sample Continuing Qualification Evaluation Requirements Page
INFORMATION

Continuing qualification Evaluation Requirements ***Completed at conclusion of Initial Evaluation***	
Continuing qualification Evaluations to be conducted each _(fill in)__ months Allotting _____ hours of FTD time. Signed: _____ NSPM / Evaluation Team Leader	Continuing qualification evaluations are due as follows: _(month)__ and __(month)_ and __(month)_ (enter or strike out, as appropriate) _____ Date

Revision: Based on (enter reasoning):	
Continuing qualification Evaluations are to be conducted each _(fill in)__ months. Allotting _____ hours. Signed: _____ NSPM / Evaluation Team Leader	Continuing qualification evaluations are due as follows: _(month)__ and __(month)_ and __(month)_ (enter or strike out, as appropriate) _____ Date

Revision: Based on (enter reasoning):	
Continuing qualification Evaluations are to be conducted each _(fill in)__ months. Allotting _____ hours. Signed: _____ NSPM / Evaluation Team Leader	Continuing qualification evaluations are due as follows: _(month)__ and __(month)_ and __(month)_ (enter or strike out, as appropriate) _____ Date

(Repeat as Necessary)

Index of Effective FSTD Directives Filed in this Section			
Number	**Effective Date**	**Date of Notification**	**Details**

Continue as Necessary....

Issued under authority provided by 49 U.S.C. 106(f), 44701(a), 44703, and Pub. L. 111–216, 124 Stat. 2348 (49 U.S.C. 44701 note) in Washington, DC, on June 24, 2014.

John Barbagallo,

Acting Deputy Director, Flight Standards Service.

[FR Doc. 2014–15432 Filed 7–9–14; 8:45 am]

BILLING CODE 4910–13–P



FEDERAL REGISTER

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Part III

Department of the Interior

Fish and Wildlife Service

50 CFR Part 17

Endangered and Threatened Wildlife and Plants; Designation of Critical Habitat for the Northwest Atlantic Ocean Distinct Population Segment of the Loggerhead Sea Turtle; Final Rule

DEPARTMENT OF THE INTERIOR

Fish and Wildlife Service

50 CFR Part 17

[Docket No. FWS–R4–ES–2012–0103; 4500030114]

RIN 1018–AY71

Endangered and Threatened Wildlife and Plants; Designation of Critical Habitat for the Northwest Atlantic Ocean Distinct Population Segment of the Loggerhead Sea Turtle

AGENCY: Fish and Wildlife Service, Interior.

ACTION: Final rule.

SUMMARY: We, the U.S. Fish and Wildlife Service, designate specific areas in the terrestrial environment of the U.S. Atlantic and Gulf of Mexico coasts as critical habitat for the Northwest Atlantic Ocean distinct population segment of the loggerhead sea turtle (*Caretta caretta*) under the Endangered Species Act of 1973, as amended. In total, approximately 1,102 kilometers (685 miles) fall within the boundaries of the critical habitat designation.

DATES: This rule is effective on August 11, 2014.

ADDRESSES: This final rule and the associated final economic analysis are available on the Internet at *http://www.regulations.gov* and *http://www.fws.gov/northflorida.* Comments and materials we received, as well as supporting documentation we used in preparing this rule, are available for public inspection at *http://www.regulations.gov.* All of the comments, materials, and documentation that we considered in this rulemaking are available by appointment, during normal business hours at: U.S. Fish and Wildlife Service, North Florida Ecological Services Office (see **FOR FURTHER INFORMATION CONTACT**).

The coordinates, plot points, or both from which the maps are generated are included in the administrative record for this critical habitat designation and are available at *http://www.fws.gov/northflorida,* at *http://www.regulations.gov* at Docket No. FWS–R4–ES–2012–0103, and at the North Florida Ecological Services Office (see **FOR FURTHER INFORMATION CONTACT**). Any additional tools or supporting information that we developed for this critical habitat designation will also be available at the Fish and Wildlife Service Web site and Field Office listed above, and may also be included in the preamble of this rule and at *http://www.regulations.gov.*

FOR FURTHER INFORMATION CONTACT: For general information about this rule, and information about the final designation in northeastern Florida, contact Jay B. Herrington, Field Supervisor, U.S. Fish and Wildlife Service, North Florida Ecological Services Office, 7915 Baymeadows Way, Suite 200, Jacksonville, FL 32256; telephone 904–731–3336; facsimile 904–731–3045. If you use a telecommunications device for the deaf (TDD), call the Federal Information Relay Service (FIRS) at 800–877–8339.

For information about the final designation in Alabama, contact Bill Pearson, Field Supervisor, U.S. Fish and Wildlife Service, Alabama Ecological Services Field Office, 1208 Main Street, Daphne, AL 36526; telephone 251–441–5181; facsimile 251–441–6222.

For information about the final designation in southern Florida, contact Craig Aubrey, Field Supervisor, U.S. Fish and Wildlife Service, South Florida Ecological Services Field Office, 1339 20th Street, Vero Beach, FL 32960; telephone 772–469–4309; facsimile 772–562–4288.

For information about the final designation in northwestern Florida, contact Catherine Philips, Acting Field Supervisor, U.S. Fish and Wildlife Service, Panama City Ecological Services Field Office, 1601 Balboa Avenue, Panama City, FL 32405; telephone 850–769–0552; facsimile 850–763–2177.

For information about the final designation in Georgia, contact Don Imm, Field Supervisor, U.S. Fish and Wildlife Service, Coastal Georgia Ecological Services Field Office, 4980 Wildlife Drive NE., Townsend, GA 31331; telephone 912–832–8739; facsimile 912–832–8744.

For information about the final designation in Mississippi, contact Stephen Ricks, Field Supervisor, U.S. Fish and Wildlife Service, Mississippi Ecological Services Field Office, 6578 Dogwood View Parkway, Suite A, Jackson, MS 39123; telephone 601–965–4900; facsimile 601–965–4340.

For information about the final designation in North Carolina, contact Pete Benjamin, Field Supervisor, U.S. Fish and Wildlife Service, Raleigh Ecological Services Field Office, Post Office Box 33726, Raleigh, NC 33726; telephone 919–856–4520; facsimile 919–856–4556.

For information about the final designation in South Carolina, contact Thomas McCoy, Acting Field Supervisor, U.S. Fish and Wildlife Service, South Carolina Ecological Services Field Office, 176 Croghan Spur Road, Suite 200, Charleston, SC 29407; telephone 843–727–4707; facsimile 843–727–4218.

SUPPLEMENTARY INFORMATION:

Executive Summary

Why we need to publish a rule. Under the Endangered Species Act (Act), when we determine that a species is endangered or threatened, we are required to designate critical habitat, to the maximum extent prudent and determinable. Designations of critical habitat can only be completed by issuing a rule. The U.S. Fish and Wildlife Service (USFWS or Service) and the National Marine Fisheries Service (NMFS) listed the Northwest Atlantic Ocean distinct population segment (DPS) of the loggerhead sea turtle as threatened on September 22, 2011 (76 FR 58868). The USFWS and NMFS share jurisdiction under the Act for the protection and conservation of sea turtles, including the loggerhead. USFWS has jurisdiction over sea turtles on the land; NMFS has jurisdiction over sea turtles in the water.

This rule consists of: A final rule designating areas in the terrestrial environment as critical habitat for the Northwest Atlantic Ocean DPS of the loggerhead sea turtle. NMFS will be designating areas in the marine environment as critical habitat for the DPS and, consistent with their distinct authority with respect to such areas, will designate such areas in a separate rulemaking. In this rule, ''critical habitat'' refers to the areas we are designating in the DPS's terrestrial environment unless otherwise specified.

The areas we are designating in this rule constitute our current best assessment of the areas that meet the definition of critical habitat for the Northwest Atlantic Ocean DPS of the loggerhead sea turtle. We are designating:

- In total, approximately 1,102 kilometers (km) (685 miles (mi)) of loggerhead sea turtle nesting beaches as critical habitat in the States of North Carolina, South Carolina, Georgia, Florida, Alabama, and Mississippi. These beaches account for 45 percent of an estimated 2,464 km (1,531 mi) of coastal beach shoreline and approximately 84 percent of the documented nesting (numbers of nests) within these six States. The critical habitat is located in Brunswick, Carteret, New Hanover, Onslow, and Pender Counties, North Carolina; Beaufort, Charleston, Colleton, and Georgetown Counties, South Carolina; Camden, Chatham, Liberty, and

McIntosh Counties, Georgia; Bay, Brevard, Broward, Charlotte, Collier, Duval, Escambia, Flagler, Franklin, Gulf, Indian River, Lee, Manatee, Martin, Monroe, Palm Beach, Sarasota, St. Johns, St. Lucie, and Volusia Counties, Florida; Baldwin County, Alabama; and Jackson County, Mississippi.

• We are exempting the following Department of Defense (DOD) installations from critical habitat designation because their integrated natural resources management plans (INRMPs) incorporate measures that provide a benefit for the loggerhead sea turtle: Marine Corps Base Camp Lejeune (Onslow Beach), North Carolina, and Cape Canaveral Air Force Station, Patrick Air Force Base, and Eglin Air Force Base (Cape San Blas), Florida.

• Under section 4(b)(2) of the Act, we are excluding from critical habitat designation areas in St. Johns, Volusia, and Indian River Counties, Florida, that are covered under a habitat conservation plan (HCP), because the Secretary finds that the benefits of excluding these areas outweigh the benefits of including them in the critical habitat designation.

• We are not excluding any additional areas from critical habitat based on economic, national security, or other relevant impacts.

We have prepared an economic analysis of the designation of critical habitat. In order to consider economic impacts under 4(b)(2) of the Act, we prepared an economic analysis of the critical habitat designations and related factors. We announced the availability of the draft economic analysis (DEA) in the **Federal Register** on July 18, 2013 (78 FR 42921), and sought comments from the public. We have incorporated the comments and have completed the final economic analysis (FEA) concurrently with this final determination.

Peer review and public comment. We sought comments from four independent specialists to ensure that our designation is based on scientifically sound data and analyses. We requested opinions from these four knowledgeable individuals on our technical assumptions, analysis, and whether or not we had used the best available information. We received responses from three of the peer reviewers. These peer reviewers concurred with our methods and conclusions, and provided additional information, clarifications and suggestions to improve this final rule. Information we received from peer review is incorporated in this final designation. We also considered all comments and information received from the public during the two comment periods and three public hearings.

Previous Federal Actions

Please refer to the final rule revising the loggerhead sea turtle's listing from a single worldwide threatened species to nine DPSs, published in the **Federal Register** on September 22, 2011 (76 FR 58868), for a detailed description of previous Federal actions concerning this species and protection under the Act.

Summary of Comments and Recommendations

We requested written comments from the public on the proposed designation of critical habitat for the Northwest Atlantic Ocean DPS of the loggerhead sea turtle during two comment periods. The first comment period opened with the publication of the proposed rule on March 25, 2013 (78 FR 17999), and closed on May 24, 2013. The second comment period, during which we requested comments on the proposed critical habitat designation and associated draft economic analysis (DEA), opened on July 18, 2013 (78 FR 42921), and closed on September 16, 2013. We held three public hearings in August 2013: Wilmington, North Carolina; Morehead City, North Carolina; and Charleston, South Carolina. We also contacted appropriate Federal, State, county, and local agencies; scientific organizations; and other interested parties and invited them to comment on the proposed rule and the DEA during these comment periods.

During the first comment period, we received 19,969 comment letters addressing the proposed critical habitat designation. The majority of these comments were form letters and letters with multiple signatures. During the second comment period, we received 2,206 comment letters addressing the proposed critical habitat designation, the DEA, or both. The majority of these comments were also form letters and letters with multiple signatures. Comments on the proposed critical habitat rule were also submitted to NMFS during the comment period for its proposed designation of critical habitat in the marine environment for the Northwest Atlantic Ocean DPS. During the three public hearings held on August 6, 7, and 8, 2013, 47 individuals or organizations made comments on the proposed designation or DEA. Comments received were grouped into general issues specifically relating to the proposed designation. These and other substantive information are addressed in the following summary and incorporated into the final rule as appropriate.

Peer Reviewer Comments

In accordance with our peer review policy published on July 1, 1994 (59 FR 34270), we solicited expert opinion from four knowledgeable individuals with scientific expertise that included familiarity with the loggerhead sea turtle and its terrestrial habitat, biological needs, and threats. We received responses from three of the peer reviewers.

We reviewed all comments we received from the peer reviewers for substantive issues and new information regarding the proposed designation. The peer reviewers generally concurred with our methods and conclusions, and provided additional information, clarifications, and suggestions to improve this final critical habitat rule. Peer reviewer comments are addressed in the following summary and incorporated into the final rule as appropriate.

(1) *Comment:* One peer reviewer commented on the justification for our proposed exemption of military installations and exclusion of areas with existing habitat conservation plans (HCPs), emphasizing the importance of all areas to the recovery of the species.

Our Response: The USFWS acknowledges that all nesting beaches support the conservation and recovery of the species. All areas including military installations and areas with existing HCPs were evaluated according to the selection criteria. Section 4(a)(3)(B)(i) of the Act (16 U.S.C. 1533(a)(3)(B)(i)) was amended in 2004 through the National Defense Authorization Act of 2004 (Pub. L. 108–136) to provide that: ''The Secretary shall not designate as critical habitat any lands or other geographic areas owned or controlled by the Department of Defense, or designated for its use, that are subject to an integrated natural resources management plan prepared under section 101 of the Sikes Act (16 U.S.C. 670a), if the Secretary determines in writing that such plan provides a benefit to the species for which critical habitat is proposed for designation.''

The USFWS analyzed the INRMPs developed by military installations located within the range of the proposed critical habitat designation for the loggerhead sea turtle to determine if they would meet the exemption criteria under section 4(a)(3) of the Act. Marine Corps Base Camp Lejeune, Cape Canaveral Air Force Station, Patrick Air Force Base, and Eglin Air Force Base are DOD lands with completed INRMPs that provide benefits to the loggerhead sea

turtle. Accordingly, we are exempting those areas from the designation.

Regarding areas with existing HCPs, per section 4(b)(2) of the Act the Secretary may exclude an area from critical habitat if she determines that the benefits of such exclusion outweigh the benefits of specifying such area as part of the critical habitat, unless she determines, based on the best scientific data available, that the failure to designate such area as critical habitat will result in the extinction of the species. In making that determination, the statute, as well as the legislative history is clear that the Secretary has broad discretion regarding which factor(s) to use and how much weight to give to any factor. The USFWS conducted this analysis on the areas with existing HCPs and did decide to exclude three areas covered by HCPs. We provide additional details later in this final rule (see Exclusions section).

(2) *Comment:* One peer reviewer commented on the availability of recent study results, ongoing work, and information on loggerhead sea turtles.

Our Response: The final rule has been updated as appropriate throughout the document with the new information.

(3) *Comment:* One peer reviewer commented on the difficulty to assess the analysis and assumptions without the specific datasets available in the proposed rule.

Our Response: As stated in the proposed rule, all supporting documentation, such as the nesting densities used in the critical habitat selection process, were available during the open comment periods for the proposed rule and are currently available for public inspection on *http://www.regulations.gov,* or by appointment, during normal business hours, at the U.S. Fish and Wildlife Service, North Florida Ecological Services Office (see **FOR FURTHER INFORMATION CONTACT**).

General Comments Provided by Multiple Commenters

(4) *Comment:* A number of Federal and State agencies, local municipalities, and several other commenters expressed concern about the economic impacts of the critical habitat designation.

Our Response: As described in Section 2.3.2 of the FEA, it is unlikely that the critical habitat designation will result in additional management efforts resulting from future section 7 consultations with the USFWS. Nesting loggerhead turtles, their nests, eggs, and hatchlings, as well as any of their nesting habitat not designated as critical habitat, are still protected under the Act regardless of whether or not critical habitat is designated. They receive protection via section 7 where they may be the subject of conservation actions and regulatory protection, ensuring Federal agency actions do not jeopardize their continued existence, and via section 9, which prohibits ''take'' of individuals, including take caused by actions that affect the DPS' habitat. Take can only be authorized through the processes provided in sections 7 and 10 of the Act, and their implementing regulations. In the FEA, we considered whether additional or different conservation measures would be needed to avoid destruction or adverse modification of critical habitat above and beyond those measures already needed to avoid jeopardizing the continued existence of the species, and found this to be unlikely. As a result, the quantified direct incremental impacts of the designation are expected to be limited to additional administrative costs to the USFWS, Federal agencies, and third parties of considering critical habitat as part of future section 7 consultations. These costs are borne by the USFWS, the Federal action agency, and the third-party participants (generally the project proponents), including State and local governments and private parties. In the areas proposed as critical habitat designation, these costs were estimated to total approximately $1,200,000 over the next 10 years ($160,000 annualized).

In addition, the FEA acknowledges that, in some cases, critical habitat may generate indirect impacts including costs associated with project delay due to third-party litigation against the USFWS or the Federal action agency and the increased length of time it will take for the USFWS to review projects. Forecasting the likelihood of third-party litigation and potential length of associated project delays is considered too speculative to be quantified in the FEA. However, delays attributable to the additional time to consider critical habitat as part of future section 7 consultations, if any, would most likely be minor. This is because potential impacts to critical habitat are considered at the same time as impacts to the species.

(5) *Comment:* A number of commenters expressed concern that areas outside of the critical habitat designation will receive less protection.

Our Response: A critical habitat designation does not signal that habitat outside the designated area is unimportant or may not support the conservation of the species. Areas that are important to the conservation of the species, both inside and outside the critical habitat designation, may continue to be the subject of conservation actions implemented under section 7(a)(1) of the Act. Turtles in those areas are subject to the regulatory protections afforded by the requirement in section 7(a)(2) of the Act for Federal agencies to ensure their actions are not likely to jeopardize the continued existence of any endangered or threatened species, and section 9 of the Act's prohibitions on taking any individual of the species, including take caused by actions that affect habitat. Take can be authorized only through the processes provided in sections 7 and 10 of the Act, and their implementing regulations.

Federal Agency Comments

(6) *Comment:* The National Aeronautics and Space Administration (NASA) commented that the proposed rule does not provide additional protection to loggerheads within the limits of the Kennedy Space Center's (KSC) coastline and that KSC meets the exemption criteria since NASA implements comprehensive conservation and habitat management plans that incorporate measures that provide a benefit for the conservation of the loggerheads.

Our Response: Unlike DOD lands with approved INRMPs, there is no categorical exemption under the Act for areas with other types of habitat management plans.

(7) *Comment:* The U.S. Army Corps of Engineers (USACE) expressed concern that the critical habitat designation will financially impact congressionally authorized projects and associated dredging activities for ports, navigation channels, and coastal storm damage reduction projects. Their concern extends to increased timeframes for consultations.

Our Response: As described in section 2.3.2 of the FEA, it is unlikely that the critical habitat designation will result in additional management efforts resulting from future section 7 consultations with the USFWS. The USFWS considered whether additional or different conservation measures would be needed to avoid destruction or adverse modification of critical habitat above and beyond those measures needed to avoid jeopardizing the continued existence of the species, and found this to be unlikely. As outlined in our response to Comment (4), designation of critical habitat delays attributable to the additional time to consider critical habitat as part of future section 7 consultations, if any, would most likely be minor. Also, see our response to Comment (4), and the Economic Impacts portion of this rule, below, for a

discussion of indirect impacts associated with critical habitat designation.

(8) *Comment:* The USACE expressed concern that if operation and maintenance dredging projects were determined to adversely modify critical habitat, it could result in substantial economic consequences. The USACE believes that these projects should be identified as ''manmade structures'' and excluded from critical habitat designation. The USACE's responsibility is to maintain safe and adequate configurations and depths for commercial and recreational navigation, national defense, safety and refuge, and national economic development. ''Excluding'' these congressionally authorized projects will enable USACE to fulfill is responsibilities efficiently and effectively.

Our Response: We considered the economic impact, national security impact, and any other relevant impact of designating as critical habitat areas with projects that occur within operation and maintenance areas. In evaluating whether any such areas should be excluded due to economic impacts, we concluded that no change in economic activity levels or the management of economic activities, including dredging projects, is expected to result from the critical habitat designation. A key conclusion of the analysis is that the listing of the DPS may lead to additional conservation efforts that would not have been required otherwise. However, as outlined in our response to Comment (4), designation of critical habitat is not anticipated to generate additional conservation measures for the DPS beyond those generated by the species' listing. Section 7 consultation is required in occupied habitat with or without a critical habitat designation. Most of the forecast costs reflect additional administrative effort as part of future section 7 consultations in order to consider the potential for activities to result in adverse modification of critical habitat. That having been said, we acknowledge it is unlikely additional conservation measures beyond those identified to avoid jeopardy for the DPS would be required to avoid adverse modification.

State Agency Comments

Section 4(i) of the Act states: ''the Secretary shall submit to the State agency a written justification for his failure to adopt regulations consistent with the agency's comments or petition.'' The designation of critical habitat for the DPS includes beaches in the States of Alabama, Florida, Georgia, Mississippi, North Carolina, and South Carolina. Comments from the States of North Carolina, South Carolina, Georgia, Florida, and Mississippi regarding the proposal to designate critical habitat for the loggerhead sea turtle are addressed below.

(9) *Comment:* A number of States, State agencies, and municipalities believe that USFWS should undergo a consistency determination under the Coastal Zone Management Act (CZMA; 16 U.S.C. 1451 *et seq.*) for the proposed designation of critical habitat in each State that has a CZMA program.

Our Response: The USFWS has determined that the designation of critical habitat does not require a consistency review under CZMA. Federal agencies are responsible for ensuring that consistency review under CZMA is completed as needed for each action they fund, authorize, or carry out. The designation of critical habitat is not a ''Federal agency activity'' as defined in the CZMA implementing regulations at 15 CFR 930.31(a), but rather an establishment of Federal agency responsibility related to the conservation of federally protected endangered or threatened species. Thus, the designation is not an agency activity itself, but results in a requirement that Federal agencies ensure that any action they fund, authorize, or carry out is not likely to result in the destruction or adverse modification of designated critical habitat of any endangered or threatened species. Therefore, while we understand the commenters' position, the Service has determined that consistency review is not needed.

(10) *Comment:* The North Carolina Department of Environment and Natural Resources (NCDNER) disagrees with the USFWS' assessment that ''designation of critical habitat in areas currently occupied by the loggerhead sea turtle may impose nominal additional regulatory restrictions to those currently in place and, therefore, may have little incremental impact on State and local governments and their activities.'' Similarly, while the North Carolina Wildlife Resources Commission (NCWRC) understands there is large uncertainty regarding ''special management considerations'' or additional protections that may ensue from the critical habitat designation, it expresses concern that such management considerations or protections may have far-reaching consequences that could reduce or restrict the effectiveness of the robust conservation measures already in place and may affect the public's ability to access and use existing public trust resources, including beaches and waterways. These agencies, as well as several other commenters, believe the USFWS should clarify the potential range of additional management efforts, regulatory reviews, and/or operational conditions that may be placed upon those activities listed as ''threats'' to designated critical habitats.

Our Response: Section 7(a)(2) of the Act and its implementing regulations at 50 CFR part 402 require Federal agencies to consult with the USFWS to ensure that they are not undertaking, funding, permitting, or authorizing actions likely to jeopardize the continued existence of listed species or destroy or adversely modify designated critical habitat. Only projects that have a Federal nexus (e.g., projects that are funded, authorized, or carried out by Federal agencies) are subject to this requirement under section 7 consultation. The designation of critical habitat does not affect land ownership or establish a refuge, wilderness, reserve, preserve, or other conservation area. Such designation does not allow the government or public to access private land and does not require implementation of restoration, recovery, or enhancement measures by non-Federal parties. Where the States, local communities, or a landowner requests Federal agency funding or authorization for an action that may affect a listed species or critical habitat, the consultation requirements of section 7 would apply, but even in the event of a destruction or adverse modification finding, the obligation of the Federal action agency and the non-Federal party is not to restore or recover the species, but to implement reasonable and prudent alternatives to avoid destruction or adverse modification of critical habitat.

We identified 12 categories of threats that may require special management considerations or protection in the proposed critical habitat units. Most, if not all, of these threats already undergo special management considerations by Federal action agencies and have done so since the loggerhead sea turtle was initially listed in 1978. There are a number of options for management efforts determined to be necessary and will be considered on a unit by unit basis. Operational conditions can be incorporated into a project description or permit conditions to avoid or minimize these threats. However, the determination of which measure or combination of measures will depend on the site conditions; nature of the proposed action; duration and magnitude of potential impacts from the project; conservation measures already in place; and other site- and action-specific considerations. If additional

measures are determined to be necessary, they will be considered in order to minimize the impacts to the listed DPS and the nesting beach. Critical habitat will not, as noted in our proposed designation, change the consultation process (see also response to Comment (4)), nor would it likely make it more difficult to move a project forward within an area designated as critical habitat, or conversely make it easier to do so on nesting beaches outside such a designation.

We do not expect the designation of critical habitat to result in changes to how the conservation efforts are currently implemented. Our proposal to designate critical habitat did not reflect an assessment that current nesting beach sea turtle conservation efforts are insufficient. Quite the opposite is true. Our focus is on those locations with the greatest nesting densities and, therefore, highest conservation value to loggerhead recovery and conservation. Most of the beaches proposed for designation have active sea turtle conservation efforts by Federal, State, local governments; private conservation organizations; and individuals within coastal communities.

(11) *Comment:* The NCDNER and North Carolina Coastal Resources Commission (NCCRC) recommend that the USFWS prepare a comprehensive economic analysis of the potential impacts to coastal communities and stakeholders as a result of the additional management efforts the designation may require.

Our Response: The Service's focus on the incremental impacts of the critical habitat rule is consistent with the U.S. Office of Management and Budget's (OMB's) guidelines for best practices concerning the method of conducting an economic analysis of Federal regulations. As described in section 2.1 of the FEA, OMB guidelines direct Federal agencies to measure the costs of a regulatory action against a baseline, which it defines as the ''best assessment of the way the world would look absent the proposed action.'' The baseline utilized in the FEA is the existing regulatory and socio-economic burden imposed on landowners, managers, or other resource users potentially affected by the designation of critical habitat *absent* the designation of critical habitat. The baseline includes protections afforded the species under the Act, as well as under other Federal, State, and local laws and guidelines.

In recognition of the divergent opinions of the courts and to address the Presidential memorandum dated February 28, 2012, the Service promulgated final regulations specifying that the impact analysis of critical habitat designations should focus on incremental effects (78 FR 53058; August 28, 2013). This regulation now codifies the process of impact analysis for proposed critical habitat by completing an ''incremental analysis.'' This method of determining the probable impacts of the designation seeks to identify and focus solely on the impacts over and above those resulting from existing protections.

Accordingly, the FEA employs ''without critical habitat'' (baseline) and ''with critical habitat'' (incremental) scenarios. The analysis qualitatively describes how baseline conservation efforts for the DPS may be implemented across the proposed designation, and, where possible, provides examples of the potential magnitude of costs of these baseline conservation efforts (Chapter 3). The FEA focuses, however, on the incremental analysis, describing and monetizing the incremental impacts due specifically to the designation of critical habitat for the DPS (Chapter 4). Sections 2.2 and 2.3 of the FEA describe in detail how the analysis defines and identifies incremental effects of the proposed designation.

The incremental approach employed by the Service in its analyses of proposed critical habitat designations does not necessarily limit impacts to administrative costs of consultation. In some cases designation of critical habitat does result in new project modifications that need to be implemented to avoid possible adverse modification of the habitat. The costs of these project modifications would then be counted in the incremental analysis, regardless of who incurs the cost. In the case of the DPS, the entire proposed critical habitat is occupied by the species, and therefore any project modifications will be required even absent critical habitat (i.e., in the baseline) to avoid possibly jeopardizing the species' existence (see response to Comment (4)).

(12) *Comment:* The NCDNER and NCCRC believe the USFWS should provide additional information on the data utilized for the proposed designations in North Carolina.

Our Response: Supporting documentation we used in preparing the proposed and final rules, as well as comments and materials we received during the two public comments periods, is available for public inspection on *http://www.regulations.gov,* or by appointment, during normal business hours, at the U.S. Fish and Wildlife Service, North Florida Ecological Services Office (see **FOR FURTHER INFORMATION CONTACT**).

(13) *Comment:* The South Carolina Department of Parks, Recreation, and Tourism recommends language used in the proposed rule be refined to address all ambiguities and more clearly specify and define permissible and non-permissible activities in order to avoid unnecessary legal disputes. Specifically, in the sections pertaining to *Special Management Considerations or Protection,* the language is often ambiguous or vague, leaving it open to interpretation. For example, the language used for activities listed as primary threats, especially coastal development and beach renourishment, needs to be more clearly specified in terms of activity definitions and circumstances in order to prevent any party from using this rule change to unnecessarily impede non-threatening activities through legal action. These types of delays can ultimately drive up costs for ongoing beach preservation efforts and negatively impact local communities and their economies. In addition, in the aftermath of a severe tropical storm or hurricane, this language may be used to prevent rebuilding previously existing structures on public beaches such as Edisto Beach, effectively shutting off the beach for public use. Similarly, in the section regarding ''Human Presence,'' while the majority of this section pertains to human presence at night, the statement referring to human foot traffic may also be interpreted to mean that protecting these habitats necessitates the removal of all human presence, regardless of time.

Our Response: The USFWS has revised the language in this final rule to clarify the discussion and description of *Special Management Considerations or Protection* and threats to critical habitat.

(14) *Comment:* South Carolina Department of Natural Resources (SCDNR) notes an apparent lack of clarity as to what critical habitat designation means. The agency is uncertain of the actual impact to properties titled to the State of South Carolina and would like further clarification as to what changes would occur if such designation is finalized and accepted.

Our Response: See our response to Comment (10), above.

(15) *Comment:* The Mississippi Development Authority commented that the reasoning for critical units along the shoreline of Mississippi was not apparent as there are far fewer nests compared to the southeast coast of Florida. They questioned the

significance of the two Mississippi units to the conservation of the species.

Our Response: We understand that the beaches in Mississippi have lower nesting densities than in some of the other parts of the DPS's nesting range. The beaches that met the critical habitat criteria not only had the highest nesting densities within each of the four recovery units, but also represented a good spatial distribution that will help ensure the protection of genetic diversity, and collectively provide a good representation of total nesting. The distribution of designated critical habitat will conserve the habitat of this DPS by:

- Maintaining their existing nesting distribution;
- Allowing for movement between beach areas depending on habitat availability (response to changing nature of coastal beach habitat) and supporting genetic interchange;
- Allowing for an increase in the size of each recovery unit to a level where the threats of genetic, demographic, and normal environmental uncertainties are diminished; and
- Maintaining their ability to withstand local or unit level environmental fluctuations or catastrophes.

(16) *Comment:* The Florida Fish and Wildlife Conservation Commission (FWC) commented that to provide more regulatory certainty, it would be helpful if the USFWS would provide details on what standards will be used to determine if a project will result in adverse modification. Some Florida stakeholders have expressed concern regarding the uncertainty of how this designation affects the section 7 review and approval process. To that end, FWC requests additional details on how the USFWS' section 7 consultation process will differ in areas that are designated as critical habitat as compared to those areas that are not designated. The FWC believes the USFWS should consider the effects of the designation of critical habitat on the State's ability to restore and maintain sandy beaches and maintain functioning inlets.

Our Response: Federal action agencies, in coordination with the USFWS, will assess each project during the section 7 consultation process to determine whether the project may adversely modify the designated critical habitat (see Effects of Critical Habitat Designation). These determinations generally are project specific and dependent on the conservation measures incorporated in the project design. For some projects, such as sand placement and groin and jetty repair and replacement, the USFWS has determined that the terms and conditions incorporated in the Florida Statewide Programmatic Sand Placement Biological Opinion for the DPS and other listed species would also ensure that sand placement projects, including emergency response, would not adversely modify critical habitat. See also our response to Comments (4) and (10).

(17) *Comment:* The FWC recommends further coordination between the USFWS and the Florida Department of Environmental Protection (FDEP) to avoid unintended consequences of the proposed critical habitat designation and existing State rules. In particular, current Florida law allows for the installation of coastal armoring protecting beachfront dwellings and infrastructure at risk to high frequency storms. However, the FDEP, through Florida Administrative code rule 62B–41.0055, prohibits coastal armoring in any location that is federally designated as critical habitat for sea turtles. As such, if the proposed critical habitat is established, the State may need to consider revising this rule.

Our Response: The USFWS is aware of the State regulation and is willing to work with the FDEP to provide any additional information needed regarding impacts to loggerhead sea turtles. If the State of Florida rescinds the regulation, the USFWS will also work with any Federal agency that may fund, construct, or authorize a coastal armoring project and to determine the need to undergo section 7 consultation.

Public Comments

General

(18) *Comment:* Several commenters, many from municipalities within proposed critical habitat units, requested that the USFWS extend the comment period to allow sufficient time to provide comments that balance the environmental and economic effects of the proposed rule.

Our Response: After the close of the initial comment period, the USFWS reopened the comment period for an additional 60 days on July 18, 2013 (78 FR 42921), with the announcement of the availability of the DEA of the proposed rule. We also held three public hearings to accept comments following announcement and reopening of the comment period.

(19) *Comment:* The USFWS should make its final determination of loggerhead critical habitat on nesting beaches in conjunction with the NMFS designation in the marine environment. There is concern that the independent actions of the agencies may result in inconsistent designations that do not reflect the importance of the connection between the marine and terrestrial environments.

Our Response: Although the proposed rules for critical habitat in the terrestrial and marine environments were not published at the same time, the USFWS and NMFS have been coordinating our efforts and sharing information throughout the rulemaking process. The agencies will continue to do so, and it is anticipated that the final rules for critical habitat in both the terrestrial and marine environments will be published, and become effective, simultaneously.

(20) *Comment:* USFWS' failure to prepare an environmental impact statement (EIS) in connection with designating critical habitat is a violation of the National Environmental Policy Act (NEPA; 42 U.S.C. 4321 *et seq.*), as designation of critical habitat significantly affects the quality of the human environment.

Our Response: It is our position that, outside the jurisdiction of the U.S. Court of Appeals for the Tenth Circuit, we do not need to prepare environmental analyses pursuant to the NEPA in connection with designating critical habitat under the Act. See the Required Determinations section of the rule below for more about USFWS's position.

(21) *Comment:* The USFWS should provide a detailed description of additional regulatory requirements associated with the planning, implementation, and maintenance of shoreline and inlet projects within the critical habitat area designation.

Our Response: The USFWS does not anticipate any additional regulatory requirements associated for any inlet or shoreline projects within the critical habitat units over and above those that would be required for the listed DPS (see our response to Comment (4)).

(22) *Comment:* The USFWS should provide a complete assessment of existing sea turtle management efforts by local, State, and Federal jurisdictions (including the USACE) affected by the proposed critical habitat designation area.

Our Response: Within each critical habitat unit description, the USFWS identifies conservation or management plans that benefit the loggerhead sea turtle. We also identify specific sea turtle management efforts conducted on public lands as identified in the Federal, State and local management plans within that critical habitat unit. If a Federal agency is conducting, funding, or authorizing a project in the unit, we will, during section 7 consultation, include in the biological opinion terms

and conditions as appropriate to minimize the impacts of the project.

(23) *Comment:* The USFWS should conduct an analysis as to whether assumptions used in the Statewide Programmatic Biological Opinion (SPBO) covering the state of Florida, including the reasonable and prudent measures, are truly satisfactory to avoid adverse modification of critical habitat.

Our Response: The USFWS used the most updated information in the SPBO to minimize the impact of the sand placement projects on the loggerhead sea turtle and other listed species. Our responsibility for analysis of impacts includes the nesting beach. Since the listed sea turtle species must use the nesting beach for laying their nests, incubating their eggs, and the emergence and movement of hatchlings from the nest to the ocean, the terms and conditions in our SPBO also address minimizing impacts to the nesting beach. As the beaches designated as critical habitat are all nesting beaches, these terms and conditions will also minimize impacts to critical habitat.

Economic Impacts

(24) *Comment:* The Town of Edisto Beach, South Carolina, requests that the USFWS withdraw the rule or eliminate the prohibitions due to significant adverse economic effects.

Our Response: With regard to the commenter's reference to ''prohibitions,'' we clarify that the 12 activities described in the rule as primary threats do not equate to prohibitions of the continued and future implementation of such activities. These primary threats are categories of activities that may impact the habitat and may require special management considerations or protection. However, this rule designating critical habitat does not dictate what those special management or protection measures will be. Rather, such measures will be considered project specific and will depend on the measures already in place or incorporated into proposed projects, and the potential impacts of a proposed Federal action (or an action that is funded or permitted by a Federal agency) to the critical habitat. We have revised the language in the *Special Management Considerations or Protection* section of this final rule to clarify this.

In addition, the DEA did not indicate that there would be significant economic effects from the proposed designation (see our response to Comment (4)).

(25) *Comment:* There are economic impacts to creating loggerhead habitat in the Gulf of Mexico shoreline of Florida. With the regional biological opinion for hopper dredging in the Gulf, communities and the USACE are able to dredge and restore beaches in Florida during the summer months. There is a prohibition of summer dredging elsewhere (in order to protect turtles). If critical habitat is designated, it is not clear if summer construction will be permitted to continue. Thus greater competition for dredges during the winter will occur and result in an increase in prices for shore protection efforts.

Our Response: The regional biological opinion, which was prepared by NMFS to cover the offshore (marine) dredging portion of beach nourishment projects, includes terms and conditions intended to minimize impacts to sea turtles and other listed species in the Gulf of Mexico. Additionally, the USFWS' SPBO covers the onshore (terrestrial) portion of beach nourishment and also includes measures to minimize impacts of the sand placement on the nesting beach on sea turtles and other listed species. Neither set of terms and conditions is expected to change as a result of critical habitat designation because, due to the presence of the listed species, the required terms and conditions are expected to also avoid adverse modification of critical habitat.

Exclusions

(26) *Comment:* The USFWS should minimize exclusions from critical habitat. Although economic impacts must be considered, the ultimate designation decision must be based on the biological and physical needs of the species and not economics. The commenter encourages the USFWS to fully consider the economic benefits of loggerhead critical habitat designation, including the tourism benefits of sea turtle habitat protection.

Our Response: We are required by section 4(b)(2) of the Act to take into account national security, economic, and other relevant impacts of critical habitat designation. The Secretary may exclude an area from critical habitat if she determines that the benefits of such exclusion outweigh the benefits of specifying such area as part of the critical habitat, unless she determines, based on the best scientific data available, that the failure to designate such area as critical habitat will result in the extinction of the species. In making that determination, the statute on its face, as well as the legislative history, are clear that the Secretary has broad discretion regarding which factor(s) to use and how much weight to give to any factor.

The primary goal of this critical habitat designation for the Northwest Atlantic Ocean DPS of the loggerhead sea turtle is to support its long-term conservation and recovery. Conservation and recovery of the DPS may result in benefits, including use benefits (wildlife-viewing), non-use benefits (existence values), and ecosystem service benefits (e.g., water quality improvements and enhanced habitat conditions for other species). In this rule, the economic analysis did evaluate such benefits of the proposed critical habitat designation but was unable to monetize their value. Since we do not anticipate that critical habitat designation will change the level or types of conservation efforts undertaken over and above those efforts already required for the listed species, we have no information on the incremental benefits that may be realized. Absent information on the incremental change in loggerhead population or recovery potential associated, we are unable to monetize associated incremental use and non-use benefits.

When identifying the benefits of exclusion, we consider, among other things, whether exclusion of a specific area is likely to result in conservation; the continuation, strengthening, or encouragement of partnerships; or implementation of a management plan. The exclusions we identified in the proposed critical habitat rule were based on the presence of HCPs. When we evaluate the existence of a conservation or management plan when considering the benefits of exclusion, we consider a variety of factors, including, but not limited to, whether the plan is finalized; how it provides for the conservation of the essential physical or biological features; whether there is a reasonable expectation that the conservation management strategies and actions contained in a management plan will be implemented into the future; whether the conservation strategies in the plan are likely to be effective; and whether the plan contains a monitoring program or adaptive management to ensure that the conservation measures are effective and can be adapted in the future in response to new information.

(27) *Comment:* A number of commenters believe that the USFWS should not exclude six of the proposed units (numbered in the proposed rule as LOGG–T–FL–01, LOGG–T–FL–02, LOGG–T–FL–03, LOGG–T–FL–04, LOGG–T–FL–05, and LOGG–T–FL–10 in St. Johns, Volusia, and Indian River Counties, Florida) pursuant to section 4(b)(2) of the Act (16 U.S.C. 1533(b)(2)). The proposed rule identified these units

as being considered for exclusion based on the rationale that they are covered by HCPs (78 FR 18000; March 25, 2013). Two commenters believe that although the HCPs are commendable, case law does not support this basis for exclusion (e.g., *Cape Hatteras Access Pres. Alliance* v. *U.S. Dep't of Interior,* 731 F. Supp. 2d 15, 28 (D.D.C. 2010), quoting *Natural Res. Def. Council,* 113 F.3d at 1127: ''. . . the [Act] does not authorize 'nondesignation of habitat when designation would be merely less beneficial to the species than another type of protection' '). Mandatory consultation for Federal actions is a valuable benefit for the species. Additionally, HCPs expire over time and are vulnerable to cut-backs. Many commenters believe that protections in the areas covered by HCPs are inadequate. For example, the St. Johns County HCP only covers beach driving; it does not include or protect against all the possible dangerous activities that occur on these beaches.

Commenters further state that unlike DOD lands with approved INRMPs, there is no categorical exemption under the Act for areas with HCPs and there is no indication that the Secretary similarly has determined in writing that such a plan provides a benefit to the species for which critical habitat is proposed for designation. Because these plans can change over time, and assuming they meet the necessary biological criteria, all such areas should be included in the designation of critical habitat.

Our Response: Using information collected during the public comment periods, as well as the HCP's annual reports and information already in our files, we evaluated whether these or other lands in the proposed critical habitat were appropriate for exclusion from this final designation pursuant to section 4(b)(2) of the Act. We evaluated whether the benefits of excluding the particular area outweigh the benefits of their inclusion, based on the ''other relevant factor'' provisions of section 4(b)(2) of the Act.

We find that the St. Johns, Volusia, and Indian River Counties' HCPs meet the above criteria for exclusion. Therefore, we are excluding non-Federal lands covered by these HCPs in proposed Units LOGG–T–FL–01, LOGG–T–FL–02, LOGG–T–FL–03, LOGG–T–FL–04, LOGG–T–FL–05, and LOGG–T–FL–10 because those HCPs adequately provides for the long-term conservation of the loggerhead and the Secretary has determined that the benefits of excluding these areas outweigh the benefits of including them in critical habitat. (For further information, see Exclusions, below.)

(28) *Comment:* Indian River County should be included in the designation of critical habitat, including currently unoccupied habitat, because a portion of the Archie Carr National Wildlife Refuge occurs in the County. According to NMFS' Web site (*http://www.nmfs.noaa.gov/pr/species/turtles/loggerhead.htm*), this refuge provides habitat for 25 percent of nesting loggerheads in the United States.

Our Response: As discussed above (see our response to Comment (27)), non-Federal lands in Indian River County are covered by a county-wide HCP and are being excluded from critical habitat. However, a portion of Archie Carr National Wildlife Refuge, which is located in Indian River County but not within the HCP, is included in the critical habitat (Units LOGG–T–FL–07 and LOGG–T–FL–08).

Recommendations for Expansion of Critical Habitat Designation

(29) *Comment:* The USFWS must expand its proposal to include all areas containing the primary constituent elements that are essential to the conservation of the species. The USFWS's methodology of selecting the top 25 percent nesting density beaches and those adjacent to them does not appear to designate all areas occupied by the species on which the biological features essential to the conservation of the species are present. The USFWS must explain how its selection of more limited areas satisfies this legal requirement and provides for the conservation and recovery of the species.

Our Response: Section 3(5)(C) of the Act states that ''[e]xcept in those circumstances determined by the Secretary, critical habitat shall not include the entire geographical area which can be occupied by the . . . species.'' Further, the USFWS is not required to designate all areas on which physical or biological features supporting the species are found. An area occupied by the species at the time of listing is eligible for designation of critical habitat if it contains ''physical and biological features (I) essential to the conservation of the species and (II) which may require special management considerations or protection'' (section 3(5)(A)(i) of the Act).

All terrestrial units considered for designation as critical habitat are currently occupied by the loggerhead sea turtle and occur within the species' geographical range. They contain the physical and biological features essential to the conservation of the species and may require special management considerations or protection, and they contain the primary constituent elements sufficient to support the terrestrial life-history processes of the species sufficient for the conservation of the population. Of these beaches, the ones we designated are those that have the highest nesting densities within each of the four recovery units, have a good spatial distribution that will help ensure the protection of genetic diversity, and collectively provide a good representation of total nesting. The beaches adjacent to the primary high-density nesting beaches also currently support loggerhead nesting and can serve as expansion areas should the high-density nesting beaches be significantly degraded or temporarily or permanently lost through natural processes or upland development. Thus, the amount and distribution of critical habitat we are designating for terrestrial habitat will conserve recovery units of this DPS as described in our response to Comment (15).

(30) *Comment:* The USFWS should consider designation of areas that would provide for resilience to the threat of climate change, especially sea level rise and increased temperatures. The USFWS should consider sea level rise and its effects on the loggerhead sea turtle. While accounting for the level of sea rise is a complex task, there is a broad consensus in the scientific community that sea level rise is imminent. This will pose a significant threat to the beaches the loggerhead sea turtles need for continuation of the species.

Our Response: As the comment acknowledges, specific forecasts related to climate change are difficult. Furthermore, habitat is dynamic, and nesting beaches may accrete and erode over time. We recognize that critical habitat designated at a particular point in time may not include all of the habitat areas that we may later determine are necessary for the recovery of the species. For these reasons, a critical habitat designation does not signal that habitat outside the designated area is unimportant or may not support the conservation of the species. Areas that are important to the conservation of the species, both inside and outside the critical habitat designation, may continue to be the subject of conservation actions, regulatory protections, and prohibitions on taking of the species, including taking caused by actions that affect habitat. The USFWS acknowledges that we cannot fully address the significant, long-term threat of climate change to

loggerhead sea turtles. However, we can determine how we respond to the threat of climate change by providing protection to the known nesting sites of the turtle. We can also identify measures to protect nesting turtles and their habitat from the actions (e.g., coastal armoring, sand placement) undertaken to respond to climate change that may potentially impact the DPS. As more specific forecasts become available in the future, a revision of critical habitat may be required to more effectively provide for the conservation of the species. At this time, however, such forecasts are unavailable. For more information on our assessment of climate change, see the *Climate Change* discussion within the of the *Special Management Considerations or Protection* section of this rule.

(31) *Comment:* Broward County Natural Resource Planning and Management Division and several other commenters believe that all or portions of Broward County should be considered for inclusion in the designation of critical habitat. Large areas of sea turtle nesting habitat exist in the County, particularly in the Fort Lauderdale, Dania Beach, North Hollywood Beach, and Hallandale areas. There is considerable nesting activity for the beaches between Hillsboro Inlet and Port Everglades. With a few exceptions (e.g., Port Everglades), the coastline has the appropriate physical and biological features as well as the primary threats requiring management. For example, in 2012, a volunteer organization in the County documented 20,000 disoriented hatchlings.

Commenters believe that Broward County should be listed as critical habitat because Florida has the most nesting habitat in the world for loggerhead sea turtles, which makes this area extremely important. Furthermore, beach nourishment is allowed to continue through May, which is both mating and nesting season for this species. Due to over-development of the coastal areas, the dunes have been removed, causing more beach erosion. Lastly, designation of critical habitat will help facilitate quicker compliance with the lighting laws and will ensure all future lights are up to code; critical habitat designation will help bring the County under one universal lighting code, which will help with enforcement.

Our Response: The USFWS acknowledges the importance of the beaches in Broward County, including Fort Lauderdale, Dania Beach, North Hollywood Beach, and Hallandale Beach. However, only Unit LOGG–T–FL–14—Boca Raton Inlet-Hillsboro Inlet in Palm Beach and Broward Counties met the selection criteria (see our responses to Comments (15) and (29), above), with a nesting density greater than 83 nests per kilometer. The adjacent beach selected to serve as an expansion area for this unit is Unit LOGG–T–FL–13—Boyton Inlet-Boca Raton Inlet in Palm Beach County. Other nesting beaches in Broward County did not meet the critical habitat selection criteria because the nesting density was not high enough. However, loggerhead sea turtle nesting along these beaches will continue to be protected, as the DPS is listed as threatened under the Act and Federal agencies are required to consult with the USFWS to ensure that they are not undertaking, funding, permitting, or authorizing actions likely to jeopardize the continued existence of listed species.

(32) *Comment:* The USFWS should consider beaches from Doctor's Pass to Gordon Pass and Marco Island in Collier County, Florida, and the eastern end of Sanibel Island in Lee County, Florida, for inclusion in critical habitat. While these beaches are not the same nesting density as other beaches proposed for designation, they are currently occupied and do appear to contain the physical and biological features and PCEs. They have suitable nesting habitat that has relatively unimpeded access (PCE 1), appropriate sands to allow for nest building (PCE 2), and, when existing sea turtle protection ordinances are observed, sufficient darkness (PCE 3). Additionally, these beaches have supported considerable nesting and would support the USFWS's goal of designating beaches for resiliency and redundancy.

Our Response: The USFWS acknowledges the importance of the beaches in Lee and Collier Counties. However, only Unit LOGG–T–FL–28—Keewaydin Island and Sea Oat Island from Gordon Pass to Big Marco Pass in Collier County met the selection criteria (see our responses to Comments (15) and (29) above) with a nesting density greater than 14.2 nests per km. The adjacent beach selected to serve as an expansion area for this unit is Unit LOGG–T–FL–27—Clam Pass to Doctors Pass in Collier County. Other nesting beaches in Lee and Collier Counties, such as the east end of Sanibel Island and Marco Island, did not meet the critical habitat selection criteria because the nesting density was not high enough. However, the loggerhead sea turtle nesting along these beaches will continue to be protected, as the DPS is listed as threatened under the Act and consultation between Federal action agencies and the USFWS is still required.

(33) *Comment:* Additional areas should be designated as critical habitat for Georgia. Specifically, the commenter recommends inclusion of Little St. Simons and Jekyll islands in critical habitat.

Our Response: These beaches (Little St. Simons and Jekyll islands) did not meet the critical habitat selection criteria because the nesting density was not high enough (greater than 11.34 nests per km) or the island was not adjacent to a high density nesting beach. The beaches that are being designated as critical habitat represent over 80 percent of loggerhead sea turtle nesting in Georgia based on nest monitoring data from 2006 to 2011 provided by the State of Georgia.

(34) *Comment:* A few comments encourage the USFWS to expand the designation areas in North Carolina and include more habitat in the designation. One comment suggests that the USFWS considers other factors as well as those described in the proposed rule, such as those listed as PCEs (e.g., unimpeded near-shore access located above mean high water mark, suitable sand, and suitable nesting beach habitat). Alternatively, the USFWS could broaden the habitat by selecting the top 50 percent of high-density areas instead of adding beaches based on adjacency. The commenter also recommends that additional areas be designated as critical habitat for South Carolina. Specifically, the commenter recommends inclusion of the following beaches and islands: Bay Point, Hilton Head, North, Pritchards, Bull, and Hunting.

Similarly, other comments recommend the inclusion of Cape Hatteras, Cape Lookout, Figure 8 Island, Ocean Isle, and Sunset Beach, North Carolina. They maintain that focusing on areas of greatest nest density per kilometer of beach ignores larger areas such as Cape Hatteras and Cape Lookout National Seashores, which have the highest total number of nests per beach in North Carolina.

Another comment asked that areas to the north of Bogue Banks, North Carolina, be designated, as nesting is anticipated to increase in the north both due to warming and range expansion expected with an increasing population.

Our Response: The USFWS acknowledges the importance of all loggerhead sea turtle nesting beaches. The recommended beaches did not meet the critical habitat selection criteria either because the nesting density was not high enough (greater than 2.38 nests per kilometers in North Carolina; greater than 13.97 nests per kilometer in South

Carolina) or the island was not adjacent to a high density nesting beach. The selected high density beaches and adjacent beaches represent over 75 and 96 percent of loggerhead nesting in North Carolina and South Carolina, respectively, based on data from 2006–2011. Loggerhead nests will continue to be protected along beaches that are not designated as critical habitat because the DPS is listed as threatened under the Act (see our responses to Comments (15) and (29), above).

(35) *Comment:* It is important that the USFWS consider the benefits of designating critical habitat in Louisiana and Texas despite the current low number of nests because this designation requires agencies to ensure that their actions are ''not likely to jeopardize the continued existence of [the loggerhead sea turtle] . . . or result in the destruction or adverse modification of habitat of [the loggerhead sea turtle].'' If proactive measures are not taken to save the habitat of this species in Louisiana and Texas, the number of nests and turtles in these States may dwindle, causing further damage to this species.

Another commenter asked that Chesapeake Bay and Delaware Bay be included in the final rule as critical habitat because they are specific regions within the geographical area occupied by loggerhead sea turtles that are essential to conservation and require special management consideration.

Our Response: The USFWS agrees that nesting in the northern and western extent of the nesting range of the DPS is important to the conservation and recovery of the species. Louisiana, Texas, Virginia, and Delaware are not included in the designation based on the very low number of nests known to be laid in these States (less than 10 annually in each State from 2002 to 2011). However, protective measures are in place to protect the loggerhead sea turtle in these States because the species is listed under the Act. Federal agencies are already required to consult with the USFWS to ensure that they are not undertaking, funding, permitting, or authorizing actions likely to jeopardize the continued existence of loggerhead sea turtles.

Recommendations of Areas To Exclude From Critical Habitat Designation

(36) *Comment:* The Town of Holden Beach, North Carolina, contends that the specific areas proposed to be designated as critical habitat for the loggerhead sea turtle in North Carolina are arbitrary and capricious because (1) North Carolina's beaches' nesting density is low compared to South Carolina, Georgia, and Florida, and (2) the USFWS did not provide any basis that North Carolina nesting beaches are required to provide genetic diversity. Other commenters contend that loggerhead sea turtle nesting density data do not support designation of critical habitat for any of North Carolina's beaches, and particularly not Bogue Banks, compared to South Carolina, Georgia, and Florida. Further, loggerhead sea turtle nesting in North Carolina represents a small fraction (approximately 1 percent) of not only the nesting by loggerhead sea turtles in the Northwest Atlantic Ocean DPS, but also within the Northern Recovery Unit (approximately 13 percent) of the Northwest Atlantic Ocean DPS.

Our Response: We understand that the beaches in North Carolina have lower nesting densities than in some of the other parts of the species' nesting range. However, for recovery of the DPS, it is important to conserve:

- Beaches that have the highest nesting densities, by State or region within a State;
- Beaches that have a good spatial distribution to ensure protection of genetic diversity;
- Beaches that collectively provide a good representation of total nesting; and
- Beaches adjacent to the high-density nesting beaches that can serve as expansion areas.

North Carolina falls within the Northern Recovery Unit. Within this Recovery Unit, we divided beach nesting densities into quartiles (four equal groups) by State and selected beaches that were within the upper quartile for designation as critical habitat. The reason we determined high nesting density beaches within each State (rather than the entire Northern Recovery Unit) was that it allowed for the inclusion of beaches near the northern extent of the range (North Carolina) that would otherwise be considered low density when compared with beaches in Georgia and South Carolina. This ensures good spatial distribution.

(37) *Comment:* The Town of Edisto Beach, South Carolina, requests to be excluded from the designation of critical habitat because the beach supports an average of only 80 nests a year and the typical sand on the beach is medium-sized and coarse and does not fit the USFWS's description of ''deep, clean, relatively loose sand above high-tide level.''

Our Response: The beaches within the Town of Edisto Beach, South Carolina, meet the criteria for critical habitat described in the *Criteria Used to Identify Critical Habitat* section of the proposed and final rule, and specifically, the Northern Recovery Unit (i.e., unit supports expansion of nesting from an adjacent unit that has high-density nesting of loggerhead sea turtles in South Carolina, was occupied at the time of listing and is currently occupied, and contains all the physical or biological features and primary constituent elements). We note that ''sand'' in the proposed rule is defined as ''. . . material predominately composed of carbonate, quartz, or similar material with a particle size distribution ranging between 0.062 mm and 4.76 mm (0.002 in and 0.187 in) (Wentworth and ASTM classification systems).'' Medium and coarse sand meets this definition. We have no other information to support excluding the beaches within the Town of Edisto Beach under section 4(b)(2) of the Act.

(38) *Comment:* The Village of Bald Head Island, North Carolina, requests that the USFWS exclude Bald Head Island from critical habitat designation under section 4(b)(2) of the Act. The commenter explains that although not recognized in the proposed rule, Bald Head Island has a well-established and respected sea turtle protection program and as such believes the Island should be excluded, as similar consideration is being given to St. Johns, Volusia, and Indian River Counties, Florida, based on established habitat conservation plans. As one of NMFS's ''index beaches,'' Bald Head Island is nationally recognized for its sea turtle nesting activity, and for the Bald Head Island Conservancy's efforts to protect this resource. At this point, no additional benefit would be gained by the designation, and additional regulatory burdens may hinder local efforts.

Our Response: The beaches of Bald Head Island meet the criteria for critical habitat described in the *Criteria Used to Identify Critical Habitat* section of the proposed and final rule, and specifically, the Northern Recovery Unit (i.e., the unit has high-density nesting by loggerhead sea turtles in North Carolina, was occupied at the time of listing and is currently occupied, and contains all the physical or biological features and primary constituent elements). While Bald Head Island, like many of the beaches in this designation, has in place active sea turtle conservation efforts by Federal, State, local governments; private conservation organizations; and individuals, we have no knowledge of any plans that commit to dedicated funding of such efforts or that this program provides comprehensive sea turtle protection. Example programs could include beachfront lighting regulations,

managed beach access, beach and dune habitat protection and restoration programs, or coastal development regulations. We recognize the efforts on Bald Head Island, but are not excluding the area, because the benefits of designating critical habitat outweigh the benefits of exclusion.

(39) *Comment:* The Escambia County Community and Environmental Department believes the areas jurisdictional to Escambia County on Perdido Key, Florida, within the Northern Gulf of Mexico Recovery Unit, should be considered for exclusion under section 4(b)(2) of the Act due to a pending programmatic HCP consistent with other communities such as St. Johns, Volusia, and Indian River Counties.

Our Response: The beaches of Escambia County meet the criteria for critical habitat. Although an area may be excluded if it is covered by an HCP, we must assess each HCP to determine whether the implementation of the conservation efforts benefits loggerhead sea turtles. Since this HCP has not yet been approved by the USFWS, or implemented in accordance with a permit, we are not excluding units within the proposed HCP coverage area.

Best Available Information and Methods

(40) *Comment:* The USFWS must include the most current nesting data through 2012.

Our Response: The Northwest Atlantic Ocean loggerhead sea turtle DPS was listed in 2011 (76 FR 58868). We have defined the terrestrial portion of the geographical area occupied for the loggerhead sea turtle as those U.S. areas in the Northwest Atlantic Ocean DPS where nesting has been documented for the most part annually for the 10-year period from 2002 to 2011, as this time period represents the most consistent and standardized nest count surveys throughout the DPS' nesting range. Consistent with this definition, in the Northern Recovery Unit, Peninsular Florida Recovery Unit, and Northern Gulf of Mexico Recovery Unit (Florida and Alabama), we used loggerhead nests counts from 2006–2011 to calculate mean nest density for each beach and select the high density nesting beaches within each recovery unit. However, even though we did not rely on the 2012 nesting data in the proposed rule, we now find that they support the high density nesting beaches selected using the 2006–2011 mean nest density.

(41) *Comment:* The USFWS must incorporate any evidence about the impact of recent management changes, for example, the Cape Hatteras National Seashore Off-Road Vehicle Management Plan and Special Regulation, which was implemented in 2012.

Our Response: While the USFWS may use information from management plans in discussing special management or protection considerations, we did not propose any critical habitat units within the Cape Hatteras National Seashore (CHNS). Therefore, discussion of the management changes at CHNS was not necessary because the changes do not affect any of the units in the designation.

(42) *Comment:* One commenter concurred with the identification of the physical and biological features of critical habitat, the primary constituent elements of critical habitat, and the listed threats. However, the commenter believes the information cited is stale and sometimes cited references have been misinterpreted or their incorporation is misleading.

Our Response: The USFWS updated the final rule with additional literature we received during the comment period and peer review. The USFWS collaborated with State technical advisors on the nesting data analysis. The peer review of the proposed rule did not indicate any of the references we used were misinterpreted or are misleading.

(43) *Comment:* It seems awkward that the USFWS did not seek peer review before submitting the proposed rule for public comment. It is acknowledged that as a result, the final rule may differ significantly from what is proposed. The commenter asks whether the public will get a second chance to comment on the next version of a rule, especially if there are significant changes.

Our Response: The USFWS conferred with scientific experts, including State technical advisors, during the development of the proposed rule and used the best scientific information available. Moreover, as discussed above, the peer review comments did not reflect suggestions for major changes to the rule. All revisions based on information we received during the public comment period are outlined in this final rule and do not represent any significant changes from the proposed rule.

(44) *Comment:* The discussion of the effects of coastal structures is narrow and biased. The quoting of Kaufman and Pilkey (1979) demonstrates a narrow understanding of the use of coastal structures. While there are outfalls within the State of Florida, they are outdated facilities designed prior to our modern understanding of coastal biology and engineering. The outfalls are few and their impacts are insignificant to the health of the large-scale sea turtle nesting habitat. The FDEP and FWC utilize existing regulatory programs where possible to reduce the impact of existing outfalls. New outfalls are prohibited by rule (62b–33, Florida Administrative Code).

Our Response: The USFWS verified that the information cited in Kaufman and Pilkey (1979) reflected our current understanding of coastal systems. There are existing outfalls along the loggerhead sea turtle nesting beach that create localized erosion channels, prevent natural dune establishment, and wash out sea turtle nests. The USFWS agrees that the design of new outfalls minimize the localized erosion; however, this impact continues for existing outfalls with the outdated design and is considered an impact to sea turtle nests.

(45) *Comment:* The USFWS should provide a scientific basis for the argument that ''the presence of groins and jetties may . . . concentrate predatory fishes, resulting in higher probabilities of hatchling predation.'' While natural hard-bottom fishing piers and coastal structures may lead to higher concentrations of predatory fishes, there is little data (if any) that demonstrate that the concentration of predatory fishes leads to an increase in predation of recent hatchlings. With many of the beaches yielding low densities of hatchlings and coastal structures being sparse in Florida, the overlay of the probabilities of increased predation must be small or insignificant. Further, the concentration of predatory fishes by structures must indicate an abundant food source for them as sea turtle hatching occurs for just a short period of time throughout the year along any unit length of beach. For example, some Gulf of Mexico beaches may have nesting densities in the 10 nests per mile range, or 1 per 500 feet. With shore-perpendicular coastal structures being only approximately 50 feet, in effect, the number of nests near any structure is only 0.1 nests per structure. The 0.1 nest will hatch on one night providing food for the predatory fish for, at most, that one night. For the remainder of the year, the predatory fish must be eating something else besides sea turtle hatchlings.

Our Response: The USFWS has updated this rule to include additional citations to support the proposition that the concentration of predatory fish increases due to the presence of groins and jetties.

(46) *Comment:* Given that the critical habitat designation is based solely upon a numerical standard, such as nest density, it is imperative that the USFWS

publicly discloses the data as well as cutoff top quartile thresholds that it used to determine designated areas.

Our Response: Supporting documentation we used in preparing the proposed and final rules, as well as comments and materials we received during the two public comment periods, are available for public inspection on *http://www.regulations.gov,* or by appointment, during normal business hours, at the U.S. Fish and Wildlife Service, North Florida Ecological Services Office (see **FOR FURTHER INFORMATION CONTACT**).

(47) *Comment:* Critical habitat units as proposed for Lee County, Florida, are flawed. Portions of these proposed units, in their natural state, do not contain the physical and biological features essential to conservation. Specifically, in the absence of directed human activity in the form of dredge spoil placement and beach nourishment, they did not and would not contain a beach sufficient to support a successful marine turtle nest. This PCE is only present because of designed and constructed public works projects of the type listed in the proposed rule as potential threats to loggerhead sea turtle conservation. This is a fundamental inconsistency that must be corrected.

Our Response: The natural state of these beaches would consist of shoreline that does not contain any human-related development that would keep the dynamic coastal process from occurring (erosion and accretion). However, when the shoreline has been fixed in place because of human development, the natural dynamics of the shoreline are unable to occur. Therefore, beach nourishment and similar projects take the place of the natural process. As indicated in previous responses to comments, we have acknowledged the results of these activities as a physical and biological feature. As stated in both the proposed rule and this final rule: ''we identify natural coastal processes or activities that mimic these natural processes to be a physical or biological feature for this species. It is important that loggerhead nesting beaches are allowed to respond naturally to coastal dynamic processes of erosion and accretion or mimic these processes.'' Accordingly, the units in Lee County meet the selection criteria and contain one or more of the PCEs.

(48) *Comment:* The USFWS should be more consistent in its use of 20-km segments to break up beach segments that are overly large in some areas for an accurate assessment of nesting densities.

Our Response: Beach segments were identified as barrier islands or mainland beaches separated by creeks, inlets, or sounds. For beach segments that were overly large in some area, such as the Florida Peninsular Recovery Unit (excluding the Florida Keys) and the Northern Gulf of Mexico Recovery Unit (except Mississippi), we used nest site fidelity information to break up these beaches into 20-km segments. Calculating nesting densities for overly large areas would have resulted in some high-density nesting beaches not being identified because they would be averaged in with adjacent lower density nesting beaches. Segmenting these larger areas ensured the high density nesting beaches were represented throughout the DPS' nesting range. See also the descriptions for each recovery unit in the Critical Habitat section of this rule for further explanation of the methodology used to identify beach segments within each recovery unit.

(49) *Comment:* Commenters expressed their concern on the method for selecting the entire 38.9-km shoreline of Bogue Banks in North Carolina as a critical habitat unit, because it is adjacent to a high-density nesting beach.

Our Response: Loggerhead sea turtles nest on dynamic ocean beaches that may be significantly degraded or lost through natural processes (erosion) or development. We designated beaches adjacent to the high-density nesting beaches as critical habitat to ensure the availability of nesting habitat if the high-density nesting beaches are temporarily or permanently lost. Loggerhead sea turtles are known to exhibit high site fidelity to individual nesting beaches. In a study in Georgia, 55 percent (12 of 22) of nesting females tracked during the inter-nesting period used a single island for nesting while 40 percent (9 of 22) used two islands (Scott 2006). Protecting individual beaches adjacent to high-density nesting beaches should provide sufficient habitat to accommodate nesting females whose primary nesting beach has been lost. We selected the adjacent beaches by designating one beach to the north and one beach to the south of each of the high-density beaches as critical habitat. See also our response to Comment (36).

Erosion Management and Sand Placement

(50) *Comment:* One commenter is concerned that this and other regulations do not make a distinction between erosion management structures that are harmful (e.g., ''hard forms'' such as seawalls, revetments, and groins) and those that are beneficial (e.g., erosion control structures such as breakwaters and some groin designs) to sea turtles. This is important because beneficial structures may not only facilitate habitat restoration efforts that might otherwise not be economically feasible due to high erosion rates in front of existing seawalls. It should also be considered that viable sand sources for beach nourishment are finite, and carefully designed erosion control structures reduce, and in some cases may eliminate, the need for future beach nourishment.

Our Response: For this rule, we are unable to make such distinctions because these projects may vary considerably with corresponding positive and negative effects. Most projects with the appropriate conservation measures incorporated minimize negative effects to nesting sea turtles and may provide overall benefits (e.g., maintenance of nesting habitat) if properly designed, installed, and maintained.

(51) *Comment:* One comment states that properly done and well-scrutinized beach nourishment should not pose major threats to the species, and, therefore, the critical habitat designation will not affect the nourishment efforts taken by coastal towns. By looking at the nesting density data in North Carolina, it can be observed that most of the designated high-density beaches have been nourished in the past years. With the exception of Bear Island (a State park), all other designated high-density islands have been heavily nourished in the past.

Our Response: The USFWS agrees that properly implemented, appropriate conservation measures incorporated in beach nourishment projects minimize impacts to loggerhead sea turtles and their habitat. As we have indicated in our response to Comment (4), we do not anticipate additional conservation measures over and above those already implemented for the listed DPS.

(52) *Comment:* The USFWS is urged to include beach restoration as an approved ''special management consideration.'' Climate change is causing sea levels to rise and the rate of sea level rise may accelerate over the next century due to increased levels of carbon dioxide, which will increase with global warming. Higher sea levels cause beaches to erode and retreat, threatening habitat that is currently suitable for nesting of loggerhead sea turtles. Beach restoration and periodic nourishment restores and maintains nesting habitat and remains the most effective form of ''special management considerations'' over the next 50 years for managing the impacts of climate change. If the new critical habitat areas

are designated and rules imposed in those areas inhibit the continuation of cost-effective beach nourishment programs, the net impacts to the loggerhead sea turtles and their nests would be negative given the current and future projections of climate change.

Our Response: Beach suitability depends mainly on four environmental factors (slope, temperature, moisture, and salinity). Both natural and human impacts to beaches affect their suitability for sea turtle nesting and egg incubation. For loggerhead sea turtle terrestrial habitat, special management considerations focus on reducing the threats to the suitability of the nesting beach. Human-altered beaches do have direct, indirect, and cumulative impacts to sea turtles and thus are not considered a ''special management consideration.'' However, the USFWS acknowledges that properly implemented appropriate conservation measures in beach nourishment projects minimize impacts to sea turtles.

(53) *Comment:* One commenter recommended that the USFWS consider the need for continued nourishment and structures as part of the community's efforts to protect critical habitat on Bald Head Island, North Carolina.

Our Response: The USFWS has considered and taken into account the beneficial effects of beach nourishment and other beach stabilization projects as provided in our identification of PCE 4, which is ''natural coastal processes or artificially created or maintained habitat mimicking natural conditions'' (see also response to Comment (47)).

(54) *Comment:* USFWS failed to use the best scientific data available. For example, in analyzing the potential impacts of beach sand placement activities, USFWS relied on publications from as long as 26 years ago. More recent studies analyzing beach placement activities are available, and USFWS failed to rely on these studies.

Our Response: For the final rule, we used the best and most current available data relevant to beach sand placement. We have defined the terrestrial portion of the geographical area occupied for the loggerhead sea turtle as those U.S. beaches in the Northwest Atlantic Ocean DPS where nesting has been documented for the most part annually for the 10-year period from 2002 to 2011, as this time period represents the most consistent and standardized nest count surveys throughout the DPS' nesting range. See also our response to Comment (40).

Additionally, we received scientific references and literature from the peer reviewers and in comments from the public. Additions or updates to the rule using this information are summarized in the Summary of Changes From Proposed Rule section. The additional information did not change the critical habitat selection criteria or the units in the critical habitat designation.

(55) *Comment:* The USFWS should consider changes in North Carolina's political environment that may soon reduce or eliminate existing laws that safeguard the terrestrial ecosystem along the coast. For example, legislation has been proposed that would repeal long-standing restrictions on the construction of jetties and groins. If this bill becomes law, structures that impede the natural flow of sand and alter the migration of barrier islands—and that present physical barriers to nesting turtles—may become commonplace along the oceanfront.

Our Response: Federal agencies are required to consult with the USFWS to ensure that they are not undertaking, funding, permitting, or authorizing actions likely to jeopardize the continued existence of listed species or destroy or adversely modify designated critical habitat (see our response to Comment (4)). Projects that have a Federal nexus (e.g., projects that are funded, authorized, or carried out by Federal agencies) are subject to this requirement under the consultation provisions of section 7 of the Act. This would include construction of groins and jetties, which must be permitted by the USACE under appropriate Federal laws regardless of State law. Moreover, even where critical habitat has not been designated, loggerhead sea turtle nesting along these beaches will continue to be protected, as the DPS is listed under the Act notwithstanding the presence or absence of protections under State law.

(56) *Comment:* Brevard County, Florida, and other commenters are concerned that the critical habitat designation may complicate or increase the cost of existing successful turtle-friendly coastal management projects or traditional use of the beach. The County believes that it could be confusing to list beach sand placement and recreational beach use as primary threats to the species, but also as a tool that defends against increased harm by other primary threats such as erosion and beach armoring. The County encourages USFWS to make clear and reinforce statements about beach nourishment and beach sand placement. They also believe that specific recreational activities should be addressed differently (i.e., beach cleaning and driving versus human foot traffic). Brevard County urges the USFWS to take all steps necessary to assure the critical habitat designation cannot be cited in a lawsuit to justify restrictions to traditional public use of the beach.

St. Lucie County, Florida, asks if special management considerations and protection will be consistently applied throughout a recovery unit even though there may be varying nesting densities and beach nourishment frequencies within that unit, or if the actual habitat conditions (i.e., specific nesting conditions) will drive the process.

Our Response: Only projects that have a Federal nexus (e.g., projects that are funded, authorized, or carried out by Federal agencies) are subject to the requirement for consultation under section 7 of the Act. The designation of critical habitat does not affect land ownership or establish a refuge, wilderness, reserve, preserve, or other conservation area. Such designation does not allow the government or public to restrict access to the beach. See also our response to Comment (10).

In the proposed rule, we identified 12 categories of threats that may require special management considerations or protection in the critical habitat units. Threats in each critical habitat unit differ, therefore the special management considerations and protections will vary.

Clarifications and Corrections

(57) *Comment:* The USFWS should clarify that while critical habitat does not include ''developed areas such as lands covered by buildings, pavement, and other structures because such lands lack physical or biological features necessary for the loggerhead sea turtle,'' it does include human-altered beaches that still contain the PCEs identified for successful nesting.

Our Response: The USFWS acknowledges that human-altered or engineered beaches may still contain the PCEs identifies for successful nesting. The final rule has been revised to include further explanation on human-altered beaches in the *Primary Constituent Elements for the Northwest Atlantic Ocean DPS of the Loggerhead Sea Turtle* section. See also our responses to Comments (50) and (51), above.

(58) *Comment:* It is not clear why the USFWS is not designating the critical habitat throughout the range of all global DPSs, especially the two DPSs (Northwest Atlantic and North Pacific) that can be found in the United States (terrestrial or aquatic).

Our Response: Critical habitat may only be designated in areas under U.S. jurisdiction per the regulations implementing the Act at 50 CFR 424.12(h). The USFWS has jurisdiction

over sea turtles on the land, and loggerhead sea turtles come on land only to nest; therefore, the only terrestrial habitat they use is for nesting. Because critical habitat can only be designated in areas under U.S. jurisdiction and because loggerhead sea turtle nesting in the United States occurs only within the Northwest Atlantic Ocean DPS, we are only designating specific areas in the terrestrial environment as critical habitat for this one DPS. Since no loggerhead nesting occurs within U.S. jurisdiction for the North Pacific Ocean DPS, no critical habitat has been proposed for that DPS in the terrestrial environment. Similarly, NMFS has jurisdiction over sea turtles in the water. On July 18, 2013 (78 FR 43006), NMFS published proposed critical habitat for the marine environment for the Northwest Atlantic Ocean DPS and reviewed potential areas within U.S. jurisdiction for critical habitat in the North Pacific Ocean loggerhead DPS (no areas met the definition of critical habitat in this DPS; therefore none was proposed); again because these are the only DPSs that occur in areas under U.S. jurisdiction.

(59) *Comment:* The USFWS needs to explain why critical habitat is not being designated for all recovery units of the Northwest Atlantic Ocean DPS. Contrary to the Executive Summary, which states ''[t]his is a proposed rule by the [USFWS] to designate specific areas in the terrestrial environment as critical habitat for the Northwest Atlantic Ocean [DPS] of the loggerhead sea turtle,'' the proposed designation does not include any within the range of the Caribbean recovery unit and evidently nothing within the Caribbean was considered.

Our Response: The Greater Caribbean Recovery Unit includes all nesting assemblages within the Greater Caribbean, which includes Puerto Rico and the U.S. Virgin Islands. No loggerhead sea turtle nesting has ever been documented in Puerto Rico (Diez 2012, pers. comm.). Only two loggerhead sea turtles have been documented as nesting in the U.S. Virgin Islands, both on Buck Island Reef National Monument off the north coast of St. Croix (Pollock *et al.* 2009, entire), where nesting has been documented since 2003. Therefore, although some loggerhead sea turtle nesting has been documented on beaches under U.S. jurisdiction within the Greater Caribbean Recovery Unit, we did not propose to designate any critical habitat in this unit due to the very low number of nests laid there.

(60) *Comment:* The Town of Holden Beach, North Carolina, and other commenters believes the USFWS should reassess its prudency determination pursuant to regulations implementing the Act (50 CFR 424.12(a)(1)). Holden Beach believes a determination of ''not prudent'' is appropriate because there are already adequate measures in place to ensure the survival and recovery of the loggerhead sea turtle and designation would adversely impact these successful programs resulting in loss of habitat and an increase in the degree of threat to the species. Other commenters are concerned that the critical habitat designation is not prudent because it would make it more difficult for local governments and others to conduct active coastal shore damage reduction projects and that existing successful conservation programs will be burdened with additional and unnecessary measures and will become more costly to implement.

Our Response: Our regulations (50 CFR 424.12(a)(1)) describe the conditions in which critical habitat could be determined to be ''not prudent;'' essentially, the designation of critical habitat is not prudent if the species is threatened by taking or other human activity, and identification of critical habitat can be expected to increase the threat, or because designation of critical habitat would not be beneficial to the species.

There is currently no identified imminent threat of take attributed to collection or vandalism of nesting beaches within the DPS, and identification and mapping of specific areas in the terrestrial environment as critical habitat is not expected to create or increase any such threat. On the other hand, potential benefits of designation include: (1) Focusing conservation activities on the most essential features and areas; (2) providing educational benefits to State or county governments or private entities; and (3) preventing people from causing inadvertent harm to the species and beaches with active nesting. Therefore, we found that designation of critical habitat is prudent for the Northwest Atlantic Ocean DPS of the loggerhead sea turtle.

The proposal to designate critical habitat did not reflect an assessment that current nesting beach sea turtle conservation efforts are insufficient. Most of the beaches proposed for designation have active sea turtle conservation efforts by Federal, State, local governments; private conservation organizations; and individuals within coastal communities. Most, if not all, beach projects already under go special management considerations by Federal action agencies and have since the species was listed. We do not expect the designation to result in changes to how the conservation efforts are currently implemented or project conservation measures (see our response to Comment (4)).

(61) *Comment:* Several commenters contend that the specific areas proposed to be designated as critical habitat for the loggerhead sea turtle do not contain features that, now or in the future, may require special management considerations or protection measures beyond those that are already in place. The USFWS failed to adequately consider existing regulations and programs that ensure that loggerhead sea turtle habitat is protected and maintained, and failed to analyze the impacts of designating critical habitat on the effectiveness of these successful programs as required by the Act.

Our Response: All of the beaches that we proposed for critical habitat designation contain the physical or biological features consisting of a beach that is:

- Capable of supporting a high density of nests or serving as an expansion area for beaches with a high density of nests and the beaches;
- Well distributed within each State or region within a State;
- Representative of total nesting; and
- Support natural coastal processes or activities that mimic these natural processes.

All of the beaches have one or more threats that may require special management considerations or protection measures. Further, the statement of ''beyond those that are already in place'' reflects an incorrect understanding of the Act. The proposal did not reflect an assessment that current nesting beach sea turtle conservation efforts are insufficient. Most of the beaches proposed for designation have active sea turtle conservation efforts by Federal, State, local governments; private conservation organizations; and individuals within coastal communities. Most, if not all, beach projects already under go special management considerations by Federal action agencies and have since the species was listed. We are designating as critical habitat those locations that met the selection criteria and, therefore, represent the highest conservation value to loggerhead sea turtle recovery and conservation.

(62) *Comment:* The location of the Intracoastal Waterway shown on the map of Units LOGG–T–FL–23, 24, 25, and 26 is inaccurate and should be

corrected for accuracy or removed from the map.

Our Response: We understand that the critical habitat as depicted on the background layer of the maps may not appear to align with the shoreline or other features such as the Intracoastal Waterway. The background layer shown in the rule is for display purposes only and may not accurately represent these features because of the dynamic coastal process and the inability of mapping data acquisition efforts to keep up with the changes. The data layers defining map units were created using Google Earth imagery, then refined using Bing imagery, and unit descriptions were then mapped using North America Lambert Conformal Conic coordinates; maps generated in this way do not provide a legible print in black and white as printed in the **Federal Register**. However, the coordinates, plot points, or both on which each map is based are available to the public at the USFWS's Internet site at *http://www.fws.gov/northflorida,* at *http://www.regulations.gov* at Docket No. FWS–R4–ES–2012–0103, and at the North Florida Ecological Services Office (see **ADDRESSES**).

Summary of Changes From Proposed Rule

The following changes have been made to the final rule from the proposed rule:

1. Based on comments from peer and public review, we have updated the information in the *Background, Physical or Biological Features,* and *Special Management Considerations or Protection* sections with updated information from recommended literature.

2. In response to concerns and confusion regarding beach stabilization projects, we have added a fourth PCE to the final rule: *Natural coastal processes or artificially created or maintained habitat mimicking natural conditions.*

3. In accordance with section 4(b)(2) of the Act, based on the information provided in the HCP annual reports, as well as additional public comments received and information in our files, we are excluding all or portions of proposed Units LOGG–T–FL–01, LOGG–T–FL–02, LOGG–T–FL–03, LOGG–T–FL–05, and LOGG–T–FL–10 in St. Johns, Volusia, and Indian River Counties, Florida, that are covered under those HCPs. (See Exclusions section below for more explanation).

4. We have made changes to maps, units, and the rule itself. In total, the final critical habitat designation has decreased from the proposed rule by 87.8 km (54.5 mi). The new unit descriptions are provided below in the Final Critical Habitat Designation section:

- For the units in Florida, the originally numbered Units LOGG–T–FL–01 to LOGG–T–FL–47 have been renumbered in the final rule as Units LOGG–T–FL–01 to LOGG–T–FL–45 by shifting up one to two numbers. This is due to the exclusion of the entire originally proposed Units LOGG–T–FL–02 and LOGG–T–FL–05 based on their inclusion in HCPs (see above). In addition, these exclusions resulted in a decrease from the proposed rule of 87.2 km (54.3 mi) of designated critical habitat for the DPS (see Table 2 in the Exclusions section).
- Based on information we received from the NPS regarding Garden Key in the LOGG–T–FL–34—Dry Tortugas, Monroe County, Florida, we revised the unit description and corresponding map to more accurately reflect the availability of nesting habitat for the DPS. This revision resulted in a 0.6 km (0.2 mi) decrease in the total length of the unit.

Background

It is our intent to discuss in this final rule only those topics directly relevant to the designation of critical habitat. Please refer to the final listing rule for the DPS published on September 22, 2011 (76 FR 58868), and proposed critical habitat designation for the DPS published March 25, 2013 (78 FR 18000), for a summary of the species and habitat information. Additional information on the associated draft economic analysis for the designation was published in the **Federal Register** on July 18, 2013 (78 FR 42921). For more information on the taxonomy, biology, and ecology of the loggerhead sea turtle, refer to the Recovery Plan for the Northwest Atlantic Population of the Loggerhead Sea Turtle (*Caretta caretta*) (NMFS and USFWS 2008, entire), which is available from the North Florida Ecological Services Office (see **FOR FURTHER INFORMATION CONTACT**).

Critical Habitat

Background

Critical habitat is defined in section 3 of the Act as:

(1) The specific areas within the geographical area occupied by the species, at the time it is listed in accordance with the Act, on which are found those physical or biological features

(a) Essential to the conservation of the species and

(b) Which may require special management considerations or protection; and

(2) Specific areas outside the geographical area occupied by the species at the time it is listed, upon a determination that such areas are essential for the conservation of the species.

Conservation, as defined under section 3 of the Act, means to use and the use of all methods and procedures that are necessary to bring an endangered or threatened species to the point at which the measures provided pursuant to the Act are no longer necessary. Such methods and procedures include, but are not limited to, all activities associated with scientific resources management such as research, census, law enforcement, habitat acquisition and maintenance, propagation, live trapping, and transplantation, and, in the extraordinary case where population pressures within a given ecosystem cannot be otherwise relieved, may include regulated take.

Critical habitat receives protection under section 7 of the Act through the requirement that Federal agencies ensure that, in consultation with USFWS or NMFS, any action they authorize, fund, or carry out is not likely to result in the destruction or adverse modification of critical habitat. The designation of critical habitat does not affect land ownership or establish a refuge, wilderness, reserve, preserve, or other conservation area. Such designation does not allow the government or public to access private lands. Such designation does not require implementation of restoration, recovery, or enhancement measures by non-Federal landowners. Where a landowner requests Federal agency funding or authorization for an action that may affect a listed species or critical habitat, the consultation requirements of section 7(a)(2) of the Act would apply, but even in the event of a destruction or adverse modification finding, the obligation of the Federal action agency and the landowner is not to restore or recover the species, but to implement reasonable and prudent alternatives to avoid destruction or adverse modification of critical habitat.

Under the first prong of the Act's definition of critical habitat, areas within the geographical area occupied by the species at the time it was listed are included in a critical habitat designation if they contain physical or biological features (1) which are essential to the conservation of the species and (2) which may require special management considerations or protection. For these areas, critical habitat designations identify, to the extent known using the best scientific

and commercial data available, those physical or biological features that are essential to the conservation of the species (such as space, food, cover, and protected habitat). In identifying those physical or biological features within an area, we focus on the principal biological or physical constituent elements (primary constituent elements such as roost sites, nesting grounds, seasonal wetlands, water quality, tide, soil type) that are essential to the conservation of the species. Primary constituent elements are those specific elements of the physical or biological features that provide for a species' life-history processes and are essential to the conservation of the species.

Under the second prong of the Act's definition of critical habitat, we can designate critical habitat in areas outside the geographical area occupied by the species at the time it is listed, upon a determination that such areas are essential for the conservation of the species. For example, an area currently occupied by the species but that was not occupied at the time of listing may be essential to the conservation of the species and may be included in the critical habitat designation. We designate critical habitat in areas outside the geographical area occupied by a species only when a designation limited to its range would be inadequate to ensure the conservation of the species.

Section 4 of the Act requires that we designate critical habitat on the basis of the best scientific and commercial data available. Further, our Policy on Information Standards Under the Endangered Species Act (published in the **Federal Register** on July 1, 1994 (59 FR 34271)), the Information Quality Act (section 515 of the Treasury and General Government Appropriations Act for Fiscal Year 2001 (Pub. L. 106–554; H.R. 5658)), and our associated Information Quality Guidelines provide criteria, establish procedures, and provide guidance to ensure that our decisions are based on the best scientific data available. They require our biologists, to the extent consistent with the Act and with the use of the best scientific data available, to use primary and original sources of information as the basis for recommendations to designate critical habitat.

When we are determining which areas should be designated as critical habitat, our primary source of information is generally the information developed during the listing process for the species. Additional information sources may include the recovery plan for the species, articles in peer-reviewed journals, conservation plans developed by States and counties, scientific status surveys and studies, biological assessments, other unpublished materials, or experts' opinions or personal knowledge.

Habitat is dynamic, and species may move from one area to another over time. We recognize that critical habitat designated at a particular point in time may not include all of the habitat areas that we may later determine are necessary for the recovery of the species. For these reasons, a critical habitat designation does not signal that habitat outside the designated area is unimportant or may not be needed for recovery of the species. Areas that are important to the conservation of the species, both inside and outside the critical habitat designation, will continue to be subject to: (1) Conservation actions implemented under section 7(a)(1) of the Act, (2) regulatory protections afforded by the requirement in section 7(a)(2) of the Act for Federal agencies to insure their actions are not likely to jeopardize the continued existence of any endangered or threatened species, and (3) section 9 of the Act's prohibitions on taking any individual of the species, including taking caused by actions that affect habitat. Federally funded or permitted projects affecting listed species outside their designated critical habitat areas may still result in jeopardy findings in some cases. These protections and conservation tools will continue to contribute to recovery of this species. Similarly, critical habitat designations made on the basis of the best available information at the time of designation will not control the direction and substance of future recovery plans, HCPs, or other species conservation planning efforts if new information available at the time of these planning efforts calls for a different outcome.

Physical or Biological Features

In accordance with section 3(5)(A)(i) and 4(b)(1)(A) of the Act and regulations at 50 CFR 424.12, in determining which areas within the geographical area occupied by the species at the time of listing to designate as critical habitat, we consider the physical or biological features (PBFs) that are essential to the conservation of the species and which may require special management considerations or protection. These include, but are not limited to:

(1) Space for individual and population growth and for normal behavior;

(2) Food, water, air, light, minerals, or other nutritional or physiological requirements;

(3) Cover or shelter;

(4) Sites for breeding, reproduction, or rearing (or development) of offspring; and

(5) Habitats that are protected from disturbance or are representative of the historical, geographic, and ecological distributions of a species.

We derive the specific PBFs essential for the loggerhead sea turtle from studies of this species' habitat, ecology, and life history as described below. Additional information can be found in the final listing rule published in the **Federal Register** on September 22, 2011 (76 FR 58868), and the Recovery Plan for the Northwest Atlantic Population of the Loggerhead Sea Turtle (*Caretta caretta*) (NMFS and USFWS 2008, entire).

Shaffer and Stein (2000, pp. 307–314) identify a methodology for conserving imperiled species known as the ''three Rs'': Representation, resiliency, and redundancy. Representation, or preserving some of everything, means conserving not just a species but its associated habitats. Resiliency and redundancy ensure there is enough of a species so it can survive into the future. Resiliency means ensuring that the habitat is adequate for a species and its representative components. Redundancy ensures an adequate number of sites and individuals. This methodology has been widely accepted as a reasonable conservation strategy (Tear *et al.* 2005, p. 841). In applying this strategy, we have determined that it is important to conserve:

(1) Beaches that have the highest nesting densities (representation);

(2) Beaches that have a good spatial distribution to ensure protection of genetic diversity (resiliency and redundancy);

(3) Beaches that collectively provide a good representation of total nesting (representation); and

(4) Beaches adjacent to the high density nesting beaches that can serve as expansion areas and provide sufficient habitat to accommodate and provide a rescue effect for nesting females whose primary nesting beach has been lost (resiliency and redundancy).

Therefore, we have determined that the following PBFs are essential for the loggerhead sea turtle.

PBF 1—Sites for Breeding, Reproduction, or Rearing (or Development) of Offspring

The production of the next generation of loggerhead sea turtles results from a synergism of the effects of the ecological conditions in the foraging area on the energetics of the female and of the beach environmental conditions on

development of the embryos. To be successful, reproduction must occur when environmental conditions support adult activity (e.g., sufficient quality and quantity of food in the foraging area, suitable beach structure for digging, nearby inter-nesting habitat) (Georges *et al.* 1993, p. 2). The environmental conditions of the nesting beach must favor embryonic development and survival (i.e., modest temperature fluctuation, low salinity, high humidity, well drained, well aerated) (Mortimer 1982, p. 49; Mortimer 1990, pp. 809, 811). Additionally, the hatchlings must emerge to onshore and offshore conditions that enhance their chances of survival (e.g., less than 100 percent depredation, appropriate offshore currents for dispersal) (Georges *et al.* 1993, p. 2).

Terrestrial nesting habitat is the supralittoral zone (area above the spring high tide line) of the beach where oviposition (egg laying), embryonic development, and hatching occur. Loggerheads nest on ocean beaches and occasionally on estuarine shorelines with suitable sand. For a beach to serve as nesting habitat, a nesting turtle must be able to access it. However, anthropogenic structures (e.g., groins, jetties, breakwaters), as well as natural features (e.g., offshore sand bars), can act as barriers or deterrents to adult females attempting to access a beach (Witherington *et al.* 2006, entire). Adult females approaching the nesting beach may encounter these structures and either crawl around them, abort nesting for that night, or move to another section of beach to nest. Nests are typically laid between the high tide line and the dune front (Routa 1968, p. 293; Witherington 1986, pp. 16, 27; Hailman and Elowson 1992, p. 5).

Wood and Bjorndal (2000, entire) evaluated four environmental factors (slope, temperature, moisture, and salinity) and found that slope had the greatest influence on loggerhead nest-site selection on a beach in Florida. Loggerheads appear to prefer relatively narrow, steeply sloped, coarse-grained beaches, although nearshore contours may also play a role in nesting beach site selection (Provancha and Ehrhart 1987, p. 42).

Nest sites typically have steeper slopes than other sites on the beach, and steeper slopes usually indicate an area of the beach with a higher elevation (Wood and Bjorndal 2000, p. 126). Wood and Bjorndal (2000, p. 126) speculated that a higher slope could be a signal to turtles that they have reached an elevation where there is an increased probability of hatching success of nests. This is related to the nests being laid high enough on the beach to be less susceptible to repeated and prolonged tidal inundation and erosion. Nests laid at lower beach elevations are subject to a greater risk of repeated and prolonged tidal inundation and erosion, which can cause mortality of incubating egg clutches (Foley *et al.* 2006, pp. 38–39). Regardless, loggerheads will use a variety of different nesting substrates and beach slopes for nesting. They will also scatter their nests over the beach, likely to ensure that at least some nest sites will be successful as ''placement of nests close to the sea increases the likelihood of inundation and egg loss to erosion whereas placement of nests farther inland increases the likelihood of desiccation, hatchling misorientation, and predation on nesting females, eggs, and hatchlings'' (Wood and Bjorndal 2000).

Loggerhead sea turtles spread their reproductive effort both temporally and spatially. Spatial clumping occurs because loggerheads concentrate their nesting to a few primary locations that are augmented by lower density, satellite sites. In addition, a few isolated, low-density sites are known (Miller *et al.* 2003, p. 126). Loggerheads show a high degree of nesting site fidelity (Miller *et al.* 2003, p. 127). Once an adult female has returned to the region where it hatched and selected a nesting beach, she will tend to re-nest in relatively close proximity (0–5 km (0–3 mi)) during successive nesting attempts within the same and subsequent nesting seasons, although a small percentage of turtles will utilize more distant nesting sites in the general area (Addison 1996, p. 76; Miller *et al.* 2003, pp. 127–128). On a regional level, in the southeastern U.S., nesting density can also be influenced by the distance to the Gulf Stream System (Putman *et al.* 2010, p. 4). Thus, a high-density nesting beach is the product of the distance from the Gulf Stream, site fidelity and nesting success. A spatiotemporal analysis of the Florida Index Nesting Beaches concluded that fine scale high and low density nesting zones were consistent over the 17-year time series. This suggests that nesting density distribution is a product of both nest site fidelity and specific beach attributes (Witherington *et al.* 2009, entire). A high-density nesting beach produces a large number of hatchlings that are recruited to the population resulting in a relatively higher number of females that will return to nest on those same beaches.

Sea turtles must have ''deep, clean, relatively loose sand above the high-tide level'' for successful nest construction (Hendrickson 1982, p. 54). Sand is classified as material predominately composed of carbonate, quartz, or similar material with a particle size distribution ranging between 0.062 mm and 4.76 mm (0.002 in and 0.187 in) (Wentworth and ASTM classification systems). Sea turtle eggs require a high-humidity substrate that allows for sufficient gas exchange for development (Mortimer 1990, p. 811; Miller 1997, pp. 67–68; Miller *et al.* 2003, pp. 129–130). Ackerman (1980, p. 575) found that the rate of growth and mortality of sea turtle embryos is related to respiratory gas exchange with embryonic growth slowing and mortality increasing in environments where gas exchange is reduced below naturally occurring levels.

Moisture conditions in the nest influence incubation period, hatching success, and hatchling size (McGehee 1990, pp. 254–257; Mortimer 1990, p. 811; Carthy *et al.* 2003, pp. 147–149). Laboratory experiments have shown that hatching success can be affected by unusually wet or dry hydric conditions (McGehee 1990, pp. 254–255). Proper moisture conditions are necessary for maximum hatching success (McGehee 1990, p. 251). In addition, water availability is known to influence the incubation environment of the embryos of turtles with flexible-shelled eggs by affecting nitrogen excretion (Packard *et al.* 1984, pp. 198–201), mobilization of calcium (Packard and Packard 1986, p. 404), mobilization of yolk nutrients (Packard *et al.* 1985, p. 571), and energy reserves in the yolk at hatching (Packard *et al.* 1988, p. 122).

Loggerhead nests incubate for variable periods of time depending on sand temperatures (Mrosovsky and Yntema 1980, p. 272). The length of the incubation period (commonly measured from the time of egg deposition to hatchling emergence) is inversely related to nest temperature, such that between 26.0 °C and 32.0 °C (78.8 °F and 89.6 °F), a change of 1 °C (33.8 °F) adds or subtracts approximately 5 days (Mrosovsky 1980, p. 531). The warmer the sand surrounding the egg chamber, the faster the embryos develop (Mrosovsky and Yntema 1980, p. 272).

Sand temperatures prevailing during the middle third of the incubation period also determine the gender of hatchling sea turtles (Mrosovsky and Yntema 1980, p. 276; Yntema and Mrosovsky 1982, pp. 1014–1015). The pivotal temperature (i.e., the incubation temperature that produces equal numbers of males and females) in loggerheads is approximately 29.0 °C (84.2 °F) (Limpus *et al.* 1983, p. 3; Mrosovsky 1988, pp. 664–666; Marcovaldi *et al.* 1997, pp. 758–759).

Incubation temperatures near the upper end of the tolerable range produce only female hatchlings while incubation temperatures near the lower end of the tolerable range produce only male hatchlings.

Loggerhead hatchlings pip (break through the egg shell) and escape from their eggs over a 1- to 3-day interval and move upward and out of the nest over a 2- to 4-day interval (Christens 1990, p. 400). The time from pipping to emergence ranges from 4 to 7 days with an average of 4.1 days (Godfrey and Mrosovsky 1997, p. 583). Hatchlings emerge from their nests en masse almost exclusively at night, likely using decreasing sand temperature as a cue (Hendrickson 1958, pp. 513–514; Mrosovsky 1968, entire; Witherington *et al.* 1990, pp. 1166–1167; Moran *et al.* 1999, p. 260). After an initial emergence, there may be secondary emergences on subsequent nights (Carr and Ogren 1960, p. 23; Witherington 1986, p. 36; Ernest and Martin 1993, pp. 10–11; Houghton and Hays 2001, p. 134).

Hatchlings use a progression of sea-finding orientation cues to guide their movement from the nest to the marine environments (Lohmann and Lohmann 2003, entire). Hatchlings first use light cues to find the ocean. On natural beaches without artificial lighting, ambient light from the open sky creates a relatively bright horizon compared to the dark silhouette of the dune and vegetation landward of the nest. This contrast guides the hatchlings to the ocean (Daniel and Smith 1947, pp. 414–415; Limpus 1971, p. 387; Salmon *et al.* 1992, pp. 72–75; Witherington and Martin 1996, pp. 5–12; Witherington 1997, pp. 311–319). After reaching the surf, hatchlings swim and are swept through the surf zone, after which wave orientation occurs in the nearshore area and later magnetic field orientation as they proceed further toward open water (Lohmann and Lohmann 2003, entire).

Both nesting and hatchling sea turtles are adversely affected by the presence of artificial lighting on or near the beach (Witherington and Martin 1996, pp. 2–5, 12–13). Artificial lighting deters adult female loggerheads from emerging from the ocean to nest, and loggerheads emerging onto a beach abort nesting attempts at a greater frequency in lighted areas (Witherington 1992, pp. 34–37). Because adult females rely on visual brightness cues to find their way back to the ocean after nesting, those turtles that nest on artificially lighted beaches may become disoriented by artificial lighting and have difficulty finding their way back to the ocean (Witherington 1992, p. 38). Hatchling sea turtles have a robust sea-finding behavior guided by visual cues (Mrosovsky and Carr 1967, pp. 228–230; Mrosovsky and Shettleworth 1968, pp. 214–218; Dickerson and Nelson 1989, entire; Witherington and Bjorndal 1991, pp. 146–148; Salmon *et al.* 1992, pp. 72–75; Witherington and Martin 1996, pp. 6–12; Lohmann *et al.* 1997, pp. 110–116; Lohmann and Lohmann 2003, pp. 45–47). Hatchlings unable to find the ocean, or delayed in reaching it, due to the presence of artificial beachfront lighting are likely to incur high mortality from dehydration, exhaustion, or predation (Carr and Ogren 1960, pp. 33–46; Ehrhart and Witherington 1987, pp. 97–98; Witherington and Martin 1996, pp. 12–13).

Since loggerheads nest on dynamic ocean beaches that may be significantly degraded or lost through natural processes (e.g., erosion) or human-related actions (e.g., development, armoring, lighting), the designation of currently occupied nesting beaches adjacent to the highest density nesting beaches as critical habitat will help ensure the availability of nesting habitat if the high-density nesting beaches are temporarily or permanently lost.

Therefore, based on the information above, we identify extra-tidal or dry sandy beaches from the mean high water (MHW) (see definition at *http://tidesandcurrents.noaa.gov/datum_options.html*) line to the toe of the secondary dune that are capable of supporting a high density of nests or serving as an expansion area for beaches with a high density of nests and well distributed within the four recovery units in which critical habitat is being designated and are representative of total nesting to be a PBF for the species.

PBF 2—Habitats Protected From Disturbance or Representative of the Historical, Geographic, and Ecological Distributions of the Species

Sea turtle nesting habitat is part of the highly dynamic and continually shifting coastal system, which includes oceanfront beaches, barrier islands, and inlets. These geologically dynamic coastal regions are controlled by natural coastal processes or activities that mimic these natural processes, including littoral or longshore drift (the process by which sediments move along the shoreline), onshore and offshore sand transport (natural erosion or accretion cycle), and tides and storm surge. The integrity of the habitat components depends upon daily tidal events; these processes are associated with the formation and movement of barrier islands, inlets, and other coastal landforms throughout the landscape.

There has been considerable loss or degradation of such habitats by humans from development, armoring, sand placement, and other activities to prevent or forestall erosion or inundation from shifting shorelines, as well as coastal storms and sea level rise resulting from climate change. Coastal dynamic processes are anticipated to accelerate due to sea level rise and an increase in frequency and intensity of coastal storms as a result of climate change (Daniels *et al.* 1993, pp. 380–384; Fuentes *et al.* 2009, pp. 136–137; Poloczanska *et al.* 2009, pp. 160–161; Bender *et al.* 2010, p. 458).

Since sea turtles evolved in this dynamic system, they are dependent upon these ever-changing features for their continued survival and recovery. Sea turtles require nesting beaches where natural coastal processes or activities that mimic these natural processes will be able to continue well into the future to allow the formation of suitable beaches for nesting (Hawkes *et al.* 2009, pp. 139–140; Poloczanska *et al.* 2009, p. 169).

Coastal processes happen over a wide range of spatial and temporal scales. Wind, waves, tides, storms, and stream discharge are important driving forces in the coastal zone (Dingler 2005, p. 163). Thus, it is important that, where it can be allowed, the natural processes be maintained or any projects that address erosion or shoreline protection contain measures to reduce negative effects or are temporary in nature.

Therefore, based on the information above, we identify natural coastal processes or activities that mimic these natural processes to be a PBF for this species. It is important that loggerhead nesting beaches are allowed to respond naturally to coastal dynamic processes of erosion and accretion or mimic these processes.

Primary Constituent Elements for the Northwest Atlantic Ocean DPS of the Loggerhead Sea Turtle

Under the Act and its implementing regulations, we are required to identify the PBFs essential to the conservation of the loggerhead sea turtle in areas occupied at the time of listing, focusing on the features' primary constituent elements (PCEs). We consider PCEs to be those specific elements of the PBFs that provide for a species' life-history processes and are essential to the conservation of the species.

Based on our current knowledge of the PBFs and habitat characteristics required to sustain the species' life-history processes, we determine that the terrestrial PCEs specific to the DPS are the extra-tidal or dry sandy beaches

from the mean high-water line to the toe of the secondary dune, which are capable of supporting a high density of nests or serving as an expansion area for beaches with a high density of nests and that are well distributed within each State, or region within a State, and representative of total nesting, consisting of four components:

(1) PCE 1—*Suitable nesting beach habitat that has (a) relatively unimpeded nearshore access from the ocean to the beach for nesting females and from the beach to the ocean for both post-nesting females and hatchlings and (b) is located above mean high water to avoid being inundated frequently by high tides.*

(2) PCE 2—*Sand that (a) allows for suitable nest construction, (b) is suitable for facilitating gas diffusion conducive to embryo development, and (c) is able to develop and maintain temperatures and a moisture content conducive to embryo development.*

(3) PCE 3—*Suitable nesting beach habitat with sufficient darkness to ensure nesting turtles are not deterred from emerging onto the beach and hatchlings and post-nesting females orient to the sea.*

(4) PCE 4—*Natural coastal processes or artificially created or maintained habitat mimicking natural conditions.* This includes artificial habitat types that mimic the natural conditions described in PCEs 1 to 3 above for beach access, nest site selection, nest construction, egg deposition and incubation, and hatchling emergence and movement to the sea. Habitat modification and loss occurs with beach stabilization activities that prevent the natural transfer and erosion and accretion of sediments along the ocean shoreline. Beach stabilization efforts that may impact loggerhead nesting include beach nourishment, beach maintenance, sediment dredging and disposal, inlet channelization, and construction of jetties and other hard structures. However, when sand placement activities result in beach habitat that mimics the natural beach habitat conditions, impacts to sea turtle nesting habitat are minimized.

Special Management Considerations or Protection

When designating critical habitat, we assess whether the specific areas within the geographical area occupied by the species at the time of listing contain features essential to the conservation of the species and which may require special management considerations or protection.

For loggerhead sea turtle terrestrial habitat, the features essential to the conservation of this species may require special management considerations or protection to reduce the following threats, which we have grouped into 12 categories:

(1) Recreational beach use (beach cleaning, human presence (e.g., dog beach, special events, piers, and recreational beach equipment));

(2) Beach driving (essential and nonessential off-road vehicles, all-terrain vehicles, and recreational access and use);

(3) Predation (depredation of eggs and hatchlings by native and nonnative predators);

(4) Beach sand placement activities (beach nourishment, beach restoration, inlet sand bypassing, dredge material disposal, dune construction, emergency sand placement after natural disaster, berm construction, and dune and berm planting);

(5) In-water and shoreline alterations (artificial in-water and shoreline stabilization measures (e.g., in-water erosion control structures, such as groins, breakwaters, jetties), inlet relocation, inlet dredging, nearshore dredging, and dredging and deepening channels);

(6) Coastal development (residential and commercial development and associated activities including beach armoring (e.g., sea walls, geotextile tubes, rock revetments, sandbags, emergency temporary armoring); and activities associated with construction, repair, and maintenance of upland structures, stormwater outfalls, and piers);

(7) Lights on land or in the adjacent water, which can deter nesting and disorient hatchlings and nesting females, direct or indirect lighting visible from the nesting beach, including skyglow and bonfires, particularly artificial lighting that has an unshielded lamp and a short wave length (below 540 nm).

(8) Beach erosion (erosion due to aperiodic, short-term weather-related erosion events, such as atmospheric fronts, northeasters, tropical storms, and hurricanes);

(9) Climate change (includes sea level rise);

(10) Habitat obstructions (tree stumps, fallen trees, and other debris on the beach; nearshore sand bars; and ponding along beachfront seaward of dry beach);

(11) Human-caused disasters and response to natural and human-caused disasters (oil spills, oil spill response including beach cleaning and berm construction, and debris cleanup after natural disasters); and

(12) Military testing and training activities (troop presence, pyrotechnics and nighttime lighting, vehicles and amphibious watercraft usage on the beach, helicopter drops and extractions, live fire exercises, and placement and removal of objects on the beach).

The threats described above do not equate to prohibitions of the continued and future implementation of such activities. These primary threats are categories of activities that may impact the habitat and its physical or biological features, and may require special management considerations or protection. Such measures will be considered on a unit by unit basis and will be dependent on what measures are already in place and the potential impacts to the habitat by a proposed Federal action (or an action that is funded or permitted by a Federal agency).

Recreational Beach Use

Beach cleaning: There is increasing demand in the southeastern U.S., especially in Florida, for beach communities to carry out beach cleaning operations to improve the appearance of beaches for visitors and residents. Beach cleaning occurs on private beaches and on some municipal or county beaches that are used for nesting by loggerhead sea turtles. Beach cleaning activities effectively remove ''seaweed, fish, glass, syringes, plastic, cans, cigarettes, shells, stone, wood, and virtually any unwanted debris'' (H. Barber and Sons 2012, entire). This can include wrack material (organic material that is washed up onto the beach by surf, tides, and wind), the removal of which reduces the natural sand-trapping abilities of beaches and contributes to their destabilization. As beach cleaning vehicles and equipment move over the sand, sand is displaced downward, lowering the substrate. Although the amount of sand lost due to single sweeping actions may be small, it adds up considerably over a period of years (Neal *et al.* 2007, p. 219). In addition, since the beach cleaning vehicles and equipment also inhibit plant growth and open the area to wind erosion, the beach and dunes may become unstable. Beach cleaning ''can result in abnormally broad unvegetated zones that are inhospitable to dune formation or plant colonization, thereby enhancing the likelihood of erosion'' (Defeo *et al.* 2009, p. 4). This is also a concern because dunes and vegetation play an important role in minimizing the impacts of artificial beachfront lighting, which causes disorientation of sea turtle hatchlings and nesting turtles, by creating a barrier that prevents

residential and commercial business lighting from being visible on the beach.

Beach cleaning occurs in a few locations in South Carolina and Alabama, but the most extensive beach cleaning activities occur in Florida, particularly southern Florida. However, a FDEP permit, which includes conditions to protect sea turtles, is required. These permit conditions restrict the timing and nature of beach cleaning to ensure these activities avoid or minimize the potential for impacts to sea turtles and their nesting habitat.

Human presence: Human presence on the beach at night during the nesting season can reduce the quality of nesting habitat by deterring or disturbing nesting turtles and causing them to avoid otherwise suitable habitat. In addition, human foot traffic can make a beach less suitable for nesting and hatchling emergence by increasing sand compaction and creating obstacles to hatchlings attempting to reach the ocean (Hosier *et al.* 1981, p. 160).

Some beach communities, local governments, and State and Federal lands have management plans or agreements that include addressing human disturbance to minimize impacts to nesting and hatchling loggerhead sea turtles. Other beach communities and Federal, State, and local governments have addressed human disturbance and presence on the beach with generally successful ''Share the Beach'' educational campaigns. The educational message in the campaigns focuses on beach user behavior when encountering a turtle on the beach—enjoy the experience but do not disturb the turtle.

Recreational beach equipment: The use and storage of lounge chairs, cabanas, umbrellas, catamarans, and other types of recreational equipment on the beach at night can also make otherwise suitable nesting habitat unsuitable by hampering or deterring nesting by adult females and trapping or impeding hatchlings during their nest-to-sea migration. The documentation of non-nesting emergences (also referred to as false crawls) at these obstacles is becoming increasingly common as more recreational beach equipment is left on the beach at night. Sobel (2002, p. 311) describes nesting turtles being deterred by wooden lounge chairs that prevented access to the upper beach.

Some beach communities, local governments, and State and Federal lands have management plans, agreements, or ordinances that address recreational equipment on the beach to minimize impacts to nesting and hatchling loggerhead sea turtles. Other beach communities and Federal, State, and local governments address recreational beach equipment with generally successful ''Leave No Trace'' and ''Share the Beach'' educational campaigns. The educational message in the campaigns focuses on removing recreational equipment from the nesting beach each night during the nesting season.

Beach Driving

Beach driving has been found to reduce the quality of loggerhead nesting habitat in several ways. In the southeastern U.S., vehicle ruts on the beach have been found to prevent or impede hatchlings from reaching the ocean following emergence from the nest (Hosier *et al.* 1981, p. 160; Cox *et al.* 1994, p. 27; Hughes and Caine 1994, p. 237). Sand compaction by vehicles has been found to hinder nest construction and hatchling emergence from nests (Mann 1977, p. 96). Vehicle lights and vehicle movement on the beach after dark results in reduced habitat suitability, which can deter females from nesting and disorient hatchlings. If driving occurs at night, sea turtles could be run over and injured. Additionally, vehicle traffic on nesting beaches contributes to erosion, especially during high tides or on narrow beaches where driving is concentrated on the high beach and foredune.

Beach driving is prohibited on the majority of nesting beaches in the southeastern U.S. by law, regulation, management plan, or agreement. However, some vehicular driving is still allowed on private, local, State, and Federal beaches for recreation, commercial, or beach and natural resource management activities. In 1985, the Florida Legislature severely restricted vehicular driving on Florida's beaches, except for cleanup, repair, or public safety. Five counties were exempted from the legislation and are allowed to continue vehicular access on coastal beaches due to the availability of less than 50 percent of its peak user demand for off-beach parking. The counties affected by this exception are Volusia, St. Johns, Gulf, Nassau, and Flagler Counties, as well as Walton County, which allows limited vehicular access on beaches for boat launching. Volusia and St. Johns Counties developed HCPs that minimize and mitigate the impacts of County-regulated driving and USFWS issued incidental take permits under section 10(a)(1)(B) of the Act. Gulf County has submitted an HCP to the USFWS in conjunction with an application for a section 10(a)(1)(B) permit that minimizes and mitigates the impacts of County-regulated driving on the beach.

Predation

Predation of sea turtle eggs and hatchlings by native and nonnative species occurs on almost all nesting beaches. Predation by a variety of predators can considerably decrease sea turtle nest hatching success. The most common predators in the southeastern U.S. are ghost crabs (*Ocypode quadrata*), raccoons (*Procyon lotor*), feral hogs (*Sus scrofa*), foxes (*Urocyon cinereoargenteus* and *Vulpes vulpes*), coyotes (*Canis latrans*), armadillos (*Dasypus novemcinctus*), and fire ants (*Solenopsis invicta*) (Stancyk 1982, p. 145; Dodd 1988, p. 48). In the absence of nest protection programs in a number of locations throughout the southeastern U.S., raccoons may depredate up to 96 percent of all nests deposited on a beach (Davis and Whiting 1977, p. 20; Stancyk *et al.* 1980, p. 290; Talbert *et al.* 1980, p. 712; Hopkins and Murphy 1981, p. 67; Schroeder 1981, p. 35; Labisky *et al.* 1986, pp. 14–15). In addition, nesting turtles harassed by predators (e.g., coyotes, red foxes) on the beach may abort nesting attempts (Hope 2012, pers. comm.). Thus, the presence of predators can affect the suitability of nesting habitat.

The longest standing beach management programs in the southeastern U.S. have focused on reducing the destruction of nests by natural and introduced predators. Most major nesting beaches in the southeastern U.S. employ some type of lethal (trapping, hunting) or nonlethal (screen, cage) control of mammalian predators to reduce nest loss. Overall, nest protection activities have substantially reduced loggerhead nest depredations, although the magnitude of the reduction has not been quantified.

Beach Sand Placement Activities

Substantial amounts of sand are deposited along Gulf of Mexico and Atlantic Ocean beaches to protect coastal properties in anticipation of preventing erosion and what otherwise would be considered natural processes of overwash and island migration. Constructed beaches tend to differ from natural beaches in several important ways for sea turtles. They are typically wider, flatter, and more compact, and the sediments are moister than those on natural beaches (Nelson *et al.* 1987, p. 51; Ackerman *et al.* 1991, p. 22; Ernest and Martin 1999, pp. 8–9). On severely eroded sections of beach, where little or no suitable nesting habitat previously existed, sand placement can result in increased nesting (Ernest and Martin 1999, p. 37). The placement of sand on a beach with reduced dry foredune

habitat may increase sea turtle nesting habitat if the placed sand is highly compatible (i.e., grain size, shape, color, etc.) with naturally occurring beach sediments in the area, and compaction and escarpment remediation measures are incorporated into the project. In addition, a nourished beach that is designed and constructed to mimic a natural beach system may benefit sea turtles more than an eroding beach it replaces. However, beach sand placement projects conducted under the USFWS's SPBO for the USACE planning and regulatory sand placement activities (including post-disaster sand placement activities) in Florida and other individual biological opinions throughout the loggerhead's nesting range include required terms and conditions that minimize incidental take of turtles.

There are, however, a few important ephemeral impacts associated with beach sand placement activities. In most cases, a significantly larger proportion of turtles emerging on engineered beaches abandon their nesting attempts than turtles emerging on natural or pre-nourished beaches, even though more nesting habitat is available (Trindell *et al.* 1998, p. 82; Ernest and Martin 1999, pp. 47–49; Herren 1999, p. 44; Brock *et al.* 2009, p. 302), with nesting success approximately 10 to 34 percent lower on nourished beaches than on control beaches during the first year post-nourishment. This reduction in nesting success is most pronounced during the first year following project construction and is most likely the result of changes in physical beach characteristics (beach profile, sediment grain size, beach compaction, frequency and extent of escarpments) associated with the nourishment project (Ernest and Martin 1999, p. 48; Mota 2009, p. 129). During the first post-construction year, the time required for turtles to excavate an egg chamber on untilled, hard-packed sands increases significantly relative to natural beach conditions. Also during the first post-construction year, nests on nourished beaches are deposited significantly more seaward of the toe of the dune than nests on natural beaches. More nests are washed out on the wide, flat beaches of the nourished treatments than on the narrower steeply sloped natural beaches. This phenomenon may persist through the second post-construction year and result from the placement of nests near the seaward edge of the beach berm where dramatic profile changes, caused by erosion and scarping, occur as the beach equilibrates to a more natural contour (Ernest and Martin 1999, p. 85).

In-Water and Shoreline Alterations

Many navigable mainland or barrier island tidal inlets along the Atlantic and Gulf of Mexico coasts are stabilized with jetties or groins. Breakwaters placed parallel to the shore have been used as well. Jetties are built perpendicular to the shoreline and extend through the entire nearshore zone and past the breaker zone to prevent or decrease sand deposition in the channel (Kaufman and Pilkey 1979, pp. 193–195). Groins are also shore-perpendicular structures that are designed to trap sand that would otherwise be transported by longshore currents and can cause downdrift erosion (Kaufman and Pilkey 1979, pp. 193–195).

These in-water structures have profound effects on adjacent beaches (Kaufman and Pilkey 1979, p. 194). Jetties and groins placed to stabilize a beach or inlet prevent normal sand transport, resulting in accretion of sand on updrift beaches and acceleration of beach erosion downdrift of the structures (Komar 1983, pp. 203–204; Pilkey *et al.* 1984, p. 44). Witherington *et al.* (2005, p. 356) found a significant negative relationship between loggerhead nesting density and distance from the nearest of 17 ocean inlets on the Atlantic coast of Florida. The effect of inlets in lowering nesting density was observed both updrift and downdrift of the inlets, leading researchers to propose that beach instability from both erosion and accretion may discourage loggerhead nesting.

Following construction, the presence of groins and jetties may interfere with nesting turtle access to the beach, result in a change in beach profile and width (downdrift erosion, loss of sandy berms, and escarpment formation), trap hatchlings, and concentrate predatory fishes, resulting in higher probabilities of hatchling predation. In addition to decreasing nesting habitat suitability, construction or repair of groins and jetties during the nesting season may result in the destruction of nests, disturbance of females attempting to nest, and disorientation of emerging hatchlings from project lighting (Kaufman and Pilkey 1979, p. 194; Komar 1983, p. 191; National Research Council 1987, pp. 73–74; Howard and Davis 1999, pp. 6–7).

However, groins and jetties constructed in appropriate high erosion areas, or to offset the effects of shoreline armoring, may reestablish a beach where none currently exists, stabilize the beach in rapidly eroding areas and reduce the potential for escarpment formation, reduce destruction of nests from erosion, and reduce the need for future sand placement events by extending the interval between sand placement events. USFWS includes terms and conditions in its biological opinions for groin and jetty construction projects to eliminate or reduce impacts to nesting and hatchling sea turtles, sea turtle nests, and sea turtle nesting habitat.

Nesting beach may be lost due to the dredging of spits that have accreted and become a hindrance to navigation. The sand may not be lost from the system if appropriate best management practices are used. For example, sand elsewhere in the system will continue to play a role in downdrift habitat protection.

Coastal Development

Coastal development not only causes the loss and degradation of suitable nesting habitat, but can result in the disruption of powerful coastal processes, accelerating erosion and interrupting the natural shoreline migration. This may in turn cause the need to protect upland structures and infrastructure by armoring, which causes changes in, additional loss of, or impact to the remaining sea turtle habitat.

In the southeastern U.S., numerous armoring or erosion control structures (e.g., bulkheads, seawalls, soil retaining walls, rock revetments, sandbags, geotextile tubes) that create barriers to nesting have been constructed to protect upland residential and commercial development. Armoring is any rigid structure placed parallel to the shoreline on the upper beach to prevent both landward retreat of the shoreline and inundation or loss of upland property by flooding and wave action (Kraus and McDougal 1996, p. 692). Although armoring structures may provide short-term protection to beachfront property, they do little to promote or maintain sandy beaches used by loggerhead sea turtles for nesting. These structures influence natural shoreline processes and the physical beach environment, but the effects are not well understood. However, it is clear that armoring structures prevent long-term recovery of the beach and dune system (i.e., building of the back beach) by physically prohibiting dune formation from wave uprush and wind-blown sand. The proportion of coastline that is armored is approximately 3 percent (9 km (5.6 mi)) in North Carolina (Godfrey 2013, pers. comm.), 12 percent (29 km (18.0 mi)) in South Carolina (Griffin 2009, pers. comm.), 9 percent (14 km (8.7 mi)) in Georgia (Dodd 2013, pers. comm.), 18 percent (239 km (148.4 mi)) in Florida (Schroeder and Mosier 2000, p. 291), 6 percent (7.5 km (4.7 mi)) in

Alabama (Morton and Peterson 2005, entire), and 0 percent along the Mississippi barrier islands (Morton and Peterson 2005, entire).

In addition to coastal armoring, there are a variety of other coastal construction activities that may affect sea turtles and their nesting habitat. These include construction, repair, and maintenance of upland structures and dune crossovers; installation of utility cables; installation and repair of public infrastructure (such as coastal highways and emergency evacuation routes); and construction equipment and lighting associated with any of these activities. Many of these activities alter nesting habitat, as well as directly harm adults, nests, and hatchlings. Most direct construction-related impacts can be avoided by requiring that nonemergency activities be performed outside of the nesting and hatching season. However, indirect effects can also result from the post-construction presence of structures on the beach. The presence of these structures may cause adult females to return to the ocean without nesting, deposit their nests lower on the beach where they are more susceptible to frequent and prolonged tidal inundation, or select less suitable nesting sites.

Coastal development also contributes to habitat degradation by increasing light pollution. Both nesting and hatchling sea turtles are adversely affected by the presence of artificial lighting on or near the beach (Witherington and Martin 1996, pp. 2–5). See the threat category for *Artificial lighting* below for additional information.

Stormwater and other water source runoff from coastal development, including beachfront parking lots, building rooftops, roads, decks, and draining swimming pools adjacent to the beach, is frequently discharged directly onto Northwest Atlantic beaches and dunes either by sheet flow, through stormwater collection system outfalls, or through small-diameter pipes. These outfalls create localized erosion channels, prevent natural dune establishment, and wash out sea turtle nests (FWC, unpublished data).

Artificial Lighting

Experimental studies have shown that artificial lighting deters adult female turtles from emerging from the ocean to nest (Witherington 1992, pp. 36–38). Witherington (1986, p. 71) also found that loggerheads aborted nesting attempts at a greater frequency in lighted areas. In addition, because adult females rely on visual brightness cues to find their way back to the ocean after nesting, those turtles that nest on lighted beaches may become disoriented by artificial lighting and have difficulty finding their way back to the ocean. Although loggerhead turtles prefer dark beaches for nesting, many do nest in lighted areas. In doing so, they place the lives of their offspring at risk as artificial lighting can impair the ability of hatchlings to properly orient to the ocean once they leave their nests (Witherington and Martin 1996, pp. 7–13). Hatchlings, unable to find the ocean or delayed in reaching it, are likely to incur high mortality from dehydration, exhaustion, or predation (Carr and Ogren 1960, p. 23; Ehrhart and Witherington 1987, pp. 66–67; Witherington and Martin 1996, p. 11).

Based on hatchling orientation index surveys at nests located at 23 representative beaches in 6 counties around Florida in 1993 and 1994, Witherington *et al.* (1996, entire) found that, by county, approximately 10 to 30 percent of nests showed evidence of hatchlings disoriented by lighting. From this survey and from measures of hatchling production (FWC, unpublished data), the actual number of hatchlings disoriented by lighting in Florida is likely in the hundreds of thousands per year. Mortality of disoriented hatchlings is likely very high (NMFS and USFWS 2008, p. I–43).

Efforts are underway to reduce light pollution on sea turtle nesting beaches. In the southeastern U.S., the effects of light pollution on sea turtles are most extensive in Florida due to dense coastal development. Enforcement of mandatory lighting ordinances in Florida and other States has increased. The FWC, working in close coordination with USFWS, has developed a sea turtle lighting certification program that involves conducting workshops to educate all interested parties about the effects of lighting on sea turtles, the best lighting options to use near sea turtle nesting beaches, and the wide variety of light fixtures and bulbs available to manage lighting on their properties without negatively impacting sea turtles. In addition, sand placement projects typically include dune construction and these created dunes help minimize the effects of landward artificial lighting by blocking some of the light and creating a dark silhouette for nesting and hatchling turtle crawling to the ocean.

Beach Erosion

Natural beach erosion events may influence the quality of nesting habitat. Short-term erosion events (e.g., atmospheric fronts, northeasters, tropical storms, and hurricanes) are common phenomena throughout the Northwest Atlantic Ocean loggerhead nesting range and may vary considerably from year to year. Although these erosion events may affect loggerhead hatchling production, the results are generally localized and they rarely result in whole-scale losses over multiple nesting seasons. The negative effects of hurricanes on low-lying and developed shorelines used for nesting by loggerheads may be longer-lasting and a greater threat overall.

Hurricanes and other storm events can result in the direct loss of sea turtle nests, either by erosion or washing away of the nests by wave action and inundation or ''drowning'' of the eggs or pre-emergent hatchlings within the nest, or indirectly affect sea turtles by causing the loss of nesting habitat. Depending on their frequency, storms can affect sea turtles on either a short-term basis (nests lost for one season and temporary loss of nesting habitat) or a long-term basis (habitat unable to recover due to frequent storm events). The manner in which hurricanes affect sea turtle nesting also depends on their characteristics (winds, storm surge, rainfall), the time of year (within or outside of the nesting season), and where the northeast edge of the hurricane crosses land (Milton *et al.* 1994, pp. 978–980; Pike and Stiner 2007, p. 2).

Climate change studies have indicated a trend toward increasing hurricane intensity (Emanuel 2005, p. 686; Webster *et al.* 2005, p. 1846; Karl *et al.* 2009, p. 114). When combined with the effects of sea level rise (see the threat category for *Climate change* below for additional information), there may be increased cumulative impacts from future storms.

USFWS acknowledges that we cannot fully address the threat of natural beach erosion facing loggerheads. However, we can determine how we respond to beach erosion events working with the States, local governments, and Federal agencies such as the Federal Emergency Management Agency (FEMA) and the USACE. Emergency beach sand placement activities conducted under the USFWS's SPBO for the USACE planning and regulatory sand placement activities include requirements for post-disaster sand placement activities in Florida. In addition, USFWS and FEMA have two programmatic consultations for post-disaster response in Florida that cover replacement of pre-existing facilities and berm construction. These consultations have enabled a faster response to complete shore protection activities and protect sea turtle nesting.

Climate Change

Climate change has the potential to impact loggerhead sea turtles in the Northwest Atlantic, affecting nesting habitat availability, temperature dependent sex ratios, timing of the nesting season, and increased erosion from frequent intense storm events (Bender *et al.* 2010, p. 458; Weishampel *et al.* 2004, p. 1426; Hawkes *et al.* 2009, pp. 139–141; Reese *et al.* 2013, pp. 269–271). The decline in loggerhead nesting in Florida from 1998 to 2007, as well as the recent increase, appears to be tied to climatic conditions (Van Houtan and Halley 2011, p. 3). Another study suggested that annual nesting numbers represent a delayed response in association with the onset of protection efforts (Arendt *et al.* 2013, p. 7). Global sea level during the 20th century rose at an estimated rate of about 1.7 millimeters (mm) (0.7 in) per year or an estimated 17 cm (6.7 in) over the entire 100-year period, a rate that is an order of magnitude greater than that seen during the several millennia that followed the end of the last ice age (Bindoff *et al.* 2007, p. 409; Fuentes *et al.* 2009, p. 137). Global sea level is projected to rise in the 21st century at an even greater rate. In the southeastern U.S., the U.S. Global Change Research Program stated that sea level is likely to increase on average up to 0.61 m (2 ft) or more by the end of the 21st century (Karl *et al.* 2009, p. 114). Although rapid changes in sea level are predicted, estimated timeframes and resulting water levels vary due to the uncertainty about global temperature projections and the rate of ice sheets melting and slipping into the ocean (Bindoff *et al.* 2007, pp. 409, 421; Witt *et al.* 2009, p. 901).

Potential impacts of climate change to the Northwest Atlantic Ocean loggerhead DPS include beach erosion from rising sea levels, repeated inundation of nests, skewed hatchling sex ratios from rising incubation temperatures, and abrupt disruption of ocean currents used for natural dispersal during the complex life cycle (Fish *et al.* 2005, pp. 489–490; Fish *et al.* 2008, p. 336; Hawkes *et al.* 2009, pp. 139–141; Poloczanska *et al.* 2009, pp. 164–175). Along developed coastlines, and especially in areas where shoreline protection structures have been constructed to limit shoreline movement, rising sea levels will cause severe effects on loggerhead nesting habitat and nesting females and their eggs. The loss of habitat as a result of climate change could be accelerated due to a combination of other environmental and oceanographic changes such as an increase in the intensity of storms and/or changes in prevailing currents, both of which could lead to increased beach loss via erosion (Kennedy *et al.* 2002, pp. 7, 14, 23, 40; Meehl *et al.* 2007, pp. 783, 788). Thus, climate change impacts could have profound long-term impacts on loggerhead nesting populations in the Northwest Atlantic Ocean, but it is not possible to project the impacts at this point in time.

USFWS acknowledges that we cannot fully address the significant, long-term threat of climate change to loggerhead sea turtles. However, we can determine how we respond to the threat of climate change by providing protection to the known nesting sites of the turtle. We can also identify measures to protect nesting habitat from the actions (e.g., coastal armoring, sand placement) undertaken to respond to climate change that may potentially impact the Northwest Atlantic Ocean loggerhead DPS.

Habitat Obstructions

Both natural and anthropogenic features (e.g., offshore sand bars, ponding along the beachfront) can act as barriers or deterrents to adult females attempting to access a beach. In addition, hatchlings often must navigate through a variety of obstacles before reaching the ocean. These include natural (e.g., tree stumps, fallen trees) and human-made debris. Debris on the beach may interfere with a hatchling's progress toward the ocean. Research has shown that travel times of hatchlings from the nest to the water may be extended when traversing areas of heavy foot traffic or vehicular ruts (Hosier *et al.* 1981); the same is true of debris on the beach. Hatchlings may be upended and spend both time and energy in righting themselves. Some beach debris may have the potential to trap hatchlings and prevent them from successfully reaching the ocean. In addition, debris over the tops of nests may impede or prevent hatchling emergence.

Human-Caused Disasters and Response to Natural and Human-Caused Disasters

Oil spills threaten loggerhead sea turtles in the Northwest Atlantic Ocean. Oil spills in the vicinity of nesting beaches just prior to or during the nesting season place nesting females, incubating egg clutches, and hatchlings at significant risk from direct exposure to contaminants (Fritts and McGehee 1982, p. 38; Lutcavage *et al.* 1997, p. 395; Witherington 1999, p. 5), as well as negative impacts on nesting habitat. Annually about 1 percent of all sea turtle strandings along the U.S. east coast have been associated with oil, but higher rates of 3 to 6 percent have been observed in South Florida and Texas (Rabalais and Rabalais 1980, p. 126; Plotkin and Amos 1990, p. 742; Teas 1994, p. 9). Oil cleanup activities can also be harmful. Earth-moving equipment can dissuade females from nesting and destroy nests, containment booms can entrap hatchlings, and lighting from nighttime activities can misdirect turtles (Witherington 1999, p. 5).

Deepwater Horizon (Mississippi Canyon 252) Oil Spill: The Deepwater Horizon (Mississippi Canyon 252) oil spill, which started April 20, 2010, discharged oil into the Gulf of Mexico through July 15, 2010. According to government estimates, between 379 and 757 million liters (100 and 200 million gallons) of oil were released into the Gulf of Mexico during this time. The U.S. Coast Guard estimates that more than 189 million liters (50 million gallons) of oil have been removed from the Gulf, or roughly a quarter of the spill amount. Additional impacts to natural resources may be attributed to the 7 million liters (1.84 million gallons) of dispersant that were applied to the spill. The U.S. Coast Guard, the States, and Responsible Parties that formed the Unified Area Command (with advice from Federal and State natural resource agencies) initiated protective measures and cleanup efforts by preparing contingency plans to deal with petroleum and other hazardous chemical spills for each State's coastline. These plans identified sensitive habitats, including all federally listed species' habitats, which received a higher priority for response actions and allowed for immediate habitat protective measures coinciding with cleanup activities.

Throughout the Deepwater Horizon oil spill response, the U.S. Coast Guard was responsible for and continues to oversee implementation and documentation of avoidance and minimization measures to protect trust resources, including sea turtles. Though containment of the well was completed in September 2010, other countermeasures, cleanup, and waste disposal are continuing and, therefore, a detailed analysis of the success of the avoidance and minimization measures has not been conducted. In addition, Natural Resource Damage Assessment studies regarding potential effects to fish and wildlife resources are currently being conducted along the northern Gulf of Mexico coast.

Juvenile loggerhead turtles and adult females have been tracked and known to forage in the Gulf of Mexico (Mansfield

2006, p. 4; Foley *et al.* 2008, pp. 75–76; Turtle Expert Working Group 2009, pp. 30–39). It is not yet clear what the immediate and long-term impacts of the Deepwater Horizon oil well blowout and uncontrolled release has had, and will have, on loggerhead sea turtles in the Gulf of Mexico.

Military Mission, Testing, and Training Activities

Troop presence: The presence of soldiers and other personnel on the beach, particularly at night during nesting and hatching season, could result in harm or death to individual nesting turtles or hatchlings, as well as deter females from nesting. Training exercises require concentration and often involve inherently dangerous activities. A nesting sea turtle or emerging hatchling could be overlooked and injured or killed by training activities on the beach. Training activities also may require the use of pyrotechnics and lighting, and both nesting and hatchling sea turtles are adversely affected by the presence of artificial lighting on or near the beach (Witherington and Martin 1996, pp. 2–5). See the threat category for *Artificial lighting* above for additional information.

Vehicles: The use of vehicles for amphibious assault training, troop transport, helicopter landing drops and extraction, search and rescue, and unmanned aerial vehicle use all have the potential to injure or kill nesting females and emerging hatchlings. In addition, heavy vehicles have the potential to compact sand that may affect the ability of hatchlings to climb out of nests or create ruts that entrap hatchlings after emergence. See the threat category for *Beach driving* above for additional information.

Live fire exercises: Live fire exercises are inherently dangerous, and spent ammunition could injure or kill sea turtles and hatchlings, particularly at night. A nesting sea turtle or emerging hatchling could approach the beach area during an exercise and be harmed or killed.

Placement or removal of objects on the beach: Digging into the sand to place or remove objects (e.g., mine placement and extraction) could result in direct mortality of developing embryos in nests within the training area for those nests that are missed during daily nesting surveys and thus not marked for avoidance. The exact number of these missed nests is not known. However, in two separate monitoring programs on the east coast of Florida where hand digging was performed to confirm the presence of nests and thus reduce the chance of missing nests through misinterpretation, trained observers still missed about 6 to 8 percent of the nests because of natural elements (Martin 1992, p. 3; Ernest and Martin 1993, pp. 23–24). This must be considered a conservative number, because missed nests are not always accounted for. In another study, Schroeder (1994, p. 133) found that, even under the best of conditions, about 7 percent of nests can be misidentified as false crawls by highly experienced sea turtle nest surveyors. Signs of hatchling emergence are very easily obliterated by the same elements that interfere with detection of nests.

USFWS consults with DOD under section 7 of the Act on INRMPs, military mission, testing, and training activities that may affect nesting and hatchling sea turtles, sea turtle nests, and sea turtle nesting habitat. Efforts to minimize the effects of these activities including natural resource management have focused on adjusting the activity timing to minimize encounters with loggerheads and adjusting locations of activities to reduce overlap with sea turtle habitats.

Criteria Used To Identify Critical Habitat

As required by section 4(b)(2) of the Act, we use the best scientific data available to designate critical habitat. In accordance with the Act and our implementing regulation at 50 CFR 424.12(b) we review available information pertaining to the habitat requirements of the species and identify occupied areas at the time of listing that contain the features essential to the conservation of the species. Here, we are designating critical habitat in areas within the geographical area occupied by the species at the time of listing in 2011 (50 CFR 17.11(h)). We are not currently designating any areas outside the geographical area occupied by the species because occupied areas are sufficient for the conservation of the species.

Although the loggerhead sea turtle occurs throughout the temperate and tropical regions of the Atlantic, Pacific, and Indian Oceans (Dodd 1988, p. 16), under our regulations critical habitat can only be designated in areas under U.S. jurisdiction (50 CFR 424.12(h)). Because loggerhead sea turtle nesting in the U.S. only occurs within the Northwest Atlantic Ocean DPS, we have defined the terrestrial portion of the geographical area occupied for the loggerhead sea turtle as those U.S. areas in the Northwest Atlantic Ocean DPS where nesting has been documented for the most part annually for the 10-year period from 2002 to 2011; this time period represents the most consistent and standardized nest count surveys (FWC 2012, entire; GDNR 2012, entire; Gulf Islands National Seashore 2012a, entire; Gulf Islands National Seashore 2012b, entire; NCWRC 2012, entire; Share the Beach 2012, entire; SCDNR 2012, entire). Nesting data were collected through a network of volunteers, private conservation groups, consultants, academics, local governments, Federal agencies, and Park Services. We collaborated with our State Technical Advisors in North Carolina, South Carolina, Georgia, and Florida. As the coordinators of the nesting surveys in those states, they provided information on the survey efforts and consistency for those specific locations to ensure our analysis accurately reflected the nesting survey effort for those states. We collected information on nesting data directly from one organization of volunteers in Alabama and the National Park Service in Mississippi.

As described in the Background section above, five recovery units have been identified for the Northwest Atlantic DPS of the loggerhead sea turtle (NMFS and USFWS 2008, pp. II–2—II–6). Four of these recovery units represent nesting assemblages in the southeastern U.S. and were delineated based on genetic differences and a combination of geographic distribution of nesting densities, geographic separation, and geopolitical boundaries. The fifth recovery unit (Greater Caribbean Recovery Unit) includes all nesting assemblages within the Greater Caribbean, which includes Puerto Rico and the U.S. Virgin Islands. No loggerhead sea turtle nesting has ever been documented in Puerto Rico (Diez 2012, pers. comm.). Only two loggerhead sea turtles have been documented as nesting since 2003 in the U.S. Virgin Islands, both on Buck Island Reef National Monument off the north coast of St. Croix (Pollock *et al.* 2009, entire). Therefore, although some loggerhead sea turtle nesting has been documented on beaches under U.S. jurisdiction within the Greater Caribbean Recovery Unit, we do not designate any critical habitat there due to the very low number of nests laid there. Therefore, the four recovery units for which we designate critical habitat are the Northern Recovery Unit, Peninsular Florida Recovery Unit, Dry Tortugas Recovery Unit, and Northern Gulf of Mexico Recovery Unit.

All terrestrial units designated as critical habitat are currently occupied by the loggerhead sea turtle, occur within the species' geographical range,

and contain the PBFs, as well as the PCEs sufficient to support the terrestrial life-history processes of the species.

Within each of the four recovery units, the beaches having the highest nesting densities were selected. The selected beaches represent a good spatial distribution that will help ensure the protection of genetic diversity, and collectively provide a good representation of total nesting. In addition, the beaches adjacent to the high-density nesting beaches were selected because they currently support loggerhead nesting and can serve as expansion areas should the high-density nesting beaches be significantly degraded or temporarily or permanently lost through natural processes or upland development. Thus, the amount and distribution of critical habitat being designated for terrestrial habitat will conserve recovery units of the DPS by:

(1) Maintaining their existing nesting distribution;

(2) Allowing for movement between beach areas depending on habitat availability (response to changing nature of coastal beach habitat) and supporting genetic interchange;

(3) Allowing for an increase in the size of each recovery unit to a level where the threats of genetic, demographic, and normal environmental uncertainties are diminished; and

(4) Maintaining their ability to withstand local or unit level environmental fluctuations or catastrophes.

We used the following process to select specific areas in the terrestrial environment as critical habitat units. For each recovery unit, we looked at nesting densities as described below to ensure a good spatial distribution of critical habitat. This approach was relatively straightforward for the Northern Recovery Unit and the Northern Gulf of Mexico Recovery Unit. For the Dry Tortugas Recovery Unit, all islands west of Key West where loggerhead nesting has been documented has been designated as critical habitat based on the unit's small size. However, the approach used for the Peninsular Florida Recovery Unit was more complex. The methodology used for identifying critical habitat was developed with the assistance of five State agency technical consultants with sea turtle expertise in North Carolina, South Carolina, Georgia, and Florida. The methodology is described by recovery unit below.

Northern Recovery Unit

For the Northern Recovery Unit, we used loggerhead nest counts from 2006–2011 to calculate mean nesting density for each beach. We defined beach segments as island beaches separated by creeks, inlets, or sounds. However, in some cases, for long contiguous stretches of habitat with no natural features, we used political boundaries to delineate beaches (e.g., Myrtle Beach).

We divided beach nesting densities into four equal groups by State and selected beaches that were within the top 25 percent (highest nesting densities) for designation as critical habitat. These high nesting density beaches along with the beaches adjacent to them, as described below, encompassed the majority of nesting within the recovery unit. The reason we determined high-density nesting beaches within each State, rather than the entire Northern Recovery Unit, was that doing so allowed for the inclusion of beaches near the northern extent of the range (North Carolina) that would otherwise be considered low density when compared with beaches further south (Georgia and South Carolina), ensuring a good spatial distribution. Although some loggerhead sea turtle nesting regularly occurs in Virginia, we did not designate any critical habitat there due to the very low number of nests (less than 10 annually from 1992 to 2011) laid in the State (Mansfield 2006, pp. 131–133).

We also identified adjacent beaches for each of the high-density nesting beaches based on current knowledge about nest site fidelity (Ehrhart 1980, p. 87; Murphy and Hopkins-Murphy 1990, 123–124; Schroeder *et al.* 2003, pp. 118–119). Loggerheads are known to exhibit high site fidelity to individual nesting beaches. In a study in Georgia, 55 percent (12 of 22) of nesting females tracked during the internesting period used a single island for nesting, while 40 percent (9 of 22) used two islands (Scott 2006, p. 51). Protecting beaches adjacent to high-density nesting beaches should provide sufficient habitat to accommodate and provide a rescue effect for nesting females whose primary nesting beach has been lost. Although these areas currently support nesting, they will facilitate recovery by providing additional nesting habitat for population expansion. Therefore, in the Northern Recovery Unit, we selected one island to the north and one island to the south, where appropriate, of each of the high-density nesting beaches identified for inclusion as critical habitat. Islands were selected because nesting occurs on the islands and not the mainland beaches.

We identified 39 units in the Northern Recovery Unit for designation as critical habitat for the loggerhead sea turtle. However, we have exempted one of the identified units (Marine Corps Base Camp Lejeune (Onslow Beach)) from critical habitat designation under section 4(a)(3) of the Act (see Exemptions section below). The remaining 38 units encompass 393.7 km (244.7 mi) of Atlantic Ocean shoreline: 8 units occur in North Carolina, 22 in South Carolina, and 8 in Georgia. These 38 areas encompass approximately 86 percent of the documented nesting (numbers of nests) within the recovery unit.

Peninsular Florida Recovery Unit

For the Peninsular Florida Recovery Unit, we took a similar approach to that used for the Northern Recovery Unit using nest counts from 2006–2011 collected under the Florida Statewide Index Nesting Beach program. However, we used recent information on loggerhead genetics within the recovery unit (Shamblin *et al.* 2011, entire) to break the unit into smaller regions for the purpose of assessing beach nesting densities (analogous to assessing nesting densities by State for the Northern Recovery Unit).

Within the southeastern U.S., Shamblin *et al.* (2011, p. 585) supported recognition of a minimum of six distinct units based solely on genetics. Four of these genetic units occur fully or partially within the Peninsular Florida Recovery Unit: (1) Northern, (2) central eastern Florida, (3) southern Florida (southeastern and southwestern), and (4) central western Florida. We used these four regions identified by Shamblin *et al.* (2011, p. 585) for our assessment, but split southern Florida into southeastern and southwestern regions based on additional genetic analyses (Shamblin *et al.* 2012, p. 158). We included the Florida Keys in Monroe County from Key West and east in the southeastern region because, even though the sample sizes for loggerhead genetics on these islands are too small to make any definitive determinations, they do indicate that loggerheads nesting in this area are least likely to group out with those in the southwestern region (Shamblin *et al.* 2012, p. 158).

Therefore, we split the Peninsular Florida Recovery Unit into the following five regions for an assessment of nesting densities based on recovery unit boundaries (NMFS and USFWS 2008, pp. II–2—II–6) and recent genetic analyses (Shamblin *et al.* 2011, p. 585; Shamblin *et al.* 2012, p. 158):

(1) Northern Florida—Florida-Georgia border to Ponce Inlet;

(2) Central Eastern Florida—Ponce Inlet to Fort Pierce Inlet;

(3) Southeastern Florida—Fort Pierce Inlet to Key West in Monroe County;

(4) Central Western Florida—Pinellas County to San Carlos Bay off Lee County; and

(5) Southwestern Florida—San Carlos Bay off Lee County to Sandy Key in northwest Monroe County.

The next step for the Peninsular Florida Recovery Unit was to delineate beaches within these five regions. For the Florida Atlantic Coast from the Florida-Georgia border through central eastern Monroe County, and for the Florida Gulf Coast from the Pinellas County-Pasco County border through northwestern Monroe County, we first defined beach segments as islands or mainland beaches separated by inlets, cuts, rivers, creeks, bays, sounds, passes, and channels. Note that, for the Miami Beaches area, we did not use the Haulover Cut to delineate beaches north and south of this water feature. The reason for this is that the permit holder survey area for the Miami Beaches occurs both north and south of the Haulover Cut, and the nesting data could not readily be separated. In this situation, the nesting density analysis included data that covered the entire survey area from the south end of Golden Beach to Government Cut.

After breaking out beach segments using inlets and other water features, we determined that the identified beach segments were overly large in some areas for an accurate assessment of nesting densities. Calculating nesting densities for overly large areas could result in some high-density nesting beaches not being identified because they would be averaged in with adjacent lower density nesting beaches. To address this issue, we next used information available on turtle nest site fidelity to further separate beach segments. Nest site fidelity varies among females, with some females laying multiple nests on a relatively small section of beach and some laying their nests over a much larger section of beach. Schroeder *et al.* (2003, p. 119) compiled reported information on mean distances between the nest sites of individual loggerheads, with the reported averages of females nesting on the Florida Atlantic coast varying from 3.0 to 17.48 km (1.9 to 10.9 mi). In Southwest Florida, Tucker (2010, p. 51) reported a mean nest site fidelity of 28.1 km (17.5 mi) for all nests, but 16.9 km (10.5 mi) if the first nests were omitted to account for each turtle's navigational correction. Based on this information, we decided to use distances of approximately 20.0 km (12.4 mi) to further separate out beach segments. We used this 20.0-km (12.4-mi) target in concert with sea turtle permit holder nesting survey area boundaries to delineate beaches for the nesting density analysis.

For the Florida Keys in Monroe County, we grouped the islands from Key West and east where loggerhead nesting has been documented into three separate segments: (1) Upper segment consisting of Lower Matecumbe Key and Long Key; (2) Middle segment consisting of Little Crawl Key, Fat Deer Key, Key Colony Beach (formerly called Shelter Key), and Vaca Key; and (3) Lower segment consisting of Bahia Honda Key, Big Pine Key, and Key West. Note that Sandy Key in northwestern Monroe County was grouped with the Southwestern Florida Region.

Once we defined the beaches by region within the Peninsular Florida Recovery Unit, we used the same approach described above for the Northern Recovery Unit. We divided beach nesting densities into four equal groups by region and selected beaches that were within the top 25 percent (highest nesting densities) for designation as critical habitat. These high density nesting beaches along with the beaches adjacent to them, as described below, encompassed the majority of nesting within the recovery unit. The reason we determined high-density nesting beaches within each region (rather than the entire Peninsular Florida Recovery Unit) was to ensure the inclusion of beaches that would otherwise be considered low density when compared with beaches along the southeastern Florida coast and thus ensure a good spatial distribution of critical habitat units within the recovery unit.

We also identified adjacent areas for each of the high-density nesting beaches based on current knowledge about nest site fidelity. Protecting beaches adjacent to high-density nesting beaches should provide sufficient habitat to accommodate and provide a rescue effect for nesting females whose primary nesting beach has been lost. To identify adjacent beaches, we again used information available on turtle nest site fidelity. Therefore, for the Peninsular Florida Recovery Unit, we selected adjacent beaches approximately 20.0 km (12.4 mi) to the north and 20.0 km (12.4 mi) to the south, where appropriate, of each of the high-density nesting beaches identified for inclusion as critical habitat. The selected adjacent beaches were based on permit holder survey area boundaries with one or more permit holder survey areas being included depending on the length of the survey areas. Within these adjacent areas for each of the high-density nesting beaches, we did not include segments that were highly urbanized, highly erosional, or prone to repeated flooding.

Although no beaches in the Florida Keys east of Key West were selected using the above process, we decided to include beaches on two Keys to ensure good spatial distribution of loggerhead nesting in the southern portion of the range for this recovery unit. The Keys (Long Key and Bahia Honda Key) we are designating as critical habitat address this need for good spatial distribution of nesting. In addition, these beaches are unique from the other beaches we are designating in that they are limestone islands with narrow, low-energy beaches (beaches where waves are not powerful); they have carbonate sands; and they are relatively close to the major offshore currents that are known to facilitate the dispersal of post-hatchling loggerheads (Putman *et al.* 2010, p. 3634; Mansfield and Putman 2013, pp. 192–193).

We identified 37 units in the Peninsular Florida Recovery Unit for designation as critical habitat for the loggerhead sea turtle. However, we have exempted two of the identified units (Cape Canaveral Air Force Station and Patrick Air Force Base) from critical habitat designation under section 4(a)(3) of the Act (see Exemptions section below). Additionally, we have excluded two units and portions of three others per the Secretary's discretion under section 4(b)(2) of the Act (see Exclusions section below). The remaining 33 units encompass 277.6 km (172.5 mi) of Atlantic Ocean shoreline and 198.8 km (123.5 mi) of Gulf of Mexico shoreline totaling 426.4 km (296 mi) of shoreline in this recovery unit: 16 units occur along the Atlantic Ocean coast, and 17 units occur along the Gulf of Mexico coast. These 33 units encompass approximately 86 percent of the documented nesting (numbers of nests) within the recovery unit.

Dry Tortugas Recovery Unit

For the Dry Tortugas Recovery Unit, we designate as critical habitat all islands west of Key West, Florida, where loggerhead nesting has been documented due to the extremely small size of this recovery unit. We identified four units in the Dry Tortugas Recovery Unit for designation as critical habitat for the loggerhead sea turtle. These four units encompass 14.0 km (8.7 mi) of Gulf of Mexico shoreline. These four units encompass 100 percent of the nesting (numbers of nests) where loggerhead nesting is known to occur within the recovery unit.

Northern Gulf of Mexico Recovery Unit

For the Northern Gulf of Mexico Recovery Unit, we used loggerhead nest counts from 2006–2011 to calculate mean nesting density for each beach. We defined beach segments as islands or mainland beaches separated by cuts, bays, sounds, or passes. We did not use Crooked Island Sound, St. Andrews Bay Entrance Channel, and Destin Pass to delineate beaches west and east of these water features because the permit holder survey areas for these three locations occur both west and east of the water feature, and the nesting data could not readily be separated. In each location, the nesting density analysis included data that covered the entire survey areas on both sides of the water feature.

After breaking out beach segments using cuts and other water features, we determined that the identified beach segments were overly large in some areas for an accurate assessment of nesting densities. Calculating nesting densities for overly large areas could result in some high-density nesting beaches not being identified because they would be averaged in with adjacent lower density nesting beaches. To address this issue, we used political boundaries and information available on turtle nest site fidelity to further separate beach segments. During the selection process, there was preliminary information on nest site fidelity available for the Northern Gulf of Mexico Recovery Unit, but it was not sufficient to determine average distances between nest sites within a season for nesting females in this recovery unit. Therefore, as described in the Peninsular Florida Recovery Unit section above, we decided to use distances of approximately 20.0 km (12.4 mi) to further separate out beach segments based on available information on nest site fidelity. We used this 20.0-km (12.4-mi) target in concert with sea turtle permit holder nesting survey area boundaries to delineate beaches for the nesting density analysis. Since then, Hart *et al.* (2013, pp. 11–12) found the mean distances between the nest sites of individual loggerhead sea turtles; with the reported average of females nesting on the Gulf of Mexico coast as 27.5 km (14.8 mi) with a range of 0.1 to 402.1 km (0.1 to 217.1 mi). Even though nest site fidelity for the Northern Gulf of Mexico Recovery Unit is slightly higher than the Peninsula Florida Recovery Unit, our use of the 20.0 km (12.4 mi) for nest site fidelity falls within the realm of acceptable site fidelity in this Recovery Unit considering outliers and is considered sufficient for conservation.

Once we defined the beaches by State within the Northern Gulf of Mexico Recovery Unit, we used a similar approach as the one described above for the Northern Recovery Unit. For Mississippi, nesting data are not collected regularly or in a standardized manner. Prior to 2006, the NPS annually conducted aerial sea turtle nesting surveys once a week during the nesting season on the Mississippi District of Gulf Islands National Seashore. Aerial surveys were conducted over Cat, West Ship, East Ship, Horn, and Petit Bois Islands. All nests sighted during aerial surveys appeared to be loggerhead nests. The total number of nests for a season ranged from 0 to approximately 15, although aerial survey methods and frequency may have missed nests. Although regular surveys have not been conducted since 2005, loggerhead nesting was documented in 2010 and 2011 during the Deepwater Horizon event response efforts. Horn and Petit Bois Islands have had the most nests; the other islands have had occasional nests. For Alabama and the Florida Panhandle, we divided beach nesting densities into four equal groups by State and selected beaches that were within the top 25 percent (highest nesting densities) for designation as critical habitat. These high density nesting beaches along with the beaches adjacent to them as described below encompassed the majority of nesting within the recovery unit. The reason we determined high-density nesting beaches within each State (rather than the entire Northern Gulf of Mexico Recovery Unit) was that it allowed consideration for the inclusion of beaches near the western extent of the range that would otherwise be considered low density when compared with beaches in Alabama and the Florida Panhandle, thus ensuring a good spatial distribution. While nesting in Mississippi may be considered low density compared to Alabama and the Florida Panhandle, the nesting numbers were much higher than those in Louisiana and Texas. Thus, although some loggerhead sea turtle nesting likely regularly occurs in Louisiana and Texas, we did not designate any critical habitat there due to the very low number of nests (less than 10 annually in each State from 2002 to 2011) known to be laid in these States.

We also identified adjacent areas for each of the high-density nesting beaches in Alabama and the Florida Panhandle based on current knowledge about nest site fidelity. Protecting beaches adjacent to high-density nesting beaches should provide sufficient habitat to accommodate and provide a rescue effect for nesting females whose primary nesting beach has been lost. To identify adjacent beaches, we again used information available on turtle nest site fidelity. Although some preliminary information on nest site fidelity is available for the Northern Gulf of Mexico Recovery Unit, it was not sufficient to determine average distances between nest sites within a season for nesting females in this recovery unit. Therefore, we used available information on nest site fidelity for the Peninsular Florida Recovery Unit and selected adjacent beaches approximately 20.0 km (12.4 mi) to the west and 20.0 km (12.4 mi) to the east, where appropriate, of each of the high-density nesting beaches identified for inclusion as critical habitat. The selected adjacent beaches were based on permit holder survey area boundaries with one or more permit holder survey areas being included depending on the length of the survey areas. Within these adjacent areas for each of the high-density nesting beaches, we did not include segments that were highly urbanized, highly erosional, or prone to repeated flooding.

We identified 14 units in the Northern Gulf of Mexico Recovery Unit for designation as critical habitat for the loggerhead sea turtle. However, we have exempted one of the identified units (Eglin Air Force Base (Cape San Blas)) from critical habitat designation under section 4(a)(3) of the Act (see Exemptions section below). The remaining 13 units encompass 218.0 km (135.5 mi) of Gulf of Mexico shoreline: 2 units occur in Mississippi, 3 in Alabama, and 8 in the Florida Panhandle. These 13 units encompass approximately 75 percent of the documented nesting (numbers of nests) within the recovery unit. The percentage of nesting is based on data from the Florida Panhandle and Alabama only.

For all units, when determining critical habitat boundaries we made every effort to avoid including developed areas such as lands covered by buildings, pavement, and other structures because such lands lack PBFs necessary for the loggerhead sea turtle. The scale of the maps we prepared under the parameters for publication within the Code of Federal Regulations may not reflect the exclusion of such developed lands. Any such lands inadvertently left inside critical habitat boundaries shown on the maps of this final rule have been excluded by text in the final rule and are not designated as critical habitat. A Federal action involving these lands would not trigger

section 7 consultation with respect to critical habitat and the requirement of no adverse modification unless the specific action would affect the PBFs in the adjacent critical habitat.

In order to translate the selection process above to the areas on the ground, we used the following methodology to identify the mapped boundaries of critical habitat for the DPS:

(1) Each unit was digitally mapped in Google Earth imagery using the unit boundary descriptions.

(2) Where feasible, natural or artificial features (inlets, channels, creeks, bays and sounds), political boundaries (County or City), or map-depicted land ownership (Federal, State, or local) were used as unit boundaries.

(3) Where features to be used as boundaries were highly dynamic, such as inlets, boundaries were distinguished using records of the sea turtle nesting in that area.

(4) Where natural, artificial, or political features, or land ownership could not be used for unit boundaries, boundaries were delineated by geographic means (latitude and longitude, decimal degree points).

(5) Data layers defining map units were created using Google Earth imagery, then refined using Bing imagery. Unit descriptions were then mapped using North America Lambert Conformal Conic coordinates.

Final Critical Habitat Designation

We are designating approximately 1,102.1 km (684.8 mi) in 88 units in the terrestrial environment as critical habitat for the loggerhead sea turtle. Under section 4(a)(3) of the Act, we have exempted four areas owned or controlled by DOD that are subject to INRMP's determined to provide a benefit to the species (see Exemptions section below). Additionally, under 4(b)(2) of the Act, we are excluding 2 units and portions of 3 units that were identified in the proposed rule for possible inclusion as critical habitat (see Exclusions section below). The critical habitat areas we describe below constitute our current best assessment of areas that meet the definition of critical habitat in the terrestrial environment for the DPS. The 88 areas we designate as critical habitat and the approximate shoreline length and Federal, State, and private and other (counties and municipalities) ownership of each critical habitat unit are shown in Table 1.

The critical habitat designation is defined by the maps, as modified by any accompanying regulatory text, presented at the end of this document in the rule portion. We include more detailed information on the boundaries of the critical habitat designation in the preamble of this document. We will make the coordinates or plot points or both on which each map is based available to the public on *http://www.regulations.gov* at Docket No. FWS–R4–ES–2012–0103, on our Internet site *http://www.fws.gov/,* and at the field office responsible for the designation at *http://www.fws.gov/northflorida,* (see **FOR FURTHER INFORMATION CONTACT** above).

TABLE 1—DESIGNATED CRITICAL HABITAT UNITS FOR THE LOGGERHEAD SEA TURTLE BY RECOVERY UNIT

[Beach length estimates reflect the linear distance along the nesting beach shoreline within critical habitat unit boundaries. All units are occupied by the loggerhead sea turtle. Note: For units in Florida, originally numbered Units LOGG–T–FL–01 to LOGG–T–FL–47 have been renumbered in the final rule as Units LOGG–T–FL–01 to LOGG–T–FL–45]

Critical habitat unit	Length of unit in kilometers (miles)	Federal	State	Private and other (counties and municipalities)
Northern Recovery Unit				
North Carolina				
LOGG–T–NC–01: Bogue Banks, Carteret County	38.9 (24.2)	0 (0)	4.6 (2.9)	34.3 (21.3)
LOGG–T–NC–02: Bear Island, Onslow County	6.6 (4.1)	0 (0)	6.6 (4.1)	0 (0)
LOGG–T–NC–03: Topsail Island, Onslow and Pender Counties	35.0 (21.8)	0 (0)	0 (0)	35.0 (21.8)
LOGG–T–NC–04: Lea-Hutaff Island, Pender County	6.1 (3.8)	0 (0)	0.5 (0.3)	5.6 (3.5)
LOGG–T–NC–05: Pleasure Island, New Hanover County	18.6 (11.5)	0 (0)	6.8 (4.2)	11.8 (7.3)
LOGG–T–NC–06: Bald Head Island, Brunswick County	15.1 (9.4)	0 (0)	5.8 (3.6)	9.3 (5.8)
LOGG–T–NC–07: Oak Island, Brunswick County	20.9 (13.0)	0 (0)	0 (0)	20.9 (13.0)
LOGG–T–NC–08: Holden Beach, Brunswick County	13.4 (8.3)	0 (0)	0 (0)	13.4 (8.3)
North Carolina State Totals	154.6 (96.1)	0 (0)	24.3 (15.1)	130.3 (81.0)
South Carolina				
LOGG–T–SC–01: North Island, Georgetown County	13.2 (8.2)	0 (0)	13.2 (8.2)	0 (0)
LOGG–T–SC–02: Sand Island, Georgetown County	4.7 (2.9)	0 (0)	4.7 (2.9)	0 (0)
LOGG–T–SC–03: South Island, Georgetown County	6.7 (4.2)	0 (0)	6.7 (4.2)	0 (0)
LOGG–T–SC–04: Cedar Island, Georgetown County	4.1 (2.5)	0 (0)	4.1 (2.5)	0 (0)
LOGG–T–SC–05: Murphy Island, Charleston County	8.0 (5.0)	0 (0)	8.0 (5.0)	0 (0)
LOGG–T–SC–06: Cape Island, Charleston County	8.3 (5.1)	8.3 (5.1)	0 (0)	0 (0)
LOGG–T–SC–07: Lighthouse Island, Charleston County	5.3 (3.3)	5.3 (3.3)	0 (0)	0 (0)
LOGG–T–SC–08: Raccoon Key, Charleston County	4.8 (3.0)	4.8 (3.0)	0 (0)	0 (0)
LOGG–T–SC–09: Folly Island, Charleston County	11.2 (7.0)	0 (0)	0 (0)	11.2 (7.0)
LOGG–T–SC–10: Kiawah Island, Charleston County	17.0 (10.6)	0 (0)	0 (0)	17.0 (10.6)
LOGG–T–SC–11: Seabrook Island, Charleston County	5.8 (3.6)	0 (0)	0 (0)	5.8 (3.6)
LOGG–T–SC–12: Botany Bay Island and Botany Bay Plantation, Charleston County	6.6 (4.1)	0 (0)	4.0 (2.5)	2.6 (1.6)
LOGG–T–SC–13: Interlude Beach, Charleston County	0.9 (0.6)	0 (0)	0.9 (0.6)	0 (0)
LOGG–T–SC–14: Edingsville Beach, Charleston County	2.7 (1.7)	0 (0)	0 (0)	2.7 (1.7)
LOGG–T–SC–15: Edisto Beach State Park, Colleton County	2.2 (1.4)	0 (0)	2.2 (1.4)	0 (0)
LOGG–T–SC–16: Edisto Beach, Colleton County	6.8 (4.2)	0 (0)	0 (0)	6.8 (4.2)
LOGG–T–SC–17: Pine Island, Colleton County	1.2 (0.7)	0 (0)	1.2 (0.7)	0 (0)

TABLE 1—DESIGNATED CRITICAL HABITAT UNITS FOR THE LOGGERHEAD SEA TURTLE BY RECOVERY UNIT—Continued

[Beach length estimates reflect the linear distance along the nesting beach shoreline within critical habitat unit boundaries. All units are occupied by the loggerhead sea turtle. Note: For units in Florida, originally numbered Units LOGG–T–FL–01 to LOGG–T–FL–47 have been renumbered in the final rule as Units LOGG–T–FL–01 to LOGG–T–FL–45]

Critical habitat unit	Length of unit in kilometers (miles)	Federal	State	Private and other (counties and municipalities)
LOGG–T–SC–18: Otter Island, Colleton County	4.1 (2.5)	0 (0)	4.1 (2.5)	0 (0)
LOGG–T–SC–19: Harbor Island, Beaufort County	2.9 (1.8)	0 (0)	0 (0)	2.9 (1.8)
LOGG–T–SC–20: Little Capers Island, Beaufort County	4.6 (2.9)	0 (0)	0 (0)	4.6 (2.9)
LOGG–T–SC–21: St. Phillips Island, Beaufort County	2.3 (1.4)	0 (0)	0 (0)	2.3 (1.4)
LOGG–T–SC–22: Bay Point Island, Beaufort County	4.3 (2.7)	0 (0)	0 (0)	4.3 (2.7)
South Carolina State Totals	127.7 (79.3)	18.4 (11.4)	48.9 (30.4)	60.4 (37.5)
Georgia				
LOGG–T–GA–01: Little Tybee Island, Chatham County	8.6 (5.3)	0 (0)	8.6 (5.3)	0 (0)
LOGG–T–GA–02: Wassaw Island, Chatham County	10.1 (6.3)	9.8 (6.1)	0 (0)	0.3 (0.2)
LOGG–T–GA–03: Ossabaw Island, Chatham County	17.1 (10.6)	0 (0)	17.1 (10.6)	0 (0)
LOGG–T–GA–04: St. Catherines Island, Liberty County	18.4 (11.5)	0 (0)	0 (0)	18.4 (11.5)
LOGG–T–GA–05: Blackbeard Island, McIntosh County	13.5 (8.4)	13.5 (8.4)	0 (0)	0 (0)
LOGG–T–GA–06: Sapelo Island, McIntosh County	9.3 (5.8)	0 (0)	9.3 (5.8)	0 (0)
LOGG–T–GA–07: Little Cumberland Island, Camden County	4.9 (3.0)	0 (0)	0 (0)	4.9 (3.0)
LOGG–T–GA–08: Cumberland Island, Camden County	29.7 (18.4)	25.2 (15.7)	0 (0)	4.5 (2.8)
Georgia State Totals	111.5 (69.3)	48.4 (30.1)	34.9 (21.7)	28.1 (17.5)
Northern Recovery Unit Totals	393.7 (244.7)	66.8 (41.5)	109.2 (67.9)	217.7 (135.3)
Peninsular Florida Recovery Unit				
Florida				
LOGG–T–FL–01: South Duval County Beaches-County line at Duval and St. Johns Counties	11.5 (7.1)	0 (0)	0 (0)	11.5 (7.1)
LOGG–T–FL–02: Fort Matanzas National Monument, St. Johns County	1.4 (0.9)	1.4 (0.9)	0 (0)	0 (0)
LOGG–T–FL–03: River to Sea Preserve at Marineland-North Peninsula State Park, Flagler and Volusia Counties	31.8 (19.8)	0 (0)	6.1 (3.8)	25.7 (16.0)
LOGG–T–FL–04: Canaveral National Seashore North, Volusia County	18.2 (11.3)	18.2 (11.3)	0 (0)	0 (0)
LOGG–T–FL–05: Canaveral National Seashore South-Merritt Island National Wildlife Refuge (NWR)-Kennedy Space, Brevard County	28.4 (17.6)	28.4 (17.6)	0 (0)	0 (0)
LOGG–T–FL–06: Central Brevard Beaches, Brevard County	19.5 (12.1)	0 (0)	0 (0)	19.5 (12.1)
LOGG–T–FL–07: South Brevard Beaches, Brevard County	20.8 (12.9)	4.2 (2.6)	1.5 (1.0)	15.0 (9.3)
LOGG–T–FL–08: Sebastian Inlet State Park-Archie Carr NWR South, Indian River County	4.1 (2.5)	0.9 (0.6)	3.2 (2.0)	0 (0)
LOGG–T–FL–09: Fort Pierce Inlet-St. Lucie Inlet, St. Lucie and Martin Counties	35.2 (21.9)	0 (0)	0 (0)	35.2 (21.9)
LOGG–T–FL–10: St. Lucie Inlet-Jupiter Inlet, Martin and Palm Beach Counties	24.9 (15.5)	4.8 (3.0)	3.7 (2.3)	16.4 (10.2)
LOGG–T–FL–11: Jupiter Inlet-Lake Worth Inlet, Palm Beach County	18.8 (11.7)	0 (0)	2.5 (1.5)	16.3 (10.1)
LOGG–T–FL–12: Lake Worth Inlet-Boynton Inlet, Palm Beach County	24.3 (15.1)	0 (0)	0 (0)	24.3 (15.1)
LOGG–T–FL–13: Boynton Inlet-Boca Raton Inlet, Palm Beach County	22.6 (14.1)	0 (0)	0 (0)	22.6 (14.1)
LOGG–T–FL–14: Boca Raton Inlet-Hillsboro Inlet, Palm Beach and Broward Counties	8.3 (5.2)	0 (0)	0 (0)	8.3 (5.2)
LOGG–T–FL–15: Long Key, Monroe County	4.2 (2.6)	0 (0)	4.2 (2.6)	0 (0)
LOGG–T–FL–16: Bahia Honda Key, Monroe County	3.7 (2.3)	0 (0)	3.7 (2.3)	0 (0)
LOGG–T–FL–17: Longboat Key, Manatee and Sarasota Counties	16.0 (9.9)	0 (0)	0 (0)	16.0 (9.9)
LOGG–T–FL–18: Siesta and Casey Keys, Sarasota County	20.8 (13.0)	0 (0)	0 (0)	20.8 (13.0)
LOGG–T–FL–19: Venice Beaches and Manasota Key, Sarasota and Charlotte Counties	26.0 (16.1)	0 (0)	1.9 (1.2)	24.1 (15.0)
LOGG–T–FL–20: Knight, Don Pedro, and Little Gasparilla Islands, Charlotte County	10.8 (6.7)	0 (0)	1.9 (1.2)	8.9 (5.5)
LOGG–T–FL–21: Gasparilla Island, Charlotte and Lee Counties	11.2 (6.9)	0 (0)	1.5 (1.0)	9.6 (6.0)
LOGG–T–FL–22: Cayo Costa, Lee County	13.5 (8.4)	0 (0)	13.2 (8.2)	0.3 (0.2)
LOGG–T–FL–23: Captiva Island, Lee County	7.6 (4.7)	0 (0)	0 (0)	7.6 (4.7)
LOGG–T–FL–24: Sanibel Island West, Lee County	12.2 (7.6)	0 (0)	0 (0)	12.2 (7.6)
LOGG–T–FL–25: Little Hickory Island, Lee and Collier Counties	8.7 (5.4)	0 (0)	0 (0)	8.7 (5.4)
LOGG–T–FL–26: Wiggins Pass-Clam Pass, Collier County	7.7 (4.8)	0 (0)	2.0 (1.2)	5.7 (3.6)
LOGG–T–FL–27: Clam Pass-Doctors Pass, Collier County	4.9 (3.0)	0 (0)	0 (0)	4.9 (3.0)
LOGG–T–FL–28: Keewaydin Island and Sea Oat Island, Collier County	13.1 (8.1)	0 (0)	12.4 (7.7)	0.7 (0.5)
LOGG–T–FL–29: Cape Romano, Collier County	9.2 (5.7)	0 (0)	7.2 (4.5)	2.0 (1.2)
LOGG–T–FL–30: Ten Thousand Islands North, Collier County	7.8 (4.9)	2.9 (1.8)	4.9 (3.1)	0 (0)
LOGG–T–FL–31: Highland Beach, Monroe County	7.2 (4.5)	7.2 (4.5)	0 (0)	0 (0)

TABLE 1—DESIGNATED CRITICAL HABITAT UNITS FOR THE LOGGERHEAD SEA TURTLE BY RECOVERY UNIT—Continued

[Beach length estimates reflect the linear distance along the nesting beach shoreline within critical habitat unit boundaries. All units are occupied by the loggerhead sea turtle. Note: For units in Florida, originally numbered Units LOGG–T–FL–01 to LOGG–T–FL–47 have been renumbered in the final rule as Units LOGG–T–FL–01 to LOGG–T–FL–45]

Critical habitat unit	Length of unit in kilometers (miles)	Federal	State	Private and other (counties and municipalities)
LOGG–T–FL–32: Graveyard Creek-Shark Point, Monroe County	0.9 (0.6)	0.9 (0.6)	0 (0)	0 (0)
LOGG–T–FL–33: Cape Sable, Monroe County	21.3 (13.2)	21.3 (13.2)	0 (0)	0 (0)
Florida State Totals	476.4 (296.0)	90.3 (56.1)	69.8 (43.4)	316.3 (196.5)
Peninsular Florida Recovery Unit Totals	476.4 (296.0)	90.3 (56.1)	69.8 (43.4)	316.3 (196.5)
Dry Tortugas Recovery Unit				
Florida				
LOGG–T–FL–34: Dry Tortugas, Monroe County	5.7 (3.6)	5.7 (3.6)	0 (0)	0 (0)
LOGG–T–FL–35: Marquesas Keys, Monroe County	5.6 (3.5)	5.6 (3.5)	0 (0)	0 (0)
LOGG–T–FL–36: Boca Grande Key, Monroe County	1.3 (0.8)	1.3 (0.8)	0 (0)	0 (0)
LOGG–T–FL–37: Woman Key, Monroe County	1.3 (0.8)	1.3 (0.8)	0 (0)	0 (0)
Florida State Totals	14.0 (8.7)	14.0 (8.7)	0 (0)	0 (0)
Dry Tortugas Recovery Unit Totals	14.0 (8.7)	14.0 (8.7)	0 (0)	0 (0)
Northern Gulf of Mexico Recovery Unit				
Mississippi				
LOGG–T–MS–01: Horn Island, Jackson County	18.6 (11.5)	17.7 (11.0)	0 (0)	0.8 (0.5)
LOGG–T–MS–02: Petit Bois Island, Jackson County	9.8 (6.1)	9.8 (6.1)	0 (0)	0 (0)
Mississippi State Totals	28.4 (17.6)	27.5 (17.1)	0 (0)	0.8 (0.5)
Alabama				
LOGG–T–AL–01: Mobile Bay-Little Lagoon Pass, Baldwin County	28.0 (17.4)	5.4 (3.4)	3.1 (1.9)	19.5 (12.1)
LOGG–T–AL–02: Gulf State Park-Perdido Pass, Baldwin County	10.7 (6.7)	0 (0)	3.5 (2.2)	7.3 (4.5)
LOGG–T–AL–03: Perdido Pass-Florida-Alabama line, Baldwin County	3.3 (2.0)	0 (0)	1.7 (1.0)	1.6 (1.0)
Alabama State Totals	42.0 (26.1)	5.4 (3.4)	8.2 (5.1)	28.3 (17.6)
Florida				
LOGG–T–FL–38: Perdido Key, Escambia County	20.2 (12.6)	11.0 (6.8)	2.5 (1.6)	6.7 (4.2)
LOGG–T–FL–39: Mexico Beach and St. Joe Beach, Bay and Gulf Counties	18.7 (11.7)	0 (0)	0 (0)	18.7 (11.7)
LOGG–T–FL–40: St. Joseph Peninsula, Gulf County	23.5 (14.6)	0 (0)	15.5 (9.7)	8.0 (4.9)
LOGG–T–FL–41: Cape San Blas, Gulf County	11.0 (6.8)	0 (0)	0.1 (0.1)	10.8 (6.7)
LOGG–T–FL–42: St. Vincent Island, Franklin County	15.1 (9.4)	15.1 (9.4)	0 (0)	0 (0)
LOGG–T–FL–43: Little St. George Island, Franklin County	15.4 (9.6)	0 (0)	15.4 (9.6)	0 (0)
LOGG–T–FL–44: St. George Island, Franklin County:	30.7 (19.1)	0 (0)	14.0 (8.7)	16.7 (10.4)
LOGG–T–FL–45: Dog Island, Franklin County	13.1 (8.1)	0 (0)	0 (0)	13.1 (8.1)
Florida State Totals	147.7 (91.8)	26.1 (16.2)	47.5 (29.5)	74.0 (46.0)
Northern Gulf of Mexico Recovery Unit Totals	218.0 (135.5)	59.0 (36.7)	55.8 (34.7)	103.2 (64.2)

Note: Linear distances may not sum due to rounding.

We present brief descriptions of all units, and reasons why they meet the definition of critical habitat for the loggerhead sea turtle, below. All units were occupied at the time of listing and are currently occupied. All units contain all of the PBFs and PCEs.

Northern Recovery Unit

North Carolina

LOGG–T–NC–01—Bogue Banks, Carteret County: This unit consists of 38.9 km (24.2 mi) of island shoreline along the Atlantic Ocean. The island is separated from the mainland by the Atlantic Intracoastal Waterway and Bogue Sound. The unit extends from Beaufort Inlet to Bogue Inlet. The unit includes lands from the MHW line landward to the toe of the secondary dune or developed structures. Land in this unit is in State and private ownership (see Table 1). The State portion is Fort Macon State Park, which is managed by the North Carolina Division of Parks and Recreation. This unit supports expansion of nesting from an adjacent unit (LOGG–T–NC–02) that has high-density nesting by loggerhead

sea turtles in North Carolina. The PBFs in this unit may require special management considerations or protections to ameliorate the threats of recreational use, beach driving, predation, beach sand placement activities, in-water and shoreline alterations, climate change, beach erosion, artificial lighting, human-caused disasters, and response to disasters. At this time, we are not aware of any management plans that address this species in this area.

LOGG–T–NC–02—Bear Island, Onslow County: This unit consists of 6.6 km (4.1 mi) of island shoreline along the Atlantic Ocean. The island is separated from the mainland by the Atlantic Intracoastal Waterway and salt marsh. The unit extends from Bogue Inlet to Bear Inlet. The unit includes lands from the MHW line landward to the toe of the secondary dune or developed structures. Land in this unit is in State ownership (see Table 1). The island is managed by the North Carolina Division of Parks and Recreation as Hammocks Beach State Park. This unit has high-density nesting by loggerhead sea turtles in North Carolina. The PBFs in this unit may require special management considerations or protections to ameliorate the threats of recreational use, predation, beach sand placement activities, in-water and shoreline alterations, climate change, beach erosion, human-caused disasters, and response to disasters. At this time, we are not aware of any management plans that address this species in this area.

LOGG–T–NC–03—Topsail Island, Onslow and Pender Counties: This unit consists of 35.0 km (21.8 mi) of island shoreline along the Atlantic Ocean. The island is separated from the mainland by the Atlantic Intracoastal Waterway, Chadwick Bay, Alligator Bay, Goose Bay, Rogers Bay, Everett Bay, Spicer Bay, Waters Bay, Stump Sound, Banks Channel, and salt marsh. The unit extends from New River Inlet to New Topsail Inlet. The unit includes lands from the MHW line to the toe of the secondary dune or developed structures. Land in this unit is in private and other ownership (see Table 1). The local municipality portion is the North Topsail Beach Park, which is managed by the Town of North Topsail Beach. This unit has high-density nesting by loggerhead sea turtles in North Carolina. The PBFs in this unit may require special management considerations or protections to ameliorate the threats of recreational use, beach driving, predation, beach sand placement activities, in-water and shoreline alterations, climate change, beach erosion, artificial lighting, human-caused disasters, and response to disasters. At this time, we are not aware of any management plans that address this species in this area.

LOGG–T–NC–04—Lea-Hutaff Island, Pender County: This unit consists of 6.1 km (3.8 mi) of island shoreline along the Atlantic Ocean. Following the closure of Old Topsail Inlet in 1998, two islands, Lea Island and Hutaff Island, joined to form what is now a single island referred to as Lea-Hutaff Island. The island is separated from the mainland by the Atlantic Intracoastal Waterway, Topsail Sound, Eddy Sound, Long Point Channel, Green Channel, and salt marsh. The unit extends from New Topsail Inlet to Rich Inlet. The unit includes lands from the MHW line to the toe of the secondary dune or developed structures. Land in this unit is in State and private ownership (see Table 1). The State portion is part of the Lea Island State Natural Area, which includes most of the original Lea Island, and is owned by the North Carolina Division of Parks and Recreation and managed by Audubon North Carolina. The remainder of the original Lea Island is privately owned. The original Hutaff Island is entirely privately owned. This unit supports expansion of nesting from an adjacent unit (LOGG–T–NC–03) that has high-density nesting by loggerhead sea turtles in North Carolina. The PBFs in this unit may require special management considerations or protections to ameliorate the threats of recreational use, predation, in-water and shoreline alterations, climate change, beach erosion, human-caused disasters, and response to disasters. At this time, we are not aware of any management plans that address this species in this area.

LOGG–T–NC–05—Pleasure Island, New Hanover County: This unit consists of 18.6 km (11.5 mi) of island shoreline along the Atlantic Ocean. The island is separated from the mainland by the Atlantic Intracoastal Waterway, Cape Fear River, Upper Midnight Channel Range, Lower Midnight Channel Range, Reaves Point Channel Range, Horseshoe Shoal Channel Range, Snow Marsh Channel Range, and The Basin (bay). The unit extends from Carolina Beach Inlet to 33.91433 N, 77.94408 W (historic location of Corncake Inlet). The unit includes lands from the MHW line to the toe of the secondary dune or developed structures. Land in this unit is in State, private, and other ownership (see Table 1). The State portion is Fort Fisher State Recreation Area, which is managed by the North Carolina Division of Parks and Recreation. The local municipality portion includes half of Freeman Park Recreation Area, which is managed by the Town of Carolina Beach. The County portion includes the other half of Freeman Park Recreation Area, which is also managed by the Town of Carolina Beach under an interlocal agreement with New Hanover County. This unit supports expansion of nesting from an adjacent unit (LOGG–T–NC–06) that has high-density nesting by loggerhead sea turtles in North Carolina. The PBFs in this unit may require special management considerations or protections to ameliorate the threats of recreational use, beach driving, predation, beach sand placement activities, in-water and shoreline alterations, climate change, beach erosion, artificial lighting, human-caused disasters, and response to disasters. At this time, we are not aware of any management plans that address this species in this area.

LOGG–T–NC–06—Bald Head Island, Brunswick County: This unit consists of 15.1 km (9.4 mi) of island shoreline along the Atlantic Ocean. The island is part of the Smith Island Complex, which is a barrier spit that includes Bald Head, Middle, and Bluff Islands. The island is separated from the mainland by the Atlantic Intracoastal Waterway, Cape Fear River, Battery Island Channel, Lower Swash Channel Range, Buzzard Bay, Smith Island Range, Southport Channel, and salt marsh. The unit extends from 33.91433 N, 77.94408W (historic location of Corncake Inlet) to the mouth of the Cape Fear River. The unit includes lands from the MHW line to the toe of the secondary dune or developed structures. Land in this unit is in State and private and other ownership (see Table 1). The State portion is Bald Head State Natural Area. This unit has high-density nesting by loggerhead sea turtles in North Carolina. The PBFs in this unit may require special management considerations or protections to ameliorate the threats of recreational use, predation, beach sand placement activities, in-water and shoreline alterations, coastal development, climate change, beach erosion, artificial lighting, human-caused disasters, and response to disasters. At this time, we are not aware of any management plans that address this species in this area.

LOGG–T–NC–07—Oak Island, Brunswick County: This unit consists of 20.9 km (13.0 mi) of island shoreline along the Atlantic Ocean. The island is separated from the mainland by the Atlantic Intracoastal Waterway, Cape Fear River, Eastern Channel, and salt marsh. The unit extends from the mouth of the Cape Fear River to Lockwoods Folly Inlet. The unit includes lands from the MHW line to the toe of the

secondary dune or developed structures. Land in this unit is in private and other ownership (see Table 1). This unit has high-density nesting by loggerhead sea turtles in North Carolina. The PBFs in this unit may require special management considerations or protections to ameliorate the threats of recreational use, predation, beach sand placement activities, in-water and shoreline alterations, climate change, beach erosion, artificial lighting, human-caused disasters, and response to disasters. At this time, we are not aware of any management plans that address this species in this area.

LOGG–T–NC–08—Holden Beach, Brunswick County: This unit consists of 13.4 km (8.3 mi) of island shoreline along the Atlantic Ocean. The island is separated from the mainland by the Atlantic Intracoastal Waterway, Elizabeth River, Montgomery Slough, Boone Channel, and salt marsh. The unit extends from Lockwoods Folly Inlet to Shallotte Inlet. The unit includes lands from the MHW line to the toe of the secondary dune or developed structures. Land in this unit is in private and other ownership (see Table 1). This unit supports expansion of nesting from an adjacent unit (LOGG–T–NC–07) that has high-density nesting by loggerhead sea turtles in North Carolina. The PBFs in this unit may require special management considerations or protections to ameliorate the threats of recreational use, predation, beach sand placement activities, in-water and shoreline alterations, climate change, beach erosion, artificial lighting, human-caused disasters, and response to disasters. At this time, we are not aware of any management plans that address this species in this area.

South Carolina

LOGG–T–SC–01—North Island, Georgetown County: This unit consists of 13.2 km (8.2 mi) of island shoreline along the Atlantic Ocean. The island is separated from the mainland by the Atlantic Intracoastal Waterway, Winyah Bay, Mud Bay, Oyster Bay, and salt marsh. The unit extends from North Inlet to Winyah Bay. The unit includes lands from the MHW line to the toe of the secondary dune or developed structures. Land in this unit is in State ownership (see Table 1). It is part of the Tom Yawkey Wildlife Center Heritage Preserve, which is managed by the SCDNR. This unit supports expansion of nesting from an adjacent unit (LOGG–T–SC–02) that has high-density nesting by loggerhead sea turtles in South Carolina. The PBFs in this unit may require special management considerations or protections to ameliorate the threats of recreational use, predation, beach erosion, climate change, artificial lighting, habitat obstructions, human-caused disasters, and response to disasters. The Tom Yawkey Wildlife Center has a management plan that includes procedures for the implementation of sea turtle nesting surveys, nest marking, feral hog removal, and beach management to protect nesting and hatchling loggerhead sea turtles from anthropogenic disturbances (Dozier 2006, pp. 31, 64–65).

LOGG–T–SC–02—Sand Island, Georgetown County: This unit consists of 4.7 km (2.9 mi) of island shoreline along the Atlantic Ocean and Winyah Bay. The island is separated from the mainland by the Atlantic Intracoastal Waterway and salt marsh. The unit extends from Winyah Bay to 33.17534 N, 79.19206 W (northern boundary of an unnamed inlet separating Sand Island and South Island). The unit includes lands from the MHW line to the toe of the secondary dune or developed structures. Land in this unit is in State ownership (see Table 1). It is part of the Tom Yawkey Wildlife Center Heritage Preserve, which is managed by the SCDNR. This unit has high-density nesting by loggerhead sea turtles in South Carolina. The PBFs in this unit may require special management considerations or protections to ameliorate the threats of predation, in-water and shoreline alterations, beach erosion, climate change, artificial lighting, human-caused disasters, and response to disasters. The Tom Yawkey Wildlife Center has a management plan that includes procedures for the implementation of sea turtle nesting surveys, nest marking, feral hog removal, and beach management to protect nesting and hatchling loggerhead sea turtles from anthropogenic disturbances (Dozier 2006, pp. 31, 64–65).

LOGG–T–SC–03—South Island, Georgetown County: This unit consists of 6.7 km (4.2 mi) of island shoreline along the Atlantic Ocean. The island is separated from the mainland by the Atlantic Intracoastal Waterway, North Santee Bay, and salt marsh. The unit extends from 33.17242 N, 79.19366 W (southern boundary of an unnamed inlet separating Sand Island and South Island) to North Santee Inlet. The unit includes lands from the MHW line to the toe of the secondary dune or developed structures. Land in this unit is in State ownership (see Table 1). It is part of the Tom Yawkey Wildlife Center Heritage Preserve, which is managed by the SCDNR. This unit has high-density nesting by loggerhead sea turtles in South Carolina. The PBFs in this unit may require special management considerations or protections to ameliorate the threats of recreational use, predation, in-water and shoreline alterations, beach erosion, climate change, artificial lighting, human-caused disasters, and response to disasters. The Tom Yawkey Wildlife Center has a management plan that includes procedures for the implementation of sea turtle nesting surveys, nest marking, feral hog removal, and beach management to protect nesting and hatchling loggerhead sea turtles from anthropogenic disturbances (Dozier 2006, pp. 31, 64–65).

LOGG–T–SC–04—Cedar Island, Georgetown County: This unit consists of 4.1 km (2.5 mi) of island shoreline along the Atlantic Ocean and North Santee Inlet. The island is separated from the mainland by the Atlantic Intracoastal Waterway and salt marsh. The unit extends from North Santee Inlet to South Santee Inlet. The unit includes lands from the MHW line to the toe of the secondary dune or developed structures. Land in this unit is in State ownership (see Table 1). It is part of the Santee Coastal Reserve Wildlife Management Area, which is managed by the SCDNR. This unit supports expansion of nesting from an adjacent unit (LOGG–T–SC–03) that has high-density nesting by loggerhead sea turtles in South Carolina. The PBFs in this unit may require special management considerations or protections to ameliorate the threats of recreational use, predation, beach erosion, climate change, habitat obstructions, human-caused disasters, and response to disasters. The Santee Coastal Reserve Wildlife Management Area has a draft management plan that includes recommendations to reduce sea turtle nest depredation by raccoons (SCDNR 2002, p. 21), but there is currently no other management for protection of loggerhead sea turtle nests.

LOGG–T–SC–05—Murphy Island, Charleston County: This unit consists of 8.0 km (5.0 mi) of island shoreline along the Atlantic Ocean and South Santee Inlet. The island is separated from the mainland by the Atlantic Intracoastal Waterway and inland marsh. The unit extends from South Santee Inlet to 33.08335 N, 79.34285 W. The unit includes lands from the MHW line to the toe of the secondary dune or developed structures. Land in this unit is in State ownership (see Table 1). It is part of the Santee Coastal Reserve Wildlife Management Area, which is managed by the SCDNR. This unit

supports expansion of nesting from an adjacent unit (LOGG–T–SC–06) that has high-density nesting by loggerhead sea turtles in South Carolina. The PBFs in this unit may require special management considerations or protections to ameliorate the threats of recreational use, predation, beach erosion, climate change, habitat obstructions, human-caused disasters, and response to disasters. The Santee Coastal Reserve Wildlife Management Area has a draft management plan that includes recommendations to reduce sea turtle nest depredation by raccoons (SCDNR 2002, p. 21), but there is currently no other management for protection of loggerhead sea turtle nests.

LOGG–T–SC–06—Cape Island, Charleston County: This unit consists of 8.3 km (5.1 mi) of island shoreline along the Atlantic Ocean. The island is separated from the mainland by the Atlantic Intracoastal Waterway, Cape Romain Harbor, coastal islands, and salt marsh. The unit extends from Cape Romain Inlet to 33.00988 N, 79.36529 W (northern boundary of an unnamed inlet between Cape Island and Lighthouse Island). The unit includes lands from the MHW line to the toe of the secondary dune or developed structures. Land in this unit is in Federal ownership (see Table 1). It is the northernmost island in the Cape Romain National Wildlife Refuge (NWR), which is managed by USFWS. This unit has high-density nesting by loggerhead sea turtles in South Carolina. It is the highest nesting density beach in the Northern Recovery Unit. The PBFs in this unit may require special management considerations or protections to ameliorate the threats of predation, in-water and shoreline alterations, beach erosion, climate change, human-caused disasters, and response to disasters. Cape Romain NWR has a Comprehensive Conservation Plan (CCP) that includes working with partners on the implementation of sea turtle nesting surveys, nest marking, minimizing human disturbance, and predator removal intended to minimize impacts to nesting and hatchling loggerhead sea turtles (USFWS 2010a, pp. 45–46).

LOGG–T–SC–07—Lighthouse Island, Charleston County: This unit consists of 5.3 km (3.3 mi) of island shoreline along the Atlantic Ocean. The island is separated from the mainland by the Atlantic Intracoastal Waterway, a network of coastal islands, and salt marsh. The unit extends from 33.01306 N, 79.36659 W (southern boundary of an unnamed inlet between Cape Island and Lighthouse Island) to Key Inlet. The unit includes lands from the MHW line to the toe of the secondary dune or developed structures. Land in this unit is in Federal ownership (see Table 1). It is part of the Cape Romain NWR, which is managed by USFWS. This unit has high-density nesting by loggerhead sea turtles in South Carolina. The PBFs in this unit may require special management considerations or protections to ameliorate the threats of predation, in-water and shoreline alterations, beach erosion, climate change, human-caused disasters, and response to disasters. Cape Romain NWR has a CCP that includes working with partners on the implementation of sea turtle nesting surveys, nest marking, minimizing human disturbance, and predator removal intended to minimize impacts to nesting and hatchling loggerhead sea turtles (USFWS 2010a, pp. 45–46).

LOGG–T–SC–08—Raccoon Key, Charleston County: This unit consists of 4.8 km (3.0 mi) of island shoreline along the Atlantic Ocean. The island is separated from the mainland by the Atlantic Intracoastal Waterway, a network of coastal islands, and salt marsh. The unit extends from Raccoon Creek Inlet to Five Fathom Creek Inlet. The unit includes lands from the MHW line to the toe of the secondary dune or developed structures. Land in this unit is in Federal ownership (see Table 1). It is part of the Cape Romain NWR, which is managed by USFWS. This unit supports expansion of nesting from an adjacent unit (LOGG–T–SC–07) that has high-density nesting by loggerhead sea turtles in South Carolina. The PBFs in this unit may require special management considerations or protections to ameliorate the threats of predation, in-water and shoreline alterations, beach erosion, climate change, human-caused disasters, and response to disasters. Cape Romain NWR has a CCP that includes working with partners on the implementation of sea turtle nesting surveys, nest marking, minimizing human disturbance, and predator removal intended to minimize impacts to nesting and hatchling loggerhead sea turtles (USFWS 2010a, pp. 45–46).

LOGG–T–SC–09—Folly Island, Charleston County: This unit consists of 11.2 km (7.0 mi) of island shoreline along the Atlantic Ocean. The island is separated from the mainland by the Atlantic Intracoastal Waterway, Folly River, a network of coastal islands, and salt marsh. The unit extends from Lighthouse Inlet to Folly River Inlet. The unit includes lands from the MHW line to the toe of the secondary dune or developed structures. Land in this unit is in State, and private and other ownership (see Table 1). The Lighthouse Inlet Heritage Preserve, is owned by the County, with a 10 percent undivided interest from the South Carolina Department of Natural Resource. The Folly Beach County Park is owned by the County. Both are managed by the Charleston County Park and Recreation Commission. This unit supports expansion of nesting from an adjacent unit (LOGG–T–SC–10) that has high-density nesting by loggerhead sea turtles in South Carolina. The PBF in this unit may require special management considerations or protections to ameliorate the threats of recreational use, beach sand placement activities, in-water and shoreline alterations, coastal development, beach erosion, climate change, artificial lighting, human-caused disasters, and response to disasters. The City of Folly Beach has a beach management plan that includes measures to protect nesting and hatchling loggerhead sea turtles from anthropogenic disturbances (City of Folly Beach 1991, pp. 32–35). These measures apply to both the private and other lands within this critical habitat unit.

LOGG–T–SC–10—Kiawah Island, Charleston County: This unit consists of 17.0 km (10.6 mi) of island shoreline along the Atlantic Ocean and Stono Inlet. The island is separated from the mainland by the Atlantic Intracoastal Waterway, Wadmalaw Island, Johns Island, Kiawah River, and salt marsh. The unit extends from Stono Inlet to Captain Sam's Inlet. The unit includes lands from the MHW line to the toe of the secondary dune or developed structures. Land in this unit is in private and other ownership (see Table 1). The County portion includes Kiawah Beachwalker Park and Isle of Palms County Park, which are managed by the Charleston County Park and Recreation Commission. This unit has high-density nesting by loggerhead sea turtles in South Carolina. The PBFs in this unit may require special management considerations or protections to ameliorate the threats of recreational use, predation, beach sand placement activities, beach erosion, climate change, human-caused disasters, and response to disasters. The Town of Kiawah Island has a Local Comprehensive Beach Management Plan that describes actions, such as nest monitoring, education, pet and vehicular restrictions, and a lighting ordinance, taken by the Town to minimize impacts to nesting and hatchling loggerhead sea turtles from anthropogenic disturbances (Town of Kiawah Island 2006, pp. 4–11—4–13).

These measures apply to both the private and other lands within this critical habitat unit although the degree of implementation is uncertain.

LOGG–T–SC–11—Seabrook Island, Charleston County: This unit consists of 5.8 km (3.6 mi) of island shoreline along the Atlantic Ocean and North Edisto Inlet. The island is separated from the mainland by the Atlantic Intracoastal Waterway, Wadmalaw Island, Johns Island, and salt marsh. The unit extends from Captain Sam's Inlet to North Edisto Inlet. The unit includes lands from the MHW line to the toe of the secondary dune or developed structures. Land in this unit is in private and other ownership (see Table 1). This unit supports expansion of nesting from adjacent units (LOGG–T–SC–10 and LOGG–T–SC–12) that have high-density nesting by loggerhead sea turtles in South Carolina. The PBFs in this unit may require special management considerations or protections to ameliorate the threats of recreational use, predation, beach sand placement activities, in-water and shoreline alterations, coastal development, beach erosion, climate change, artificial lighting, human-caused disasters, and response to disasters. The Town of Seabrook Island has a beach management plan that includes the implementation of sea turtle nesting surveys, nest marking, and actions to minimize human disturbance impacts to nesting and hatchling loggerhead sea turtles (Town Council of Seabrook 1991, p. 15). These measures apply to the private lands within this critical habitat unit although the degree of implementation is uncertain.

LOGG–T–SC–12—Botany Bay Island and Botany Bay Plantation, Charleston County: This unit consists of 6.6 km (4.1 mi) of island shoreline along the Atlantic Ocean and North Edisto Inlet. It includes the shoreline of Botany Bay Island and Botany Bay Plantation, which is located on the north end of Edisto Island. Botany Bay Island and Botany Bay Plantation were originally separated by South Creek Inlet. However, due to beach accretion on the south end of Botany Bay Island, it is now continuous with Botany Bay Plantation. This unit is separated from the mainland by the Atlantic Intracoastal Waterway, Ocella Creek, Townsend River, South Creek Inlet, a network of coastal islands, and salt marsh. The unit extends from North Edisto Inlet to 32.53710 N, 80.24614 W (northern boundary of an unnamed inlet separating Botany Bay Plantation and Interlude Beach). The unit includes lands from the MHW line to the toe of the secondary dune or developed structures. Land in this unit is in State and private and other ownership (see Table 1). The Botany Bay Island portion is privately owned; however, the owner has placed a conservation easement on the property with The Nature Conservancy. The State portion is part of the Botany Bay Plantation Wildlife Management Area Heritage Preserve, which is managed by the SCDNR.

This unit has high-density nesting by loggerhead sea turtles in South Carolina. The PBFs in this unit may require special management considerations or protections to ameliorate the threats of predation, beach erosion, climate change, habitat obstructions, human-caused disasters, and response to disasters. The Botany Bay Plantation Wildlife Management Area Heritage Preserve has a management plan that includes the implementation of sea turtle nesting surveys, nest marking, actions to minimize human disturbance, and predator removal intended to minimize impacts to nesting and hatchling loggerhead sea turtles (SCDNR 2009, p. 12).

LOGG–T–SC–13—Interlude Beach, Charleston County: This unit consists of 0.9 km (0.6 mi) of island shoreline along the Atlantic Ocean. This unit includes a section of Edisto Island, which is separated from the mainland by the Atlantic Intracoastal Waterway, a network of coastal islands, and salt marsh. The unit extends from 32.53636 N, 80.24647 W (southern boundary of an unnamed inlet separating Interlude Beach and Botany Bay Plantation) to Frampton Inlet. The unit includes lands from the MHW line to the toe of the secondary dune or developed structures. Land in this unit is in State ownership (see Table 1). It is part of the Botany Bay Plantation Wildlife Management Area Heritage Preserve, which is managed by the SCDNR. This unit supports expansion of nesting from adjacent units (LOGG–T–SC–12 and LOGG–T–SC–14) that have high-density nesting by loggerhead sea turtles in South Carolina. The PBFs in this unit may require special management considerations or protections to ameliorate the threats of predation, beach erosion, climate change, human-caused disasters, and response to disasters. The Botany Bay Plantation Wildlife Management Area Heritage Preserve has a management plan that includes the implementation of sea turtle nesting surveys, nest marking, actions to minimize human disturbance, and predator removal intended to minimize impacts to nesting and hatchling loggerhead sea turtles (SCDNR 2009, p. 12).

LOGG–T–SC–14—Edingsville Beach, Charleston County: This unit consists of 2.7 km (1.7 mi) of island shoreline along the Atlantic Ocean. This unit includes a section of Edisto Island, which is separated from the mainland by the Atlantic Intracoastal Waterway, a network of coastal islands, and salt marsh. The unit extends from Frampton Inlet to Jeremy Inlet. The unit includes lands from the MHW line to the toe of the secondary dune or developed structures. Land in this unit is in private and other ownership (see Table 1). This unit has high-density nesting by loggerhead sea turtles in South Carolina. The PBFs in this unit may require special management considerations or protections to ameliorate the threats of predation, beach erosion, climate change, human-caused disasters, and response to disasters. At this time, we are not aware of any management plans that address this species in this area.

LOGG–T–SC–15—Edisto Beach State Park, Colleton County: This unit consists of 2.2 km (1.4 mi) of island shoreline along the Atlantic Ocean. This unit includes a section of Edisto Island, which is separated from the mainland by the Atlantic Intracoastal Waterway, a network of coastal islands, and salt marsh. The unit extends from Jeremy Inlet to 32.50307 N, 80.29625 W (State Park boundary separating Edisto Beach State Park and the Town of Edisto Beach). The unit includes lands from the MHW line to the toe of the secondary dune or developed structures. Land in this unit is in State ownership (see Table 1). It is managed by the South Carolina Department of Parks, Recreation, and Tourism as the Edisto Beach State Park. This unit has high-density nesting by loggerhead sea turtles in South Carolina. The PBFs in this unit may require special management considerations or protections to ameliorate the threats of recreational use, predation, beach erosion, climate change, artificial lighting, human-caused disasters, and response to disasters. The Edisto Beach State Park has a General Management Plan that includes the implementation of sea turtle nesting surveys, nest marking, and education intended to minimize impacts to nesting and hatchling loggerhead sea turtles (Edisto Beach State Park 2010, pp. 17–18, 21–22).

LOGG–T–SC–16—Edisto Beach, Colleton County: This unit consists of 6.8 km (4.2 mi) of island shoreline along the Atlantic Ocean and South Edisto River. This unit includes a section of Edisto Island, which is separated from the mainland by the Atlantic Intracoastal Waterway, Big Bay Creek, a network of coastal islands, and salt marsh. The unit extends from 32.50307 N, 80.29625 W (State Park boundary

separating Edisto Beach State Park and the Town of Edisto Beach) to South Edisto Inlet. The unit includes lands from the MHW line to the toe of the secondary dune or developed structures. The unit occurs within the town limits of Edisto Beach. Land in this unit is in private and other ownership (see Table 1). This unit supports expansion of nesting from an adjacent unit (LOGG–T–SC–15) that has high-density nesting by loggerhead sea turtles in South Carolina. The PBFs in this unit may require special management considerations or protections to ameliorate the threats of recreational use, predation, beach sand placement activities, in-water and shoreline alterations, beach erosion, climate change, artificial lighting, human-caused disasters, and response to disasters. The Town of Edisto Beach has a Local Comprehensive Beach Management Plan that includes the implementation of sea turtle nesting surveys, nest marking, and beach management to protect nesting and hatchling loggerhead sea turtles from anthropogenic disturbances (Town of Edisto Beach 2011, p. 25). These measures apply to the private lands within this critical habitat unit although the degree of implementation is uncertain.

LOGG–T–SC–17—Pine Island, Colleton County: This unit consists of 1.2 km (0.7 mi) of island shoreline along the South Edisto Inlet. The island is separated from the mainland by the Atlantic Intracoastal Waterway, Fish Creek, a network of coastal islands, and salt marsh. The unit extends from South Edisto River to 32.49266 N, 80.36846 W (northern boundary of an unnamed inlet to Fish Creek). The unit includes lands from the MHW line to the toe of the secondary dune or developed structures. Land in this unit is in State ownership (see Table 1). It is managed by the SCDNR as part of the Ashepoo-Combahee-Edisto (ACE) Basin National Estuarine Research Reserve (NERR). This unit supports expansion of nesting from an adjacent unit (LOGG–T–SC–18) that has high-density nesting by loggerhead sea turtles in South Carolina. The PBFs in this unit may require special management considerations or protections to ameliorate the threats of recreational use, predation, beach erosion, climate change, habitat obstructions, human-caused disasters, and response to disasters. At this time, we are not aware of any management plans that address this species in this area.

LOGG–T–SC–18—Otter Island, Colleton County: This unit consists of 4.1 km (2.5 mi) of island shoreline along the Atlantic Ocean and Saint Helena Sound. The island is separated from the mainland by the Atlantic Intracoastal Waterway, Ashepoo River, a network of coastal islands, and salt marsh. The unit extends from Fish Creek Inlet to Saint Helena Sound. The unit includes lands from the MHW line to the toe of the secondary dune or developed structures. Land in this unit is in State ownership (see Table 1). It is part of the St. Helena Sound Heritage Preserve and the ACE Basin Estuarine Research Reserve, which are managed by the SCDNR. This unit was occupied at the time of listing and is currently occupied. This unit has high-density nesting by loggerhead sea turtles in South Carolina. The PBFs in this unit may require special management considerations or protections to ameliorate the threats of predation, beach erosion, climate change, habitat obstructions, human-caused disasters, and response to disasters. At this time, we are not aware of any management plans that address this species in this area.

LOGG–T–SC–19—Harbor Island, Beaufort County: This unit consists of 2.9 km (1.8 mi) of island shoreline along the Atlantic Ocean and Saint Helena Sound. The island is separated from the mainland by the Atlantic Intracoastal Waterway, a network of coastal islands, and salt marsh. The unit extends from Harbor Inlet to Johnson Inlet. The unit includes lands from the MHW line to the toe of the secondary dune or developed structures. Land in this unit is in private and other ownership (see Table 1). This unit supports expansion of nesting from an adjacent unit (LOGG–T–SC–18) that has high-density nesting by loggerhead sea turtles in South Carolina. The PBFs in this unit may require special management considerations or protections to ameliorate the threats of recreational use, predation, beach erosion, climate change, artificial lighting, habitat obstructions, human-caused disasters, and response to disasters. Beaufort County has a Comprehensive Beach Management Plan that includes the implementation of sea turtle nesting surveys, nest marking, and beach management to protect nesting and hatchling loggerhead sea turtles from anthropogenic disturbances (Beaufort County Planning Board 2010, p. 5–19). These measures apply to the private lands within this critical habitat unit.

LOGG–T–SC–20—Little Capers Island, Beaufort County: This unit consists of 4.6 km (2.9 mi) of island shoreline along the Atlantic Ocean. The island is separated from the mainland by the Atlantic Intracoastal Waterway, a network of coastal islands, and salt marsh. The unit extends from ''Pritchards Inlet'' (there is some uncertainty about the true name of this water feature) located at 32.29009 N, 80.54459 W to Trenchards Inlet. The unit includes lands from the MHW line to the toe of the secondary dune or developed structures. Land in this unit is in private and other ownership (see Table 1). This unit supports expansion of nesting from an adjacent unit (LOGG–T–SC–21) that has high-density nesting by loggerhead sea turtles in South Carolina. The PBFs in this unit may require special management considerations or protections to ameliorate the threats of recreational use, predation, beach erosion, climate change, artificial lighting, habitat obstructions, human-caused disasters, and response to disasters. Beaufort County has a Comprehensive Beach Management Plan that includes the implementation of sea turtle nesting surveys, nest marking, and beach management to protect nesting and hatchling loggerhead sea turtles from anthropogenic disturbances (Beaufort County Planning Board 2010, p. 5–19). These measures apply to the private lands within this critical habitat unit.

LOGG–T–SC–21—St. Phillips Island, Beaufort County: This unit consists of 2.3 km (1.4 mi) of island shoreline along the Atlantic Ocean and Trenchards Inlet. The island is separated from the mainland by the Atlantic Intracoastal Waterway, a network of coastal islands, and salt marsh. The unit extends from Trenchards Inlet to Morse Island Creek Inlet East. The unit includes lands from the MHW line to the toe of the secondary dune or developed structures. Land in this unit is in private and other ownership (see Table 1). Although privately owned, the island is protected in perpetuity by a conservation easement with The Nature Conservancy. This unit has high-density nesting by loggerhead sea turtles in South Carolina. The PBFs in this unit may require special management considerations or protections to ameliorate the threats of predation, beach erosion, climate change, habitat obstructions, human-caused disasters, and response to disasters. At this time, we are not aware of any management plans that address this species in this area.

LOGG–T–SC–22—Bay Point Island, Beaufort County: This unit consists of 4.3 km (2.7 mi) of island shoreline along the Atlantic Ocean and Port Royal Sound. The island is separated from the mainland by the Atlantic Intracoastal Waterway, a network of coastal islands, and salt marsh. The unit extends from Morse Island Creek Inlet East along the Atlantic Ocean shoreline to Morse Island Creek Inlet West along the Port

Royal Sound shoreline. The unit includes lands from the MHW line to the toe of the secondary dune or developed structures. Land in this unit is in private and other ownership (see Table 1). This unit supports expansion of nesting from an adjacent unit (LOGG–T–SC–21) that has high-density nesting by loggerhead sea turtles in South Carolina. The PBFs in this unit may require special management considerations or protections to ameliorate the threats of predation, beach driving, beach erosion, climate change, habitat obstructions, human-caused disasters, and response to disasters. At this time, we are not aware of any management plans that address this species in this area.

Georgia

LOGG–T–GA–01—Little Tybee Island, Chatham County: This unit consists of 8.6 km (5.3 mi) of island shoreline along the Atlantic Ocean. Little Tybee Island is not a specific island, rather it is a complex of several small, low-lying islands, including Myrtle and Williamson Islands, that are separated by tidal flows, creeks, or sloughs. The island complex is separated from the mainland by the Atlantic Intracoastal Waterway, Tybee Creek, Bull River, a network of coastal islands, and salt marsh. The unit extends from Tybee Creek Inlet to Wassaw Sound. The unit includes lands from the MHW line to the toe of the secondary dune or developed structures. Land in this unit is in State ownership (see Table 1). The island is owned by the GDNR and managed by The Nature Conservancy as the Little Tybee Island Natural Heritage Preserve. This unit supports expansion of nesting from an adjacent unit (LOGG–T–GA–02) that has high-density nesting by loggerhead sea turtles in Georgia. The PBFs in this unit may require special management considerations or protections to ameliorate the threats of recreational use, predation, in-water and shoreline alterations, beach erosion, climate change, human-caused disasters, and response to disasters. The GDNR signed a Memorandum of Agreement with the USFWS, NPS, St. Catherines Island Foundation, Jekyll Island Authority, City of Tybee Island, Glynn County, Little Cumberland Island Homeowners Association, and Little St. Simons Island, Ltd. mandating that land owned by the State adhere to actions listed in the Management Plan for the Protection of Nesting Loggerhead Sea Turtles and their Habitat in Georgia. This includes working with partners on the implementation of sea turtle nesting surveys, nest marking and protection, education, and predator removal intended to minimize impacts to nesting and hatchling loggerhead sea turtles (GDRN 1994, pp. 6–9).

LOGG–T–GA–02—Wassaw Island, Chatham County: This unit consists of 10.1 km (6.3 mi) of island shoreline along the Atlantic Ocean. The island is separated from the mainland by the Atlantic Intracoastal Waterway, Romerly Marshes, Odingsell River, and a network of coastal islands. The unit extends from Wassaw Sound to Ossabaw Sound. The unit includes lands from the MHW line to the toe of the secondary dune or developed structures. Land in this unit is in Federal and private ownership (see Table 1). The majority of the island is managed by USFWS as the Wassaw NWR. This unit has high-density nesting by loggerhead sea turtles in Georgia. The PBFs in this unit may require special management considerations or protections to ameliorate the threats of recreational use, predation, beach erosion, climate change, habitat obstructions, human-caused disasters, and response to disasters.

Wassaw NWR is part of the Savannah Coastal Refuges Complex, which has a draft CCP that includes working with partners on the implementation of sea turtle nesting surveys, nest marking, education, and predator removal intended to minimize impacts to nesting and hatchling loggerhead sea turtles (USFWS 2010b, pp. 37, 104). USFWS signed a Memorandum of Agreement with the GDNR, NPS, St. Catherines Island Foundation, Jekyll Island Authority, City of Tybee Island, Glynn County, Little Cumberland Island Homeowners Association, and Little St. Simons Island, Ltd. mandating that land owned by the Refuge adhere to actions listed in the Management Plan for the Protection of Nesting Loggerhead Sea Turtles and their Habitat in Georgia. This includes working with partners on the implementation of sea turtle nesting surveys, nest marking and protection, education, and predator removal intended to minimize impacts to nesting and hatchling loggerhead sea turtles (GDNR 1994, pp. 6–9).

LOGG–T–GA–03—Ossabaw Island, Chatham County: This unit consists of 17.1 km (10.6 mi) of island shoreline along the Atlantic Ocean. The island is separated from the mainland by the Atlantic Intracoastal Waterway, Bear River, a network of coastal islands, and extensive salt marshes. Ossabaw Island is divided into four contiguous sections of beach: Bradley (North), North Middle, South Middle, and South beaches. The unit extends from Ogeechee River to St. Catherines Sound. The unit includes lands from the MHW line to the toe of the secondary dune or developed structures. Land in this unit is in State ownership (see Table 1). The island is managed by the GDNR. This unit has high-density nesting by loggerhead sea turtles in Georgia. The PBFs in this unit may require special management considerations or protections to ameliorate the threats of recreational use, predation, beach erosion, climate change, human-caused disasters, and response to disasters.

A Comprehensive Management Plan for Ossabaw Island includes actions to minimize human disturbance and predator removal intended to minimize impacts to nesting and hatchling loggerhead sea turtles (GDNR 2001, pp. 37, 40, 43). The GDNR signed a Memorandum of Agreement with the USFWS, NPS, St. Catherines Island Foundation, Jekyll Island Authority, City of Tybee Island, Glynn County, Little Cumberland Island Homeowners Association, and Little St. Simons Island, Ltd. mandating that land owned by the State adhere to actions listed in the Management Plan for the Protection of Nesting Loggerhead Sea Turtles and their Habitat in Georgia. This includes working with partners on the implementation of sea turtle nesting surveys, nest marking and protection, education, and predator removal intended to minimize impacts to nesting and hatchling loggerhead sea turtles (GDNR 1994, pp. 6–9).

LOGG–T–GA–04—St. Catherines Island, Liberty County: This unit consists of 18.4 km (11.5 mi) of island shoreline along the Atlantic Ocean. The island is separated from the mainland by the Atlantic Intracoastal Waterway, North Newport River, South Newport River, a network of coastal islands, and extensive salt marshes. The unit extends from St. Catherines Sound to Sapelo Sound. The unit includes lands from the MHW line to the toe of the secondary dune or developed structures. Land in this unit is in private ownership (see Table 1). This unit supports expansion of nesting from adjacent units (LOGG–T–GA–03 and LOGG–T–GA–05) that have high-density nesting by loggerhead sea turtles in Georgia. The PBFs in this unit may require special management considerations or protections to ameliorate the threats of recreational use, predation, habitat obstructions, beach erosion, climate change, human-caused disasters, and response to disasters. The St. Catherines Island Foundation signed a Memorandum of Agreement with the GDNR, USFWS, NPS, Jekyll Island Authority, City of Tybee Island, Glynn County, Little Cumberland Island Homeowners Association, and Little St. Simons

Island, Ltd. mandating that land owned by the Foundation adhere to actions listed in the Management Plan for the Protection of Nesting Loggerhead Sea Turtles and their Habitat in Georgia. This includes working with partners on the implementation of sea turtle nesting surveys, nest marking and protection, education, and predator removal intended to minimize impacts to nesting and hatchling loggerhead sea turtles (GDNR 1994, pp. 6–9).

LOGG–T–GA–05—Blackbeard Island, McIntosh County: This unit consists of 13.5 km (8.4 mi) of island shoreline along the Atlantic Ocean. The island is separated from the mainland by the Atlantic Intracoastal Waterway, Blackbeard Creek, Mud River, a network of coastal islands, and extensive salt marshes. The unit extends from Sapelo Sound to Cabretta Inlet. The unit includes lands from the MHW line to the toe of the secondary dune or developed structures. Land in this unit is in Federal ownership (see Table 1). The island is managed by USFWS as the Blackbeard Island NWR. This unit has high-density nesting by loggerhead sea turtles in Georgia. The PBFs in this unit may require special management considerations or protections to ameliorate the threats of recreational use, predation, habitat obstructions, beach erosion, climate change, human-caused disasters, and response to disasters. Blackbeard Island NWR is part of the Savannah Coastal Refuges Complex, which has a draft CCP that includes working with partners on the implementation of sea turtle nesting surveys, nest marking, education, and predator removal intended to minimize impacts to nesting and hatchling loggerhead sea turtles (USFWS 2010b, pp. 125, 136).

USFWS signed a Memorandum of Agreement with the GDNR, NPS, St. Catherines Island Foundation, Jekyll Island Authority, City of Tybee Island, Glynn County, Little Cumberland Island Homeowners Association, and Little St. Simons Island, Ltd. mandating that land owned by the Refuge adhere to actions listed in the Management Plan for the Protection of Nesting Loggerhead Sea Turtles and their Habitat in Georgia. This includes working with partners on the implementation of sea turtle nesting surveys, nest marking and protection, education, and predator removal intended to minimize impacts to nesting and hatchling loggerhead sea turtles (GDNR 1994, pp. 6–9).

LOGG–T–GA–06—Sapelo Island, McIntosh County: This unit consists of 9.3 km (5.8 mi) of island shoreline along the Atlantic Ocean. The island is separated from the mainland by the Atlantic Intracoastal Waterway, Doboy Sound, Mud Creek, Teakettle Creek, a network of coastal islands, and extensive salt marshes. Sapelo Island is divided into two contiguous sections of beach: Nannygoat and Cabretta beaches. The unit extends from Cabretta Inlet to Doboy Sound. The unit includes lands from the MHW line to the toe of the secondary dune or developed structures. Land in this unit is in State ownership (see Table 1). The island is managed by the GDNR. This unit supports expansion of nesting from an adjacent unit (LOGG–T–GA–05) that has high-density nesting by loggerhead sea turtles in Georgia. The PBFs in this unit may require special management considerations or protections to ameliorate the threats of recreational use, poaching, beach driving, predation, beach erosion, climate change, human-caused disasters, and response to disasters.

A Comprehensive Management Plan for Sapelo Island includes actions to minimize human disturbance and predator removal intended to minimize impacts to nesting and hatchling loggerhead sea turtles (GDNR 1998, pp. 5, 36, 55). The GDNR signed a Memorandum of Agreement with the USFWS, NPS, St. Catherines Island Foundation, Jekyll Island Authority, City of Tybee Island, Glynn County, Little Cumberland Island Homeowners Association, and Little St. Simons Island, Ltd. mandating that land owned by the State adhere to actions listed in the Management Plan for the Protection of Nesting Loggerhead Sea Turtles and their Habitat in Georgia. This includes working with partners on the implementation of sea turtle nesting surveys, nest marking and protection, education, and predator removal intended to minimize impacts to nesting and hatchling loggerhead sea turtles (GDNR 1994, pp. 6–9).

LOGG–T–GA–07—Little Cumberland Island, Camden County: This unit consists of 4.9 km (3.0 mi) of island shoreline along the Atlantic Ocean. The island is separated from the mainland by the Atlantic Intracoastal Waterway, Cumberland River, and salt marsh. The unit extends from St. Andrew Sound to Christmas Creek. The unit includes lands from the MHW line to the toe of the secondary dune or developed structures. Land in this unit is in private ownership (see Table 1). Although Little Cumberland Island is privately owned, it lies within the boundaries of Cumberland Island National Seashore and is recognized as a Special Use Zone where private property owners have entered into an agreement with the NPS. This unit supports expansion of nesting from an adjacent unit (LOGG–T–GA–08) that has high-density nesting by loggerhead sea turtles in Georgia. The PBFs in this unit may require special management considerations or protections to ameliorate the threats of recreational use, beach driving, predation, beach erosion, climate change, human-caused disasters, and response to disasters.

The Little Cumberland Island Homeowners Association signed a Memorandum of Agreement with the GDNR, USFWS, NPS, St. Catherines Island Foundation, Jekyll Island Authority, City of Tybee Island, Glynn County, and Little St. Simons Island, Ltd. mandating that land owned by the Association adhere to actions listed in the Management Plan for the Protection of Nesting Loggerhead Sea Turtles and their Habitat in Georgia. This includes working with partners on the implementation of sea turtle nesting surveys, nest marking and protection, education, and predator removal intended to minimize impacts to nesting and hatchling loggerhead sea turtles (GDNR 1994, pp. 6–9).

LOGG–T–GA–08—Cumberland Island, Camden County: This unit consists of 29.7 km (18.4 mi) of island shoreline along the Atlantic Ocean. The island is separated from the mainland by the Atlantic Intracoastal Waterway, Cumberland River, Cumberland Sound, Brickhill River, a network of coastal islands, and extensive salt marsh. The unit extends from Christmas Creek to St. Marys River. The unit includes lands from the MHW line to the toe of the secondary dune or developed structures. Land in this unit is in Federal and private ownership (see Table 1). The Federal portion is part of Cumberland Island National Seashore, which is managed by the NPS. This unit has high-density nesting by loggerhead sea turtles in Georgia. The PBFs in this unit may require special management considerations or protections to ameliorate the threats of recreational use, beach driving, predation, beach erosion, climate change, human-caused disasters, and response to disasters.

Cumberland Island National Seashore has a General Management Plan that includes predator removal and dune preservation intended to minimize impacts to nesting and hatchling loggerhead sea turtles (NPS 1984, pp. 22–23). The NPS signed a Memorandum of Agreement with the GDNR, USFWS, St. Catherines Island Foundation, Jekyll Island Authority, City of Tybee Island, Glynn County, and Little St. Simons Island, Ltd. mandating that land owned by the Cumberland Island National Seashore adhere to actions listed in the Management Plan for the Protection of

Nesting Loggerhead Sea Turtles and their Habitat in Georgia. This includes working with partners on the implementation of sea turtle nesting surveys, nest marking and protection, education, and predator removal intended to minimize impacts to nesting and hatchling loggerhead sea turtles (GDNR 1994, pp. 6–9).

Peninsular Florida Recovery Unit

Because of the removal of the originally proposed Unit LOGG–T–FL–02 and LOGG–T–FL–04 from the Peninsular Florida Recovery Unit, originally numbered Units LOGG–T–FL–01 to LOGG–T–FL–35 in this Recovery Unit have been renumbered in the final rule as Units LOGG–T–FL–01 to LOGG–T–FL–33.

Northern Florida Region

LOGG–T–FL–01—South Duval County Beaches—Duval and St. Johns County line: This unit consists of 11.5 km (7.1 mi) of island shoreline along the Atlantic Ocean. The island is separated from the mainland by the Atlantic Intracoastal Waterway, Pablo Creek, and Lake Ponte Vedra. The unit extends from the south boundary of Kathryn Abbey Hanna Park in Duval County to the Duval-St. Johns County line. The unit includes lands from the MHW line to the toe of the secondary dune or developed structures. Land in this unit is in private ownership (see Table 1). This unit supports expansion of nesting from an adjacent beach (St. Johns County beaches) that has high-density nesting by loggerhead sea turtles in the Northern Florida Region of the Peninsular Florida Recovery Unit. The PBFs in this unit may require special management considerations or protections to ameliorate the threats of recreational use, beach driving, predation, beach sand placement activities, coastal development, climate change, beach erosion, artificial lighting, human-caused disasters, and response to disasters.

This unit originally included the adjacent beaches in St. Johns County. However, those beaches have been excluded under Section 4(b)(2) of the Act because of their inclusion in the HCP for St. Johns County (see Exclusions Based on Other Relevant Impacts discussion below).

LOGG–T–FL–02—Fort Matanzas National Monument, St. Johns County: This unit consists of 1.4 km (0.9 mi) of island shoreline along the Atlantic Ocean. The island is separated from the mainland by the Matanzas River, which is part of the Atlantic Intracoastal Waterway. The unit extends from the northern boundary of Fort Matanzas National Monument to the southern boundary of Fort Matanzas National Monument. The unit includes lands from the MHW line to the toe of the secondary dune or developed structures. Land in this unit is in Federal ownership (see Table 1). The Fort Matanzas National Monument is managed by the NPS. This unit supports expansion of nesting from adjacent units (St. Johns County beaches and LOGG–T–FL–03) that have high-density nesting by loggerhead sea turtles in the Northern Florida Region of the Peninsular Florida Recovery Unit. The PBFs in this unit may require special management considerations or protections to ameliorate the threats of recreational use, beach driving, predation, beach sand placement activities, in-water and shoreline alterations, coastal development, climate change, beach erosion, artificial lighting, human-caused disasters, and response to disasters.

Fort Matanzas National Monument has a General Management Plan that includes exotic organism removal if necessary and possible, which may protect nesting and hatchling loggerhead sea turtles (NPS 1982a, p. 27). This Management Plan is being revised.

This unit originally included the adjacent beaches in St. Johns County. However, those beaches have been excluded under Section 4(b)(2) of the Act because of their inclusion in the HCP for St. Johns County (see Exclusions Based on Other Relevant Impacts discussion below).

LOGG–T–FL–03—River to Sea Preserve at Marineland—North Peninsula State Park, Flagler and Volusia Counties: This unit consists of 31.8 km (19.8 mi) of island shoreline along the Atlantic Ocean. The island is separated from the mainland by the Matanzas River, which is part of the Atlantic Intracoastal Waterway, and Smith Creek. The unit extends from the north boundary of the River to Sea Preserve at Marineland to the south boundary of North Peninsula State Park. The unit includes lands from the MHW line to the toe of the secondary dune or developed structures. Land in this unit is in State, private, and other ownership (see Table 1). The State portion is North Peninsula State Park, which is managed by FDEP. The County portion includes the River to Sea Preserve at Marineland and Varn Park, which are managed by the Flagler County Parks and Recreation Department. This unit has high-density nesting by loggerhead sea turtles in the Northern Florida Region of the Peninsular Florida Recovery Unit. The PBFs in this unit may require special management considerations or protections to ameliorate the threats of recreational use, beach driving, predation, beach sand placement activities, coastal development, climate change, beach erosion, artificial lighting, human-caused disasters, and response to disasters.

The North Peninsula State Park Unit Management Plan addresses the species in the State portion of the unit. The Unit Management Plan includes procedures for the implementation of sea turtle nesting surveys, nest marking, removal of nonnative species (feral cats, feral hogs, and nine-banded armadillos) when encountered, and beach management to protect nesting and hatchling loggerhead sea turtles from anthropogenic disturbances (FDEP 2006a, pp. 15–16).

Central Eastern Florida Region

LOGG–T–FL–04—Canaveral National Seashore North, Volusia County: This unit consists of 18.2 km (11.3 mi) of island shoreline along the Atlantic Ocean. The island is separated from the mainland by the Atlantic Intracoastal Waterway, Mosquito Lagoon, and a network of coastal islands. The unit extends from the north boundary of Canaveral National Seashore to the Volusia-Brevard County line. The unit includes lands from the MHW line to the toe of the secondary dune or developed structures. Land in this unit is in Federal ownership (see Table 1). It is part of the Canaveral National Seashore, which is managed by the NPS. This unit supports expansion of nesting from an adjacent unit (LOGG–T–FL–05) that has high-density nesting by loggerhead sea turtles in the Central Eastern Florida Region of the Peninsular Florida Recovery Unit. The PBFs in this unit may require special management considerations or protections to ameliorate the threats of recreational use, predation, climate change, beach erosion, human-caused disasters, and response to disasters. Canaveral National Seashore has a General Management Plan that includes beach management to protect nesting and hatchling loggerhead sea turtles from anthropogenic disturbances (NPS 1982b, p. 52).

LOGG–T–FL–05—Canaveral National Seashore South-Merritt Island NWR–Kennedy Space Center, Brevard County: This unit consists of 28.4 km (17.6 mi) of island shoreline along the Atlantic Ocean. The island is separated from the mainland by the Atlantic Intracoastal Waterway, Mosquito Lagoon, Indian River Lagoon, Merritt Island, and scattered coastal islands. The unit extends from the Volusia-Brevard

County line to the south boundary of Merritt Island NWR–Kennedy Space Center (Merritt Island NWR was established in 1963 as an overlay of the National Aeronautics and Space Administration's (NASA) John F. Kennedy Space Center). The unit includes lands from the MHW line to the toe of the secondary dune or developed structures. Land in this unit is in Federal ownership (see Table 1). The northern portion is part of the Canaveral National Seashore in Brevard County, which is managed by the NPS. The southern portion is part of Merritt Island NWR–Kennedy Space Center, which is managed by USFWS. This unit has high-density nesting by loggerhead sea turtles in the Central Eastern Florida Region of the Peninsular Florida Recovery Unit. (Note: Although the mean nesting densities in this unit were not in the top 25 percent of nesting for the Central Eastern Florida Region, the unit was included because of the still high nesting density that occurs here and to ensure a good spatial distribution of nesting within this region.)

The PBFs in this unit may require special management considerations or protections to ameliorate the threats of predation, climate change, beach erosion, artificial lighting, human-caused disasters, and response to disasters. Canaveral National Seashore has a General Management Plan that includes beach management to protect nesting and hatchling loggerhead sea turtles from anthropogenic disturbances (NPS 1982b, p. 52). Merritt Island NWR has a CCP that includes working with partners on the implementation of sea turtle nesting surveys, nest marking, and predator removal intended to minimize impacts to nesting and hatchling loggerhead sea turtles (USFWS 2008a, pp. 82, 93–94).

LOGG–T–FL–06—Central Brevard Beaches, Brevard County: This unit consists of 19.5 km (12.1 mi) of island shoreline along the Atlantic Ocean. The island is separated from the mainland by the Atlantic Intracoastal Waterway, Indian River Lagoon, Banana River, and Merritt Island. The unit extends from the south boundary of Patrick Air Force Base to the north boundary of Archie Carr NWR. The unit includes lands from the MHW line to the toe of the secondary dune or developed structures. Land in this unit is in private and other ownership (see Table 1). The County portion includes Paradise Beach North, Spessard Holland North Beach Park, Spessard Holland South Beach Park, and Ocean Ridge Sanctuary, which are managed by the Brevard County Parks and Recreation Department. This unit has high-density nesting by loggerhead sea turtles in the Central Eastern Florida Region of the Peninsular Florida Recovery Unit. The PBFs in this unit may require special management considerations or protections to ameliorate the threats of recreational use, predation, beach sand placement activities, coastal development, beach erosion, artificial lighting, human-caused disasters, and response to disasters. At this time, we are not aware of any management plans that address this species in this area.

LOGG–T–FL–07—South Brevard Beaches, Brevard County: This unit consists of 20.8 km (12.9 mi) of island shoreline along the Atlantic Ocean. The island is separated from the mainland by the Atlantic Intracoastal Waterway, Indian River Lagoon, and scattered coastal islands. The unit extends from the north boundary of Archie Carr NWR to Sebastian Inlet. The unit includes lands from the MHW line to the toe of the secondary dune or developed structures. Land in this unit is in Federal, State, private, and other ownership (see Table 1). The Federal portion is part of Archie Carr NWR, which is managed by USFWS. The State portion is part of Sebastian Inlet State Park, which is managed by FDEP. The Brevard County portion includes Sea Oats Park, Coconut Point Park, Ponce Landing and Coconut Point Sanctuary, Twin Shores Park, Hog Point Sanctuary, Apollo Eleven Park, Martine Hammock Sanctuary, Judith Resnick Memorial Park, Barrier Island Ecosystem Center, and Louis Bonsteel III Memorial Park, which are managed by the Brevard County Parks and Recreation Department. This unit has high-density nesting by loggerhead sea turtles in the Central Eastern Florida Region of the Peninsular Florida Recovery Unit. The PBFs in this unit may require special management considerations or protections to ameliorate the threats of recreational use, predation, beach sand placement activities, climate change, beach erosion, artificial lighting, human-caused disasters, and response to disasters.

Archie Carr NWR has a CCP that includes working with partners on the implementation of sea turtle nesting surveys, nest marking, minimizing human disturbance, and predator removal intended to minimize impacts to nesting and hatchling loggerhead sea turtles (USFWS 2008b, pp. 74–76). Sebastian Inlet State Park has a Unit Management Plan that includes procedures for the implementation of sea turtle nesting surveys, nest marking, nonnative species removal when encountered (feral cats, feral hogs, and nine-banded armadillos), problem native species removal (raccoons), and beach management to protect nesting and hatchling loggerhead sea turtles from anthropogenic disturbances (FDEP 2008a, pp. 39–41).

LOGG–T–FL–08—Sebastian Inlet State Park-Archie Carr NWR South, Indian River County: This unit consists of 4.1 km (2.6 mi) of island shoreline along the Atlantic Ocean. The island is separated from the mainland by the Atlantic Intracoastal Waterway, Indian River Lagoon, Indian River Narrows, a network of coastal islands, and salt marsh. The unit includes Sebastian Inlet State Park and parcels within the Archie Carr NWR. The unit includes lands from the MHW line to the toe of the secondary dune or developed structures. Land in this unit is in Federal and State ownership (see Table 1). The Federal portion is part of Archie Carr NWR, which is managed by USFWS. The State portion is part of Sebastian Inlet State Park, which is managed by the FDEP. This unit supports expansion of nesting from an adjacent unit (LOGG–T–FL–07) that has high-density nesting by loggerhead sea turtles in the Central Eastern Florida Region of the Peninsular Florida Recovery Unit. The PBFs in this unit may require special management considerations or protections to ameliorate the threats of recreational use, predation, beach sand placement activities, climate change, beach erosion, artificial lighting, human-caused disasters, and response to disasters.

The Archie Carr NWR has a CCP that includes working with partners on the implementation of sea turtle nesting surveys, nest marking, minimizing human disturbance, and predator removal intended to minimize impacts to nesting and hatchling loggerhead sea turtles (USFWS 2008b, pp. 74–76). The Sebastian Inlet State Park has a Unit Management Plan that includes procedures for the implementation of sea turtle nesting surveys, nest marking, removal of nonnative species (feral cats, feral hogs, and nine-banded armadillos) when encountered and problem native species (raccoons), and beach management to protect nesting and hatchling loggerhead sea turtles from anthropogenic disturbances (FDEP 2008a, pp. 39–41).

Southeastern Florida Region

LOGG–T–FL–09—Fort Pierce Inlet-St. Lucie Inlet, St. Lucie and Martin Counties: This unit consists of 35.2 km (21.9 mi) of island shoreline along the Atlantic Ocean. The island is separated from the mainland by the Atlantic Intracoastal Waterway and the Indian River Lagoon. The unit extends from

Fort Pierce Inlet to St. Lucie Inlet. This unit includes lands from the MHW line to the toe of the secondary dune or developed structures. Land in this unit is in private and other ownership (see Table 1). The St. Lucie County portion includes Blind Creek Natural Area and John Brooks Park, which are managed by the St. Lucie County Environmental Resources Department. The St. Lucie County portion also includes Fredrick Douglas Memorial Park, Ocean Bay, Blind Creek Beach, and Dollman Tract, which are managed by the St. Lucie Parks, Recreation, and Facility Department. The Martin County portion includes Glasscock Beach Park, Sea Turtle Park, Jensen Beach Park, Muscara, Bob Graham Beach Park, Curtis Beach Park, Beachwalk Pasley, Bryn Mawr Beach, Virginia Forrest Beach Park, Tiger Shores Beach, Stuart Beach Park and Addition, Santa Lucea, Olsen Property, Clifton S. Perry Beach, House of Refuge Park, Chastain Beach Park, and Bathtub Beach Park, which are managed by the Martin County Parks and Recreation Department.

This unit has high-density nesting by loggerhead sea turtles in the Southeastern Florida Region of the Peninsular Florida Recovery Unit. The PBFs in this unit may require special management considerations or protections to ameliorate the threats of recreational use, predation, beach sand placement activities, in-water and shoreline alterations, coastal development, climate change, beach erosion, artificial lighting, human-caused disasters, and response to disasters. John Brooks Park has a management plan that includes protection of nests and nonnative species removal to minimize impacts to nesting and hatchling loggerhead sea turtles (St. Lucie County Environmental Resources Department 2008, p. 29). Blind Creek Natural Area has a draft management plan that includes nonnative plant (*Casuarina equisetifolia* (Australian pine)) removal to minimize impacts to nesting and hatchling loggerhead sea turtles (St. Lucie County Environmental Resources Department 2011, p. 26).

LOGG–T–FL–10—St. Lucie Inlet-Jupiter Inlet, Martin and Palm Beach Counties: This unit consists of 24.9 km (15.5 mi) of island shoreline along the Atlantic Ocean. The island is separated from the mainland by the Atlantic Intracoastal Waterway, Great Pocket, Peck Lake, Hobe Sound, South Jupiter Narrows, Jupiter Sound, and a network of coastal islands. The unit extends from St. Lucie Inlet to Jupiter Inlet. This unit includes lands from the MHW line to the toe of the secondary dune or developed structures. Land in this unit is in Federal, State, private, and other ownership (see Table 1). The Federal portion is Hobe Sound NWR, which is managed by USFWS. The State portion is St. Lucie Inlet Preserve State Park, which is managed by FDEP. The County portion is Coral Cove Park, which is managed by the Palm Beach County Parks and Recreation Department. A portion of the private lands includes Blowing Rocks Preserve, which is owned and managed by The Nature Conservancy. This unit has high-density nesting by loggerhead sea turtles in the Southeastern Florida Region of the Peninsular Florida Recovery Unit.

The PBFs in this unit may require special management considerations or protections to ameliorate the threats of recreational use, predation, beach sand placement activities, in-water shoreline alterations, coastal development, climate change, beach erosion, artificial lighting, human-caused disasters, and response to disasters. Hobe Sound NWR has a CCP that includes working with partners on the implementation of sea turtle nesting surveys, nest marking, education, nonnative species removal, and minimizing human disturbance intended to minimize impacts to nesting and hatchling loggerhead sea turtles (USFWS 2006, pp. 81–86). St. Lucie Inlet Preserve State Park has a Unit Management Plan that includes maintaining a long-term data set of sea turtle nests, removal of nonnative species (feral cats) when encountered and problem native species (raccoons), and beach management to protect nesting and hatchling loggerhead sea turtles from anthropogenic disturbances (FDEP 2002a, pp. 20–21).

LOGG–T–FL–11—Jupiter Inlet–Lake Worth Inlet, Palm Beach County: This unit consists of 18.8 km (11.7 mi) of island shoreline along the Atlantic Ocean. The island is separated from the mainland by the Atlantic Intracoastal Waterway, Lake Worth Creek, Lake Worth, Munyon Island, Little Munyon Island, Singer Island, and Peanut Island. The unit extends from Jupiter Inlet to Lake Worth Inlet. This unit includes lands from the MHW line to the toe of the secondary dune or developed structures. Land in this unit is in State, private, and other ownership (see Table 1). The State portion is John D. MacArthur Beach State Park, which is managed by FDEP. The County portion includes Jupiter Beach Park, Carlin Park, Radnor, Juno Dunes Natural Area, and Loggerhead Park, which are managed by the Palm Beach County Parks and Recreation Department. This unit was occupied at the time of listing and is currently occupied. This unit has high-density nesting by loggerhead sea turtles in the Southeastern Florida Region of the Peninsular Florida Recovery Unit. The PBFs in this unit may require special management considerations or protections to ameliorate the threats of recreational use, predation, beach placement activities, in-water and shoreline alterations, coastal development, climate change, beach erosion, artificial lighting, human-caused disasters, and response to disasters. John D. MacArthur Beach State Park has a Unit Management Plan that includes procedures for the implementation of sea turtle nesting surveys, nest marking, artificial lighting management, problem species removal, education, and beach management to protect nesting and hatchling loggerhead sea turtles from anthropogenic disturbances (FDEP 2005a, pp. 20–21).

LOGG–T–FL–12—Lake Worth Inlet–Boynton Inlet, Palm Beach County: This unit consists of 24.3 km (15.1 mi) of island shoreline along the Atlantic Ocean. The island is separated from the mainland by the Atlantic Intracoastal Waterway, Lake Worth, and scattered coastal islands. The unit extends from Lake Worth Inlet to Boynton Inlet. This unit includes lands from the MHW line to the toe of the secondary dune or developed structures. Land in this unit is in private ownership (see Table 1). This unit has high-density nesting by loggerhead sea turtles in the Southeastern Florida Region of the Peninsular Florida Recovery Unit. The PBFs in this unit may require special management considerations or protections to ameliorate the threats of recreational use, predation, beach sand placement activities, in-water and shoreline alterations, coastal development, climate change, beach erosion, artificial lighting, human-caused disasters, and response to disasters. At this time, we are not aware of any management plans that address this species in this area.

LOGG–T–FL–13—Boynton Inlet–Boca Raton Inlet, Palm Beach County: This unit consists of 22.6 km (14.1 mi) of island shoreline along the Atlantic Ocean. The island is separated from the mainland by the Atlantic Intracoastal Waterway, Lake Rogers, Lake Wyman, and Lake Boca Raton. The unit extends from Boynton Inlet to Boca Raton Inlet. This unit includes lands from the MHW line to the toe of the secondary dune or developed structures. Land in this unit is in private and other ownership (see Table 1). The County portion is Ocean Ridge Hammock Park, which is managed by the Palm Beach County Parks and Recreation Department. The

municipality portion includes Spanish River Park, Red Reef Park, and South Beach Park, which are managed by the City of Boca Raton. This unit supports expansion of nesting from adjacent units (LOGG–T–FL–12 and LOGG–T–FL–14) that have high-density nesting by loggerhead sea turtles in the Southeastern Florida Region of the Peninsular Florida Recovery Unit. The PBFs in this unit may require special management considerations or protections to ameliorate the threats of recreational use, predation, beach sand placement activities, in-water shoreline alterations, coastal development, climate change, beach erosion, artificial lighting, human-caused disasters, and response to disasters. At this time, we are not aware of any management plans that address this species in this area.

LOGG–T–FL–14—Boca Raton Inlet–Hillsboro Inlet, Palm Beach and Broward Counties: This unit consists of 8.3 km (5.2 mi) of island shoreline along the Atlantic Ocean. The island is separated from the mainland by the Atlantic Intracoastal Waterway and the Hillsboro River. The unit extends from Boca Raton Inlet to Hillsboro Inlet. This unit includes lands from the MHW line to the toe of the secondary dune or developed structures. Land in this unit is in private and other ownership (see Table 1). The County portion is South Inlet Park, which is managed by the Palm Beach County Parks and Recreation Department. This unit has high-density nesting by loggerhead sea turtles in the Southeastern Florida Region of the Peninsular Florida Recovery Unit. The PBFs in this unit may require special management considerations or protections to ameliorate the threats of recreational use, predation, beach sand placement activities, in-water and shoreline alterations, coastal development, climate change, beach erosion, artificial lighting, human-caused disasters, and response to disasters. At this time, we are not aware of any management plans that address this species in this area.

LOGG–T–FL–15—Long Key, Monroe County: This unit consists of 4.2 km (2.6 mi) of island shoreline along the Atlantic Ocean. The island is bordered on the east by the Atlantic Ocean, on the west by Florida Bay, and on the north and south by natural channels between Keys (Fiesta Key to the north and Conch Key to the south). This unit extends from the natural channel between Fiesta Key and Long Key to the natural channel between Long Key and Conch Key. This unit includes lands from the MHW line to the toe of the secondary dune or developed structures. Land in this unit is in State ownership (see Table 1). The island is managed by FDEP as Long Key State Park. This unit was included to ensure conservation of the unique nesting habitat in the Florida Keys. Nesting beaches in the Florida Keys are unique from the other beaches in the Peninsular Florida Recovery Unit in that they are limestone islands with narrow, low-energy beaches (beaches where waves are not powerful); they have carbonate sands; and they are relatively close to the major offshore currents that facilitate the dispersal of post-hatchling loggerheads. The PBFs in this unit may require special management considerations or protections to ameliorate the threats of recreational use, predation, sand beach placement activities, climate change, beach erosion, human-caused disasters, and response to disasters. Long Key State Park has a Unit Management Plan that includes procedures for the implementation of sea turtle nesting surveys, nest marking, problem species removal, and beach management to protect nesting and hatchling loggerhead sea turtles from anthropogenic disturbances (FDEP 2004, pp. 18–19).

LOGG–T–FL–16—Bahia Honda Key, Monroe County: This unit consists of 3.7 km (2.3 mi) of island shoreline along the Atlantic Ocean. The island is bordered on the east by the Atlantic Ocean, on the west by Florida Bay, and on the north and south by natural channels between Keys (Ohio Key to the north and Spanish Harbor Key to the south). This unit extends from the natural channel between Ohio Key and Bahia Honda Key to the natural channel between Bahia Honda Key and Spanish Harbor Key. This unit includes lands from the MHW line to the toe of the secondary dune or developed structures. Land in this unit is in State ownership (see Table 1). The island is managed by FDEP as Bahia Honda State Park. This unit was included to ensure conservation of the unique nesting habitat in this Florida Keys. Nesting beaches in the Florida Keys are unique from the other beaches in the Peninsular Florida Recovery Unit in that they are limestone islands with narrow, low-energy beaches; they have carbonate sands; and they are relatively close to the major offshore currents that are known to facilitate the dispersal of post-hatchling loggerheads. The PBFs in this unit may require special management considerations or protections to ameliorate the threats of recreational use, predation, climate change, beach erosion, human-caused disasters, and response to disasters. Bahia Honda State Park has a Unit Management Plan that includes procedures for the implementation of sea turtle nesting surveys and nest marking intended to protect nesting and hatchling loggerhead sea turtles from anthropogenic disturbances (FDEP 2003a, pp. 18–20).

Central Western Florida Region

LOGG–T–FL–17—Longboat Key, Manatee and Sarasota Counties: This unit consists of 16.0 km (9.9 mi) of island shoreline along the Gulf of Mexico. The island is separated from the mainland by Sarasota Pass. The unit extends from Longboat Pass to New Pass. This unit includes lands from the MHW line to the toe of the secondary dune or developed structures. Land in this unit is in private ownership (see Table 1). This unit supports expansion of nesting from an adjacent unit (LOGG–T–FL–18) that has high-density nesting by loggerhead sea turtles in the Central Western Florida Region of the Peninsular Florida Recovery Unit. The PBFs in this unit may require special management considerations or protections to ameliorate the threats of recreational use, predation, beach sand placement activities, in-water shoreline alterations, climate change, beach erosion, artificial lighting, human-caused disasters, and response to disasters. At this time, we are not aware of any management plans that address this species in this area.

LOGG–T–FL–18—Siesta and Casey Keys, Sarasota County: This unit consists of 20.8 km (13.0 mi) of island shoreline along the Gulf of Mexico. It includes the shoreline of Siesta Key and Casey Key, which were originally two separate islands divided by Midnight Pass. When Midnight Pass was closed in 1983, the two islands were combined into a single island. The island is separated from the mainland by the Intracoastal Waterway, Roberts Bay, Little Sarasota Bay, Dryman Bay, Blackburn Bay, and scattered coastal islands. The unit extends from Big Sarasota Pass to Venice Inlet. This unit includes lands from the MHW line to the toe of the secondary dune or developed structures. Land in this unit is in private and other ownership (see Table 1). The County portion includes Turtle Beach County Park and Palmer Point County Park, which are managed by the Sarasota County Parks and Recreation Department. This unit has high-density nesting by loggerhead sea turtles in the Central Western Florida Region of the Peninsular Florida Recovery Unit. The PBFs in this unit may require special management considerations or protections to ameliorate the threats of recreational

use, predation, beach sand placement activities, coastal development, climate change, beach erosion, artificial lighting, human-caused disasters, and response to disasters. At this time, we are not aware of any management plans that address this species in this area.

LOGG–T–FL–19—Venice Beaches and Manasota Key, Sarasota and Charlotte Counties: This unit consists of 26.0 km (16.1 mi) of island shoreline along the Gulf of Mexico. The island is separated from the mainland by the Intracoastal Waterway, Roberts Bay, Red Lake, Lemon Bay, and scattered coastal islands. The unit extends from Venice Inlet to Stump Pass. This unit includes lands from the MHW line to the toe of the secondary dune or developed structures. Land in this unit is in State, private, and other ownership (see Table 1). The State portion is Stump Pass Beach State Park, which is managed by FDEP. The Sarasota County portion includes Service Club Park, Brohard Beach, Paw Beach, Caspersen Beach County Park, and Blind Pass Park, which are managed by the Sarasota County Parks and Recreation Department. This unit has high-density nesting by loggerhead sea turtles in the Central Western Florida Region of the Peninsular Florida Recovery Unit. The PBFs in this unit may require special management considerations or protections to ameliorate the threats of recreational use, predation, beach sand placement activities, in-water shoreline alterations, coastal development, climate change, beach erosion, artificial lighting, human-caused disasters, and response to disasters. Stump Pass Beach State Park has a Unit Management Plan that includes procedures for the implementation of sea turtle nesting surveys, nest marking, education, problem species (raccoons) removal, and beach management to protect nesting and hatchling loggerhead sea turtles from anthropogenic disturbances (FDEP 2003b, pp. 4–5).

LOGG–T–FL–20—Knight, Don Pedro, and Little Gasparilla Islands, Charlotte County: This unit consists of 10.8 km (6.7 mi) of island shoreline along the Gulf of Mexico. It includes the shoreline of Knight Island, Don Pedro Island, and Little Gasparilla Island, which were originally three separate islands divided by passes. When the passes closed during the 1960s, the three islands were combined into a single island. The island is separated from the mainland by the Intracoastal Waterway, Lemon Bay, Placida Harbor, and scattered keys and islands. The unit extends from Stump Pass to Gasparilla Pass. This unit includes lands from the MHW line to the toe of the secondary dune or developed structures. Land in this unit is in State and private ownership (see Table 1). The State portion is Don Pedro Island State Park, which is managed by FDEP. This unit has high-density nesting by loggerhead sea turtles in the Central Western Florida Region of the Peninsular Florida Recovery Unit. The PBFs in this unit may require special management considerations or protections to ameliorate the threats of recreational use, predation, beach sand placement activities, in-water and shoreline alterations, climate change, beach erosion, artificial lighting, human-caused disasters, and response to disasters. Don Pedro Island State Park has a Unit Management Plan that includes procedures for the implementation of nesting surveys, nest marking, education, problem species removal, and beach management to protect nesting and hatchling loggerhead sea turtles from anthropogenic disturbances (FDEP 2001a, pp. 16–20).

LOGG–T–FL–21—Gasparilla Island, Charlotte and Lee Counties: This unit consists of 11.2 km (6.9 mi) of island shoreline along the Gulf of Mexico. The island is separated from the mainland by the Intracoastal Waterway, Gasparilla Sound, Charlotte Harbor, Turtle Bay, Bull Bay, and a network of keys. The unit extends from Gasparilla Pass to Boca Grande Pass. This unit includes lands from the MHW line to the toe of the secondary dune or developed structures. Land in this unit is in State and private ownership (see Table 1). The State portion is Gasparilla Island State Park, which is managed by FDEP. This unit has high-density nesting by loggerhead sea turtles in the Central Western Florida Region of the Peninsular Florida Recovery Unit. The PBFs in this unit may require special management considerations or protections to ameliorate the threats of recreational use, predation, beach sand placement activities, coastal development, climate change, beach erosion, artificial lighting, human-caused disasters, and response to disasters. Gasparilla Island State Park has a Unit Management Plan that includes procedures for the implementation of nesting surveys, nest marking, terrestrial predator control, education, and beach management to protect nesting and hatchling loggerhead sea turtles from anthropogenic disturbances (FDEP 2002b, p. 4).

LOGG–T–FL–22—Cayo Costa, Lee County: This unit consists of 13.5 km (8.4 mi) of island shoreline along the Gulf of Mexico. The island is separated from the mainland by the Intracoastal Waterway, Pine Island Sound, Matlacha Pass, Pelican Bay, Primo Bay, Pine Island, Little Pine Island, and numerous smaller keys and islands. The unit extends from Boca Grande Pass to Captiva Pass. This unit includes lands from the MHW line to the toe of the secondary dune or developed structures. Land in this unit is in State and private ownership (see Table 1). The State portion is Cayo Costa State Park, which is managed by FDEP. This unit supports expansion of nesting from an adjacent unit (LOGG–T–FL–21) that has high-density nesting by loggerhead sea turtles in the Central Western Florida Region of the Peninsular Florida Recovery Unit. The PBFs in this unit may require special management considerations or protections to ameliorate the threats of recreational use, predation, in-water and shoreline alterations, climate change, beach erosion, human-caused disasters, and response to disasters. Cayo Costa State Park has a Unit Management Plan that includes procedures for the implementation of nesting surveys, nest marking, terrestrial predator control, and beach management to protect nesting and hatchling loggerhead sea turtles from anthropogenic disturbances (FDEP 2005b, pp. 14, 30).

LOGG–T–FL–23—Captiva Island, Lee County: This unit consists of 7.6 km (4.7 mi) of island shoreline along the Gulf of Mexico. The island is separated from the mainland by the Intracoastal Waterway, Pine Island Sound, Matlacha Pass, San Carlos Bay, Pine Island, and scattered keys and islands. The unit extends from Redfish Pass to Blind Pass. This unit includes lands from the MHW line to the toe of the secondary dune or developed structures. Land in this unit is in private ownership (see Table 1). This unit supports expansion of nesting from an adjacent unit (LOGG–T–FL–24) that has high-density nesting by loggerhead sea turtles in the Central Western Florida Region of the Peninsular Florida Recovery Unit. The PBFs in this unit may require special management considerations or protections to ameliorate the threats of recreational use, predation, beach sand placement activities, in-water shoreline alterations, coastal development, climate change, beach erosion, artificial lighting, human-caused disasters, and response to disasters. At this time, we are not aware of any management plans that address this species in this area.

LOGG–T–FL–24—Sanibel Island West, Lee County: This unit consists of 12.2 km (7.6 mi) of island shoreline along the Gulf of Mexico. The island is separated from the mainland by the Intracoastal Waterway, San Carlos Bay, Pine Island Sound, Matlacha Pass, Pine Island, and

numerous keys and islands. The unit extends from Blind Pass to Tarpon Bay Road. This unit includes lands from the MHW line to the toe of the secondary dune or developed structures. Land in this unit is in private and other ownership (see Table 1). The municipality portion includes Silver Key and Bowman's Beach Regional Park, which are managed by the City of Sanibel Natural Resources Department. This unit has high-density nesting by loggerhead sea turtles in the Central Western Florida Region of the Peninsular Florida Recovery Unit. The PBFs in this unit may require special management considerations or protections to ameliorate the threats of recreational use, predation, beach sand placement activities, climate change, beach erosion, artificial lighting, human-caused disasters, and response to disasters. At this time, we are not aware of any management plans that address this species in this area.

Southwestern Florida Region

LOGG–T–FL–25—Little Hickory Island, Lee and Collier Counties: This unit consists of 8.7 km (5.4 mi) of island shoreline along the Gulf of Mexico. The island is separated from the mainland by Estero Bay, Hogue Channel, Fish Trap Bay, Little Hickory Bay, Big Hickory Island, and extensive mangroves and mangrove islands. The unit extends from Big Hickory Pass to Wiggins Pass. This unit includes lands from the MHW line to the toe of the secondary dune or developed structures. Land in this unit is in private and other ownership (see Table 1). The Collier County portion is Barefoot Beach County Preserve Park, which is managed by the Collier County Parks and Recreation Department. This unit supports expansion of nesting from an adjacent unit (LOGG–T–FL–24) that has high-density nesting by loggerhead sea turtles in the Southwestern Florida Region of the Peninsular Florida Recovery Unit. The PBFs in this unit may require special management considerations or protections to ameliorate the threats of recreational use, predation, beach sand placement activities, in-water shoreline alterations, coastal development, climate change, beach erosion, artificial lighting, habitat obstructions, human-caused disasters, and response to disasters. At this time, we are not aware of any management plans that address this species in this area.

LOGG–T–FL–26—Wiggins Pass—Clam Pass, Collier County: This unit consists of 7.7 km (4.8 mi) of mainland shoreline along the Gulf of Mexico. This section of the mainland is bounded on the west by Vanderbilt Channel, Vanderbilt Lagoon, Inner Clam Bay, and extensive mangrove vegetative shorelines. The unit extends from Wiggins Pass to Clam Pass. This unit includes lands from the MHW line to the toe of the secondary dune or developed structures. Land in this unit is in State, private, and other ownership (see Table 1). The State portion is Delnor–Wiggins Pass State Park, which is managed by FDEP. The County portion is Vanderbilt Beach County Park, which is managed by the Collier County Parks and Recreation Department. This unit supports expansion of nesting from an adjacent unit (LOGG–T–FL–28) that has high-density nesting by loggerhead sea turtles in the Southwestern Florida Region of the Peninsular Florida Recovery Unit. The PBFs in this unit may require special management considerations or protections to ameliorate the threats of recreational use, predation, beach sand placement activities, in-water and shoreline alterations, climate change, beach erosion, artificial lighting, human-caused disasters, and response to disasters. Delnor–Wiggins Pass State Park has a Unit Management Plan that includes procedures for the implementation of nesting surveys, nest marking, terrestrial predator control, education, and beach management to protect nesting and hatchling loggerhead sea turtles from anthropogenic disturbances (FDEP 2009, pp. 16–23).

LOGG–T–FL–27—Clam Pass—Doctors Pass, Collier County: This unit consists of 4.9 km (3.0 mi) of island shoreline along the Gulf of Mexico. The island is separated from the mainland by Moorings Bay, Outer Doctors Bay, Inner Doctors Bay, Venetian Bay, and Outer Clam Bay. The unit extends from Clam Pass to Doctors Pass. This unit includes lands from the MHW line to the toe of the secondary dune or developed structures. Land in this unit is in private ownership (see Table 1). This unit supports expansion of nesting from an adjacent unit (LOGG–T–FL–28) that has high-density nesting by loggerhead sea turtles in the Southwestern Florida Region of the Peninsular Florida Recovery Unit. The PBFs in this unit may require special management considerations or protections to ameliorate the threats of recreational use, predation, beach sand placement activities, climate change, beach erosion, artificial lighting, human-caused disasters, and response to disasters. At this time, we are not aware of any management plans that address this species in this area.

LOGG–T–FL–28–Keewaydin Island and Sea Oat Island, Collier County: This unit consists of 13.1 km (8.1 mi) of island shoreline along the Gulf of Mexico. These islands are separated from the mainland by Dollar Bay, Bartell Bay, Periwinkle Bay, Rookery Bay, Hall Bay, Nature Conservancy Bay, Johnson Bay, Shell Bay, Sand Hill Bay, Hall Bay, Little Marco Pass, and a network of mangroves, coastal islands, and salt marsh. The unit extends from Gordon Pass to Big Marco Pass. This unit includes lands from the MHW line to the toe of the secondary dune or developed structures. Land in this unit is in State and private ownership (see Table 1). The State and part of the private ownership (National Audubon Society) portions are part of the Rookery Bay National Estuarine Research Reserve (NERR), which is managed by FDEP's Office of Coastal and Aquatic Managed Areas. This unit has high-density nesting by loggerhead sea turtles in the Southwestern Florida Region of the Peninsular Florida Recovery Unit. The PBFs in this unit may require special management considerations or protections to ameliorate the threats of recreational use, predation, in-water and shoreline alterations, beach sand placement activities, climate change, beach erosion, artificial lighting, human-caused disasters, and response to disasters. Rookery Bay NERR has a management plan that includes working with partners for the implementation of nesting surveys, nest marking, terrestrial predator control, education, and beach management to protect nesting and hatchling loggerhead sea turtles from anthropogenic disturbances (FDEP 2012a, pp. 62–77, 223, 269).

LOGG–T–FL–29—Cape Romano, Collier County: This unit consists of 9.2 km (5.7 mi) of island shoreline along the Gulf of Mexico and Gullivan Bay. Cape Romano is a coastal island complex within the Rookery Bay National Estuarine Research Reserve (NERR) and is located off the southwest coast of Florida in Collier County. Loggerhead sea turtle nesting has been regularly monitored and documented within this island complex. This island complex is separated from the mainland by Caxambas Bay, Grassy Bay, Barfield Bay, Goodland Bay, Gullivan Bay, and a network of other keys and islands. From north to south, the islands and keys included in this unit are: Kice Island, Big Morgan Island, Morgan Keys, Carr Island, and Cape Romano Island. Kice Island is in State ownership and is part of Rookery Bay NERR. It has 3.9 km (2.4 mi) of shoreline. Big Morgan Island is in State ownership (as part of Rookery Bay NERR) and other ownership. It has 1.4 km (0.9 mi) of shoreline. Morgan

Key is in State ownership (as part of Rookery Bay NERR) and other ownership. It has 0.7 km (0.4 mi) of shoreline. Carr Island is in State ownership and is part of Rookery Bay NERR. It has 0.3 km (0.2 mi) of shoreline. Cape Romano is in State ownership (as part of Rookery Bay NERR) and other ownership. It has 2.9 km (1.8 mi) of shoreline. The unit extends from Caxambas Pass to Gullivan Bay. This unit includes lands from the MHW line to the toe of the secondary dune or developed structures. Land in this unit is in State and other ownership (see Table 1). The State portion is part of the Rookery Bay NERR, which is owned by the State of Florida and managed by FDEP's Office of Coastal and Aquatic Managed Areas.

This unit has high-density nesting by loggerhead sea turtles in the Southwestern Florida Region of the Peninsular Florida Recovery Unit. The PBFs in this unit may require special management considerations or protections to ameliorate the threats of recreational use, predation, climate change, beach erosion, human-caused disasters, and response to disasters. Rookery Bay NERR has a management plan that includes working with partners such as the Conservancy of Southwest Florida for the implementation of nesting surveys, nest marking, terrestrial predator control, education, and beach management to protect nesting and hatchling loggerhead sea turtles from anthropogenic disturbances (FDEP 2012a, pp. 62–77, 223, 269).

LOGG–T–FL–30—Ten Thousand Islands North, Collier County: This unit consists of 7.8 km (4.9 mi) of island shoreline along the Gulf of Mexico. The Ten Thousand Islands are a chain of islands and mangrove islets off the southwest coast of Florida in Collier and Monroe Counties. This unit includes nine keys where loggerhead sea turtle nesting has been documented within the northern part of the Ten Thousand Islands in Collier County in both the Ten Thousand Islands NWR and the Rookery Bay National Estuarine Research Reserve (NERR). These keys are separated from the mainland by Sugar Bay, Palm Bay, Blackwater Bay, Buttonwood Bay, Pumpkin Bay, Santina Bay, and a network of keys and islands. From west to east and north to south, these nine keys are: Coon Key, Brush Island, B Key, Turtle Key, Gullivan Key, White Horse Key, Hog Key, Panther Key, and Round Key.

Coon Key is part of Ten Thousand Islands NWR and has 0.4 km (0.2 mi) of shoreline. Brush Island is in State ownership and is part of Rookery Bay NERR. It has 0.6 km (0.4 mi) of shoreline. B Key (25.89055 N, 81.59641 W) is in Federal and State ownership and is part of both Ten Thousand Islands NWR and Rookery Bay NERR. It has 0.5 km (0.3 mi) of shoreline. Turtle Key is in State ownership and is part of Rookery Bay NERR. It has 0.5 km (0.3 mi) of shoreline. Gullivan Key is in State ownership and is part of Rookery Bay NERR. It has 1.1 km (0.7 mi) of shoreline. White Horse Key is in State ownership and is part of Rookery Bay NERR. It has 1.6 km (1.0 mi) of shoreline. Hog Key is in Federal and State ownership and is part of both Ten Thousand Islands NWR and Rookery Bay NERR. It has 0.9 km (0.6 mi) of shoreline. Panther Key is in Federal ownership and is part of Ten Thousand Islands NWR. It has 2.0 km (1.3 mi) of shoreline. Round Key is in Federal ownership and is part Ten Thousand Islands NWR. It has 0.3 km (0.2 mi) of shoreline.

The unit includes lands from the MHW line to the toe of the secondary dune or developed structures. Land in this unit is in Federal and State ownership (see Table 1). The Ten Thousand Islands NWR portion is managed by USFWS. The Rookery Bay NERR portion is managed by FDEP's Office of Coastal and Aquatic Managed Areas. This unit supports expansion of nesting from an adjacent unit (LOGG–T–FL–29) that has high-density nesting by loggerhead sea turtles in the Southwestern Florida Region of the Peninsular Florida Recovery Unit. The PBFs in this unit may require special management considerations or protections to ameliorate the threats of recreational use, predation, climate change, beach erosion, human-caused disasters, and response to disasters. Rookery Bay NERR has a management plan that includes working with partners for the implementation of nesting surveys, nest marking, terrestrial predator control, education, and beach management to protect nesting and hatchling loggerhead sea turtles from anthropogenic disturbances (FDEP 2012a, pp. 62–77, 223, 269). Thousand Islands NWR has a CCP that includes implementation of nesting surveys, nest marking, and predator removal intended to minimize impacts to nesting and hatchling loggerhead sea turtles (USFWS 2001, pp. 12, 20–22).

LOGG–T–FL–31—Highland Beach, Monroe County: This unit consists of 7.2 km (4.5 mi) of island (Key McLaughlin) shoreline along the Gulf of Mexico. The island is separated from the mainland by Rogers River Bay, Big Bay, Big Lostmans Bay, extensive salt marsh, and a network of keys and islands. The unit extends from First Bay to Rogers River Inlet. The unit includes lands from the MHW line to the toe of the secondary dune or developed structures. Land in this unit is in Federal ownership (see Table 1). It is part of the Everglades National Park, which is managed by the NPS. This unit supports expansion of nesting from an adjacent unit (LOGG–T–FL–32) that has high-density nesting by loggerhead sea turtles in the Southwestern Florida Region of the Peninsular Florida Recovery Unit. The PBFs in this unit may require special management considerations or protections to ameliorate the threats of recreational use, climate change, beach erosion, human-caused disasters, and response to disasters. At this time, we are not aware of any management plans that address this species in this area.

LOGG–T–FL–32—Graveyard Creek-Shark Point, Monroe County: This unit consists of 0.9 km (0.6 mi) of mainland shoreline along the Gulf of Mexico. The unit extends from Shark Point (25.38796 N, 81.14933 W) to Graveyard Creek Inlet. The unit includes lands from the MHW line to the toe of the secondary dune or developed structures. Land in this unit is in Federal ownership (see Table 1). It is part of the Everglades National Park, which is managed by the NPS. This unit has high-density nesting by loggerhead sea turtles in the Southwestern Florida Region of the Peninsular Florida Recovery Unit. The PBFs in this unit may require special management considerations or protections to ameliorate the threats of recreational use, predation, climate change, beach erosion, human-caused disasters, and response to disasters. At this time, we are not aware of any management plans that address this species in this area.

LOGG–T–FL–33—Cape Sable, Monroe County: This unit consists of 21.3 km (13.2 mi) of mainland shoreline along the Gulf of Mexico. The unit extends from the north boundary of Cape Sable at 25.25924 N, 81.16687 W to the south boundary of Cape Sable at 25.12470 N, 81.06681 W. Land in this unit is in Federal ownership (see Table 1). It is part of the Everglades National Park, which is managed by the NPS. The unit includes lands from the MHW line to the toe of the secondary dune or developed structures. This unit has high-density nesting by loggerhead sea turtles in the Southwestern Florida Region of the Peninsular Florida Recovery Unit. The PBFs in this unit may require special management considerations or protections to ameliorate the threats of recreational use, predation, climate change, beach erosion, human-caused disasters, and

response to disasters. At this time, we are not aware of any management plans that address this species in this area.

Dry Tortugas Recovery Unit

Because of the removal of the originally proposed Unit LOGG–T–FL–02 and LOGG–T–FL–04 from the Peninsular Florida Recovery Unit, originally numbered Units LOGG–T–FL–36 to LOGG–T–FL–39 in the Dry Tortugas Recovery Unit have been renumbered in the final rule as Units LOGG–T–FL–34 to LOGG–T–FL–37.

LOGG–T–FL–34—Dry Tortugas, Monroe County: This unit consists of 5.7 km (3.6 mi) of shoreline along the Gulf of Mexico. The Dry Tortugas are a small group of seven islands located at the end of the Florida Keys about 108 km (67 mi) west of Key West. This unit includes six islands where loggerhead sea turtle nesting has been documented within the Dry Tortugas. From west to east, these six islands are: Loggerhead Key, Garden Key, Bush Key, Long Key, Hospital Key, and East Key. Loggerhead Key is the largest island in the chain and has 2.4 km (1.5 mi) of beach. Garden Key, the second largest island in the chain, is 4.0 km (2.5 mi) east of Loggerhead Key and has 0.2 km (0.1 mi) of beach. Bush Key is located 0.1 km (0.1 mi) east of Garden Key and has 2.0 km (1.3 mi) of beach; Bush Key is occasionally connected to Garden Key by a sand bar. Long Key is located 0.1 km (0.1 mi) south of the eastern end of Bush Key and has 0.3 km (0.2 mi) of beach; Long Key is occasionally connected to Bush Key by a sand bar. Hospital Key is located 2.5 km (1.6 mi) northeast of Garden Key and Bush Key and has 0.2 km (0.1 mi) of beach. East Key is located 0.6 km (0.3 mi) east of Middle Key (Middle Key is not included in the unit) and has 0.6 km (0.3 mi) of beach.

The unit includes lands from the MHW line to the toe of the secondary dune or developed structures (such as a sea plane landing area, fort walls). Land in this unit is in Federal ownership (see Table 1). It is part of the Dry Tortugas National Park, which is managed by the NPS. This unit was included because of the extremely small size of the Dry Tortugas Recovery Unit. The PBFs in this unit may require special management considerations or protections to ameliorate the threats of recreational use, predation, climate change, beach erosion, habitat obstructions, human-caused disasters, and response to disasters. Dry Tortugas National Park has a General Management Plan that includes special protection zones intended to manage the beach to protect nesting and hatchling loggerhead sea turtles from anthropogenic disturbances (NPS 2000, p. 38).

LOGG–T–FL–35—Marquesas Keys, Monroe County: This unit consists of 5.6 km (3.5 mi) of shoreline along the Gulf of Mexico. The Marquesas Keys are a small group of eight islands located at the end of the Florida Keys about 29.3 km (18.2 mi) west of Key West. This unit includes four islands where loggerhead sea turtle nesting has been documented within the Marquesas Keys: Marquesas Key, Unnamed Key 1, Unnamed Key 2, and Unnamed Key 3. Marquesas Key is the largest key in the northeastern region of the island group and has 3.8 km (2.4 mi) of shoreline. Unnamed Keys 1, 2, and 3 are at the far westernmost side of the island group. Unnamed Key 1 is the northernmost key of the three and has 0.4 km (0.2 mi) of shoreline. Unnamed Key 2 is just south of Unnamed Key 1 and has 1.0 km (0.6 mi) of shoreline. Unnamed Key 3 is southwest of Unnamed Key 2 and has 0.5 km (0.3 mi) of shoreline.

The unit includes lands from the MHW line to the toe of the secondary dune or developed structures. Land in this unit is in Federal ownership (see Table 1). The Marquesas Keys are part of the Key West NWR, which is managed by USFWS. This unit was included because of the extremely small size of the Dry Tortugas Recovery Unit. The PBFs in this unit may require special management considerations or protections to ameliorate the threats of recreational use, climate change, beach erosion, human-caused disasters, and response to disasters. Key West NWR is included within the Lower Florida Keys National Wildlife Refuges Comprehensive Conservation Plan, which includes implementation of nesting surveys, nest marking, debris removal, and predator removal intended to minimize impacts to nesting and hatchling loggerhead sea turtles (USFWS 2009, pp. 67–68).

LOGG–T–FL–36—Boca Grande Key, Monroe County: This unit consists of 1.3 km (0.8 mi) of island shoreline along the Gulf of Mexico. Boca Grande Key is one of the outlying islands of the Florida Keys and is located about 18.9 km (11.7 mi) west of Key West. The unit extends from 24.53767 N, 82.00763 W (at the northern end of the key) to 24.52757 N, 82.00581 W (at the southern end of the key). The unit includes lands from the MHW line to the toe of the secondary dune or developed structures. Land in this unit is in Federal ownership (see Table 1). It is part of the Key West NWR, which is managed by USFWS. This unit was included because of the extremely small size of the Dry Tortugas Recovery Unit. The PBFs in this unit may require special management considerations or protections to ameliorate the threats of recreational use, climate change, beach erosion, human-caused disasters, and response to disasters. Key West NWR is included within the Lower Florida Keys National Wildlife Refuges Comprehensive Conservation Plan, which includes implementation of nesting surveys, nest marking, debris removal, and predator removal intended to minimize impacts to nesting and hatchling loggerhead sea turtles (USFWS 2009, pp. 67–68).

LOGG–T–FL–37—Woman Key, Monroe County: This unit consists of 1.3 km (0.8 mi) of island shoreline along the Gulf of Mexico. Woman Key is one of the outlying islands of the Florida Keys and is located about 15.9 km (9.9 mi) west of Key West. The unit extends from 24.52452 N, 81.97893 W (at the western end of the key) to 24.52385 N, 81.96680 W (at the eastern end of the key). The unit includes lands from the MHW line to the toe of the secondary dune or developed structures. Land in this unit is in Federal ownership (see Table 1). It is part of the Key West NWR, which is managed by USFWS. This unit was included because of the extremely small size of the Dry Tortugas Recovery Unit. The PBFs in this unit may require special management considerations or protections to ameliorate the threats of recreational use, climate change, beach erosion, human-caused disasters, and response to disasters. Key West NWR is included within the Lower Florida Keys National Wildlife Refuges Comprehensive Conservation Plan, which includes implementation of nesting surveys, nest marking, debris removal, and predator removal intended to minimize impacts to nesting and hatchling loggerhead sea turtles (USFWS 2009, pp. 67–68).

Northern Gulf of Mexico Recovery Unit

Mississippi

LOGG–T–MS–01—Horn Island, Jackson County: This unit consists of 18.6 km (11.5 mi) of island shoreline along the Gulf of Mexico. The island is separated from the mainland by the Gulf Intracoastal Waterway, Mississippi Sound, Pascagoula Bay, and scattered coastal islands. The unit extends from Dog Keys Pass to the easternmost point of the ocean facing island shore. The unit includes lands from the MHW line to the toe of the secondary dune or developed structures. Land in this unit is in Federal and private ownership (see Table 1). The Federal portion is part of the Gulf Islands National Seashore, Mississippi District, which is managed

by the NPS. Nesting was confirmed by weekly aerial surveys prior to 2006. Although regular surveys have not been conducted since 2005, loggerhead nesting was documented in 2010 and 2011 during the Deepwater Horizon event response efforts. This unit was included because Horn Island has been documented as one of two islands in Mississippi with the greatest number of nests.

The PBFs in this unit may require special management considerations or protections to ameliorate the threats of recreational use, predation, climate change, beach erosion, human-caused disasters, and response to disasters. The existing Gulf Islands National Seashore General Management Plan includes controlling nonnative species to protect nesting and hatchling loggerhead sea turtles from anthropogenic disturbances (NPS 1978, p. 46). The management plan is being revised and a draft is under review. The draft Gulf Islands National Seashore General Management Plan includes management efforts that would emphasize sea turtle nest monitoring and closure areas around nests intended to protect nesting and hatchling loggerhead sea turtles from anthropogenic disturbances (NPS 2011, p. 85).

LOGG–T–MS–02—Petit Bois Island, Jackson County: This unit consists of 9.8 km (6.1 mi) of island shoreline along the Gulf of Mexico. The island is separated from the mainland by the Gulf Intracoastal Waterway, Mississippi Sound, Point Aux Chenes Bay, scattered coastal islands, and salt marsh. The unit extends from Horn Island Pass to Petit Bois Pass. The unit includes lands from the MHW line to the toe of the secondary dune or developed structures. Land in this unit is in Federal ownership (see Table 1). Petit Bois Island is part of the Gulf Islands National Seashore, Mississippi District, which is managed by the NPS. Nesting was confirmed by weekly aerial surveys prior to 2006. Although regular surveys have not been conducted since 2005, loggerhead nesting was documented in 2010 and 2011 during Deepwater Horizon event response efforts. This unit was included because Petit Bois Island has been documented as one of two islands in Mississippi with the greatest number of nests.

The PBFs in this unit may require special management considerations or protections to ameliorate the threats of recreational use, predation, climate change, beach erosion, human-caused disasters, and response to disasters. The existing Gulf Islands National Seashore General Management Plan includes controlling nonnative species to protect nesting and hatchling loggerhead sea turtles from anthropogenic disturbances (NPS 1978, p. 46). The management plan is being revised, and a draft is under review. The draft Gulf Islands National Seashore General Management Plan includes management efforts that would emphasize sea turtle nest monitoring and closure areas around nests intended to protect nesting and hatchling loggerhead sea turtles from anthropogenic disturbances (NPS 2011, p. 85).

Alabama

LOGG–T–AL–01—Mobile Bay-Little Lagoon Pass, Baldwin County: This unit consists of 28.0 km (17.4 mi) of island shoreline along the Gulf of Mexico. The island is separated from the mainland by the Gulf Intracoastal Waterway, Bon Secour Bay, and Little Lagoon. The unit extends from Mobile Bay Inlet to Little Lagoon Pass. The unit includes lands from the MHW line to the toe of the secondary dune or developed structures. Land in this unit is in Federal, State, and private ownership (see Table 1). The Federal portion includes part of the Bon Secour NWR and four Bureau of Land Management (BLM) parcels. Bon Secour NWR assists in managing one of the BLM parcels; BLM manages their remaining three parcels. The State portion includes Fort Morgan State Park, which is managed by USFWS. This unit has high-density nesting by loggerhead sea turtles in Alabama. The PBFs in this unit may require special management considerations or protections to ameliorate the threats of recreational use, predation, climate change, beach erosion, artificial lighting, human-caused disasters, and response to disasters. Bon Secour NWR has a CCP that includes working with partners for the implementation of nesting surveys, nest marking, education, minimizing human disturbance, predator removal, and other conservation efforts intended to minimize impacts to nesting and hatchling loggerhead sea turtles (USFWS 2005, pp. 54–55).

LOGG–T–AL–02—Gulf State Park-Perdido Pass, Baldwin County: This unit consists of 10.7 km (6.7 mi) of island shoreline along the Gulf of Mexico. The island is separated from the mainland by the Gulf Intracoastal Coastal Waterway, Shelby Lakes, Little Lake, Portage Creek, Wolf Bay, Bay La Launch, Cotton Bayou, and Terry Cove. The unit extends from the west boundary of Gulf State Park to Perdido Pass. The unit includes lands from the MHW line to the toe of the secondary dune or developed structures. Land in this unit is in State and private ownership (see Table 1). The State portion is part of Gulf State Park, which is managed by the Alabama State Parks. This unit has high-density nesting by loggerhead sea turtles in Alabama. The PBFs in this unit may require special management considerations or protections to ameliorate the threats of recreational use, predation, in-water and shoreline alterations, coastal development, climate change, beach erosion, artificial lighting, human-caused disasters, and response to disasters. At this time, we are not aware of any management plans that address this species in this area.

LOGG–T–AL–03—Perdido Pass-Florida-Alabama line, Baldwin County: This unit consists of 3.3 km (2.0 mi) of island shoreline along the Gulf of Mexico. The island is separated from the mainland by the Gulf Intracoastal Waterway, Old River, Bayou St. John, Terry Cover, Amica Bay, and coastal islands. The unit extends from Perdido Pass to the Alabama–Florida border. This area is referred to as Alabama/Florida Point. The unit includes lands from the MHW line to the toe of the secondary dune or developed structures. Land in this unit is in State and private ownership (see Table 1). The State portion is part of Gulf State Park, which is managed by the Alabama State Parks. This unit supports expansion of nesting from an adjacent unit (LOGG–T–AL–02) that has high-density nesting by loggerhead sea turtles in Alabama. The PBFs in this unit may require special management considerations or protections to ameliorate the threats of recreational use, predation, in-water and shoreline alterations, beach sand placement activities, climate change, beach erosion, artificial lighting, human-caused disasters, and response to disasters. At this time, we are not aware of any management plans that address this species in this area.

Florida

Because of the removal of the originally proposed Unit LOGG–T–FL–02 and LOGG–T–FL–04 from the Peninsular Florida Recovery Unit, originally numbered Units LOGG–T–FL–40 to LOGG–T–FL–47 in the Northern Gulf of Mexico Recovery Unit have been renumbered in the final rule as Units LOGG–T–FL–38 to LOGG–T–FL–45.

LOGG–T–FL–38—Perdido Key, Escambia County: This unit consists of 20.2 km (12.6 mi) of island shoreline along the Gulf of Mexico. The island is separated from the mainland by the Gulf Intracoastal Waterway, Old River, Perdido Bay, Big Lagoon, and coastal islands. The unit extends from the Alabama-Florida border to Pensacola

Pass. The unit includes lands from the MHW line to the toe of the secondary dune or developed structures. Land in this unit is in Federal, State, and private ownership (see Table 1). The Federal portion is part of Gulf Islands National Seashore, Florida District, which is managed by the NPS. The State portion is Perdido Key State Park, which is managed by FDEP. This unit supports expansion of nesting from an adjacent unit (LOGG–T–AL–02) that has high-density nesting by loggerhead sea turtles in the Alabama portion of the Northern Gulf of Mexico Recovery Unit. The PBFs in this unit may require special management considerations or protections to ameliorate the threats of recreational use, predation, beach sand placement activities, in-water and shoreline alterations, climate change, beach erosion, artificial lighting, human-caused disasters, and response to disasters.

The existing Gulf Islands National Seashore General Management Plan includes controlling nonnative species to protect nesting and hatchling loggerhead sea turtles from anthropogenic disturbances (NPS 1978, p. 46). The management plan is being revised, and a draft is under review. The draft Gulf Islands National Seashore General Management Plan includes management efforts that would emphasize sea turtle nest monitoring and closure areas around nests intended to protect nesting and hatchling loggerhead sea turtles from anthropogenic disturbances (NPS 2011, p. 77). Perdido Key State Park has a Unit Management Plan that includes procedures for the implementation of nesting surveys, nest marking, terrestrial predator control, debris removal, artificial light reduction in adjacent developed areas, education, and beach management to protect nesting and hatchling loggerhead sea turtles from anthropogenic disturbances (FDEP 2006b, p. 5).

LOGG–T–FL–39—Mexico Beach and St. Joe Beach, Bay and Gulf Counties: This unit consists of 18.7 km (11.7 mi) of mainland shoreline along the Gulf of Mexico. The unit extends from the eastern boundary of Tyndall Air Force Base to Gulf County Canal in St. Joseph Bay. The unit includes lands from the MHW line to the toe of the secondary dune or developed structures. Land in this unit is in private ownership (see Table 1). This unit supports expansion of nesting from an adjacent unit (LOGG–T–FL–40) that has high-density nesting by loggerhead sea turtles in the Florida portion of the Northern Gulf of Mexico Recovery Unit. The PBFs in this unit may require special management considerations or protections to ameliorate the threats of recreational use, predation, in-water and shoreline alterations, beach sand placement activities, climate change, beach erosion, artificial lighting, human-caused disasters, and response to disasters. At this time, we are not aware of any management plans that address this species in this unit.

LOGG–T–FL–40—St. Joseph Peninsula, Gulf County: This unit consists of 23.5 km (14.6 mi) of a spit shoreline along the Gulf of Mexico. The spit is separated from the mainland by St. Joseph Bay. The unit extends from St. Joseph Bay to the west boundary of Eglin Air Force Base. The unit includes lands from the MHW line to the toe of the secondary dune or developed structures. Land in this unit is in State and private ownership (see Table 1). The State portion includes T.H. Stone Memorial St. Joseph Peninsula State Park and part of the St. Joseph Bay Aquatic Preserve, which are managed by FDEP. This unit has high-density nesting by loggerhead sea turtles in the Florida portion of the Northern Gulf of Mexico Recovery Unit. The PBFs in this unit may require special management considerations or protections to ameliorate the threats of recreational use, beach sand placement activities, beach driving, predation, climate change, beach erosion, artificial lighting, human-caused disasters, and response to disasters.

T.H. Stone Memorial St. Joseph Peninsula State Park has a Unit Management Plan that includes procedures for the implementation of nesting surveys, nest marking, terrestrial predator control, and beach management to protect nesting and hatchling loggerhead sea turtles from anthropogenic disturbances (FDEP 2001b, pp. 4–5, 18). The St. Joseph Bay Aquatic Preserve Management Plan includes working with partners on the implementation of nesting surveys, nest marking, education, and beach management to protect nesting and hatchling loggerhead sea turtles from anthropogenic disturbances (FDEP 2008b, pp. 50–51, 77). Gulf County has a draft HCP that could include sea turtle nest monitoring, nest protection from vehicles on the beach, public education, artificial light management, land acquisition, beach horseback riding ordinance enforcement, and predator control. These measures apply to the private lands within this critical habitat unit and are intended to minimize and mitigate impacts to nesting and hatchling loggerhead sea turtles as a result of the County-authorized beach driving (Gulf County Board of County Commissioners 2004, pp. 5–6–5–10).

LOGG–T–FL–41—Cape San Blas, Gulf County: This unit consists of 11.0 km (6.8 mi) of mainland and spit shoreline along the Gulf of Mexico. The unit extends from the east boundary of Eglin Air Force Base to Indian Pass. The unit includes lands from the MHW line to the toe of the secondary dune or developed structures. Land in this unit is in State, private, and other ownership (see Table 1). The State portion is part of St. Joseph Bay State Buffer Preserve, which is managed by FDEP. The County portion is Salinas Park, which is managed by Gulf County. This unit supports expansion of nesting from adjacent units (LOGG–T–FL–40 and LOGG–T–FL–42) that have high-density nesting by loggerhead sea turtles in the Florida portion of the Northern Gulf of Mexico Recovery Unit. The PBFs in this unit may require special management considerations or protections to ameliorate the threats of recreational use, beach driving, predation, coastal development, climate change, beach erosion, artificial lighting, habitat obstructions, human-caused disasters, and response to disasters. The draft St. Joseph Bay State Buffer Preserve Management Plan includes predator control (FDEP 2012b, p. 33).

LOGG–T–FL–42—St. Vincent Island, Franklin County: This unit consists of 15.1 km (9.4 mi) of island shoreline along the Gulf of Mexico. The island is separated from the mainland by St. Vincent Sound. The unit extends from Indian Pass to West Pass. The unit includes lands from the MHW line to the toe of the secondary dune or developed structures. Land in this unit is in Federal ownership (see Table 1). This unit is managed by USFWS as the St. Vincent NWR. This unit has high-density nesting by loggerhead sea turtles in the Florida portion of the Northern Gulf of Mexico Recovery Unit. The PBFs in this unit may require special management considerations or protections to ameliorate the threats of recreational use, predation, climate change, beach erosion, artificial lighting, human-caused disasters, and response to disasters. St. Vincent NWR has a draft CCP that includes the implementation of nesting surveys, nest marking, education, minimizing human disturbance, predator removal, and other conservation efforts intended to minimize impacts to nesting and hatchling loggerhead sea turtles (USFWS 2012, pp. 64–65).

LOGG–T–FL–43—Little St. George Island, Franklin County: This unit consists of 15.4 km (9.6 mi) of island shoreline along the Gulf of Mexico. The

island is separated from the mainland by Apalachicola Bay and St. Vincent Sound. The unit extends from West Pass to Bob Sikes Cut. The unit includes lands from the MHW line to the toe of the secondary dune or developed structures. Land in this unit is in State ownership (see Table 1). This unit is managed by FDEP as the Apalachicola NERR. This unit has high-density nesting by loggerhead sea turtles in the Florida portion of the Northern Gulf of Mexico Recovery Unit. The PBFs in this unit may require special management considerations or protections to ameliorate the threats of recreational use, predation, climate change, beach erosion, artificial lighting, human-caused disasters, and response to disasters. The existing Apalachicola NERR Management Plan includes working with partners on the implementation of nesting surveys and controlling nonnative species to protect nesting and hatchling loggerhead sea turtles from anthropogenic disturbances (FDEP 1998, pp. 78, 126, 161). The management plan is being revised, and a draft is under review. The draft management plan includes working with partners on the implementation of nesting surveys, nest marking, predator removal, education, and beach management to protect nesting and hatchling loggerhead sea turtles from anthropogenic disturbances (FDEP 2011, pp. 48–49, 73–76).

LOGG–T–FL–44—St. George Island, Franklin County: This unit consists of 30.7 km (19.1 mi) of island shoreline along the Gulf of Mexico. The island is separated from the mainland by the Intracoastal Waterway, Apalachicola Bay, and East Bay. The unit extends from Bob Sikes Cut to East Pass. The unit includes lands from the MHW line to the toe of the secondary dune or developed structures. Land in this unit is in State and private ownership (see Table 1). The State portion is Dr. Julian G. Bruce St. George Island State Park, which is managed by FDEP. This unit supports expansion of nesting from an adjacent unit (LOGG–T–FL–43) that has high-density nesting by loggerhead sea turtles in the Florida portion of the Northern Gulf of Mexico Recovery Unit. The PBFs in this unit may require special management considerations or protections to ameliorate the threats of recreational use, predation, climate change, beach erosion, artificial lighting, human-caused disasters, and response to disasters. The Dr. Julian G. Bruce St. George Island State Park has a Unit Management Plan that includes procedures for the implementation of nesting surveys, nest marking, terrestrial predator control, debris removal, artificial light reduction in adjacent developed areas, education, and beach management to protect nesting and hatchling loggerhead sea turtles from anthropogenic disturbances (FDEP 2003c, pp. 16–18).

LOGG–T–FL–45—Dog Island, Franklin County: This unit consists of 13.1 km (8.1 mi) of island shoreline along the Gulf of Mexico. The island is separated from the mainland by St. George Sound. The unit extends from East Pass to St. George Sound. The unit includes lands from the MHW line to the toe of the secondary dune or developed structures. Land in this unit is in private conservation ownership (The Nature Conservancy) (see Table 1). The unit includes the Jeff Lewis Wilderness Preserve, which is owned and managed by The Nature Conservancy. This unit supports expansion of nesting from an adjacent unit (LOGG–T–FL–43) that has high-density nesting by loggerhead sea turtles in the Florida portion of the Northern Gulf of Mexico Recovery Unit. The PBFs in this unit may require special management considerations or protections to ameliorate the threats of recreational use, beach driving, predation, climate change, beach erosion, artificial lighting, human-caused disasters, and response to disasters. At this time, we are not aware of any management plans that address this species in this area.

Effects of Critical Habitat Designation

Section 7 Consultation

Section 7(a)(2) of the Act requires Federal agencies, including the USFWS, to ensure that any action they fund, authorize, or carry out is not likely to jeopardize the continued existence of any endangered species or threatened species or result in the destruction or adverse modification of designated critical habitat of such species. In addition, section 7(a)(4) of the Act requires Federal agencies to confer with USFWS on any agency action which is likely to jeopardize the continued existence of any species listed under the Act or result in the destruction or adverse modification of proposed critical habitat.

Decisions by the 5th and 9th Circuit Courts of Appeal have invalidated our regulatory definition of ''destruction or adverse modification'' (50 CFR 402.02) (see *Gifford Pinchot Task Force* v. *U.S. Fish and Wildlife Service,* 378 F. 3d 1059 (9th Cir. 2004) and *Sierra Club* v. *U.S. Fish and Wildlife Service,* 245 F.3d 434 (5th Cir. 2001)), and we do not rely on this regulatory definition when analyzing whether an action is likely to destroy or adversely modify critical habitat. Under the provisions of the Act, we determine destruction or adverse modification on the basis of whether, with implementation of the proposed Federal action, the affected critical habitat would continue to serve its intended conservation role for the species.

If a Federal action may affect a listed species or its critical habitat, the responsible Federal agency (action agency) must enter into consultation with us. Examples of actions that are subject to the section 7 consultation process are actions on State, tribal, local, or private lands that require a Federal permit (such as a permit from the USACE under section 404 of the Clean Water Act (33 U.S.C. 1251 *et seq.*) or a permit from USFWS under section 10 of the Act) or that involve some other Federal action (such as funding from the Federal Highway Administration, Federal Aviation Administration, or the Federal Emergency Management Agency). Federal actions not affecting listed species or critical habitat, and actions on State, tribal, local, or private lands that are not federally funded or authorized, do not require section 7 consultation.

As a result of section 7 consultation, we document compliance with the requirements of section 7(a)(2) through our issuance of:

(1) A concurrence letter for Federal actions that may affect, but are not likely to adversely affect, listed species or critical habitat; or

(2) A biological opinion for Federal actions that may affect, or are likely to adversely affect, listed species or critical habitat.

When we issue a biological opinion concluding that a project is likely to jeopardize the continued existence of a listed species and/or destroy or adversely modify critical habitat, we provide reasonable and prudent alternatives to the project, if any are identifiable, that would avoid the likelihood of jeopardy and/or destruction or adverse modification of critical habitat. We define ''reasonable and prudent alternatives'' (at 50 CFR 402.02) as alternative actions identified during consultation that:

(1) Can be implemented in a manner consistent with the intended purpose of the action;

(2) Can be implemented consistent with the scope of the Federal agency's legal authority and jurisdiction;

(3) Are economically and technologically feasible; and

(4) Would, in the Director's opinion, avoid the likelihood of jeopardizing the continued existence of the listed species

and/or avoid the likelihood of destroying or adversely modifying critical habitat.

Reasonable and prudent alternatives can vary from slight project modifications to extensive redesign or relocation of the project. Costs associated with implementing a reasonable and prudent alternative are similarly variable.

Regulations at 50 CFR 402.16 require Federal agencies to reinitiate consultation on previously reviewed actions in instances where we have listed a new species or subsequently designated critical habitat that may be affected and the Federal agency has retained discretionary involvement or control over the action (or the agency's discretionary involvement or control is authorized by law). Consequently, Federal agencies sometimes may need to request reinitiation of consultation with us on actions for which formal consultation has been completed, if those actions with discretionary involvement or control may affect subsequently listed species or designated critical habitat.

Application of the ''Adverse Modification'' Standard

The key factor related to the adverse modification determination is whether, with implementation of the proposed Federal action, the affected critical habitat would continue to serve its intended conservation role for the species. Activities that may destroy or adversely modify critical habitat are those that alter the PBFs to an extent that appreciably reduces the conservation value of critical habitat for the loggerhead sea turtle. As discussed above, the role of critical habitat is to support life-history needs of the species and provide for the conservation of the species.

Section 4(b)(8) of the Act requires us to briefly evaluate and describe, in any proposed or final regulation that designates critical habitat, activities involving a Federal action that may destroy or adversely modify such habitat, or that may be affected by such designation.

Activities that may affect critical habitat, when carried out, funded, or authorized by a Federal agency, should result in consultation for the loggerhead sea turtle. These activities include, but are not limited to:

(1) Actions that would significantly alter beach sand characteristics. Such activities could include, but are not limited to, beach sand placement and beach driving. These activities may lead to changes to the nest incubation environment by altering gas exchange, moisture content, temperature, and hardness of the nesting substrate to levels that eliminate or reduce the suitability of habitat necessary for successful reproduction of the loggerhead sea turtle. However, beach sand placement projects conducted under the USFWS's Statewide Programmatic Biological Opinion for the USACE planning and regulatory sand placement activities (including post-disaster sand placement activities) in Florida and other individual biological opinions throughout the loggerhead's nesting range include required terms and conditions that minimize incidental take of turtles and, if incorporated, the sand placement projects are not expected to result in adverse modification of critical habitat.

(2) Actions that would significantly decrease adult female access to nesting habitat or hinder hatchling sea turtles emerging from the nest from reaching the ocean. Such activities could include, but are not limited to, coastal residential and commercial development, beach armoring, groin construction, and construction of other erosion control devices. These structures could act as barriers or deterrents to adult females attempting to access a beach to levels that eliminate or reduce the suitability of habitat necessary for successful reproduction of the loggerhead sea turtle.

(3) Actions that would significantly alter natural lighting levels. Such activities could include, but are not limited to, lighting of coastal residential and commercial structures, street lighting, bridge lighting, pier lighting, and other development or road infrastructure. These activities could increase the levels of artificial lighting visible from the beach and act as a deterrent to adult females attempting to access a beach or disorient hatchlings emerging from the nest and crawling to the ocean. Increased levels may eliminate or reduce the suitability of habitat necessary for successful reproduction of the loggerhead sea turtle.

Exemptions

Application of Section 4(a)(3) of the Act

The Sikes Act Improvement Act of 1997 (Sikes Act) (16 U.S.C. 670a) required each military installation that includes land and water suitable for the conservation and management of natural resources to complete an integrated natural resources management plan (INRMP) by November 17, 2001. An INRMP integrates implementation of the military mission of the installation with stewardship of the natural resources found on the base. Each INRMP includes:

(1) An assessment of the ecological needs on the installation, including the need to provide for the conservation of listed species;

(2) A statement of goals and priorities;

(3) A detailed description of management actions to be implemented to provide for these ecological needs; and

(4) A monitoring and adaptive management plan.

Among other things, each INRMP must, to the extent appropriate and applicable, provide for fish and wildlife management; fish and wildlife habitat enhancement or modification; wetland protection, enhancement, and restoration where necessary to support fish and wildlife; and enforcement of applicable natural resource laws.

The National Defense Authorization Act for Fiscal Year 2004 (Pub. L. 108–136) amended the Act to limit areas eligible for designation as critical habitat. Specifically, section 4(a)(3)(B)(i) of the Act (16 U.S.C. 1533(a)(3)(B)(i)) now provides: ''The Secretary shall not designate as critical habitat any lands or other geographic areas owned or controlled by the DOD, or designated for its use, that are subject to an integrated natural resources management plan prepared under section 101 of the Sikes Act (16 U.S.C. 670a), if the Secretary determines in writing that such plan provides a benefit to the species for which critical habitat is proposed for designation.''

We consult with the military on the development and implementation of INRMPs for installations with listed species. We analyzed INRMPs developed by military installations located within the range of the proposed critical habitat designation for the loggerhead sea turtle to determine if they are exempt under section 4(a)(3) of the Act.

Approved INRMPs

The following areas are DOD lands with completed, USFWS-approved INRMPs within the critical habitat designation.

Marine Corps Base Camp Lejeune (Onslow Beach), NC, 12.4 km (7.7 mi)

Marine Corps Base Camp Lejeune is the Marine Corps' largest amphibious training base and is home to 47,000 marines and sailors, the largest single concentration of marines in the world. The mission of Camp Lejeune is to train and maintain combat-ready units for expeditionary deployment anywhere in the world. Onslow Beach, one of two

stretches of beach on the base, is used to support amphibious operations. Operations at the beach range from daily exercises by 2nd Amphibious Assault Battalion and Joint Armed Services training to periodic, large-scale training such as the quarterly Capability Exercises, which include explosives on the beach, inland artillery fire, and three Landing Craft Air Cushioned and 10 to 12 Amphibious Assault Vehicle landings (Marine Corps Base Camp Lejeune 2006, p. 1–10 and Appendix E).

Camp Lejeune encompasses an estimated 57,870 hectares (ha) (143,000 acres (ac)), including the onshore, nearshore, and surf areas in and adjacent to the Atlantic Ocean and the New River, in Onslow County, North Carolina. Onslow Beach consists of 12.4 km (7.7 mi) of island shoreline along the Atlantic Ocean. The island on which Onslow Beach is located is separated from the mainland by the Atlantic Intracoastal Waterway, Banks Channel, Salliers Bay, Wards Channel, and salt marsh. The boundaries of the island are from Browns Inlet to New River Inlet. Onslow Beach, which has been monitored for sea turtle nesting since 1979, has high-density nesting by loggerhead sea turtles for North Carolina.

The Marine Corps Base Camp Lejeune INRMP is a planning document that guides the management and conservation of natural resources under the installation's control. The INRMP was prepared to assist installation staff and users in managing natural resources more effectively so as to ensure that installation lands remain available and in good condition to support the installation's military mission. Camp Lejeune published its first INRMP in 2001 to guide resources management on the installation for the years 2002–2006. A revised INRMP was prepared in 2006 for the years 2007–2011. The existing INRMP will remain in use until its next revision, which the installation is preparing to initiate.

The 2006 INRMP includes the implementation of sea turtle nesting surveys, nest marking, and beach management to protect nesting and hatchling loggerhead sea turtles from anthropogenic disturbances (Marine Corps Base Camp Lejeune 2006, pp. 4–14—4–15). The INRMP identifies the goal of contributing to the recovery of the loggerhead sea turtle through development of ecosystem management-based strategies. The INRMP identifies the following management and protective measures to achieve this goal:

(1) Conduct nightly or morning ground sea turtle nest surveys on Onslow Beach during the nesting season;

(2) Conduct aerial surveys for sea turtle nests on Brown's Island and North Onslow Beach;

(3) Protect sea turtle nest sites with cages and restrictive signage;

(4) Move sea turtle nests that are in the amphibious training beach;

(5) Impose driving restrictions on Onslow Beach during the sea turtle nesting season, including restrictions to protect sensitive habitat south of Onslow South Tower;

(6) Rake ruts in front of sea turtle nests;

(7) Reduce sources of artificial lighting on Onslow Beach; and

(8) Monitor recreational or training impacts to Onslow Beach during the sea turtle nesting season.

In a letter dated October 25, 2012, Marine Corps Base Camp Lejeune provided information detailing its commitments to conduct additional activities that will benefit loggerhead sea turtles on Onslow Beach and Brown's Island. The commitments listed above will continue and will be added to the base's next INRMP. In addition, the following activities will be conducted and added to the next INRMP:

(1) Control sea turtle nest predators by implementing trapping to ensure that the annual mammalian predator rate is 10 percent or lower; and

(2) Manage lighting by ensuring that all fixtures and bulbs conform to the guidelines in the technical report titled ''Understanding, Assessing, and Resolving Light Pollution Problems on Sea Turtle Nesting Beaches'' (Witherington and Martin 1996, pp. 20–27). Marine Corps Base Camp Lejeune will conduct a sea turtle lighting survey and submit a plan to retrofit any lights visible from the nesting beach. The plan will be reviewed and approved by USFWS prior to installation or replacement of lights.

Based on the above considerations we have determined that the identified lands are subject to the Marine Corps Base Camp Lejeune INRMP and that conservation efforts identified in the INRMP will provide a benefit to the loggerhead sea turtle. Therefore, lands within this installation are exempt from critical habitat designation. We are not including 12.4 km (7.7 mi) of habitat in this critical habitat designation because of this exemption.

Cape Canaveral Air Force Station, Brevard County, FL, 21.0 km (13.0 mi)

Cape Canaveral Air Force Station is part of the 45th Space Wing, a unit of Air Force Space Command, whose mission is to assure access to the high frontier and to support global operations. The 45th Space Wing currently operates a number of rockets and missiles, including the Delta IV and Atlas V, and provides support for the DOD, NASA, and commercial manned and unmanned space programs.

Cape Canaveral Air Force Station is situated on the Canaveral Peninsula along the Atlantic Coast in Brevard County, Florida, and occupies 6,394 ha (15,800 ac). The installation's beach consists of 21.0 km (13.0 mi) of island shoreline along the Atlantic Ocean. The island is separated from the mainland by the Atlantic Intracoastal Waterway, the Barge Channel, Banana River, Indian River Lagoon, Merritt Island, and Harrison Island. The boundaries of the installation are from the south boundary of Merritt Island NWR-Kennedy Space Center (Merritt Island NWR was established in 1963 as an overlay of NASA's John F. Kennedy Space Center) to Port Canaveral. Cape Canaveral Air Force Station is adjacent to a critical habitat unit (LOGG–T–FL–06) that has high-density nesting by loggerhead sea turtles in the Central Eastern Florida Region of the Peninsular Florida Recovery Unit.

Cape Canaveral Air Force Station is covered by the 45th Space Wing 2008 INRMP, a planning document that guides the management and conservation of natural resources under the Space Wing's control. The INRMP was prepared to manage natural resources in compliance with relevant statutes, executive orders, Presidential memoranda, regulations, and Air Force-specific requirements. The INRMP integrates the 45th Space Wing's natural resources management program with ongoing mission activities for sustainability while conserving and protecting natural resources. The 45th Space Wing is committed to a proactive, interdisciplinary management strategy focused on an ecosystem-based approach to natural resources management. This strategy includes the Air Force objective of sustaining and restoring natural resources to uphold operational capabilities while complying with Federal, State, and local standards that protect and conserve wildlife, habitat, and the surrounding watershed.

The 2008 INRMP includes the implementation of sea turtle nesting surveys, nest marking, predator control, and exterior lighting management to conserve loggerhead sea turtles and their habitat (45th Space Wing 2008, pp. 64–71 and Tab A). The INRMP identifies the need to develop and implement programs to protect and

conserve federally listed threatened and endangered plants and wildlife, including the loggerhead sea turtle. The INRMP identifies the following management and protective measures to achieve this goal:

(1) Monitor sea turtle nesting activities;

(2) Manage lighting (i.e., use of sea turtle friendly low pressure sodium and amber light-emitting diode (LED) shielded lighting in compliance with the Endangered Species Act for facilities that require illumination); and

(3) Control sea turtle nest predators.

In a letter dated October 10, 2012, the 45th Space Wing provided information detailing its commitments to conduct activities that benefit loggerheads on the beaches of Cape Canaveral Air Force Station and Patrick Air Force Base. These commitments will be added to their next INRMP and include:

(1) Monitor sea turtle nesting activities by participating in the Statewide Nesting Beach Survey and Index Nesting Beach Survey programs and conducting hatchling productivity assessments;

(2) Control sea turtle nest predators by implementing trapping at the first sign of tracks on the beach at Patrick Air Force Base; controlling raccoons, coyotes, and feral hogs within 0.8 km (0.5 mi) of the beach at Cape Canaveral Air Force Station; and installing predator-proof trash receptacles if needed; and

(3) Manage lighting by ensuring that all fixtures and bulbs follow the Space Wing Instruction (SWI) 32–7001 (internal instructions for exterior lighting management on both Patrick Air Force Base and Cape Canaveral Air Force Station), which has been reviewed and approved by USFWS, prior to installation or replacement. Any lights that do not follow the SWI 32–7001 require a USFWS-approved Light Management Plan.

Based on the above considerations we have determined that the identified lands are subject to the 45th Space Wing INRMP and that conservation efforts identified in the INRMP will provide a benefit to the loggerhead sea turtle. Therefore, lands within this installation are exempt from critical habitat designation. We are not including 21.0 km (13.0 mi) of habitat in this critical habitat designation because of this exemption.

Patrick Air Force Base, Brevard County, FL, 6.6 km (4.1 mi)

Patrick Air Force Base is also part of the 45th Space Wing (see discussion for Cape Canaveral above) and is presently the home of Headquarters, 45th Space Wing. Patrick Air Force Base is located on a barrier island on the central east coast of Florida in Brevard County and covers 810 ha (2,002 ac) of developed land and some coastal dune and estuarine habitat. The installation's beach consists of 6.6 km (4.1 mi) of island shoreline along the Atlantic Ocean. The island is separated from the mainland by the Atlantic Intracoastal Waterway, Indian River Lagoon, Banana River, and Merritt Island. The boundaries of the installation are from the south boundary of the city of Cocoa Beach (28.2720 N, 80.6055 W) to the north boundary of the town of Satellite Beach (28.2127 N, 80.5973 W). Patrick Air Force Base has high-density nesting by loggerhead sea turtles in the Central Eastern Florida Region of the Peninsular Florida Recovery Unit.

Like Cape Canaveral Air Force Station, Patrick Air Force Base is governed by the 45th Space Wing 2008 INRMP. As with Cape Canaveral Air Force Station, we have determined that the identified lands are subject to the 45th Space Wing INRMP and that conservation efforts identified in the INRMP will provide a benefit to the loggerhead sea turtle. Therefore, lands within this installation are exempt from critical habitat designation. We are not including 6.6 km (4.1 mi) of habitat in this critical habitat designation because of this exemption.

Eglin Air Force Base (Cape San Blas), Gulf County, FL, 4.8 km (3.0 mi)

Eglin Air Force Base is the largest forested military reservation in the U.S. and supports a multitude of military testing and training operations, as well as many diverse species and habitats. Eglin's missions include the 7th Special Forces Group (Airborne) beddown, Amphibious Ready Group/Marine Expeditionary Unit, Stand-off Precision Guided Missile, and Massive Ordnance Air Blast.

Eglin Air Force Base, also known as the Eglin Military Complex, is located in Santa Rosa, Okaloosa, Walton, and Gulf Counties in Northwest Florida and the Gulf of Mexico and occupies 261,428 ha (464,000 ac). The Eglin Military Complex includes the mainland Reservation located in Santa Rosa, Okaloosa, and Walton Counties, as well as a small parcel (389 ha (962 ac)) on Cape San Blas in Gulf County, Florida. Eglin's Cape San Blas parcel consists of 4.8 km (3.0 mi) of spit shoreline along the Gulf of Mexico. The spit is separated from the mainland by St. Joseph Bay. The boundaries of Eglin's Cape San Blas parcel are from 29.67680 N 85.36351 W to 29.67608 N 85.33394 W. Eglin's Cape San Blas parcel also contains U.S. Federal Reserve property, but the entire parcel is under Eglin's management. Eglin's Cape San Blas parcel has high-density nesting by loggerhead sea turtles in the Florida portion of the Northern Gulf of Mexico Recovery Unit.

The 2012 Eglin Air Force Base INRMP is a planning document that guides the management and conservation of natural resources under the installation's control. It provides interdisciplinary strategic guidance for the management of natural resources in support of the military mission within the land and water ranges of the Eglin Military Complex. The Eglin Air Force Base INRMP integrates and prioritizes wildlife, fire, and forest management activities to protect and effectively manage the Complex's aquatic and terrestrial environments, and ensure ''no net loss'' in the operational capability of these resources to support Eglin test and training missions.

The 2012 INRMP has a revised sea turtle chapter that includes the implementation of sea turtle nesting surveys, nest marking, predator control, and exterior lighting management to conserve loggerhead sea turtles and their habitat (Eglin Air Force Base 2012, pp. 8–7—8–16). The INRMP identifies the need to develop and implement programs to protect and conserve federally listed endangered and threatened plants and wildlife, including the loggerhead sea turtle. The INRMP identifies the following management and protective measures to achieve this goal:

(1) Monitor sea turtle nesting activities;

(2) Manage lighting (i.e., using sea turtle friendly, low-pressure sodium lighting at all test sites, turning off lights not necessary for safety, lowering lights, or properly shielding lights);

(3) Implement dune protection as needed; and

(4) Control sea turtle nest predators by implementing trapping either as soon as a nest is found to have been depredated or if deemed necessary by biologists.

Based on the above considerations, we have determined that the identified lands are subject to the Eglin Air Force Base INRMP and that conservation efforts identified in the INRMP will provide a benefit to the loggerhead sea turtle. Therefore, lands within this installation are exempt from critical habitat designation. We are not including 4.8 km (3.0 mi) of habitat in this critical habitat designation because of this exemption.

Exclusions

Application of Section 4(b)(2) of the Act

Section 4(b)(2) of the Act states that the Secretary shall designate and make revisions to critical habitat on the basis of the best available scientific data after taking into consideration the economic impact, national security impact, and any other relevant impact of specifying any particular area as critical habitat. The Secretary may exclude an area from critical habitat if she determines that the benefits of such exclusion outweigh the benefits of specifying such area as part of the critical habitat, unless she determines, based on the best scientific data available, that the failure to designate such area as critical habitat will result in the extinction of the species. In making that determination, the statute, as well as the legislative history, is clear that the Secretary has broad discretion regarding which factor(s) to use and how much weight to give to any factor.

In considering whether to exclude a particular area from the designation, we identify the benefits of including the area in the designation, identify the benefits of excluding the area from the designation, and evaluate whether the benefits of exclusion outweigh the benefits of inclusion. If the analysis indicates that the benefits of exclusion outweigh the benefits of inclusion, the Secretary may exercise her discretion to exclude the area only if such exclusion would not result in the extinction of the species.

When identifying the benefits of inclusion for an area, we consider the additional regulatory benefits that area would receive from the protection from adverse modification or destruction as a result of actions with a Federal nexus; the educational benefits of mapping essential habitat for recovery of the listed species; and any benefits that may result from a designation due to State or Federal laws that may apply to critical habitat. When identifying the benefits of exclusion, we consider, among other things, whether exclusion of a specific area is likely to result in conservation; the continuation, strengthening, or encouragement of partnerships; or implementation of a management plan that provides equal to or more conservation than a critical habitat designation would provide.

In the case of loggerhead sea turtle, the benefits of including an area in critical habitat include public awareness of its presence and the importance of habitat protection, and in cases where a Federal nexus exists, increased habitat protection for the loggerhead due to the protection from adverse modification or destruction of critical habitat.

When we evaluate the existence of a conservation plan when considering the benefits of exclusion, we consider a variety of factors, including but not limited to: Whether the plan is finalized; how it provides for the conservation of the essential PBFs; whether there is a reasonable expectation that the conservation management strategies and actions contained in a management plan will be implemented into the future; whether the conservation strategies in the plan are likely to be effective; and whether the plan contains a monitoring program or adaptive management to ensure that the conservation measures are effective and can be adapted in the future in response to new information.

After identifying the benefits of inclusion and the benefits of exclusion, we balance the benefits of each side to evaluate whether the benefits of exclusion outweigh those of inclusion. If our analysis indicates that the benefits of exclusion outweigh the benefits of inclusion, we then determine whether exclusion would result in extinction. If exclusion of an area from critical habitat will result in extinction, we will not exclude it from the designation.

Exclusions Based on Economic Impacts

Under section 4(b)(2) of the Act, we consider the economic impacts of specifying any particular area as critical habitat. In order to consider economic impacts, we prepared a DEA of the proposed critical habitat designation and related factors (Industrial Economics, Incorporated (IEc) 2013, entire). The draft analysis, dated July 17, 2013, was made available for public review from July 18, 2013, through September 16, 2013 (78 FR 42921). Following the close of the comment period, a final analysis (dated December 24, 2013) of the potential economic effects of the designation was developed taking into consideration the public comments and any new information (IEc 2013, entire).

The intent of FEA is to quantify the economic impacts of all potential conservation efforts for the loggerhead sea turtle; some of these costs will likely be incurred regardless of whether we designate critical habitat. The economic impact of the final critical habitat designation is analyzed by comparing scenarios both ''with critical habitat'' and ''without critical habitat.'' The ''without critical habitat'' scenario represents the baseline for the analysis, considering protections already in place for the species (e.g., under the Federal listing and other Federal, State, and local regulations). The baseline, therefore, represents the costs incurred regardless of whether critical habitat is designated. The ''with critical habitat'' scenario describes the incremental impacts associated specifically with the designation of critical habitat for the species. The incremental conservation efforts and associated impacts are those not expected to occur absent the designation of critical habitat for the species. In other words, the incremental costs are those attributable solely to the designation of critical habitat above and beyond the baseline costs; these are the costs we consider in the final designation of critical habitat. The analysis looks retrospectively at baseline impacts incurred since the species was listed, and forecasts both baseline and incremental impacts likely to occur with the designation of critical habitat.

The FEA also addresses how potential economic impacts are likely to be distributed, including an assessment of any local or regional impacts of habitat conservation and the potential effects of conservation activities on government agencies, private businesses, and individuals. The FEA measures lost economic efficiency associated with residential and commercial development and public projects and activities, such as economic impacts on water management and transportation projects, Federal lands, small entities, and the energy industry. Decision-makers can use this information to assess whether the effects of the designation might unduly burden a particular group or economic sector. Finally, the FEA looks retrospectively at costs that have been incurred since 2011 (year of the DPS' listing) (76 FR 58868), and considers those costs that may occur in the 10 years following the designation of critical habitat, which was determined to be the appropriate period for analysis because limited planning information was available for most activities to forecast activity levels for projects beyond a 10-year timeframe. The FEA quantifies economic impacts of loggerhead sea turtle conservation efforts associated with the following categories of activity:

(1) Species and Habitat Management;
(2) In-water and Coastal Construction;
(3) Sand Placement;
(4) Recreation;
(5) Lighting Management;
(6) Disaster Response;
(7) Oil and Gas Activities; and
(8) Offshore Renewable Energy.

Our economic analysis did not identify any disproportionate costs that are likely to result from the designation. Consequently, the Secretary is not

exercising her discretion to exclude any areas from this designation of critical habitat for the Northwest Atlantic Ocean DPS of the loggerhead sea turtle based on economic impacts.

A copy of the FEA with supporting documents may be obtained by contacting the North Florida Ecological Services Office (see **ADDRESSES**) or by downloading from the Internet at *http://www.regulations.gov.*

Exclusions Based on National Security Impacts

Under section 4(b)(2) of the Act, we consider lands where a national security impact may exist. As discussed above, we have exempted from the designation of critical habitat under section 4(a)(3) of the Act those DOD lands with completed INRMPs determined to provide a benefit to the loggerhead sea turtle but where a national security impact may exist. We have not identified any other lands owned or managed by the DOD within the lands designated for critical habitat designation. Consequently, the Secretary is not exercising her discretion to exclude any areas from this final designation based on impacts on national security.

Exclusions Based on Other Relevant Impacts

Based on the information provided by entities identified in the proposed rule for potential exclusion, as well as any additional public comments received, we considered whether certain lands covered in three HCPs in Florida were appropriate for exclusion from this final designation pursuant to section 4(b)(2) of the Act: (1) St. Johns County, numbered in the proposed rule as Units LOGG–T–FL–01, LOGG–T–FL–02, and LOGG–T–FL–03; (2) Volusia County, numbered in the proposed rule as Unit LOGG–T–FL–05; and (3) Indian River County, numbered in the proposed rule as Unit LOGG–T–FL–10. As a result of our consideration, we are excluding the following areas within those units covered by all three Counties' HCPs from critical habitat designation for the loggerhead sea turtle. Table 2 below provides approximate areas of lands that are being excluded on this basis.

TABLE 2—LANDS BEING EXCLUDED FROM CRITICAL HABITAT UNDER SECTION 4(B)(2) OF THE ACT BASED ON COVERAGE BY HCPS

[Note: The unit numbers in this table reflect the numbering used in the proposed rule. As noted in Table 1 and elsewhere in this rule, critical habitat unit numbers in Florida have been renumbered based on these exclusions.]

Unit	Specific area	Areas meeting the definition of critical habitat, in kilometers (miles)	Areas excluded from critical habitat, in kilometers (miles)
LOGG–T–FL–01	South Duval County Beaches—Old Ponte Vedra, Duval and St. Johns Counties.	25.2 (15.6)	13.7 (8.5)
LOGG–T–FL–02	Guana Tolomato Matanzas National Estuarine Research Reserve—St. Augustine Inlet, St. Johns County.	24.1 (15.0)	24.1 (15.0)
LOGG–T–FL–03	St. Augustine Inlet—Matanzas Inlet, St. Johns County	22.4 (14.0)	21.0 (13.1)
LOGG–T–FL–05	Ormond-by-the-Sea—Granada Blvd, Volusia County	11.1 (6.9)	11.1 (6.9)
LOGG–T–FL–10	Sebastian Inlet—Indian River Shores, Indian River County	21.4 (13.3)	17.3 (10.8)
Total		104.2 (64.8)	87.2 (54.3)

Land and Resource Management Plans, Conservation Plans, or Agreements Based on Conservation Partnerships

We consider a current land management or conservation plan (HCP as well as other types) to provide adequate management or protection if it meets the following criteria:

(1) The plan is complete and provides a conservation benefit for the species and its habitat;

(2) There is a reasonable expectation that the conservation management strategies and actions will be implemented for the foreseeable future, based on past practices, written guidance, or regulations; and

(3) The plan provides conservation strategies and measures consistent with currently accepted principles of conservation biology.

St. Johns County HCP

We believe that the HCP in St. Johns County, Florida, titled ''A Plan for the Protection of Sea Turtles and Anastasia Island Beach Mice on the Beaches of St. Johns County, Florida,'' fulfills the above criteria, and we therefore conducted a discretionary exclusion analysis for the HCP.

The HCP in St. Johns County, Florida, covers approximately 66.1 k (41.1 mi) of beaches along the 67.6 k (42.0-mi) coastline in the County. This includes the beaches in Guana River State Park, Anastasia State Park, and the beaches within the municipalities of St. Augustine, St. Augustine Beach, and Marineland. Even though the County does not exercise regulatory authority in the State parks or the municipalities, these beaches are included, because the County performs beach services and operates safety and/or emergency vehicles in these areas. St. Johns County has regulatory authority over 46.0 k (28.6 mi) of beachfront. Therefore, the HCP includes all beaches along St. Johns County between the Duval County Line on the north and the Flagler County Line on the south, except for those beaches fronting Fort Matanzas National Monument. The eastern or waterward limit of the Plan Area is the Mean Low Water (MLW) line of the Atlantic Ocean, and the western or landward boundary follows the Coastal Construction Control Line.

The HCP covers activities associated with public vehicular beach access and driving issued under the County's authorization and potential incidental take of, among other listed species, five species of sea turtles (loggerhead, leatherback, green, Kemp's ridley, and hawksbill) for a 20-year period. The over-arching biological goal of the HCP is to provide a net benefit to sea turtles throughout the life of the incidental take permit (ITP). The proposed critical habitat units within the HCP coverage area included the portions of LOGG–T–FL–01—South Duval County Beaches-Old Ponte Vedra located in St. Johns County, all of LOGG–T–FL–02—Guana Tolomato Matanzas National Estuarine Research Reserve (GTMNERR)-St. Augustine Inlet, and portions of LOGG–T–FL–03—St. Augustine Inlet-Matanzas

Inlet (Table 3). The three Units total 58 km (35.2 mi).

The measures in the HCP are intended to minimize and mitigate impacts to nesting and hatchling loggerhead sea turtles as a result of the County-authorized beach driving. The HCP measures to minimize the potential for impacts to sea turtles causally related to vehicular access to the beach allowed under the County's authorization include:

(1) Reducing public vehicular beach access hours during the sea turtle nesting season.

(2) Installing and maintaining traffic barricades at beach ramps and other points to regulate vehicular access.

(3) Monitoring and conspicuous marking of all sea turtle nests in the Plan Area.

(4) Developing a standard protocol to remove vehicle ruts seaward of sea turtle nests during periods when hatchlings are expected to emerge.

(5) Increased and dedicated enforcement of beach driving policies and procedures.

(6) Developing and implementing a public awareness program.

(7) Elevating trash receptacles on posts along public driving areas.

(8) Developing and instituting a training program that must be attended by drivers wishing to obtain a four-wheel drive permit for driving north of Vilano Ramp.

(9) Reducing public beach driving along Summer Haven.

In addition to the minimization measures described above, the County will mitigate unavoidable take that might occur as the result of County-authorized beach driving through the following: A proactive Beach Lighting Management Program to align the City of St. Augustine Beach's lighting regulations and the County's lighting regulations; developing and instituting a beach horseback riding registration and education program; restricting Porpoise Point vehicular access to allow re-establishment of natural dune features at certain locations; establishing a single, marked driving lane; restoring the primary dune along certain locations; implementing a uniform and consistent sea turtle monitoring program; and providing funding for the HCP.

The ITP was issued by the USFWS in 2006; annual reports have been received for all the years since the ITP was issued. The reports summarize the programs, policies and procedures implemented by St. Johns County during each year in support of the ITP and HCP. It assesses the effectiveness of these measures, identifies program deficiencies and describes steps that will be taken by the County to further improve HCP/ITP performance. Each action is provided a summary of implementation and an assessment with corresponding solutions provided. Through the annual reports, St. Johns County has shown how successfully they are implementing the HCP and ITP and continuing to improve the programs as the need or opportunities arise. The implementation of the HCP has reached its sixth year and the County has been working diligently to reach compliance by increasing its enforcement capabilities and HCP support staff, improving its levels of communication with sea turtle survey permit holders and FWC staff involved in implementation of the Florida Fish and Wildlife sea turtle conservation guidelines. The County is able to spend more time evaluating areas of the HCP that are in need of special attention. The County has shown a clear commitment to implement the HCP and ITP.

Benefits of Inclusion—St. Johns County HCP

As described above, the St. Johns County HCP has very narrow focused incidental take coverage and resultant conservation. Because of the narrow focus of the HCP coverage, projects that have a Federal nexus outside of the purview of the HCP activities would require section 7 consultation. Projects could include shoreline protection efforts, such as beach nourishment, armoring, disaster response, habitat restoration, and recovery grants to the State that are federally conducted, funded, or permitted. However, as indicated above, the USFWS does not anticipate additional requirements beyond those required for the species being listed. The incremental benefit to the species from the resultant section 7 consultation required by projects other than the subject HCP along the beachfront would be reduced but not eliminated. The inclusion of these areas as critical habitat could therefore provide some additional Federal regulatory benefits not found in the St. Johns County HCP. Another potential benefit of including lands in a critical habitat designation is that it serves to educate landowners, State and local governments, and the public regarding the potential conservation value of an area. A significant part of the HCP is to promote education of the beachfront landowners and users about sea turtles and other coastal species. There is a plethora of education material produced and distributed in this regard for the HCP. Through their public awareness program the County seeks to create an active community of stewards of the environment and protected species. This goal is achieved by providing education materials, developing science-based school-age field trips, and attending periodic public events. Through this program, County staff is able to educate the community on beach driving policies, the traditional recreational uses on County beaches, and how they may impact sea turtles and other coastal species and their habitats. The public is reached through various media outlets including, local newspapers, news channels, Government television stations, radio, public service announcements, and the County Web site (St. Johns County 2010, pp. 33–34). Thus, the benefits of inclusion in critical habitat are further reduced based on the prior and ongoing educational efforts associated with the HCP.

Benefits of Exclusion—St. Johns County HCP

The benefits of excluding the St. Johns HCP from critical habitat could include fostering more partnerships between the Service and the County and the County with the municipalities within its jurisdiction, sea turtle nest monitoring group, and the State of Florida. For example, the County works closely with local volunteers in their Sea Turtle Washback Program to assist with sea turtle conservation efforts while fostering their interest in sea turtles. The County has worked closely forming partnerships with the municipalities that are covered under the HCP although the County has no regulatory authority. In the 2012 annual report (St. Johns County 2013, p. 53), summarizes the implementation of the HCP's light management to benefit loggerhead nesting habitat: ''In September 2006 the Beach Lighting Management Plan (BLMP), County Ordinance 99–33 was submitted and approved through the USFWS. In May 2007, the City of St. Augustine Beach officially adopted County Ordinance 99–33 allowing the Beach Lighting Officer to begin an education effort within the City limits and conduct surveys of the locale. Prior to the start of the 2007 nesting season a part time seasonal Beach Lighting Officer was employed to implement and enforce the BLMP in the City during the sea turtle season. The beaches of St. Johns County were surveyed seven nights a week throughout the entire nesting season of 2012.''

According to the St. Johns County HCP, the beach lighting management plan is to be continually and consistently implemented. The

activities, under which the plan is conducted, directly benefit loggerhead terrestrial habitat by maintaining suitable nesting beach habitat with sufficient darkness to ensure nesting turtles are not deterred from emerging onto the beach and hatchlings and post-nesting females orient to the sea and provide benefits over and above the narrow scope of the HCP.

Other partnerships formed by St. Johns County have included the sea turtle survey permit holders and the FWC that manages the survey program. St. Johns County sea turtle patrol is coordinated by eight different permit holders and based solely on volunteer efforts with the exception of park rangers from Anastasia State Park and GTMNERR. Beaches are patrolled seven days a week from May 1st until approximately mid-September. The Standardized Sea Turtle Monitoring Protocol is used. Because of the number of reporting surveyors to the County and the amount of data, communication has been key to collecting good quality data and resolving issues related to the HCP implementation, allowing the County to make critical beach management decisions and analyze the effectiveness of the protection measures. Their goal is to work in a positive manner and as a team with the permit holders and their volunteers in order to move forward with the protection of the listed species. Fostering good working partnerships has also resulted in better data collection on sea turtle nesting activities and effects of beach driving and other activities authorized by the County.

Additionally, the designation of critical habitat could have an unintended negative effect on the Service's relationship with non-Federal landowners within and outside of the area covered by the HCP due to the perceived imposition of redundant government regulation. If lands within the area cover by the HCP for the benefit of the DPS are designated as critical habitat, it could have a dampening effect on our continued ability to seek new partnerships with future participants including States, counties, local jurisdictions, conservation organizations, and private landowners, which together can implement various conservation actions (such as safe harbor agreements (SHAs), HCPs, and other conservation plans, particularly large, regional conservation plans that involve numerous participants or address landscape-level conservation of species and habitats) that we would be unable to accomplish otherwise.

The 2010 annual report (St. Johns County 2010, p. v) effectively summarizes the County's HCP and its implementation: ''The HCP is meant to create compatibility between protected species and beach user groups. For the program to work in its entirety, support and understanding from these user groups pertaining to all aspects of the HCP and ITP must be obtained. In addition, the management of County beaches is extremely challenging due to the number and types of activities governed by the HCP. The County must not only coordinate programs within and among numerous County departments, it is also responsible for training and coordinating the activities of outside contractors, commercial fishermen, north beach permittees, horseback riders and groups involved in protected species monitoring. Due to the complexity of the HCP, the diversity of program participants, the scope of activities and the limited staff, it is expected that difficult issues sometimes occur.'' Although the HCP is complex and the County acknowledges challenges may arise, the Service finds that the County has effectively implemented the HCP and will continue to do so in the future.

Benefits of Exclusion Outweigh Benefits of Inclusion—St. Johns County HCP

The Secretary has determined that the benefits of excluding the St. Johns County HCP from the designation of critical habitat for the species outweigh the benefits of including this area in critical habitat. Any Federal nexus on these lands would likely result from actions not covered by the HCP. St. Johns County has shown in the 6 years of implementing the HCP that they are committed to the HCP: Improving the process, fostering partnerships with involved parties, securing high quality data and scientific information to better inform decisions, and seeking compatibility with the beach user groups and conservation of nesting sea turtles and other coastal species. The HCP covers only non-Federal lands. Thus, there would still be need for section 7 consultation on projects outside of the purview of the HCP activities that have a Federal nexus as a result of Federal actions, authorizations, or funding. The benefits of inclusion in critical habitat at these sites would be minimized since they are occupied by the species and section 7 consultation would still be invoked to consider the project effects on the species.

Exclusion of these lands from critical habitat would help foster the partnership we have developed with St. Johns County through the development and continuing implementation of the HCP. Exclusion of these lands will also help the County as they continue their partnerships with the local municipalities, sea turtle monitoring groups and the State of Florida. Recognizing the important contributions of our conservation partners through exclusion from critical habitat helps to preserve these partnerships, and helps foster future partnerships for the benefit of listed species, the majority of which do not occur on Federal lands; we consider this to be a substantial benefit of exclusion. For these reasons, we have determined that the benefits of exclusion outweigh the benefits of inclusion in this case.

Exclusion Will Not Result in the Extinction of the Species—St. Johns County HCP

Because the HCP has a successful and committed record of implementation, the coverage area of the HCP includes the loggerhead sea turtle and its habitat, and the HCP specifically addresses the loggerhead sea turtle's habitat and meets the conservation needs of the species within the plan area, the Secretary has determined that exclusion of this area will not result in the extinction of the species. The shoreline covered under the St. Johns County HCP that are within the proposed critical habitat units LOGG–T–FL–01—South Duval County Beaches-Old Ponte Vedra, LOGG–T–FL–02—Guana Tolomato Matanzas National Estuarine Research Reserve-St. Augustine Inlet, and LOGG–T–FL–03—St. Augustine Inlet-Matanzas Inlet compose 58.8 km (36.6 mi) of shoreline. This accounts for 5 percent of the total critical habitat shoreline proposed for the species. Proposed Unit LOGG–T–FL–02 is a high density nesting beach and proposed Units LOGG–T–FL–01 and LOGG–T–FL–03 were units selected because they were adjacent to a high density nesting beach. The conservation under the HCP would continue for these beaches and, for activities not covered by the HCP, these beaches are occupied and therefore section 7 consultation would still be invoked to consider the project effects on the species. Based on the above discussion, the Secretary is exercising her discretion under section 4(b)(2) of the Act to exclude from this final critical habitat designation portions of LOGG–T–FL–01 and LOGG–T–FL–03 and the entire LOGG–T–FL–02 critical habitat units totaling 58.8 km (36.6 mi).

Volusia County HCP

We believe the HCP in Volusia County, Florida; titled ''A Plan for the Protection of Sea Turtles on the Beaches of Volusia County, Florida,'' fulfills the above criteria, and we therefore

conducted a discretionary exclusion analysis for the HCP. For the purposes of this HCP, Volusia County's coastline is divided into two areas. The Plan Area, the area for which incidental take has been requested under the HCP/ITP, extends from the Volusia County/Flagler County Line on the north to the Volusia County/Brevard County line on the south. The Plan Area encompasses the entire 80.5 km (50.0 mi) of Atlantic Ocean beaches in the County, including those in the North Peninsula State Recreation Area and the Canaveral National Seashore, as well as the beaches on the north and south shores of Ponce Inlet from the jetties west to the intersection of the Inlet and Halifax River. Even though the County does not exercise regulatory authority in the State and Federal parks, they are included because County public safety or emergency vehicles may have to enter those areas under emergency conditions. The second area, a subset of the first and hereafter referred to as County Beaches, includes about 58.0 km (36.0 mi) of beaches over which Volusia County exercises sole beach management and regulatory authority. Both areas are bounded on the east by the MLW line and on the west by the bulkhead line or line of permanent vegetation.

The HCP covers activities associated with the County's authorization of vehicles on the County Beaches by the public, as well as other associated activities by the County, including emergency operations, special events, scientific studies, and routine coastal construction projects. The primary goal of the HCP is to develop a comprehensive plan that will minimize the potential for harm to listed species covered under the ITP within the defined Plan Area while allowing for continued vehicular access to the County Beaches. The present HCP took into account the previous HCP/ITP (1995 to 2001), updated programs, policies, procedures, and management initiatives needed to continue to protect sea turtles, as well as piping plovers, into the future. Changes were made to eliminate measures that had little or no conservation benefit, reflect past HCP performance, and recognize past efforts undertaken by the County in fulfillment of its obligations under the ITP.

The proposed critical habitat rule (78 FR 18000) described the units within the HCP Plan Area to include LOGG–T–FL–04—River to Sea Preserve at Marineland-North Peninsula State Park and LOGG–T–FL–05—Ormond-by-the-Sea-Granada Blvd. However, in our July 18, 2013, notice of availability of the DEA and associated re-opening of the comment period (78 FR 42921), we announced that we were no longer considering proposed Unit LOGG–T–FL–04 for exclusion. The reason for this change, as described in the notice, was because the HCP covers only incidental take associated with County emergency vehicles accessing the North Peninsula State Park beaches and does not contain any specific conservation measures for the covered species, including the loggerhead sea turtle, within the park.

Conservation of covered species and their habitat in the HCP will be achieved through good faith implementation of the minimization and mitigation measures along with active enforcement of those measures (EAI Inc. 2008, p. 6). The measures apply to non-Federal lands including private and County Beaches. The measures to minimize the potential for impacts to sea turtles causally related to vehicular access to the beach allowed under the County's authorization include:

- A plan that will encourage the development of off-beach parking alternatives and other facilities in those areas where vehicular access is prohibited so that public access is guaranteed.
- Establishment of programs to generate the requisite data needed to assess the effectiveness of the HCP in meeting its biological goal.
- Continuing to assign a staff person as the HCP Coordinator to administer the ITP and support a Protected Species Specialist to monitor and manage protected species on County Beaches.
- A scientifically based sea turtle monitoring program. The sea turtle program will be monitored to ensure that data collected in support of the HCP are consistent, reliable, and permit an accurate assessment of the effectiveness of protective measures implemented under the ITP.
- A public education program to include: Posting signage on the beach indicating driving restrictions and areas, and wildlife conservation, distributing brochures on driving and parking regulations, and sea turtles, developing and providing daily announcements, maintaining County Web site and public park kiosks about coastal wildlife.
- Maintaining a Committee in the County to facilitate inter-departmental communication and coordination among the various County divisions, departments, and offices that have responsibilities under the HCP.
- An ancillary protective measure of rut removal to eliminate ruts that may impede or trap hatchlings crawling from the nest to the sea will be instituted.
- Systematic surveys for washback sea turtle hatchlings conducted by Beach Safety.

In addition to the minimization measures described above, Volusia County is mitigating unavoidable take by:

- Minimizing take and allowing for potential growth in the nesting population of sea turtles by seeking methods to separate sea turtles and vehicular traffic;
- Conducting a professionally managed sea turtle monitoring and nest protection program;
- Regulating activities potentially impacting sea turtles;
- Having an active enforcement program;
- Creating and providing an HCP/ITP training program and manual; and
- Funding a sea turtle rehabilitation and public education center, Marine Science Center in the Town of Ponce Inlet, centrally located to County Beaches.

Volusia County had or has implemented the following voluntary measures for the benefit of covered species as well as other protected species inhabiting County Beaches. Under its original ITP, Volusia County developed a Beach Lighting Management Plan (BLMP). The document characterized upland development, beachfront lighting, sea turtle nesting patterns, and disorientation trends. It identified the strategies, tools, policies, procedures, and resources needed to effectively manage artificial lighting along County Beaches. The County completed implementation of its BLMP. Although lighting problems persist, particularly in the highly urbanized areas of Daytona Beach and Daytona Beach Shores, the County believes the program currently in place is steadily improving the quality of sea turtle nesting habitat on County Beaches. The County has committed to continuation of its light management efforts on a policy, but not legal, basis by adequately staffing and funding this program into the future. This policy is independent of HCP and ITP requirements and represents a voluntary program.

In addition to the systematic surveys for washback sea turtle hatchlings conducted by Beach Safety as a requirement of the ITP, the County has voluntarily developed and initiated a new proactive program, Washback Watchers, to help locate and remove even more washback hatchlings from County Beaches.

The ITP was issued by the USFWS in 2005. Annual reports are available for the years 2006 through 2013 since the

present ITP has been issued. The Annual Reports provide documentation of the County's implementation of measures prescribed by the ITP. During the first ITP issued to Volusia County from 1996 to 2001 the HCP was diligently implemented. The success of the County's HCP in minimizing take resulted primarily from programs that spatially and temporally limited the potential for sea turtle-vehicle interactions. Public vehicles were prohibited from accessing the beach at night when the vast majority of sea turtle nesting and hatching occurs. Additionally, public no-driving zones, including the establishment of marked conservation areas in public driving areas, limit vehicle interactions with nests. Only about 5 percent of the nests deposited each year on County Beaches remain outside of these protected areas and these nests are conspicuously barricaded so vehicles can avoid them. During 2012, 77 percent of the total sea turtle nests deposited on Volusia County beaches occurred in Natural Beach Management Areas (BMAs) where public driving is prohibited. These nesting numbers and distribution are consistent with results from the previous 16 years that the original and current HCP had been in effect (1997 to 2013) and demonstrates the overall effectiveness of the Natural BMAs in protecting nests from vehicular traffic.

The County has maintained adequate staff positions and County committees as required or provided for in the HCP. Enforcement of the HCP beach driving and other policies has remained in effect; while changes in enforcement personnel may change, the overall patrol and coverage of the beach is sustained. Volusia County Beach Safety issues warnings, parking tickets, and traffic citations for HCP-related enforcement actions, disobeying traffic devices, driving outside designated traffic lanes, or for towed vehicles left on the beach after closing hours. Review of the issued warnings, tickets, and citations between 2006 and 2011 indicates that while the numbers continue to range between 600 and 900 violations a year, the County has proceeded to address the areas where violations occur. For example, driving outside the driving lanes was a common violation and this became an issue for habitat conservation as well as human fatalities. Driving lanes are now clearly delineated on the beach and warnings, tickets, citations issued for this violation has decreased.

The County's beach public awareness program developed pursuant to the HCP uses a variety of methods to reach beach drivers, the general public, and media including distribution of brochures at the beach access ramps (vehicle and pedestrian accesses), maintenance of a County Web site, participation in school and civic events, and signage on the beach and at County park kiosks. The County also has participated in television shows, written newspaper and magazine articles, and designed a public service announcement. The County also provides informational materials to beach hotels, motels, condominiums, and commercial vendors.

Volusia County included light management within its original HCP as a mitigation measure for impacts to nesting and hatchling sea turtles from beach driving. In the present HCP Volusia County removed light management as a mitigation measure and replaced it with the establishment of a sea turtle rehabilitation facility. The present HCP included the County's commitment to maintaining its current Light Management Plan as part of its voluntary Conservation Measures. Light management on sea turtle nesting beaches provides significant conservation for nesting sea turtles and hatchlings, especially on urban beaches found in Volusia County.

Until recently, the USFWS had been supportive of Volusia County's lighting ordinances. In May 2011, however, the USFWS became aware of a proposed revision to the 2008 lighting ordinance that would reduce protection to sea turtles by allowing lights of certain wavelengths that are disruptive to nesting and hatchling sea turtles to be visible from the beach if used for lighted signage and decorative lighting. On May 18, 2011, the USFWS sent a letter to the Volusia County Commission explaining the significant risk of adverse effects to sea turtles from such proposed lighting changes, as well as the liability to the County and others for any such effects as described under section 9 of the Act. Although the USFWS and FWC expressed similar concerns, Volusia County adopted the revised lighting ordinance with the above less restrictive provisions.

At present, there are amusement rides adjacent to habitat that supports the nesting loggerhead turtles. The exterior lighting on these rides are permissible under the revised County's ordinance. However, the exterior lighting of these rides has negatively affected sea turtle nesting and hatchling sea-finding orientation. There have been two loggerhead nest disorientations attributed to the exterior lights on this amusement ride (Trindell 2013, pers. comm.). Beachfront lighting not only affects the nesting beaches directly seaward, but also adjacent beaches and, depending on the light type and location, may have effects on beaches miles away. Especially in areas where activities are clustered, the cumulative effect of the lighting contributes to sky glow, resulting in widespread effects of the lighting. While we acknowledge that light management is an on-going issue, it is outside the scope of the HCP. We will continue to work with Volusia County and the municipalities to find solutions to lighting issues.

Benefits of Inclusion—Volusia County HCP

As described above, the Volusia County HCP has a very narrow focused incidental take coverage. While the range of incidental take granted is narrow, benefits from minimization and mitigative measures include sea turtle nest monitoring, education, and wildlife rehabilitation. There would still be need for section 7 consultation on projects outside of the purview of the HCP activities that have a Federal nexus. Such projects could include beach nourishment, disaster response, dune restoration, and recovery grants to the State. However, as indicated above, the USFWS does not anticipate additional requirements in designated critical habitat beyond those required for the DPS. The incremental benefit to the DPS from the resultant section 7 consultations would be reduced but not eliminated. The inclusion of these areas as critical habitat could therefore provide some additional Federal regulatory benefits not found in the Volusia County HCP. For example, the loss of the BLMP as a mitigation measure reduces the beneficial effects of the HCP for the DPS. While the Marine Science Center provides educational benefits and turtle rehabilitation, the overall direct benefits to the species in Volusia County are less than what would be realized from a fully committed lighting management program.

Another potential benefit of including lands in a critical habitat designation is that it serves to educate landowners, State and local governments, and the public regarding the potential conservation value of an area. On the other hand, a significant part of the Volusia County HCP is to promote education of the beach users and general public about sea turtles and other coastal species, so some of the educational benefits of inclusion would be reduced.

Benefits of Exclusion—Volusia County HCP

The benefits of excluding the Volusia County HCP from critical habitat could include the improvement of the existing relationship between the County and the USFWS, which, as outlined above, has already led to many conservation benefits for the species. Exclusion would likewise improve the potential for the County to help foster partnerships among the municipalities within the County, which could lead to a better light management program. Appropriate beachfront lighting benefits the species by maintaining suitable nesting beach habitat with sufficient darkness to ensure nesting turtles are not deterred from emerging onto the beach and hatchlings and post-nesting females orient to the sea. A primary constituent element of the species' critical habitat is ''Suitable nesting beach habitat with sufficient darkness to ensure nesting turtles are not deterred from emerging onto the beach and hatchlings and post-nesting females orient to the sea.'' The positive effects of effective lighting management, compliance, and enforcement provide direct, on the ground, measurable benefits to nesting and hatchling turtles. While education and rehabilitation of injured turtles and washbacks may provide benefits as well, the actual on the ground results are much less than those provided by lighting management.

Additionally, the designation of critical habitat could have an unintended negative effect on the Service's relationship with non-Federal landowners within and outside of the area covered by the HCP due to the perceived imposition of redundant government regulation. If lands within the area cover by the HCP for the benefit of the DPS are designated as critical habitat, it could have a dampening effect on our continued ability to seek new partnerships with future participants including States, counties, local jurisdictions, conservation organizations, and private landowners, which together can implement various conservation actions (such as safe harbor agreements (SHAs), HCPs, and other conservation plans, particularly large, regional conservation plans that involve numerous participants or address landscape-level conservation of species and habitats) that we would be unable to accomplish otherwise.

Benefits of Exclusion Outweigh Benefits of Inclusion—Volusia County HCP

The Secretary has determined that the benefits of excluding the Volusia County HCP from the designation of critical habitat for the DPS outweigh the benefits of including this area in critical habitat. Volusia County has shown in the 16 years of implementing the HCP that it is committed to the HCP: Improving the process, securing high quality data and scientific information to better inform decisions, and seeking compatibility with the beach user groups and conservation of nesting sea turtles and other coastal species. The HCP covers only non-Federal lands. Thus, there would still be need for section 7 consultation on projects outside of the purview of the HCP activities that have a Federal nexus as a result of Federal actions, authorizations, or funding. The benefits of inclusion in critical habitat at these sites would be minimized since the areas are occupied by the species and section 7 consultation would still be required for projects with a Federal nexus to consider the project's effects on the species (i.e., regardless of whether or not CH is designated).

This HCP was intended to cover incidental take of sea turtles related to driving by the public and County as authorized or permitted by Volusia County. Overall, the measures provided for in the HCP address the intended purpose of the HCP.

Exclusion of these lands from critical habitat would help foster the partnership we have developed with Volusia County through the development and continued implementation of the HCP. Exclusion of these lands will also help us support the County as they continue their partnership with the local municipalities, sea turtle monitoring groups, and the State of Florida. Recognizing the important contributions of our conservation partners through exclusion from critical habitat helps to preserve these partnerships, and helps foster future partnerships for the benefit of listed species, the majority of which do not occur on Federal lands; we consider this to be a substantial benefit of exclusion. For these reasons, we have determined, after careful balancing, that the benefits of exclusion of lands covered by the Volusia County HCP from critical habitat for the DPS outweigh the benefits of inclusion.

Exclusion Will Not Result in the Extinction of the Species—Volusia County HCP

Because the HCP has a successful record of implementation, the coverage area of the HCP includes the loggerhead sea turtle and its habitat, and the HCP specifically addresses the loggerhead sea turtle's habitat and meets the conservation needs of the species within the plan area, the Secretary has determined that exclusion of this area will not result in the extinction of the species. The shoreline covered under the Volusia County HCP that is within the proposed critical habitat Unit LOGG–T–FL–05—Ormond-by-the-Sea-Granada Blvd. composes 11.1 km (6.9 mi) of shoreline. This accounts for less than 1 percent of the total critical habitat shoreline proposed for the species. Proposed Unit LOGG–T–FL–05 is a high density nesting beach. The conservation under the HCP would continue for these beaches and, for activities not covered by the HCP, these beaches are occupied and therefore section 7 consultation would still be invoked to consider the project effects on the species. Based on the above discussion, the Secretary is exercising her discretion under section 4(b)(2) of the Act to exclude from this final critical habitat designation Unit LOGG–T–FL–05 in its entirely, totaling 11.1 km (6.9 mi).

Indian River County HCP

We believe the HCP in Indian River County, Florida, titled ''Habitat Conservation Plan for the Protection of Sea Turtles on the Eroding Beaches of Indian River County, Florida,'' fulfills the above criteria, and we therefore conducted a discretionary exclusion analysis for the HCP. The Plan Area covers approximately 35.4 km (22.0 mi) of coastline that is continuous beachfront property uninterrupted by any inlets or ocean passes. The HCP is bounded on the north by the Sebastian Inlet, the centerline of which separates Indian River County from Brevard County. On the south, the Plan Area is defined as the Indian River/St. Lucie County Line. The seaward and landward limits of the HCP Area are the MLW line of the Atlantic Ocean and Highway A1A, respectively. Within the Plan Area is the Archie Carr National Wildlife Refuge (ACNWR) designation, overlaying about 9.7 km (6.0 mi) of beachfront from Sebastian Inlet south. Also, within the Plan Area is the Sebastian Inlet State Park (3.4 km (2.1 mi)) managed by the State of Florida, FDEP, Division of Recreation and Parks, 1.6 km (1.0 mi) of the ACNWR managed by the USFWS, and approximately 1.6 km (1.0 mi) managed by the County, the remaining being private landowners. There are three municipalities that front the beach in Indian River County: The Town of Orchid, the Town of Indian River Shores, and the City of Vero Beach. Collectively, they comprise approximately 15.6 km (9.7 mi; 43 percent) of the County's coastline. Vero Beach is the largest municipality within

Indian River County with 6.8 km (4.2 mi) of shoreline. The ITP does not include the beaches of USFWS-managed ACNWR or the State-managed Sebastian Inlet State Park; however, these areas fall within the HCP Plan Area because the County can carry out mitigation measures in these areas.

The HCP covers activities associated with the County's Emergency Armoring Authorization Actions and potential take of five species of sea turtles (loggerhead, leatherback, green, Kemp's ridley, and hawksbill) for a 30-year period. It does not cover general development activities conducted outside of emergency protection actions during a designated disaster situation. The biological goal of the HCP is to increase the productivity of sea turtle nesting within the County's beaches included in the HCP. The proposed critical habitat unit within the coverage area of the HCP includes LOGG–T–FL–10—Sebastian Inlet-Indian River Shores that includes 17.3 km (10.8 mi) of the total Plan Area of 35.4 km (22 mi) and was selected as a beach adjacent to a high density nesting beach. The measures in the HCP are intended to minimize and mitigate impacts to nesting and hatchling loggerhead sea turtles as a result of the County-authorized emergency beach armoring.

The HCP minimization measures related to incidental take of sea turtles from shoreline protection activities initiated under the County's emergency authorization include:

- Implementation of a public awareness program advocating a proactive approach to shoreline protection;
- Establishment of specific conditions under which Emergency Permits will be issued;
- Regulation of the type and siting of temporary structures;
- Requirements for sea turtle monitoring and nest protection during implementation of emergency shoreline protection measures and/or construction of permanent structures resulting from temporary measures; and
- Implementation of a Memorandum of Agreement with FDEP to coordinate permitting activities and ensure compliance with State regulations regarding emergency shoreline protection activities.

In addition to the minimization measures described above, the County is mitigating unavoidable take through the previous acquisition of coastal property and a predator control program on non-Federal lands that has and will continue to provide quantifiable benefits to sea turtles in excess of the amount of take likely to occur as the result of shoreline protection measures initiated under the County's emergency authorization. The County has also committed to a sea turtle monitoring program that has and will continue to help collect the data needed to better quantify current natural and human-related impacts to sea turtles on the County's beaches. The County coordinates the activities of the various groups monitoring sea turtle nesting activity in the County; standardizes data collection techniques, provides limited logistical support, and maintains a County-wide sea turtle database. The County is responsible for conducting sea turtle monitoring along approximately 8.0 km (5.0 mi) of coastline where no current monitoring program is in place. The County may also assume responsibilities of other entities currently monitoring County Beaches if it is deemed mutually beneficial to do so. This information will be used to better direct the County's limited resources toward those programs that are likely to have the greatest conservation value. Finally, the County will work to improve its light management program in unincorporated areas of the County to reduce the harmful effects of artificial light on sea turtles. The light management is only effective in the unincorporated areas of the County and is not enforceable within the local municipalities of the City of Vero Beach, and the towns of Orchid Beach and Indian River Shores. The overarching biological goal of the HCP is to increase the productivity of the County's beaches as sea turtle nesting habitat.

Compliance with the ITP, issued by the Service in 2004 based on completion of the HCP, has generally been good, but some issues have been experienced in recent years. In general, Indian River County has worked diligently and supported the HCP. However, after the first few years, the budget for the program declined (Indian River County 2010, pp. 36–39). This has been largely due to the severe economic recession that began in 2008 and resulted in substantial budget cuts. The County made substantial gains through 2008 with the nest monitoring program, predator control and education program, but continues to fall short in other areas due to the lack of support staff. The HCP Coordinator position was filled at the start of the ITP and continues to be filled. However, the supervisor position (Coastal Resource Manager), who helped develop and guide the implementation of this HCP, was vacated in early 2010 and the County has no immediate plans to re-fill the position. Furthermore, while annual reports are available for the years 2005, 2006, 2008, 2009, and 2010, no reports have been received for the years covering 2011 through 2013 due to understaffing of the County HCP program.

Under the provisions of the light management program, the County is required to enforce the lighting ordinance within unincorporated areas. The County's Light Management Program has experienced some difficulties largely due to lack of personnel. While lighting violations and disorientations are adequately reported, code enforcement action has been less effective. The number of environmental planning staff in the County that address lighting problems has been reduced. Even minor aspects of the HCP are affected by reduced budgets, support, and personnel. Required lighting notices to beachfront residences have been mailed late. Although the annual reports on the HCP have not been submitted in recent years, the sea turtle nesting report is provided in a timely manner and the County keeps the USFWS apprised of significant events throughout the nesting season. The current process to address lighting problems continues to face some challenges, and more work is needed for full implementation.

If adequately enforced, the Indian River County HCP's beach lighting management plan is expected to benefit the loggerhead terrestrial habitat by maintaining suitable nesting beach habitat with sufficient darkness to ensure nesting turtles are not deterred from emerging onto the beach and hatchlings and post-nesting females orient to the sea. According to assessments of the beach lighting management plan provided in annual reports t, this mitigation measure is not always adequately implemented. A PCE of the species critical habitat is ''Suitable nesting beach habitat with sufficient darkness to ensure nesting turtles are not deterred from emerging onto the beach and hatchlings and post-nesting females orient to the sea.'' Because of the shortfalls in budget and staff, the USFWS intends to work with the County to find solutions to overcome these issues and improve conservation related to light management.

Education of beach users and property owners remains a constant activity and continues to be a primary tool to inform the public, generate interest in sea turtles, and help manage the nesting beaches. The education program has been getting significant help from partners in other agencies and non-profits. Every year newspaper articles, radio talk shows, public presentations,

as well as on-the-beach talks, are given by the HCP coordinator and sea turtle permit surveyors. Educational signs have been created for marked nests. When possible, small grants were obtained for educational materials. The program is maintained by a few dedicated individuals, who continue to conduct public education at every opportunity. There remain many human activities on the beach with the potential to harm nests and turtles, and only some of these are illegal under local ordinances. Law enforcement has been sporadic. On the balance, however, the continual efforts by the County to increase sea turtle awareness have resulted in net positive, on-the-ground conservation benefits for the species.

The Predator Control Plan (PCP) constituted the principal form of mitigation for the incidental take of sea turtles causally related to shoreline protection. The County has met the general intent of the PCP. In the areas where there has been raccoon predation, minimal trapping has been conducted by personnel from the USFWS (Refuges) or contractors with U.S. Department of Agriculture with some support from the County. Complicating predator control is canine predation of turtle nests by a mix of coyote and domestic dogs. Per the 2010 annual report, the issue of canine predation has been difficult to solve because coyotes are not easily trapped and there exists strong sentiments regarding the issue of curtailing the behavior of domestic dogs. However, the recent focus to address canine predation has met the intent of the predator control program. The County is committed to working with partners in animal control and wildlife offices as well as local communities in solving these complex issues. As such, the PCP, which was originally focused on raccoons, has evolved into an informal and diverse attempt to control predation from multiple sources and remains supported by the County. The current situation is unknown because the 2011 through 2013 annual reports have not been submitted.

The sea turtle nest monitoring program has been the cornerstone of the HCP and has required the most time and effort. This is largely due to the high density nesting that occurs in Indian River County. Significant gains in this program have been made in terms of the collection of quality data from individual permit holder groups and the detail and accuracy of the data has remained at a fairly high level. During times when special projects are being conducted on the beach, for example beach nourishment, communication and data reporting problems occur because personnel completing sea turtle surveys and meeting nourishment reporting requirements are unable to keep up with all the permitting reporting and requirements. In addition, the HCP coordinator has increased responsibilities in conducting sea turtle monitoring with little additional support from the County; thus, most resources have been relegated to this effort.

Other actions have been completed by the County in support of the HCP. The County obtained a grant through the National Fish and Wildlife Foundation (NFWF) in 2007 to re-plant dune vegetation, such as sea grapes (*Coccoloba uvifera*), and fix public beachfront lighting problems to improve sea turtle nesting habitat in the County. The grant began in 2007 and was completed in 2009. The vegetation will provide a light screen in the future, provided the plants are not excessively trimmed. Interest in the planting program was lower than expected and only 15 properties planted the sea grapes; the most common reason given for not participating in the project was a property owner's desire for an unobstructed view of the ocean. The second part of the grant consisted of modifying 84 percent of the public lights near the beach resulting in an 87.5 percent reduction in overall light trespass onto the beach. Light management techniques that were developed during this project have been disseminated to other Florida and international sea turtle nesting beach programs. The HCP Coordinator also obtained grants for updating their nest monitoring with geographic information system technology.

Annual reports are to be submitted that describe efforts undertaken to implement the HCP. Since its inception, the annual reports have been delayed. The reports for 2011 through 2013 have not been completed due to lack of staff. However, as noted earlier, the County does work closely with the USFWS's South Florida Ecological Services Office, keeping them apprised on significant events during the nesting season. Monitoring results from the season have been sent to the USFWS in a timely manner, while completion of the annual report is delayed. Lateness or not completing reports are largely because of lack of resources and staff dedicated to working on the many HCP programs. The HCP Coordinator recommends a minimum of two additional staff to help with data reporting, nesting surveys and implementing the light management plan, predator control plan and education program.

Recently, there have been gains in education and accountability. A 2008 lighting workshop hosted by the County was considered a successful event. In addition, a significant number of public beachfront lighting problems have been solved through provision of outside grant funding. County staff continues to do the best it can even with significant shortfalls in the County's budget.

Benefits of Inclusion—Indian River County HCP

As described above, the Indian River County HCP has a very narrow focused incidental take coverage. While the range of incidental take granted is narrow, benefits from minimization and mitigative measures include basic sea turtle nest monitoring, lighting management, predator control, and education. There would still be a need for section 7 consultation on projects outside of the purview of the covered HCP activities that have a Federal nexus. Such projects could include beach nourishment, disaster response, dune restoration, and recovery grants to the State that are federally conducted, funded or permitted. However, as indicated above, the USFWS does not anticipate additional requirements for designated critical habitat beyond those required for the DPS being listed. The incremental benefit to the DPS from the resultant section 7 consultation would be reduced but not eliminated. The inclusion of these areas as critical habitat could therefore provide some additional Federal regulatory benefits not found in the Indian River County HCP. Another potential benefit of including lands in a critical habitat designation is that it serves to educate landowners, State and local governments, and the public regarding the potential conservation value of an area. On the other hand, a significant part of the Indian River County HCP is to promote education of the beachfront landowners and users about sea turtles and other coastal species, so some of the educational benefits of inclusion would be reduced.

Benefits of Exclusion—Indian River County HCP

Exclusion of these lands from critical habitat would help maintain and foster the successful partnership we have with Indian River County through the development and continued implementation of the HCP. The benefits of excluding the Indian River County HCP from critical habitat also include developing additional partnerships beneficial to the DPS. For

example, the County has worked closely with the sea turtle surveyors to facilitate standardized nest monitoring data collection. The County has no regulatory authority over the surveyors, who provide their data to the County for the HCP; they are also invaluable to alerting the County to issues on the beach including impacts to sea turtle nests and lighting issues. Partnerships that could be but have not yet been developed include working with the Towns of Orchid Beach and Indian River Shores to facilitate lighting compliance. The County currently has no enforcement capabilities in these municipalities but does have influence and a close working relationship with the Towns. In addition, the County's HCP Coordinator has taken over sea turtle nesting surveys for the City of Vero Beach and South Indian River Shores. Fostering partnerships with these municipalities could result in assistance from the municipalities to complete the surveys. The County's HCP Coordinator essentially manages the HCP and conducts a large amount of the on the ground HCP work without sufficient support from the County. More partnerships could be developed with regard to education, sea turtle nest monitoring, and data collection.

Additionally, the designation of critical habitat could have an unintended negative effect on the Service's relationship with non-Federal landowners within and outside of the area covered by the HCP due to the perceived imposition of redundant government regulation. If lands within the area cover by the HCP for the benefit of the DPS are designated as critical habitat, it could have a dampening effect on our continued ability to seek new partnerships with future participants including States, counties, local jurisdictions, conservation organizations, and private landowners, which together can implement various conservation actions (such as safe harbor agreements (SHAs), HCPs, and other conservation plans, particularly large, regional conservation plans that involve numerous participants or address landscape-level conservation of species and habitats) that we would be unable to accomplish otherwise.

Benefits of Exclusion Outweigh Benefits of Inclusion—Indian River County HCP

The Secretary has determined that the benefits of excluding the Indian River County HCP from the designation of critical habitat for the DPS outweigh the benefits of including this area in critical habitat. Indian River County has shown in the 9 years of implementing the HCP that when it has adequate resources, it is committed to the HCP: Improving the process, securing high quality data and scientific information to better inform decisions, and seeking compatibility with the beach user groups and conservation of nesting sea turtles and other coastal species. While there have been recent funding and staffing problems, resulting in some compliance issues, the County has had tremendous success on many fronts, especially nest monitoring and in general sea turtle education and awareness. These conservation efforts have directly benefitted sea turtles in Indian River County. There is a strong possibility that additional partnerships will be fostered as a result of the HCP and our partnership with the County that will further improve the current benefits to the species.

The HCP covers only non-Federal lands. Thus, there would still be need for section 7 consultation on projects outside of the purview of the HCP activities that have a Federal nexus as a result of Federal actions, authorizations, or funding. The benefits of inclusion in critical habitat at these sites would be minimized since the area is occupied by the species and section 7 consultation would still be required for projects with a Federal nexus to consider the project's effects on the species (i.e., regardless of whether or not critical habitat is designated).

This HCP was intended to cover incidental take of sea turtle related to emergency shoreline protection activities permitted by Indian River County, Florida, as provided by the Florida Statue 161. Overall, the measures provided for in the HCP address the intended purpose of the HCP. While the County has had budgetary and staffing challenges that have affected their ability to consistently support the HCP, they have continued to implement the minimization and mitigation measures to the best of their ability. The USFWS believes that these challenges can be overcome and intends to work with the County to do so.

Exclusion of these lands from critical habitat would help foster the partnership we have developed with Indian River County through the development and continued implementation of the HCP. Exclusion of these lands will also help us maintain and improve an important and successful partnership with the County as it continues its partnership with the local municipalities, sea turtle monitoring groups and the State of Florida. Recognizing the important contributions of our conservation partners through exclusion from critical habitat helps to preserve these partnerships, and helps foster future partnerships for the benefit of listed species, the majority of which do not occur on Federal lands; we consider this to be a substantial benefit of exclusion. For these reasons, we have determined, after careful balancing, that the benefits of exclusion of lands covered by the Indian River County HCP from critical habitat for the DPS outweigh the benefits of inclusion.

Exclusion Will Not Result in the Extinction of the Species—Indian River County HCP

Because the HCP has, for the most part, a successful and committed record of implementation despite the recent challenges, the coverage area of the HCP includes the loggerhead sea turtle and its habitat, and the HCP specifically addresses the loggerhead sea turtle's habitat and meets the conservation needs of the species within the plan area, the Secretary has determined that exclusion of this area will not result in the extinction of the species. The shoreline covered under the Indian River HCP is within the proposed critical habitat Unit LOGG–T–FL–10—Sebastian Inlet—Indian River Shores, accounting for 17.3 km (10.8 mi) of shoreline with the unit. This accounts for less than 1 percent of the total critical habitat shoreline proposed for the species. Proposed Unit LOGG–T–FL–10 was selected as a critical habitat unit because it is adjacent to a high density nesting beach. The conservation under the HCP would continue for these beaches and, for activities not covered by the HCP, these beaches are occupied and therefore section 7 consultation would still be invoked to consider the project effects on the species. Based on the above discussion, the Secretary is exercising her discretion under section 4(b)(2) of the Act to exclude from this final critical habitat designation portions of Unit LOGG–T–FL–10, totaling 17.3 km (10.8 mi).

Required Determinations

Regulatory Planning and Review (Executive Orders 12866 and 13563)

Executive Order 12866 provides that the Office of Information and Regulatory Affairs (OIRA) will review all significant rules. The Office of Information and Regulatory Affairs has determined that this rule is significant because it will raise novel legal or policy issues.

Executive Order 13563 reaffirms the principles of E.O. 12866 while calling for improvements in the nation's regulatory system to promote predictability, to reduce uncertainty,

and to use the best, most innovative, and least burdensome tools for achieving regulatory ends. The executive order directs agencies to consider regulatory approaches that reduce burdens and maintain flexibility and freedom of choice for the public where these approaches are relevant, feasible, and consistent with regulatory objectives. E.O. 13563 emphasizes further that regulations must be based on the best available science and that the rulemaking process must allow for public participation and an open exchange of ideas. We have developed this rule in a manner consistent with these requirements.

Regulatory Flexibility Act (5 U.S.C. 601 et seq.)

Under the Regulatory Flexibility Act (RFA; 5 U.S.C. 601 *et seq.*), as amended by the Small Business Regulatory Enforcement Fairness Act of 1996 (SBREFA; 5 U.S.C. 801 *et seq.*), whenever an agency is required to publish a notice of rulemaking for any proposed or final rule, it must prepare and make available for public comment a regulatory flexibility analysis that describes the effects of the rule on small entities (i.e., small businesses, small organizations, and small government jurisdictions). However, no regulatory flexibility analysis is required if the head of the agency certifies the rule will not have a significant economic impact on a substantial number of small entities. The SBREFA amended the RFA to require Federal agencies to provide a certification statement of the factual basis for certifying that the rule will not have a significant economic impact on a substantial number of small entities.

According to the Small Business Administration, small entities include small organizations such as independent nonprofit organizations; small governmental jurisdictions, including school boards and city and town governments that serve fewer than 50,000 residents; and small businesses (13 CFR 121.201). Small businesses include manufacturing and mining concerns with fewer than 500 employees, wholesale trade entities with fewer than 100 employees, retail and service businesses with less than $5 million in annual sales, general and heavy construction businesses with less than $27.5 million in annual business, special trade contractors doing less than $11.5 million in annual business, and agricultural businesses with annual sales less than $750,000. To determine if potential economic impacts to these small entities are significant, we considered the types of activities that might trigger regulatory impacts under this designation as well as types of project modifications that may result. In general, the term ''significant economic impact'' is meant to apply to a typical small business firm's business operations.

The Service's current understanding of the requirements under the RFA, as amended, and following recent court decisions, is that Federal agencies are only required to evaluate the potential incremental impacts of rulemaking on those entities directly regulated by the rulemaking itself, and therefore, not required to evaluate the potential impacts to indirectly regulated entities. The regulatory mechanism through which critical habitat protections are realized is section 7 of the Act, which requires Federal agencies, in consultation with the Service, to ensure that any action authorized, funded, or carried by the Agency is not likely to destroy or adversely modify critical habitat. Therefore, under section 7 only Federal action agencies are directly subject to the specific regulatory requirement (avoiding destruction and adverse modification) imposed by critical habitat designation. Consequently, it is our position that only Federal action agencies will be directly regulated by this designation. There is no requirement under RFA to evaluate the potential impacts to entities not directly regulated. Moreover, Federal agencies are not small entities. Therefore, because no small entities are directly regulated by this rulemaking, the Service certifies that the final critical habitat designation will not have a significant economic impact on a substantial number of small entities. However, it is the current practice of the USFWS to assess, to the extent practicable, these potential impacts if sufficient data are available, whether or not this analysis is believed by the Service to be strictly required by the RFA.

During the development of this final rule we reviewed and evaluated all information submitted during the comment period that may pertain to our consideration of the probable incremental economic impacts of this critical habitat designation. Based on this information, we affirm our certification that this final critical habitat designation will not have a significant economic impact on a substantial number of small entities, and a regulatory flexibility analysis is not required.

Energy Supply, Distribution, or Use—Executive Order 13211

Executive Order 13211 (Actions Concerning Regulations That Significantly Affect Energy Supply, Distribution, or Use) requires agencies to prepare Statements of Energy Effects when undertaking certain actions. OMB has provided guidance for implementing this Executive Order that outlines nine outcomes that may constitute ''a significant adverse effect'' when compared to not taking the regulatory action under consideration. Natural gas and oil activities in State and Federal waters occur offshore of the States of Alabama, Mississippi, and Florida in the Gulf of Mexico (GOM) where critical habitat is being designated for the species. Potential direct and indirect effects to designated critical habitat could result from associated oil and gas activities, including, but not limited to, pipeline installation and maintenance, coastal-based facilities, boat vessel traffic, and spills. USFWS and the Bureau of Ocean Energy and Management (BOEM) and the Bureau of Safety and Environmental Enforcement (BSEE) have a long history of intra-agency coordination and consultation under the Act on offshore outer continental shelf (OCS) oil and gas since the 1970s. Consultation occurs on the 5-year Multi-lease Sale Program and then on each individual lease sale in that program as they occur. As a result, regulations and other measures are in place to minimize impacts of natural gas and oil exploration, development, production, and abandonment in the GOM OCS. The regulations and measures are generally not considered a substantial cost compared with overall project costs and are already being implemented by oil and gas companies.

The most recent consultation completed was for the GOM OCS 2007–2012 Program and Supplemental Lease Sales 2009–2012 and the initial coordination on the proposed 2012–2017 Multi-lease Sale Program. In 2010, Minerals Management Service (as it was known at the time) reinitiated the 2007 consultation as a result of the Deep Water Horizon oil spill. Currently, BOEM and BSEE are working with the USFWS on a programmatic consultation. Individual lease sales consultations have been completed for the 2007–2012 and 2009–2012 Programs. Most of the eastern GOM, including the Straits of Florida (Alabama and Florida), remains under a congressionally mandated moratorium and is not proposed for new leasing in either the 2007–2012 or 2012–2017 Multi-lease Sale Programs. BOEM will move forward with an environmental analysis for potential seismic studies in the Mid- and South Atlantic planning areas (Florida Atlantic coast, Georgia,

South Carolina, and North Carolina), but no lease sales will be scheduled in the Atlantic until at least mid-2017. The States of Mississippi and Alabama have oil and gas programs in their respective State waters. USFWS only conducts consultation in accordance with the Act on oil and gas activities within State waters where there is a Federal nexus (discharge, wetland impacts, or navigation permits).

No other activities associated with energy supply, distribution, or use are anticipated within the critical habitat designation. We do not expect the designation of this critical habitat to significantly affect energy supplies, distribution, or use. Thus, based on information in the economic analysis, energy-related impacts associated with the loggerhead sea turtle conservation activities within critical habitat are not expected. As such, the designation of critical habitat is not expected to significantly affect energy supplies, distribution, or use. Therefore, this action is not a significant energy action, and no Statement of Energy Effects is required.

Unfunded Mandates Reform Act (2 U.S.C. 1501 et seq.)

In accordance with the Unfunded Mandates Reform Act (2 U.S.C. 1501 *et seq.*), we make the following findings:

(1) This rule will not produce a Federal mandate. In general, a Federal mandate is a provision in legislation, statute, or regulation that would impose an enforceable duty upon State, local, or tribal governments, or the private sector, and includes both ''Federal intergovernmental mandates'' and ''Federal private sector mandates.'' These terms are defined in 2 U.S.C. 658(5)–(7). ''Federal intergovernmental mandate'' includes a regulation that ''would impose an enforceable duty upon State, local, or tribal governments'' with two exceptions. It excludes ''a condition of Federal assistance.'' It also excludes ''a duty arising from participation in a voluntary Federal program,'' unless the regulation ''relates to a then-existing Federal program under which $500,000,000 or more is provided annually to State, local, and tribal governments under entitlement authority,'' if the provision would ''increase the stringency of conditions of assistance'' or ''place caps upon, or otherwise decrease, the Federal Government's responsibility to provide funding,'' and the State, local, or tribal governments ''lack authority'' to adjust accordingly. At the time of enactment, these entitlement programs were: Medicaid; Aid to Families with Dependent Children work programs; Child Nutrition; Food Stamps; Social Services Block Grants; Vocational Rehabilitation State Grants; Foster Care, Adoption Assistance, and Independent Living; Family Support Welfare Services; and Child Support Enforcement. ''Federal private sector mandate'' includes a regulation that ''would impose an enforceable duty upon the private sector, except (i) a condition of Federal assistance or (ii) a duty arising from participation in a voluntary Federal program.''

The designation of critical habitat does not impose a legally binding duty on non-Federal Government entities or private parties. Under the Act, the only regulatory effect is that Federal agencies must ensure that their actions do not destroy or adversely modify critical habitat under section 7. While non-Federal entities that receive Federal funding, assistance, or permits, or that otherwise require approval or authorization from a Federal agency for an action, may be indirectly impacted by the designation of critical habitat, the legally binding duty to avoid destruction or adverse modification of critical habitat rests squarely on the Federal agency. Furthermore, to the extent that non-Federal entities are indirectly impacted because they receive Federal assistance or participate in a voluntary Federal aid program, the Unfunded Mandates Reform Act would not apply, nor would critical habitat shift the costs of the large entitlement programs listed above onto State governments.

(2) We do not believe that this rule will significantly or uniquely affect small governments. A portion of the lands being designated for critical habitat is owned by State, County, or local municipalities. Small governments will be affected only to the extent that any programs having Federal funds, permits, or other authorized activities must ensure that their actions will not adversely affect the critical habitat. Consequently, we do not believe that the critical habitat designation will significantly or uniquely affect small government entities. As such, a Small Government Agency Plan is not required.

Takings—Executive Order 12630

In accordance with Executive Order 12630 (''Government Actions and Interference with Constitutionally Protected Private Property Rights''), we have analyzed the potential takings implications of designating critical habitat for the loggerhead sea turtle in a takings implications assessment. As discussed above, the designation of critical habitat affects only Federal actions. Although private parties that receive Federal funding or assistance, or require approval or authorization from a Federal agency for an action may be indirectly impacted by the designation of critical habitat, the legally binding duty to avoid destruction or adverse modification of critical habitat rests squarely on the Federal agency. Critical habitat designation does not affect landowner actions that do not require Federal funding or permits, nor does it preclude development of habitat conservation programs or issuance of incidental take permits to permit actions that do require Federal funding or permits to go forward. The takings implications assessment concludes that this designation of critical habitat for the loggerhead sea turtle does not pose significant takings implications for lands within or affected by the designation.

Federalism—Executive Order 13132

In accordance with Executive Order 13132 (Federalism), this final rule does not have significant Federalism effects. A federalism summary impact statement is not required. In keeping with Department of the Interior and Department of Commerce policy, we requested information from, and coordinated development of this critical habitat designation with, appropriate State resource agencies in North Carolina, South Carolina, Georgia, Florida, Alabama, and Mississippi. We received comments from North Carolina Department of Environment and Natural Resources' Division of Coastal Management, South Carolina Department of Health and Environmental Control, Governor of South Carolina, South Carolina Department of Parks, Recreation and Tourism, GDNR Coastal Resources Division, FDEP, FWC, and Mississippi Development Authority. We have addressed them in the Summary of Comments and Recommendations section of this rule. From a federalism perspective, the designation of critical habitat directly affects only the responsibilities of Federal agencies. The Act imposes no other duties with respect to critical habitat, either for States and local governments, or for anyone else. As a result, the rule does not have substantial direct effects either on the States, or on the relationship between the national government and the States, or on the distribution of powers and responsibilities among the various levels of government. The designation may have some benefit to these governments because the areas that contain the features essential to the conservation of the species are more

clearly defined, and the physical and biological features of the habitat necessary to the conservation of the species are specifically identified. This information does not alter where and what federally sponsored activities may occur. However, it may assist these local governments in long-range planning (because these local governments no longer have to wait for case-by-case section 7 consultations to occur).

Where State and local governments require approval or authorization from a Federal agency for actions that may affect critical habitat, consultation under section 7(a)(2) would be required. While non-Federal entities that receive Federal funding, assistance, or permits, or that otherwise require approval or authorization from a Federal agency for an action, may be indirectly impacted by the designation of critical habitat, the legally binding duty to avoid destruction or adverse modification of critical habitat rests squarely on the Federal agency.

Civil Justice Reform—Executive Order 12988

In accordance with Executive Order 12988 (Civil Justice Reform), the Office of the Solicitor has determined that the rule does not unduly burden the judicial system and that it meets the applicable standards set forth in sections 3(a) and 3(b)(2) of the Executive Order. We are designating critical habitat in accordance with the provisions of the Act. To assist the public in understanding the habitat needs of the species, the rule identifies the elements of PBFs essential to the conservation of the loggerhead sea turtle. The designated areas of critical habitat are presented on maps, and the rule provides several options for the interested parties to obtain more detailed location information, if desired.

Paperwork Reduction Act of 1995 (44 U.S.C. 3501 et seq.)

This rule does not contain any new collections of information that require approval by OMB under the Paperwork Reduction Act of 1995 (44 U.S.C. 3501 *et seq.*). This rule will not impose recordkeeping or reporting requirements on State or local governments, individuals, businesses, or organizations. An agency may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a currently valid OMB control number.

National Environmental Policy Act (NEPA; 42 U.S.C. 4321 et seq.)

It is our position that, outside the jurisdiction of the U.S. Court of Appeals for the Tenth Circuit, we do not need to prepare environmental analyses pursuant to NEPA in connection with designating critical habitat under the Act. We published a notice outlining our reasons for this determination in the **Federal Register** on October 25, 1983 (48 FR 49244). This position was upheld by the U.S. Court of Appeals for the Ninth Circuit (*Douglas County* v. *Babbitt,* 48 F.3d 1495 (9th Cir. 1995), cert. denied 516 U.S. 1042 (1996)).

Government-to-Government Relationship With Tribes

In accordance with the President's memorandum of April 29, 1994 (Government-to-Government Relations with Native American Tribal Governments; 59 FR 22951), Executive Order 13175 (Consultation and Coordination With Indian Tribal Governments), and the Department of the Interior's manual at 512 DM 2, we readily acknowledge our responsibility to communicate meaningfully with recognized Federal Tribes on a government-to-government basis. In accordance with Secretarial Order 3206 of June 5, 1997 (American Indian Tribal Rights, Federal-Tribal Trust Responsibilities, and the Endangered Species Act), we readily acknowledge our responsibilities to work directly with tribes in developing programs for healthy ecosystems, to acknowledge that tribal lands are not subject to the same controls as Federal public lands, to remain sensitive to Indian culture, and to make information available to tribes. We determined that there are no tribal lands that were occupied by the loggerhead sea turtle at the time of listing that contain the features essential for conservation of the species. Therefore, we are not designating critical habitat for the loggerhead sea turtle on tribal lands.

References Cited

A complete list of references cited in this rulemaking is available on the Internet at *http://www.regulations.gov* and upon request from the North Florida Ecological Services Office (see **FOR FURTHER INFORMATION CONTACT**).

Authors

The primary authors of this package are the staff members of the North Florida Ecological Services Office.

List of Subjects in 50 CFR Part 17

Endangered and threatened species, Exports, Imports, Reporting and recordkeeping requirements, Transportation.

Regulation Promulgation

Accordingly, we amend part 17, subchapter B of chapter I, title 50 of the Code of Federal Regulations, as set forth below:

PART 17—[AMENDED]

■ 1. The authority citation for part 17 continues to read as follows:

Authority: 16 U.S.C. 1361–1407; 1531–1544; 4201–4245, unless otherwise noted.

■ 2. Amend § 17.11(h) by revising the entry for ''Sea turtle, loggerhead, Northwest Atlantic Ocean'' under REPTILES in the List of Endangered and Threatened Wildlife to read as follows:

§ 17.11 Endangered and threatened wildlife.

* * * * *

(h) * * *

Species		Historic range	Vertebrate population where endangered or threatened	Status	When listed	Critical habitat	Special rules
Common name	Scientific name						
*	*	*	*	*	*		*
REPTILES							
*	*	*	*	*	*		*
Sea turtle, loggerhead, Northwest Atlantic Ocean.	*Caretta caretta*	Northwest Atlantic Ocean Basin.	Northwest Atlantic Ocean north of the equator, south of 60° N. Lat., and west of 40° W. Long.	T	794	17.95(c)	NA

Species		Historic range	Vertebrate population where endangered or threatened	Status	When listed	Critical habitat	Special rules
Common name	Scientific name						
*	*	*	*	*	*		*

■ 3. In § 17.95, amend paragraph (c) by adding an entry for ''Loggerhead Sea Turtle, Northwest Atlantic Ocean (*Caretta caretta*),'' in the same alphabetical order that the species appears in the table at § 17.11(h), to read as follows:

§ 17.95 Critical habitat—fish and wildlife.

* * * * *

(c) *Reptiles.*

* * * * *

Loggerhead Sea Turtle, Northwest Atlantic Ocean (*Caretta caretta*)

(1) Critical habitat units are depicted for the following areas on the maps below:

(i) North Carolina—Brunswick, Carteret, New Hanover, Onslow, and Pender Counties;

(ii) South Carolina—Beaufort, Charleston, Colleton, and Georgetown Counties;

(iii) Georgia—Camden, Chatham, Liberty, and McIntosh Counties;

(iv) Florida—Bay, Brevard, Broward, Charlotte, Collier, Duval, Escambia, Flagler, Franklin, Gulf, Indian River, Lee, Manatee, Martin, Monroe, Palm Beach, Sarasota, St. Johns, St. Lucie, and Volusia Counties;

(v) Alabama—Baldwin County; and

(vi) Mississippi—Jackson County.

(2) Within these areas, the primary constituent elements of the physical or biological features essential to the conservation of the Northwest Atlantic Ocean distinct population segment of the loggerhead sea turtle are the extra-tidal or dry sandy beaches from the mean high-water line to the toe of the secondary dune, which are capable of supporting a high density of nests or serving as an expansion area for beaches with a high density of nests and that are well distributed within each State, or region within a State, and representative of total nesting, consisting of four components:

(i) Suitable nesting beach habitat that:

(A) Has relatively unimpeded nearshore access from the ocean to the beach for nesting females and from the beach to the ocean for both post-nesting females and hatchlings; and

(B) Is located above mean high water to avoid being inundated frequently by high tides.

(ii) Sand that:

(A) Allows for suitable nest construction;

(B) Is suitable for facilitating gas diffusion conducive to embryo development; and

(C) Is able to develop and maintain temperatures and a moisture content conducive to embryo development.

(iii) Suitable nesting beach habitat with sufficient darkness to ensure that nesting turtles are not deterred from emerging onto the beach and hatchlings and post-nesting females orient to the sea.

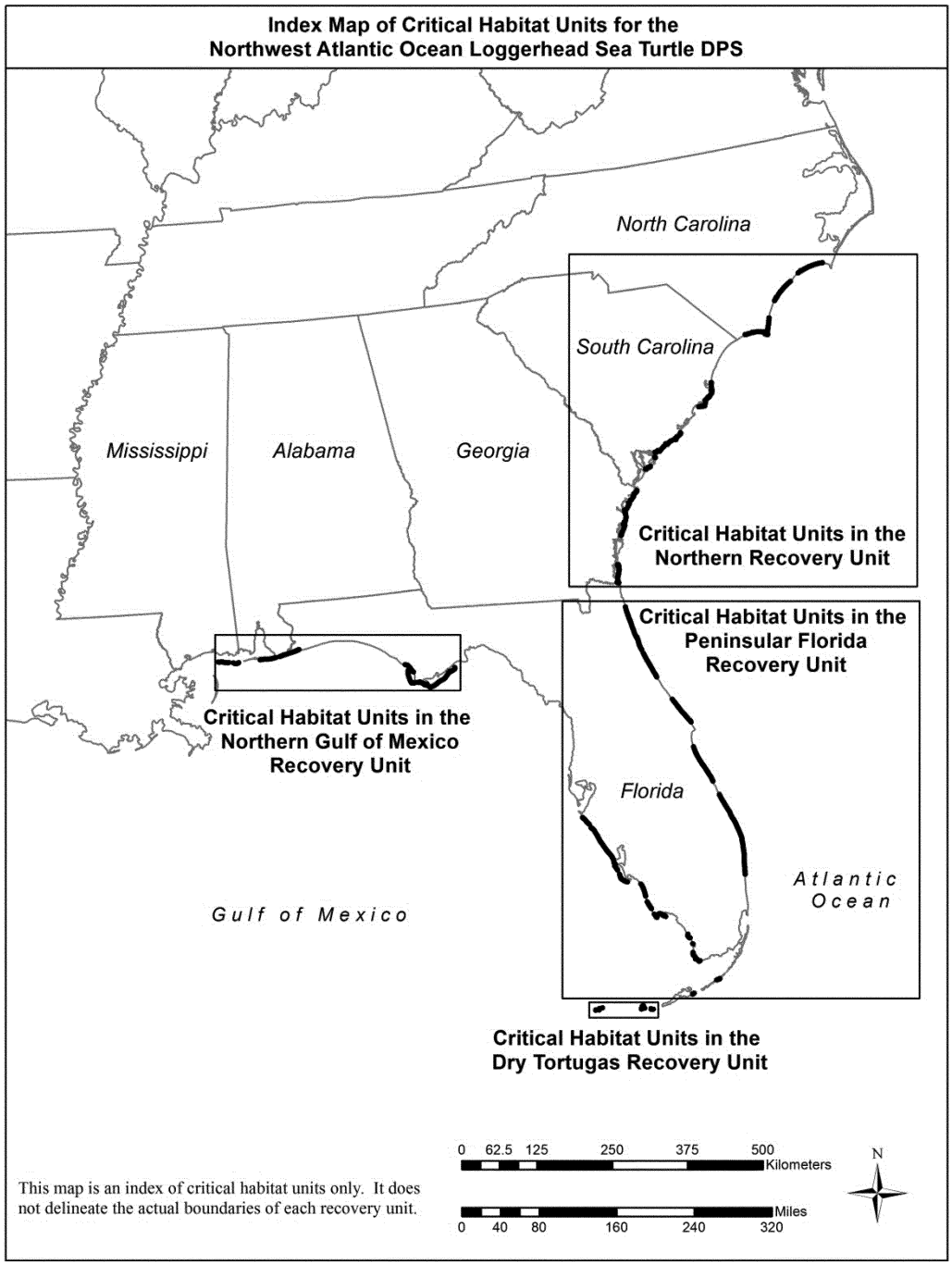
(iv) Natural coastal processes or artificially created or maintained habitat mimicking natural conditions. This includes artificial habitat types that mimic the natural conditions described in paragraphs (2)(i), (2)(ii), and (2)(iii) of this entry for beach access, nest site selection, nest construction, egg deposition and incubation, and hatchling emergence and movement to the sea. Habitat modification and loss occurs with beach stabilization activities that prevent the natural transfer and erosion and accretion of sediments along the ocean shoreline. Beach stabilization efforts that may impact loggerhead nesting include beach nourishment, beach maintenance, sediment dredging and disposal, inlet channelization, and construction of jetties and other hard structures. However, when sand placement activities result in beach habitat that mimics the natural beach habitat conditions, impacts to sea turtle nesting habitat are minimized.

(3) Critical habitat does not include manmade structures (such as buildings, aqueducts, runways, roads, and other paved areas) and the land on which they are located existing within the legal boundaries on August 11, 2014.

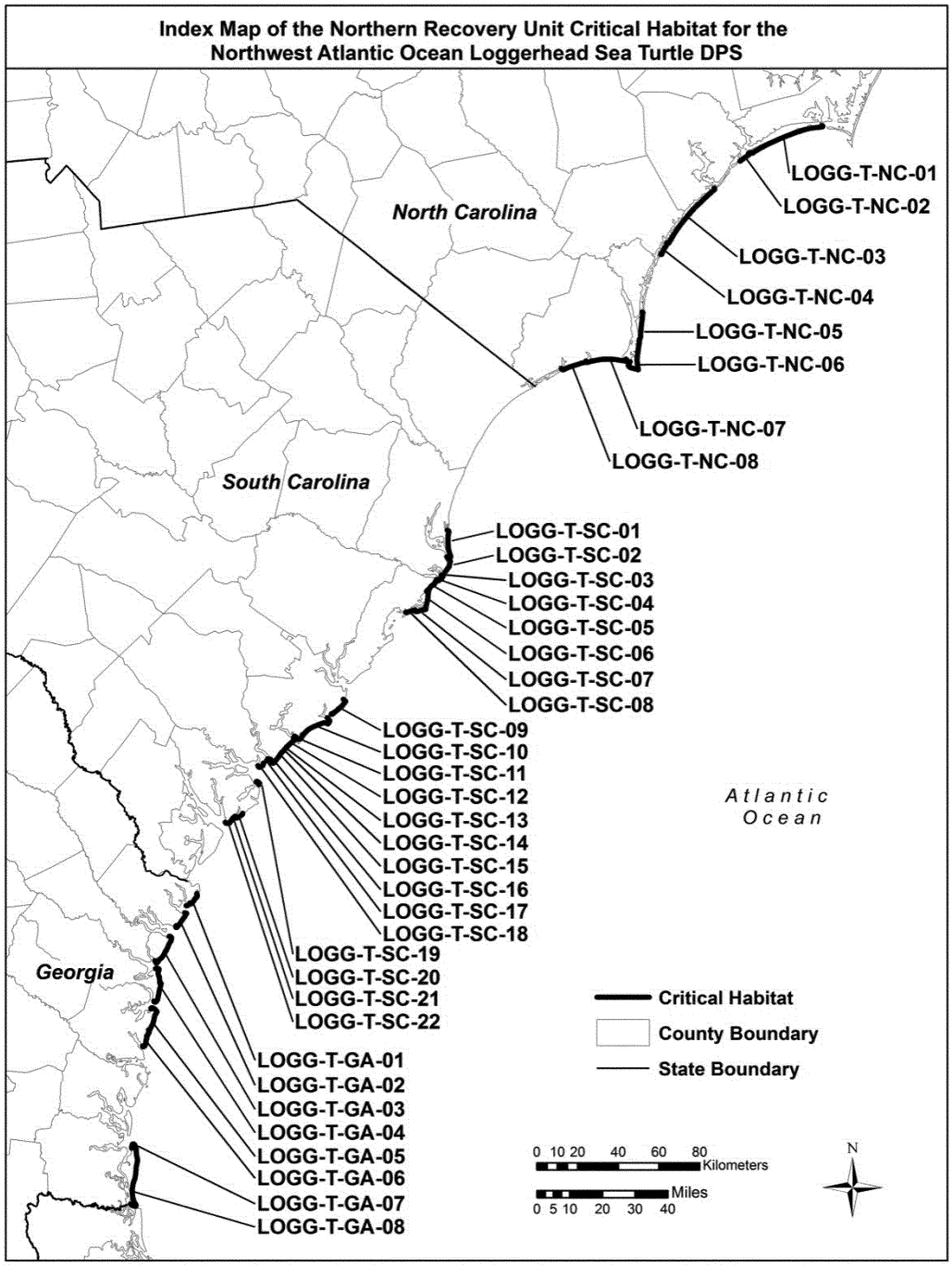
(4) *Critical habitat map units.* Data layers defining map units were created using Google Earth imagery, then refined using Bing imagery. Unit descriptions were then mapped using North America Lambert Conformal Conic coordinates. The maps in this entry, as modified by any accompanying regulatory text, establish the boundaries of the critical habitat designation. The coordinates or plot points or both on which each map is based are available to the public at the Service's Internet site at *http://www.fws.gov/northflorida,* at *http:www.regulations.gov* at Docket No. FWS–R4–ES–2012–0103, and at the field office responsible for this designation. You may obtain field office location information by contacting one of the USFWS regional offices, the addresses of which are listed at 50 CFR 2.2.

(5) *Note:* Index map follows:

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(6) *Note:* Index map of critical habitat units in the Northern Recovery Unit:



(7)(i) Units:

(A) LOGG–T–NC–01—Boque Banks, Carteret County, North Carolina.

(B) LOGG–T–NC–02—Bear Island, Onslow County, North Carolina.

(C) LOGG–T–NC–03—Topsail Island, Onslow and Pender Counties, North Carolina.

(D) LOGG–T–NC–04—Lea-Hutaff Island, Pender County, North Carolina.

(ii) General descriptions of units:

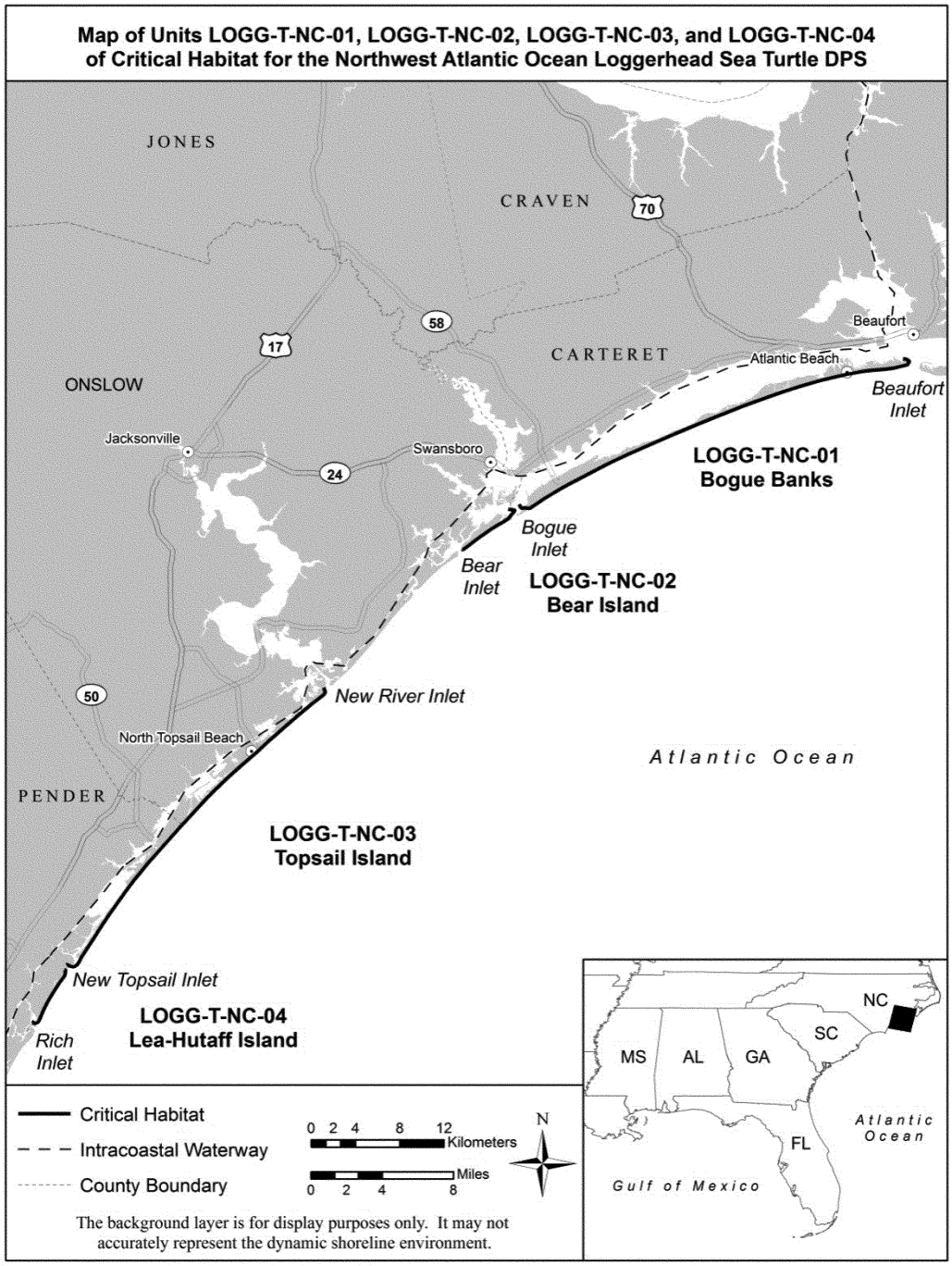
(A) LOGG–T–NC–01—Boque Banks: This unit consists of 38.9 km (24.2 mi) of island shoreline along the Atlantic Ocean and extends from Beaufort Inlet to Bogue Inlet.

(B) LOGG–T–NC–02—Bear Island: This unit consists of 6.6 km (4.1 mi) of island shoreline along the Atlantic Ocean and extends from Bogue Inlet to Bear Inlet.

(C) LOGG–T–NC–03—Topsail Island: This unit consists of 35.0 km (21.8 mi) of island shoreline along the Atlantic Ocean and extends from New River Inlet to New Topsail Inlet.

(D) LOGG–T–NC–04—Lea-Hutaff Island: This unit consists of 6.1 km (3.8 mi) of island shoreline along the Atlantic Ocean and extends from New Topsail Inlet to Rich Inlet.

(iii) Map of Units LOGG–T–NC–01, LOGG–T–NC–02, LOGG–T–NC–03, and LOGG–T–NC–04 follows:



(8)(i) Units:

(A) LOGG–T–NC–05—Pleasure Island, New Hanover County, North Carolina.

(B) LOGG–T–NC–06—Bald Head Island, Brunswick County, North Carolina.

(C) LOGG–T–NC–07—Oak Island, Brunswick County, North Carolina.

(D) LOGG–T–NC–08—Holden Beach, Brunswick County, North Carolina.

(ii) General descriptions of units:

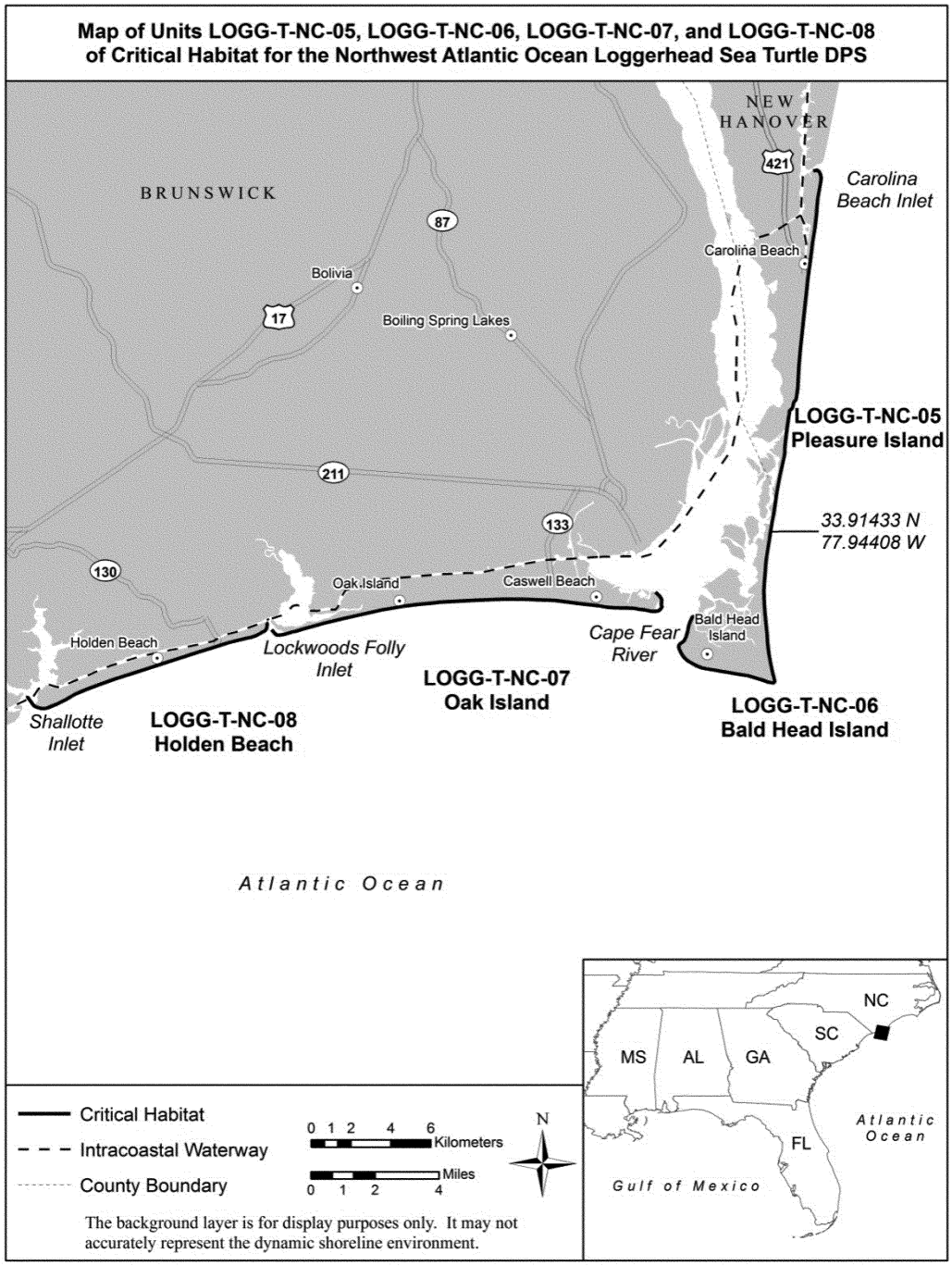
(A) LOGG–T–NC–05—Pleasure Island: This unit consists of 18.6 km (11.5 mi) of island shoreline along the Atlantic Ocean and extends from Carolina Beach Inlet to 33.91433 N, 77.94408 W (historic location of Corncake Inlet).

(B) LOGG–T–NC–06—Bald Head Island: This unit consists of 15.1 km (9.4 mi) of island shoreline along the Atlantic Ocean and extends from 33.91433 N, 77.94408 W (historic location of Corncake Inlet) to the mouth of the Cape Fear River.

(C) LOGG–T–NC–07—Oak Island: This unit consists of 20.9 km (13.0 mi) of island shoreline along the Atlantic Ocean and extends from the mouth of the Cape Fear River to Lockwoods Folly Inlet.

(D) LOGG–T–NC–08—Holden Beach: This unit consists of 13.4 km (8.3 mi) of island shoreline along the Atlantic Ocean and extends from Lockwoods Folly Inlet to Shallotte Inlet.

(iii) Map of Units LOGG–T–NC–05, LOGG–T–NC–06, LOGG–T–NC–07, and LOGG–T–NC–08 follows:



(9)(i) Units:

(A) LOGG–T–SC–01—North Island, Georgetown County, South Carolina.

(B) LOGG–T–SC–02—Sand Island, Georgetown County, South Carolina.

(C) LOGG–T–SC–03—South Island, Georgetown County, South Carolina.

(D) LOGG–T–SC–04—Cedar Island, Georgetown County, South Carolina.

(E) LOGG–T–SC–05—Murphy Island, Charleston County, South Carolina.

(ii) General descriptions of units:

(A) LOGG–T–SC–01—North Island: This unit consists of 13.2 km (8.2 mi) of island shoreline along the Atlantic Ocean and extends from North Inlet to Winyah Bay.

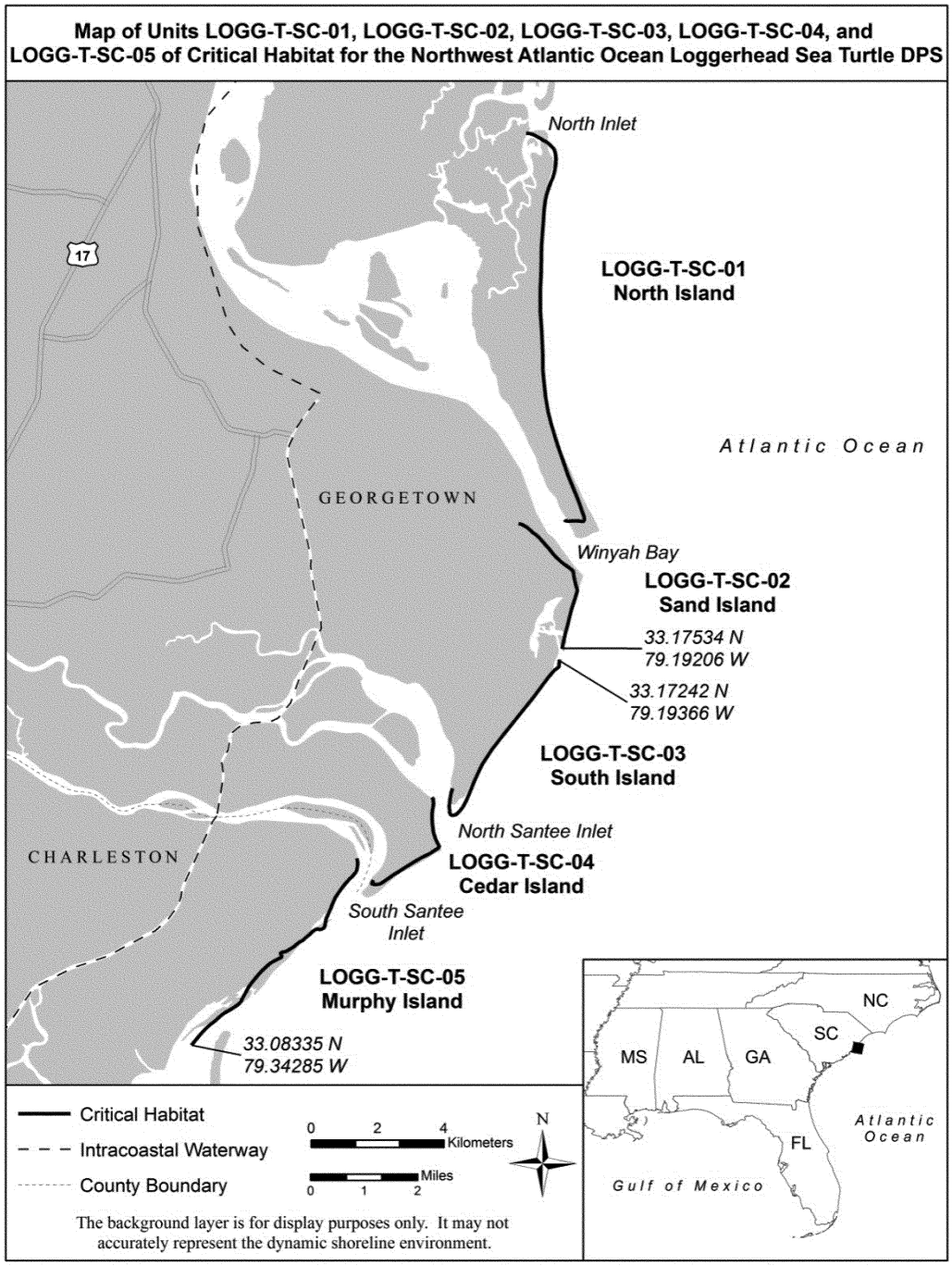
(B) LOGG–T–SC–02—Sand Island: This unit consists of 4.7 km (2.9 mi) of island shoreline along the Atlantic Ocean and Winyah Bay and extends from Winyah Bay to 33.17534 N, 79.19206 W (northern boundary of an unnamed inlet separating Sand Island and South Island).

(C) LOGG–T–SC–03—South Island: This unit consists of 6.7 km (4.2 mi) of island shoreline along the Atlantic Ocean and extends from 33.17242 N, 79.19366 W (southern boundary of an unnamed inlet separating Sand Island and South Island) to North Santee Inlet.

(D) LOGG–T–SC–04—Cedar Island: This unit consists of 4.1 km (2.5 mi) of island shoreline along the Atlantic Ocean and North Santee Inlet and extends from North Santee Inlet to South Santee Inlet.

(E) LOGG–T–SC–05—Murphy Island: This unit consists of 8.0 km (5.0 mi) of island shoreline along the Atlantic Ocean and South Santee Inlet and extends from South Santee Inlet to 33.08335 N, 79.34285 W.

(iii) Map of Units LOGG–T–SC–01, LOGG–T–SC–02, LOGG–T–SC–03, LOGG–T–SC–04, and LOGG–T–SC–05 follows:



(10)(i) Units:

(A) LOGG–T–SC–06—Cape Island, Charleston County, South Carolina.

(B) LOGG–T–SC–07—Lighthouse Island, Charleston County, South Carolina.

(C) LOGG–T–SC–08—Raccoon Key, Charleston County, South Carolina.

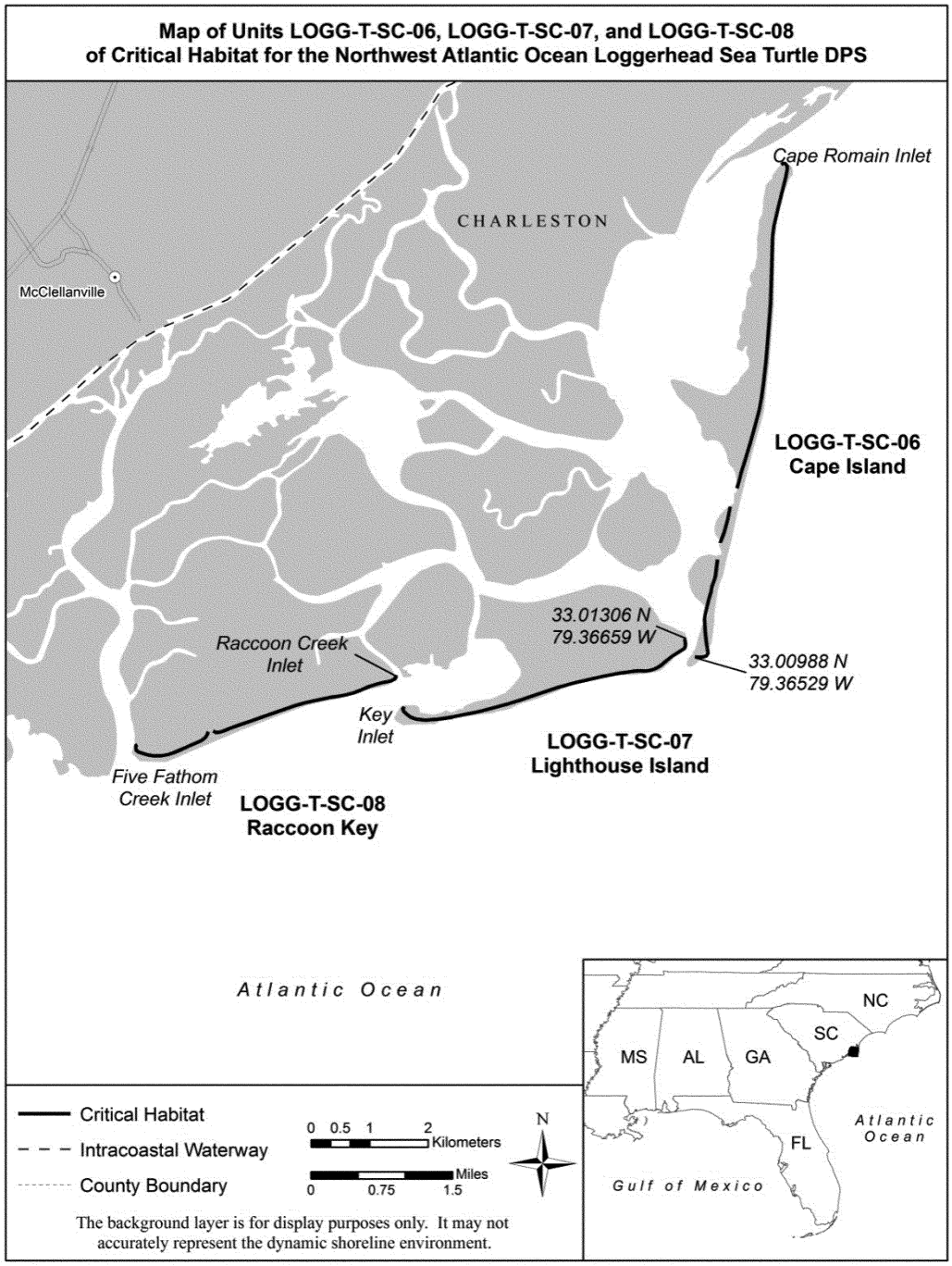
(ii) General descriptions of units:

(A) LOGG–T–SC–06—Cape Island: This unit consists of 8.3 km (5.1 mi) of island shoreline along the Atlantic Ocean and extends from Cape Romain Inlet to 33.00988 N, 79.36529 W (northern boundary of an unnamed inlet between Cape Island and Lighthouse Island).

(B) LOGG–T–SC–07—Lighthouse Island: This unit consists of 5.3 km (3.3 mi) of island shoreline along the Atlantic Ocean and extends from 33.01306 N, 79.36659 W (southern boundary of an unnamed inlet between Cape Island and Lighthouse Island) to Key Inlet.

(C) LOGG–T–SC–08—Raccoon Key: This unit consists of 4.8 km (3.0 mi) of island shoreline along the Atlantic Ocean and extends from Raccoon Creek Inlet to Five Fathom Creek Inlet.

(iii) Map of Units LOGG–T–SC–06, LOGG–T–SC–07, and LOGG–T–SC–08 follows:



(11)(i) Units:

(A) LOGG–T–SC–09—Folly Island, Charleston County, South Carolina.

(B) LOGG–T–SC–10—Kiawah Island, Charleston County, South Carolina.

(C) LOGG–T–SC–11—Seabrook Island, Charleston County, South Carolina.

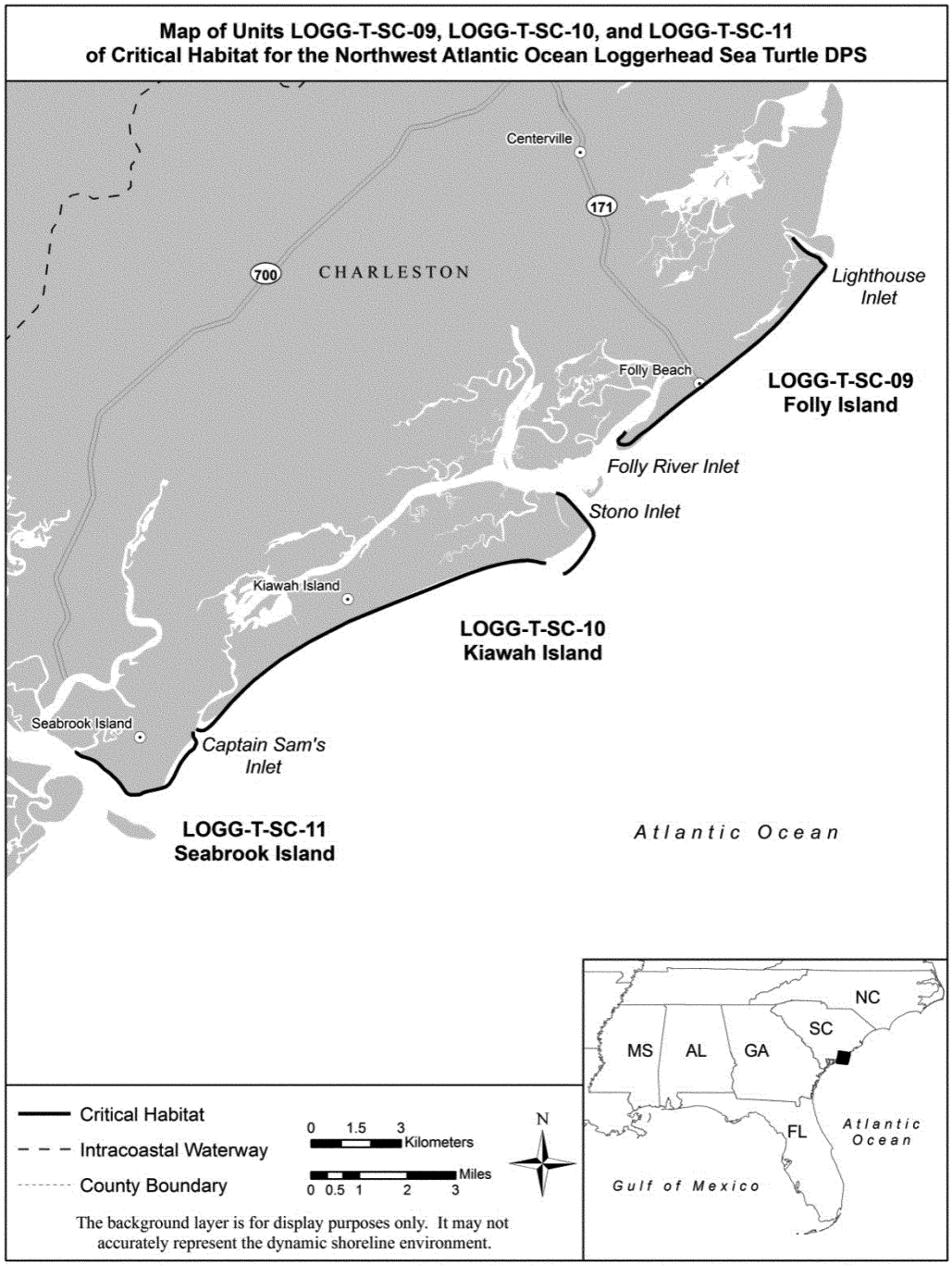
(ii) General descriptions of units:

(A) LOGG–T–SC–09—Folly Island: This unit consists of 11.2 km (7.0 mi) of island shoreline along the Atlantic Ocean and extends from Lighthouse Inlet to Folly River Inlet.

(B) LOGG–T–SC–10—Kiawah Island: This unit consists of 17.0 km (10.6 mi) of island shoreline along the Atlantic Ocean and Stono Inlet and extends from Stono Inlet to Captain Sam's Inlet.

(C) LOGG–T–SC–11—Seabrook Island: This unit consists of 5.8 km (3.6 mi) of island shoreline along the Atlantic Ocean and North Edisto Inlet and extends from Captain Sam's Inlet to North Edisto Inlet.

(iii) Map of Units LOGG–T–SC–09, LOGG–T–SC–10, and LOGG–T–SC–11 follows:



(12)(i) Units:

(A) LOGG–T–SC–12—Botany Bay Island and Botany Bay Plantation, Charleston County, South Carolina.

(B) LOGG–T–SC–13—Interlude Beach, Charleston County, South Carolina.

(C) LOGG–T–SC–14—Edingsville Beach, Charleston County, South Carolina.

(D) LOGG–T–SC–15—Edisto Beach State Park, Colleton County, South Carolina.

(E) LOGG–T–SC–16—Edisto Beach, Colleton County, South Carolina.

(ii) General descriptions of units:

(A) LOGG–T–SC–12—Botany Bay Island and Botany Bay Plantation: This unit consists of 6.6 km (4.1 mi) of island shoreline along the Atlantic Ocean and North Edisto Inlet and extends from North Edisto Inlet to 32.53710 N, 80.24614 W (northern boundary of an unnamed inlet separating Botany Bay Plantation and Interlude Beach).

(B) LOGG–T–SC–13—Interlude Beach: This unit consists of 0.9 km (0.6 mi) of island shoreline along the Atlantic Ocean and extends from 32.53636 N, 80.24647 W (southern boundary of an unnamed inlet separating Interlude Beach and Botany Bay Plantation) to Frampton Inlet.

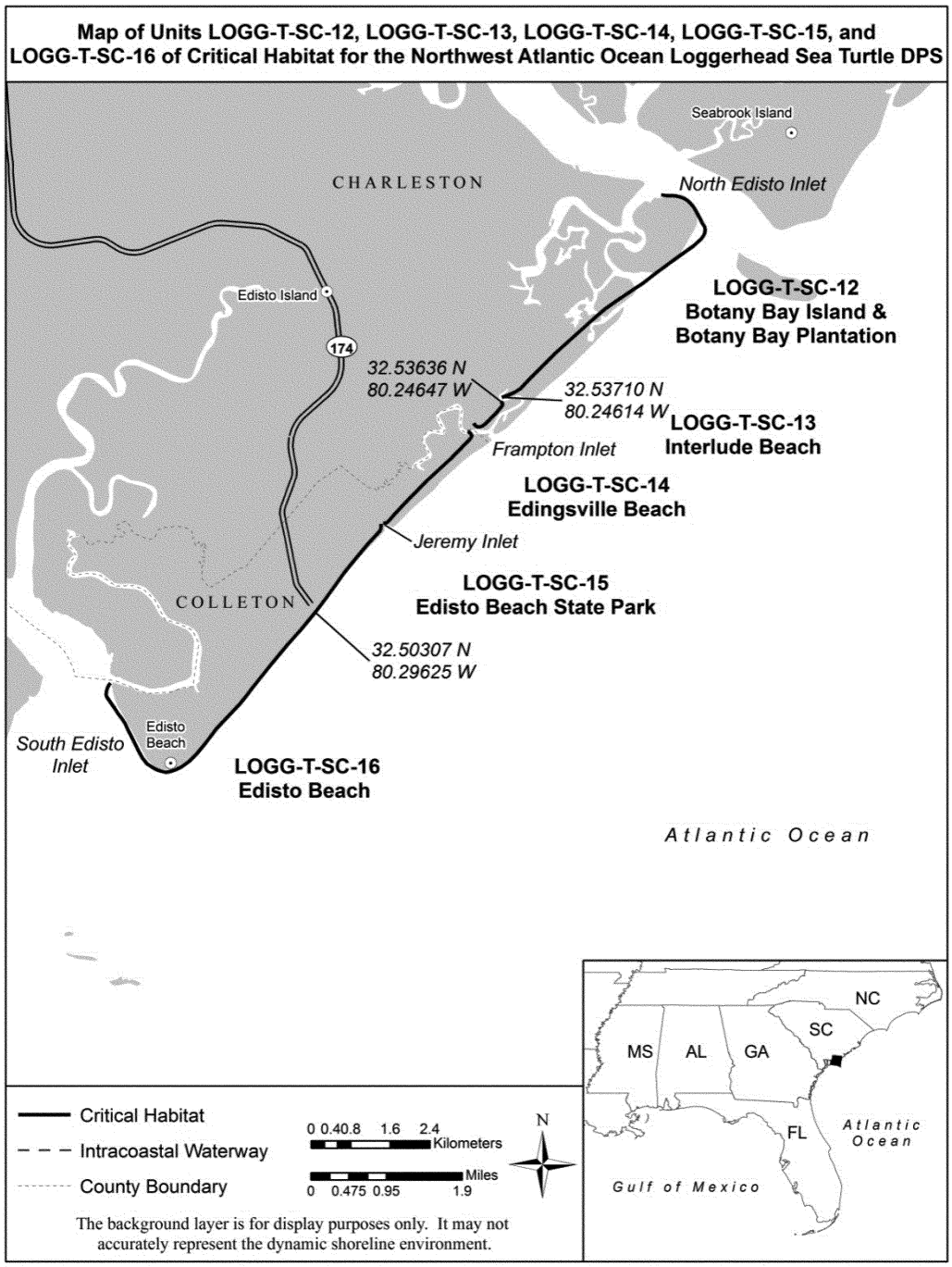
(C) LOGG–T–SC–14—Edingsville Beach: This unit consists of 2.7 km (1.7 mi) of island shoreline along the Atlantic Ocean and extends from Frampton Inlet to Jeremy Inlet.

(D) LOGG–T–SC–15—Edisto Beach State Park: This unit consists of 2.2 km (1.4 mi) of island shoreline along the Atlantic Ocean and extends from Jeremy Inlet to 32.50307 N, 80.29625 W (State Park boundary separating Edisto Beach

State Park and the Town of Edisto Beach).

(E) LOGG–T–SC–16—Edisto Beach: This unit consists of 6.8 km (4.2 mi) of island shoreline along the Atlantic Ocean and South Edisto River and extends from 32.50307 N, 80.29625 W (State Park boundary separating Edisto Beach State Park and the Town of Edisto Beach) to South Edisto Inlet.

(iii) Map of Units LOGG–T–SC–12, LOGG–T–SC–13, LOGG–T–SC–14, LOGG–T–SC–15, and LOGG–T–SC–16 follows:



(13)(i) Units:

(A) LOGG–T–SC–17—Pine Island, Colleton County, South Carolina.

(B) LOGG–T–SC–18—Otter Island, Colleton County, South Carolina.

(C) LOGG–T–SC–19—Harbor Island, Beaufort County, South Carolina.

(ii) General descriptions of units:

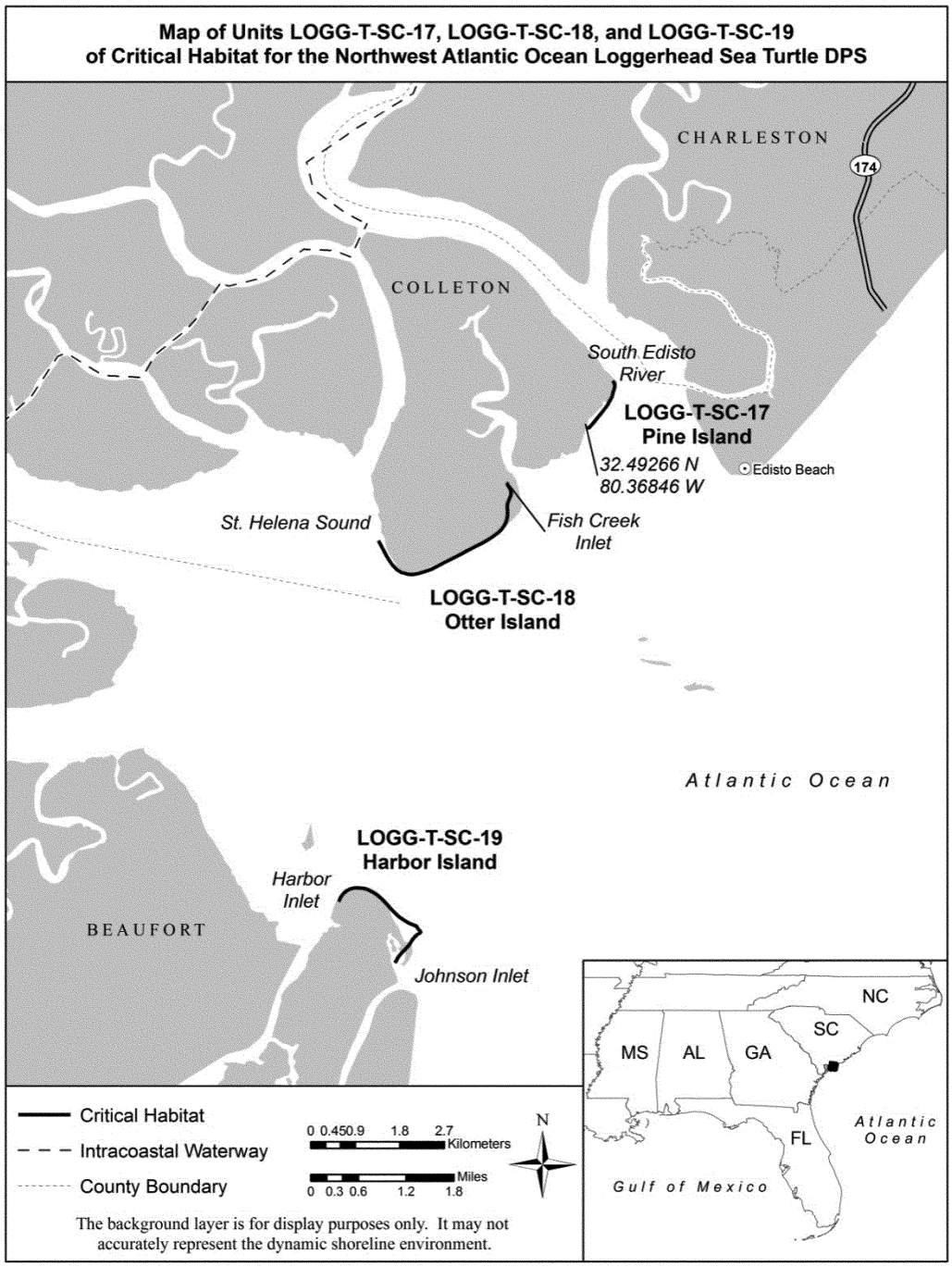
(A) LOGG–T–SC–17—Pine Island: This unit consists of 1.2 km (0.7 mi) of island shoreline along the South Edisto Inlet and extends from South Edisto River to 32.49266 N, 80.36846 W (northern boundary of an unnamed inlet to Fish Creek).

(B) LOGG–T–SC–18—Otter Island: This unit consists of 4.1 km (2.5 mi) of island shoreline along the Atlantic Ocean and Saint Helena Sound and extends from Fish Creek Inlet to Saint Helena Sound.

(C) LOGG–T–SC–19—Harbor Island: This unit consists of 2.9 km (1.8 mi) of

island shoreline along the Atlantic Ocean and Saint Helena Sound and extends from Harbor Inlet to Johnson Inlet.

(iii) Map of Units LOGG–T–SC–17, LOGG–T–SC–18, and LOGG–T–SC–19 follows:



(14)(i) Units:

(A) LOGG–T–SC–20—Little Capers Island, Beaufort County, South Carolina

(B) LOGG–T–SC–21—St. Phillips Island, Beaufort County, South Carolina

(C) LOGG–T–SC–22—Bay Point Island, Beaufort County, South Carolina

(ii) General descriptions of units:

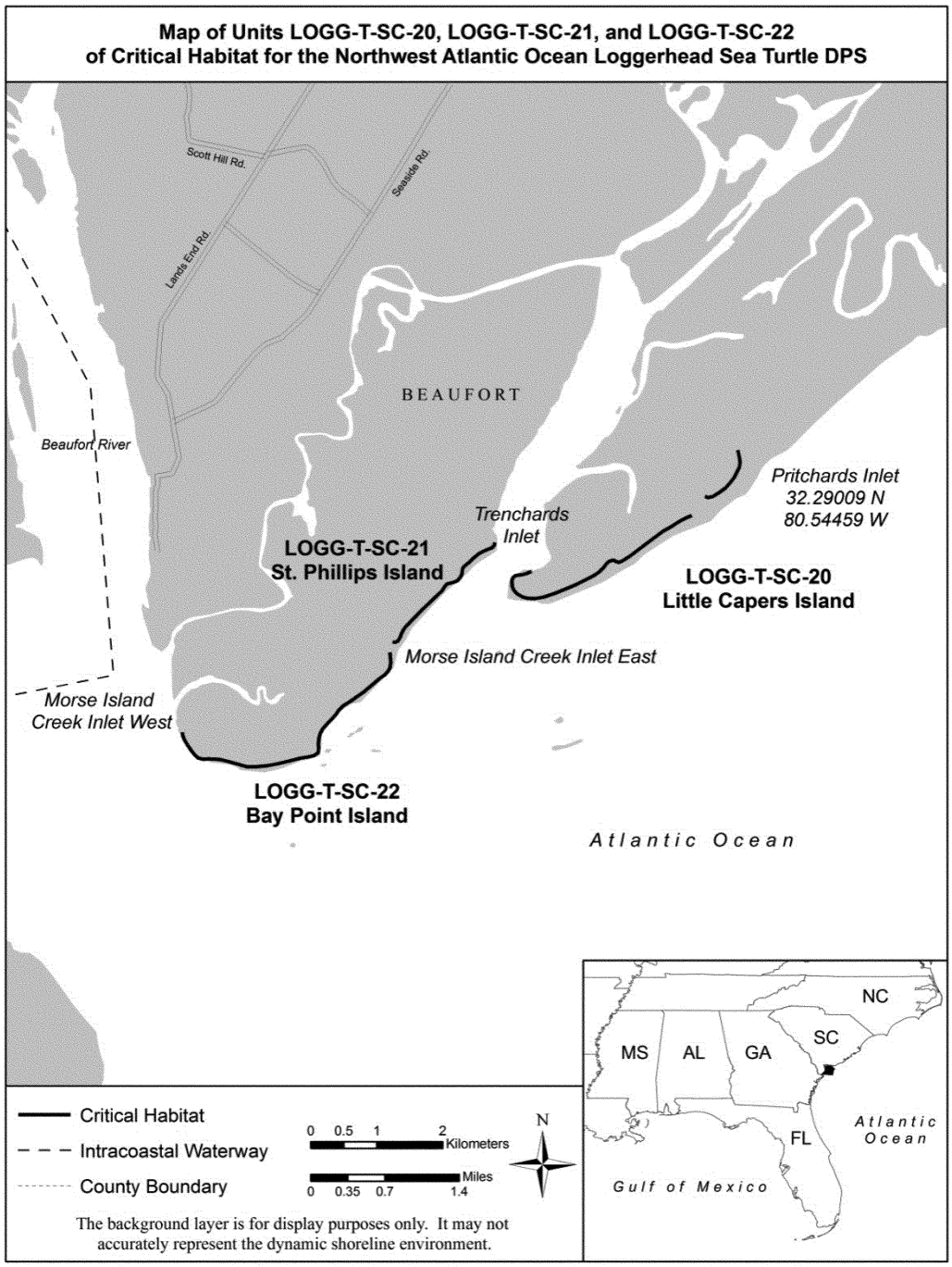
(A) LOGG–T–SC–20—Little Capers Island: This unit consists of 4.6 km (2.9 mi) of island shoreline along the Atlantic Ocean and extends from ''Pritchards Inlet'' (there is some uncertainty about the true name of this water feature) located at 32.29009 N, 80.54459 W to Trenchards Inlet.

(B) LOGG–T–SC–21—St. Phillips Island: This unit consists of 2.3 km (1.4 mi) of island shoreline along the Atlantic Ocean and Trenchards Inlet and extends from Trenchards Inlet to Morse Island Creek Inlet East.

(C) LOGG–T–SC–22—Bay Point Island: This unit consists of 4.3 km (2.7 mi) of island shoreline along the Atlantic Ocean and Port Royal Sound and extends from Morse Island Creek Inlet East along the Atlantic Ocean shoreline to Morse Island Creek Inlet

West along the Port Royal Sound shoreline.

(iii) Map of Units LOGG–T–SC–20, LOGG–T–SC–21, and LOGG–T–SC–22 follows:



(15)(i) Units:

(A) LOGG–T–GA–01—Little Tybee Island, Chatham County, Georgia.

(B) LOGG–T–GA–02—Wassaw Island, Chatham County, Georgia.

(C) LOGG–T–GA–03—Ossabaw Island, Chatham County, Georgia.

(D) LOGG–T–GA–04—St. Catherines Island, Liberty County, Georgia.

(ii) General descriptions of units:

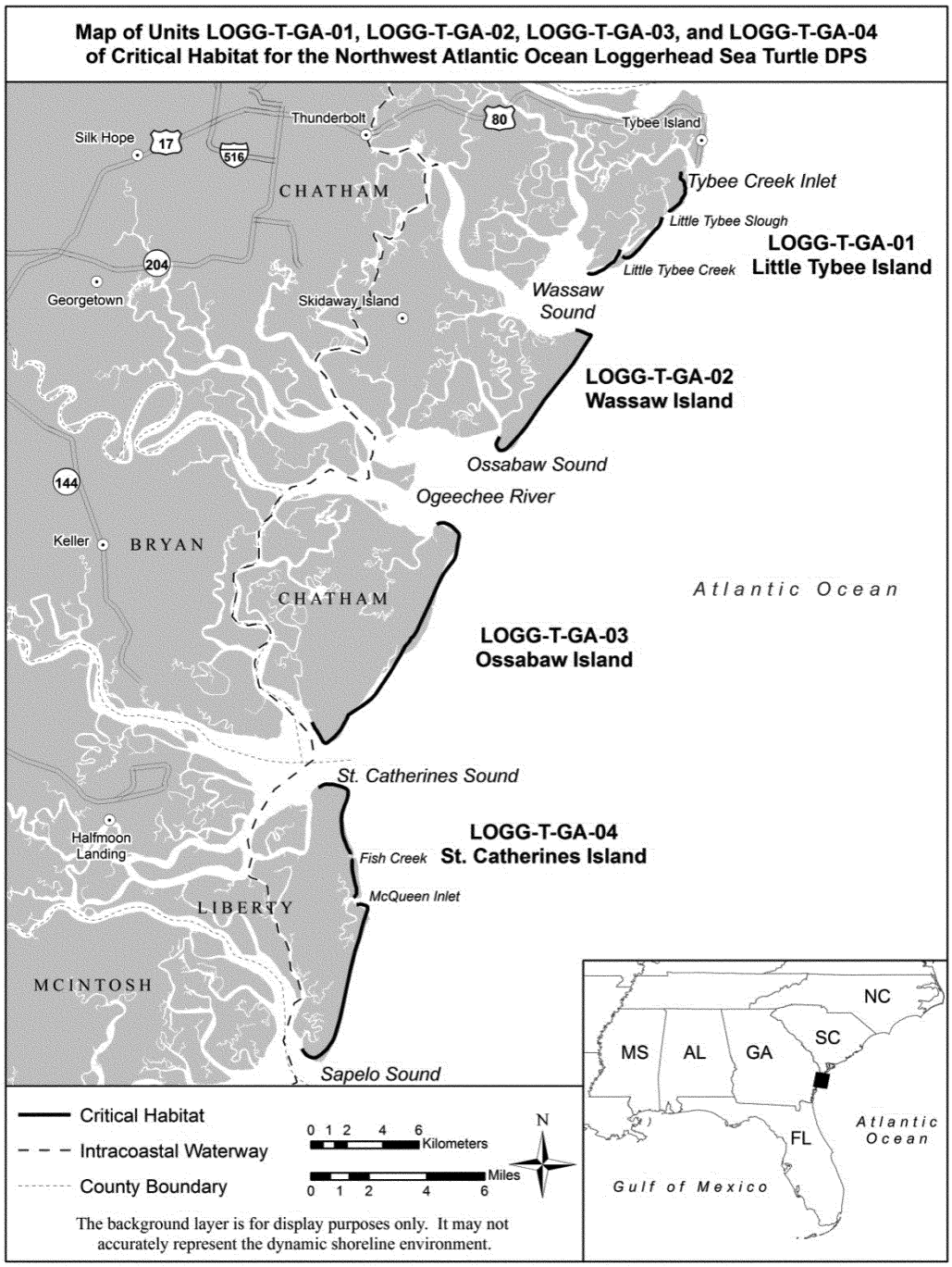
(A) LOGG–T–GA–01—Little Tybee Island: This unit consists of 8.6 km (5.3 mi) of island shoreline along the Atlantic Ocean and extends from Tybee Creek Inlet to Wassaw Sound.

(B) LOGG–T–GA–02—Wassaw Island: This unit consists of 10.1 km (6.3 mi) of island shoreline along the Atlantic Ocean and extends from Wassaw Sound to Ossabaw Sound.

(C) LOGG–T–GA–03—Ossabaw Island: This unit consists of 17.1 km (10.6 mi) of island shoreline along the Atlantic Ocean and extends from Ogeechee River to St. Catherines Sound.

(D) LOGG–T–GA–04—St. Catherines Island: This unit consists of 18.4 km (11.5 mi) of island shoreline along the Atlantic Ocean and extends from St. Catherines Sound to Sapelo Sound.

(iii) Map of Units LOGG–T–GA–01, LOGG–T–GA–02, LOGG–T–GA–03, and LOGG–T–GA–04 follows:



(16)(i) Units:

(A) LOGG–T–GA–05—Blackbeard Island, McIntosh County, Georgia.

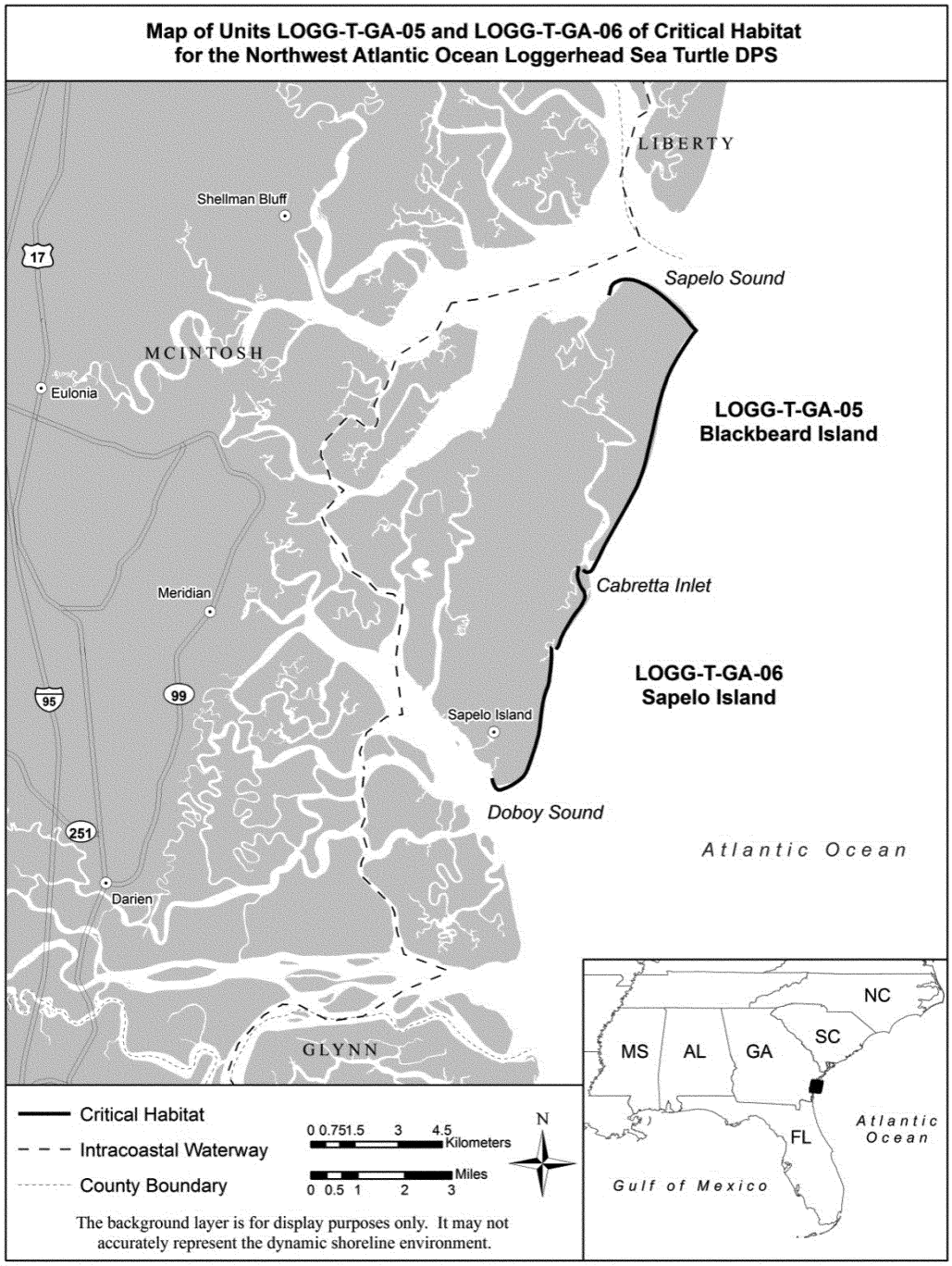
(B) LOGG–T–GA–06—Sapelo Island, McIntosh County, Georgia.

(ii) General descriptions of units:

(A) LOGG–T–GA–05—Blackbeard Island: This unit consists of 13.5 km (8.4 mi) of island shoreline along the Atlantic Ocean and extends from Sapelo Sound to Cabretta Inlet.

(B) LOGG–T–GA–06—Sapelo Island: This unit consists of 9.3 km (5.8 mi) of island shoreline along the Atlantic Ocean and extends from Cabretta Inlet to Doboy Sound.

(iii) Map of Units LOGG–T–GA–05 and LOGG–T–GA–06 follows:



(17)(i) Units:

(A) LOGG–T–GA–07—Little Cumberland Island, Camden County, Georgia.

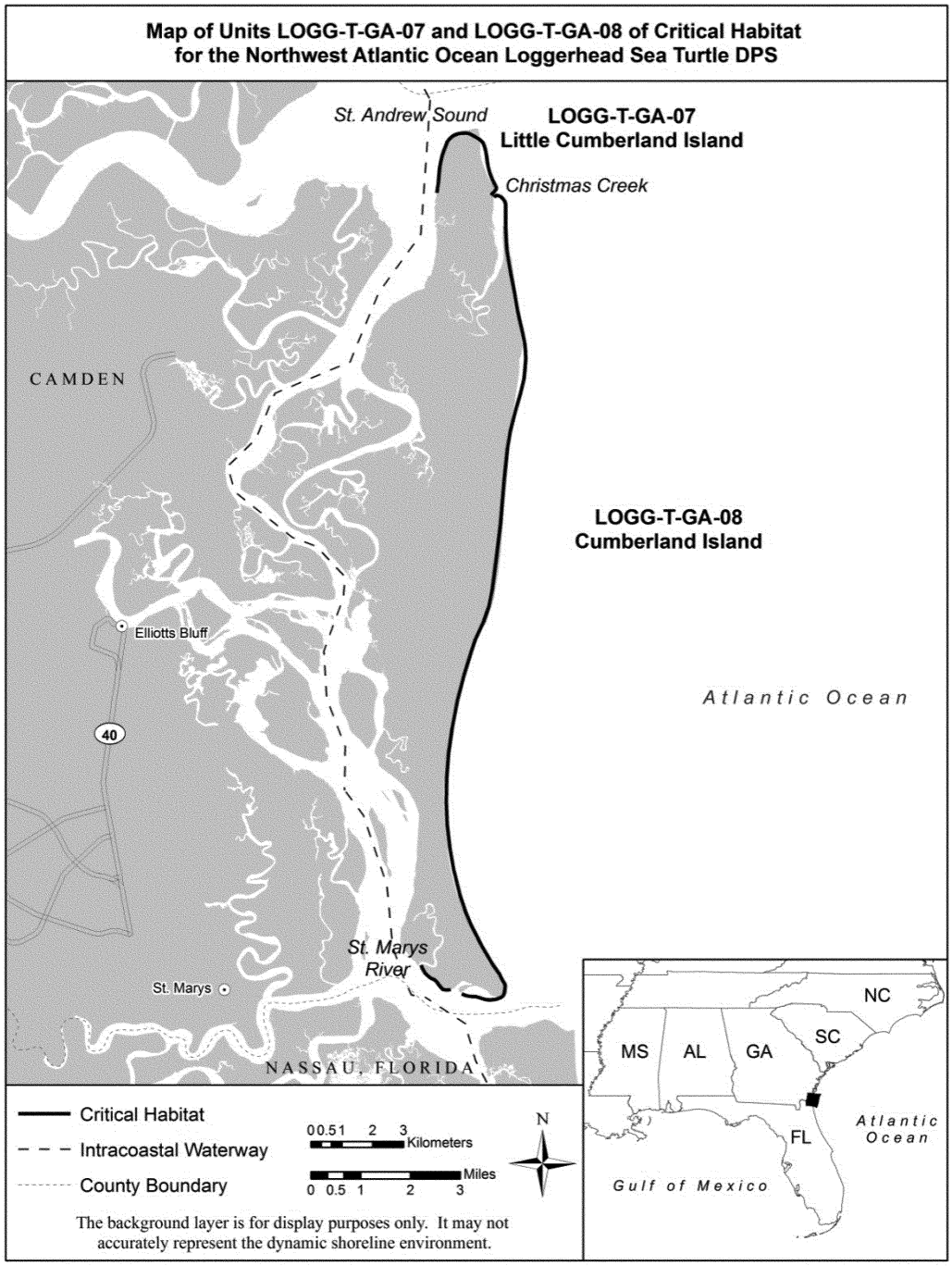
(B) LOGG–T–GA–08—Cumberland Island, Camden County, Georgia.

(ii) General descriptions of units:

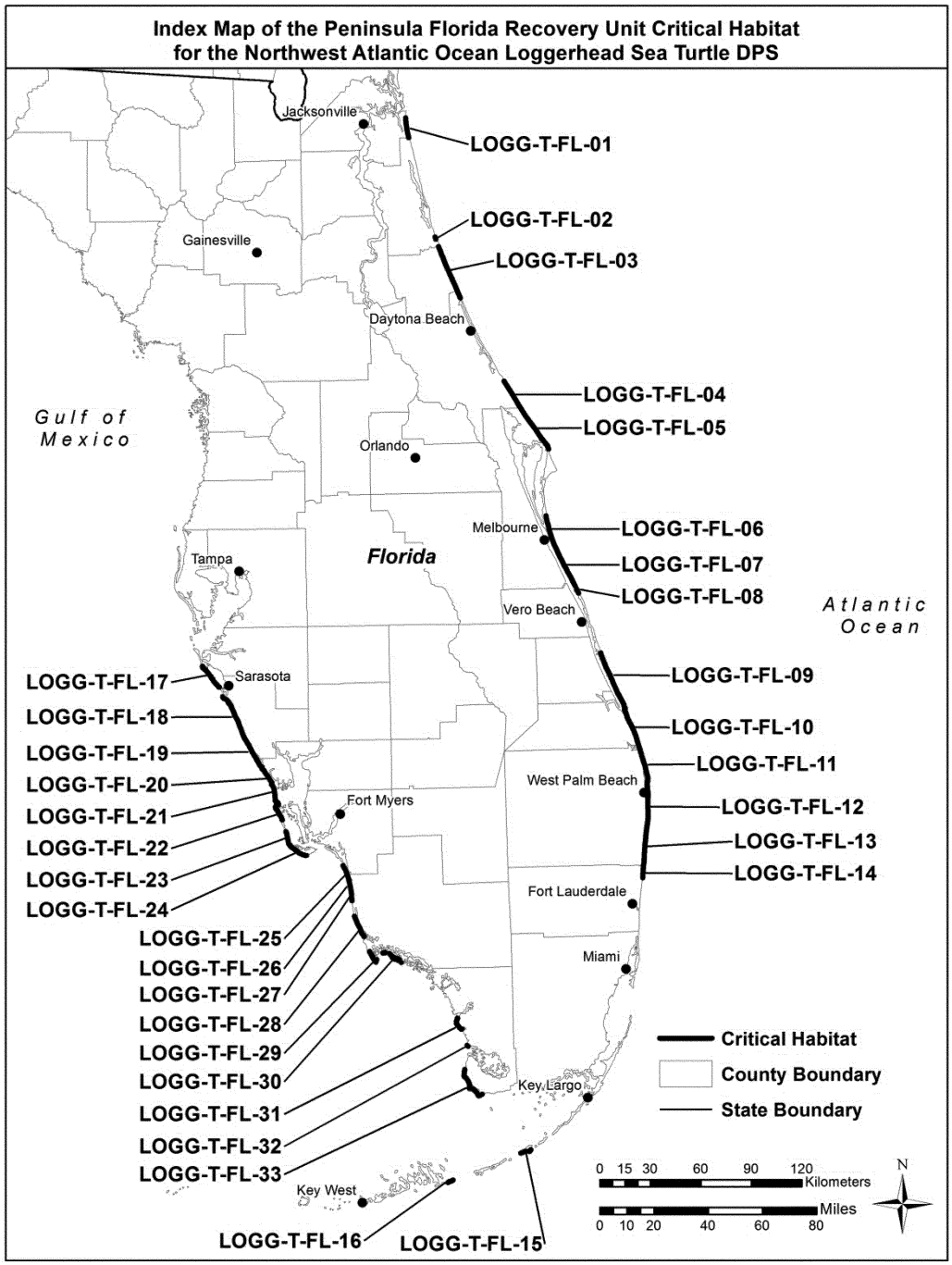
(A) LOGG–T–GA–07—Little Cumberland Island: This unit consists of 4.9 km (3.0 mi) of island shoreline along the Atlantic Ocean and extends from St. Andrew Sound to Christmas Creek.

(B) LOGG–T–GA–08—Cumberland Island: This unit consists of 29.7 km (18.4 mi) of island shoreline along the Atlantic Ocean and extends from Christmas Creek to St. Marys River.

(iii) Map of Units LOGG–T–GA–07 and LOGG–T–GA–08 follows:



(18) *Note:* Index map of critical habitat units in the Peninsular Florida Recovery Unit:



(19)(i) Units:

(A) LOGG–T–FL–01—South Duval County Beaches-Duval and St. Johns County line, Florida.

(B) LOGG–T–FL–02—Fort Matanzas National Monument, St. Johns County, Florida.

(C) LOGG–T–FL–03—River to Sea Preserve at Marineland-North Peninsula State Park, Flagler and Volusia Counties, Florida.

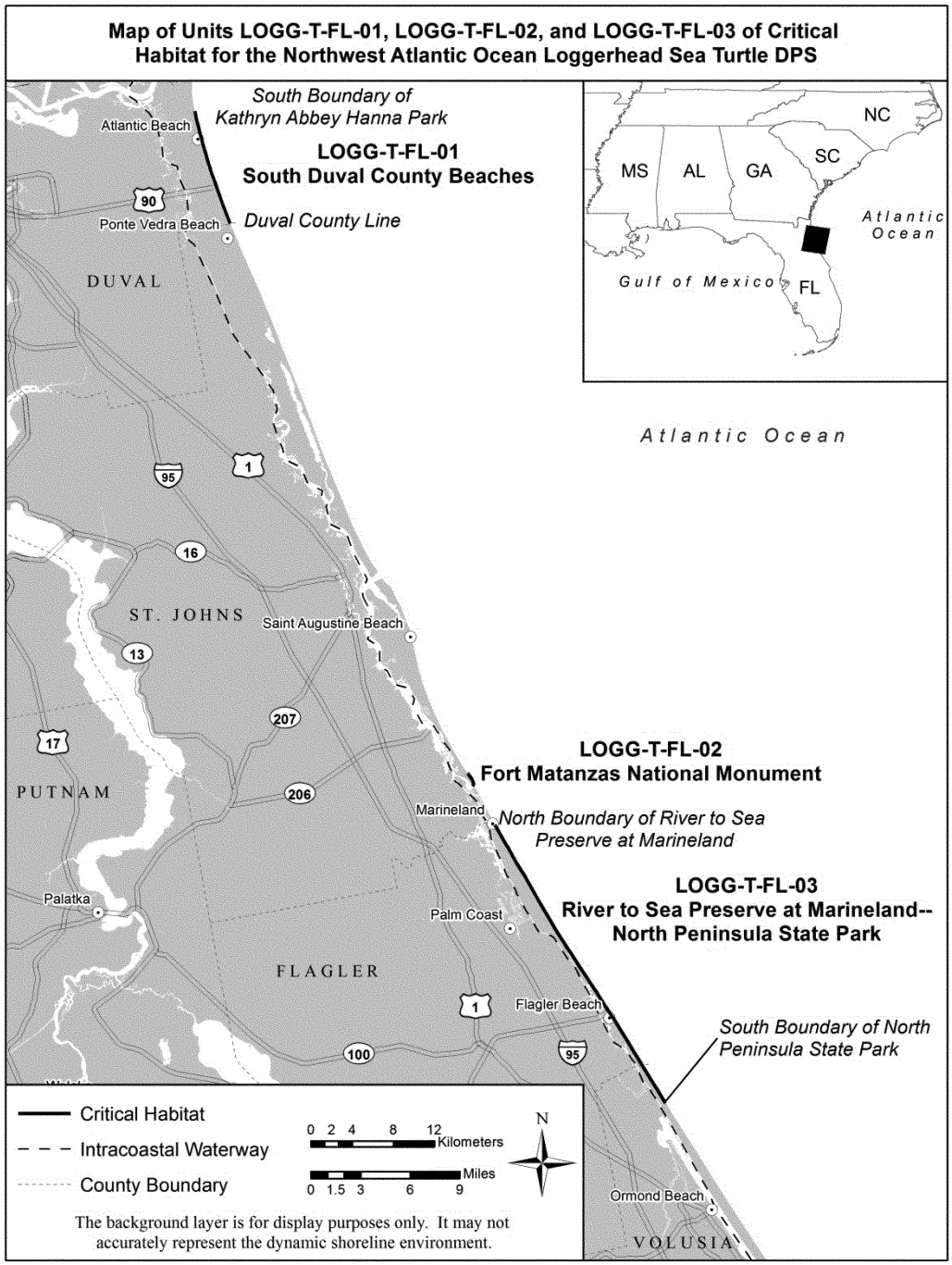
(ii) General descriptions of units:

(A) LOGG–T–FL–01—South Duval County Beaches-Duval and St. Johns County line: This unit consists of 11.5 km (7.1 mi) of island shoreline along the Atlantic Ocean and extends from the south boundary of Kathryn Abbey Hanna Park in Duval County to the boundary of the St. Johns County line.

(B) LOGG–T–FL–02—Fort Matanzas National Monument: This unit consists of 1.4 km (0.9 mi) of island shoreline along the Atlantic Ocean and includes the shoreline along Fort Matanzas National Monument in St. Johns County.

(C) LOGG–T–FL–03—River to Sea Preserve at Marineland-North Peninsula State Park: This unit consists of 31.8 km (19.8 mi) of island shoreline along the Atlantic Ocean and extends from the north boundary of the River to Sea Preserve at Marineland to the south boundary of North Peninsula State Park.

(iii) Map of Units LOGG–T–FL–01, LOGG–T–FL–02, and LOGG–T–FL–03 follows:



(20)(i) Units:

(A) LOGG–T–FL–04—Canaveral National Seashore North, Volusia County, Florida.

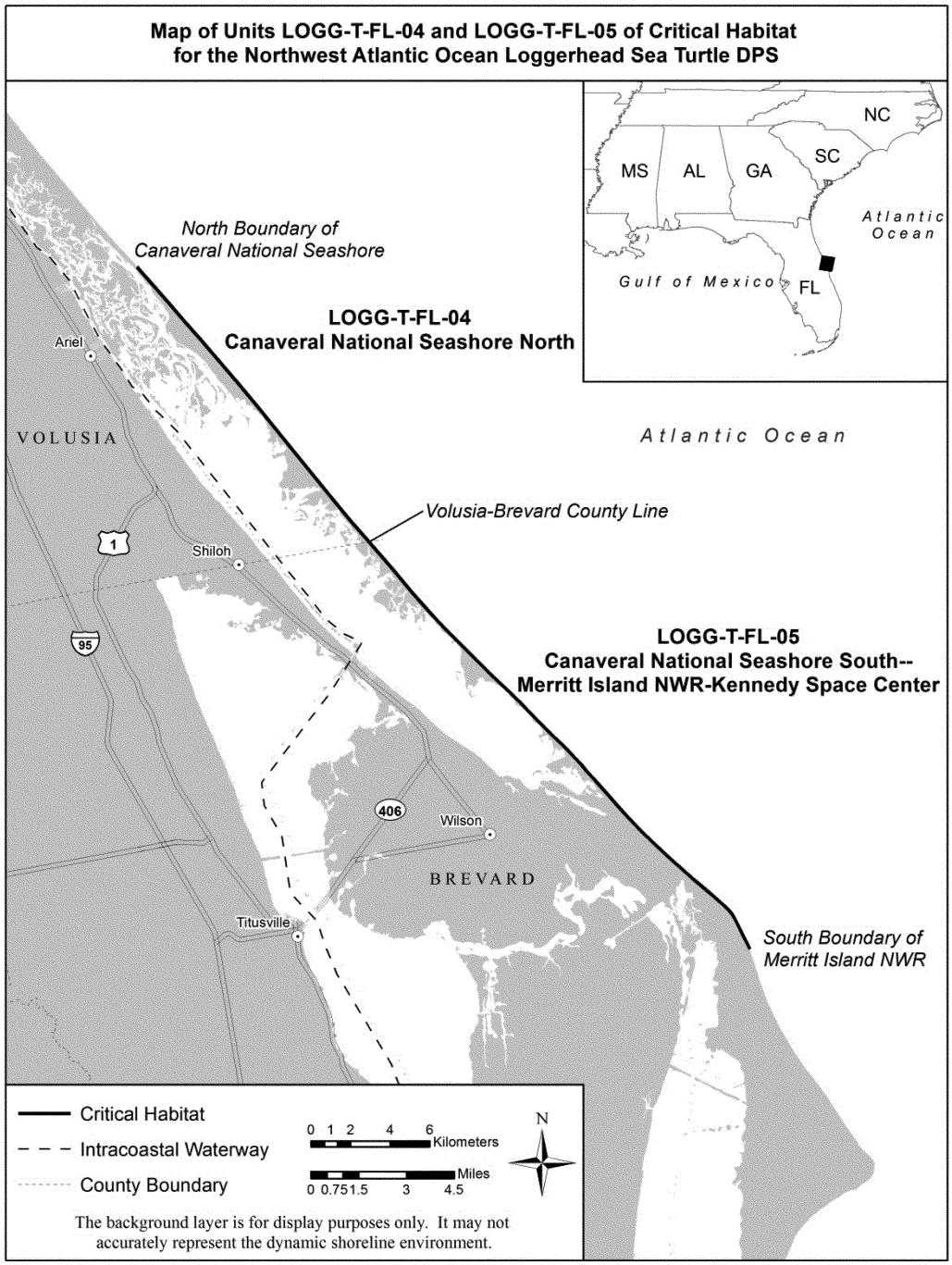
(B) LOGG–T–FL–05—Canaveral National Seashore South-Merritt Island NWR–Kennedy Space Center, Brevard County, Florida.

(ii) General descriptions of units:

(A) LOGG–T–FL–04—Canaveral National Seashore North: This unit consists of 18.2 km (11.3 mi) of island shoreline along the Atlantic Ocean and extends from the north boundary of Canaveral National Seashore to the Volusia-Brevard County line.

(B) LOGG–T–FL–05—Canaveral National Seashore South-Merritt Island NWR–Kennedy Space Center: This unit consists of 28.4 km (17.6 mi) of island shoreline along the Atlantic Ocean and extends from the Volusia-Brevard County line to the south boundary of Merritt Island NWR-Kennedy Space Center (Merritt Island NWR was established in 1963 as an overlay of the National Aeronautics and Space Administration's (NASA) John F. Kennedy Space Center).

(iii) Map of Units LOGG–T–FL–04 and LOGG–T–FL–05 follows:



(21)(i) Units:

(A) LOGG–T–FL–06—Central Brevard Beaches, Brevard County, Florida.

(B) LOGG–T–FL–07—South Brevard Beaches, Brevard County, Florida.

(C) LOGG–T–FL–08—Sebastian Inlet State Park-Archie Carr NWR South, Indian River County, Florida.

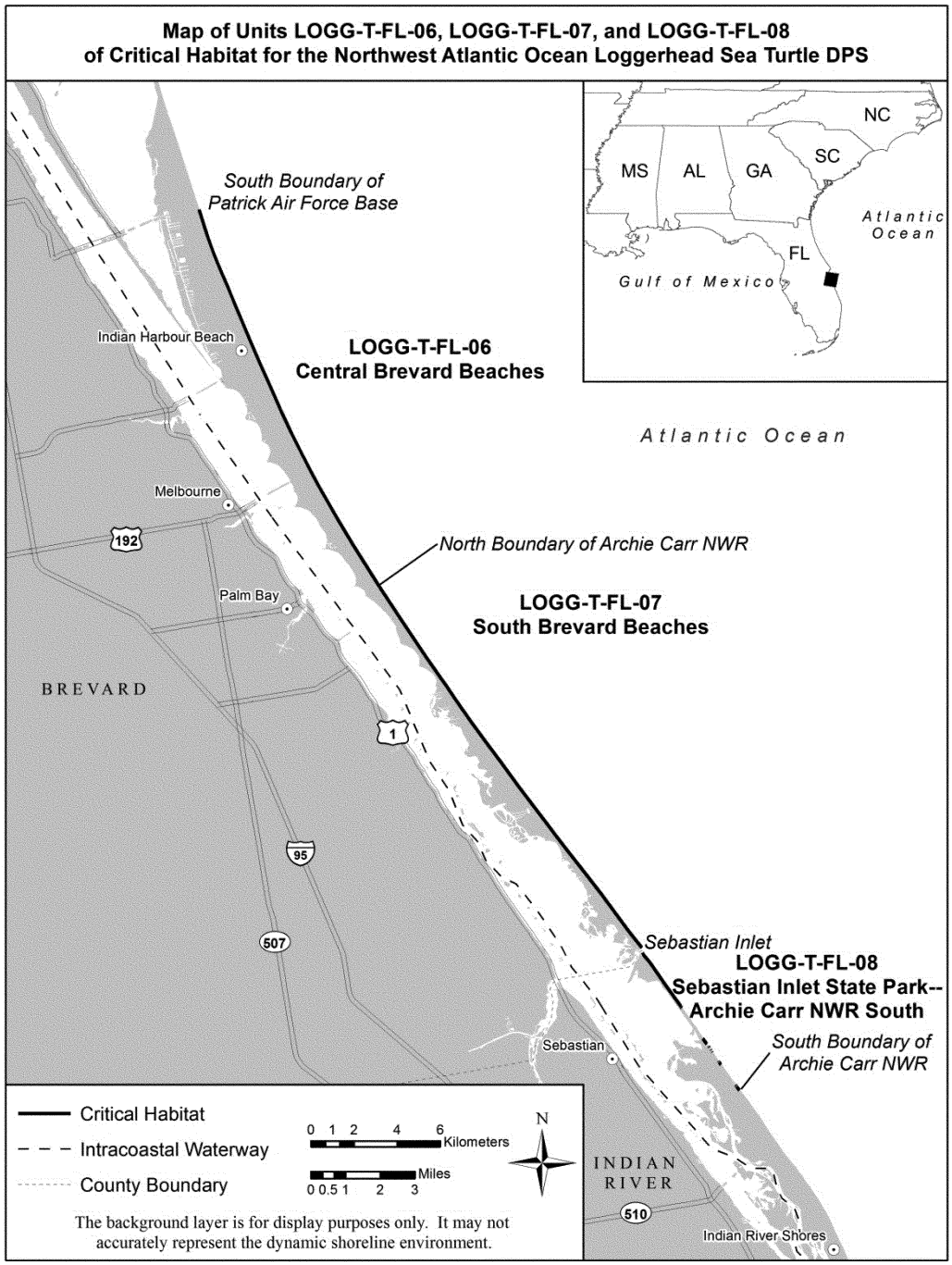
(ii) General descriptions of units:

(A) LOGG–T–FL–06—Central Brevard Beaches: This unit consists of 19.5 km (12.1 mi) of island shoreline along the Atlantic Ocean and extends from the south boundary of Patrick Air Force Base to the north boundary of Archie Carr National Wildlife Refuge (NWR).

(B) LOGG–T–FL–07—South Brevard Beaches: This unit consists of 20.8 km (12.9 mi) of island shoreline along the Atlantic Ocean and extends from the north boundary of Archie Carr NWR to Sebastian Inlet.

(C) LOGG–T–FL–08—Sebastian Inlet State Park-Archie Carr NWR South: This unit consists of 4.1 km (2.6 mi) of island shoreline along the Atlantic Ocean and extends from Sebastian Inlet State Park and parcels within the Archie Carr NWR.

(iii) Map of Units LOGG–T–FL–06, LOGG–T–FL–07, and LOGG–T–FL–08 follows:



(22)(i) Units:

(A) LOGG–T–FL–09—Fort Pierce Inlet–St. Lucie Inlet, St. Lucie and Martin Counties, Florida.

(B) LOGG–T–FL–10—St. Lucie Inlet-Jupiter Inlet, Martin and Palm Beach Counties, Florida.

(C) LOGG–T–FL–11—Jupiter Inlet-Lake Worth Inlet, Palm Beach County, Florida.

(D) LOGG–T–FL–12—Lake Worth Inlet-Boynton Inlet, Palm Beach County, Florida.

(E) LOGG–T–FL–13—Boynton Inlet-Boca Raton Inlet, Palm Beach County, Florida.

(F) LOGG–T–FL–14—Boca Raton Inlet-Hillsboro Inlet, Palm Beach and Broward Counties, Florida.

(ii) General descriptions of units:

(A) LOGG–T–FL–09—Fort Pierce Inlet-St. Lucie Inlet: This unit consists of 35.2 km (21.9 mi) of island shoreline along the Atlantic Ocean and extends from Fort Pierce Inlet to St. Lucie Inlet.

(B) LOGG–T–FL–10—St. Lucie Inlet-Jupiter Inlet: This unit consists of 24.9 km (15.5 mi) of island shoreline along the Atlantic Ocean and extends from St. Lucie Inlet to Jupiter Inlet.

(C) LOGG–T–FL–11—Jupiter Inlet-Lake Worth Inlet: This unit consists of 18.8 km (11.7 mi) of island shoreline along the Atlantic Ocean and extends from Jupiter Inlet to Lake Worth Inlet.

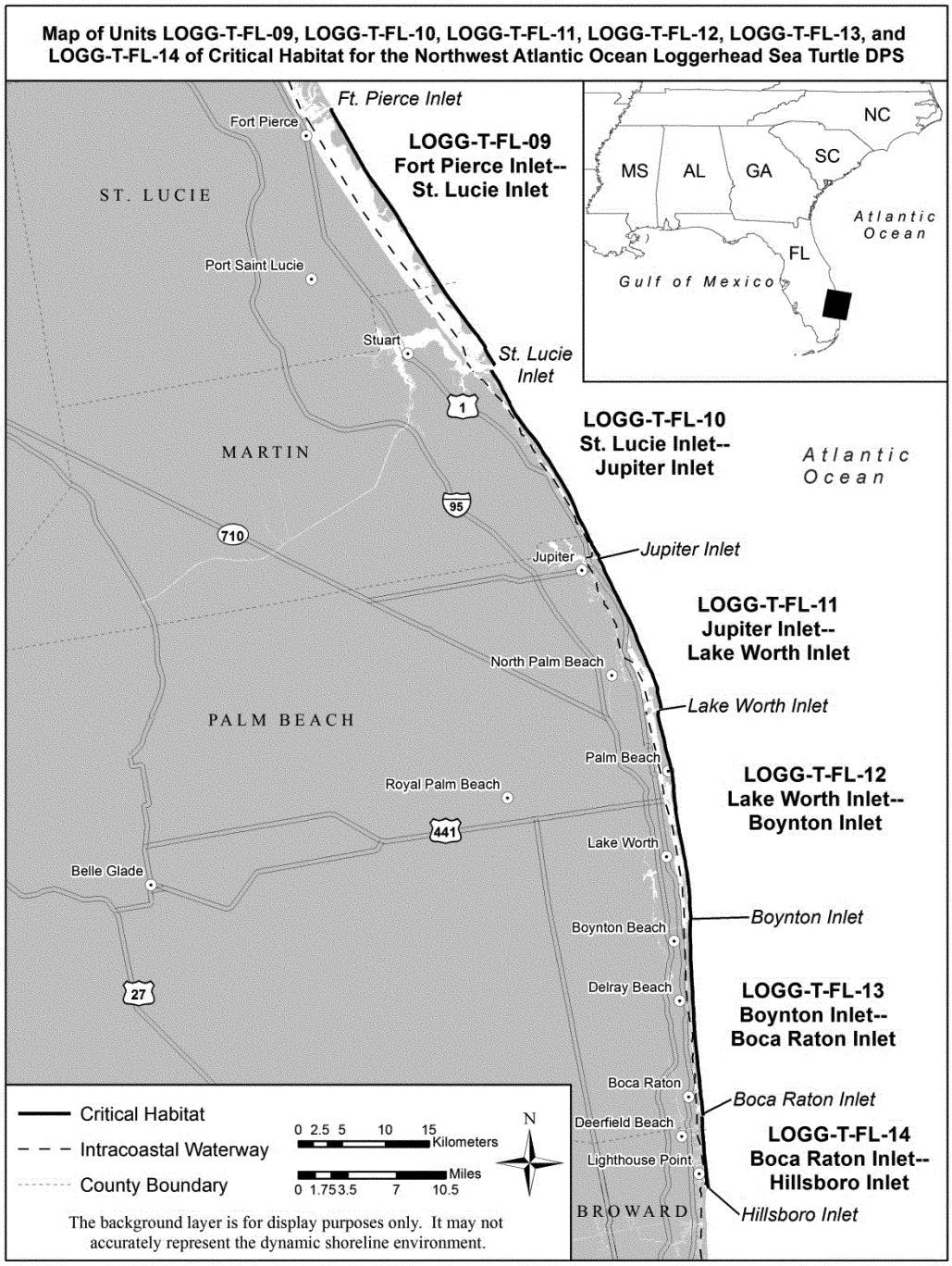
(D) LOGG–T–FL–12—Lake Worth Inlet-Boynton Inlet: This unit consists of 24.3 km (15.1 mi) of island shoreline along the Atlantic Ocean and extends from Lake Worth Inlet to Boynton Inlet.

(E) LOGG–T–FL–13—Boynton Inlet-Boca Raton Inlet: This unit consists of 22.6 km (14.1 mi) of island shoreline

along the Atlantic Ocean and extends from Boynton Inlet to Boca Raton Inlet.

(F) LOGG–T–FL–14—Boca Raton Inlet–Hillsboro Inlet: This unit consists of 8.3 km (5.2 mi) of island shoreline along the Atlantic Ocean and extends from Boca Raton Inlet to Hillsboro Inlet.

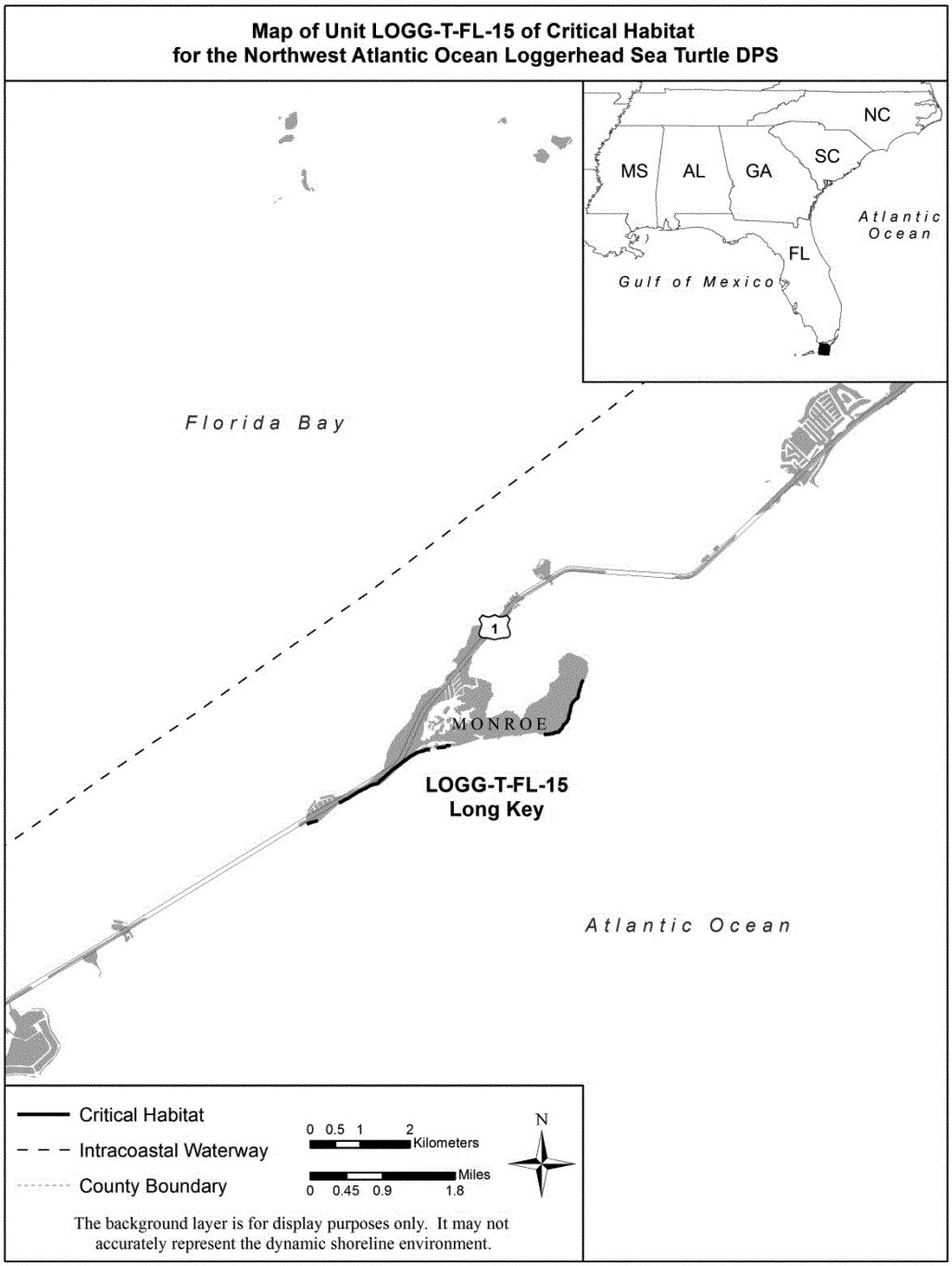
(iii) Map of Units LOGG–T–FL–09, LOGG–T–FL–10, LOGG–T–FL–11, LOGG–T–FL–12, LOGG–T–FL–13, and LOGG–T–FL–14 follows:



(23) Unit LOGG–T–FL–15—Long Key, Monroe County, Florida.

(i) *General description:* This unit consists of 4.2 km (2.6 mi) of island shoreline along the Atlantic Ocean and extends from the natural channel between Fiesta Key and Long Key to the natural channel between Long Key and Conch Key.

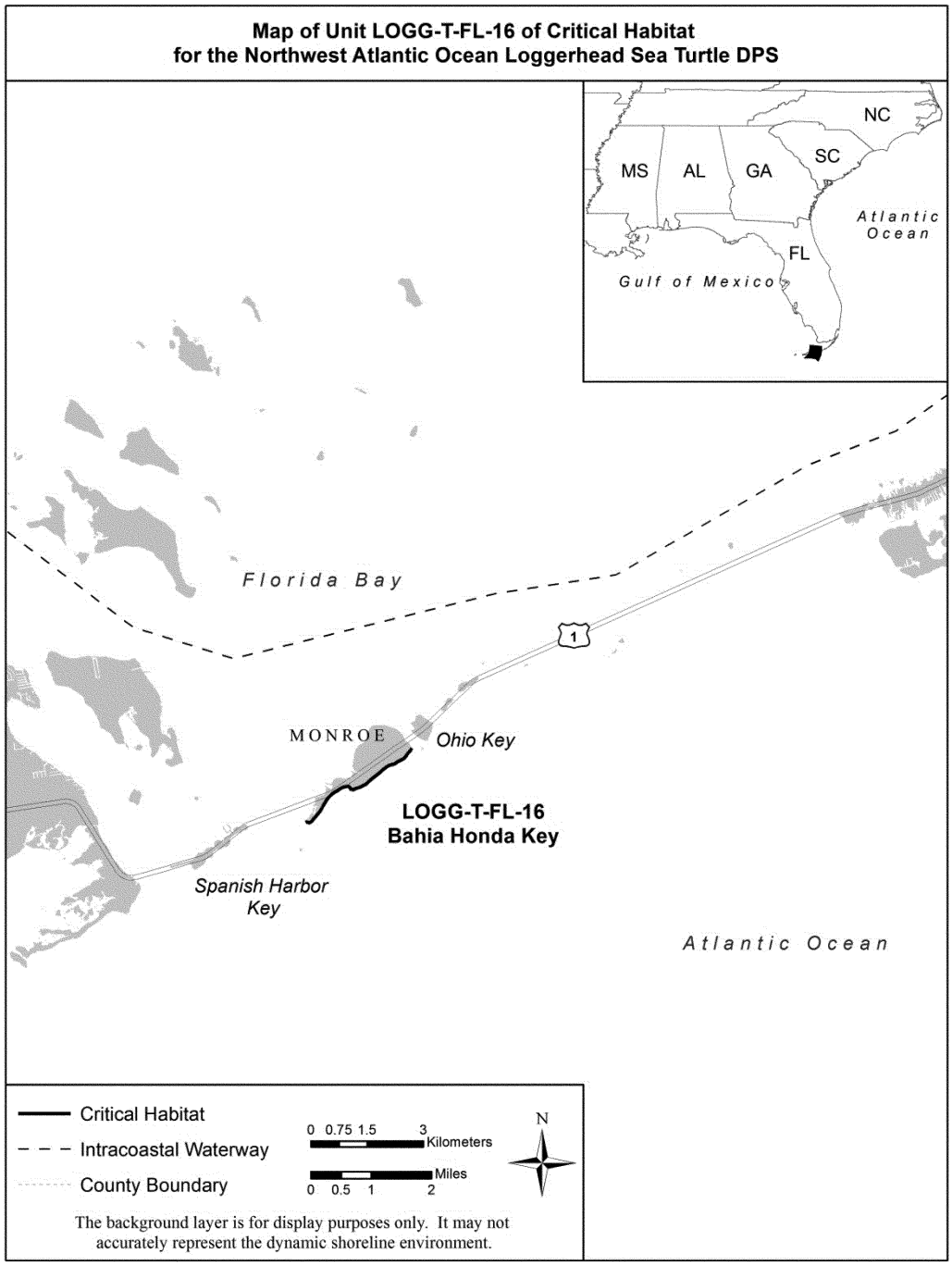
(ii) Map of Unit LOGG–T–FL–15 follows:



(24) Unit LOGG–T–FL–16—Bahia Honda Key, Monroe County, Florida.

(i) *General description:* This unit consists of 3.7 km (2.3 mi) of island shoreline along the Atlantic Ocean and extends from the natural channel between Ohio Key and Bahia Honda Key to the natural channel between Bahia Honda Key and Spanish Harbor Key.

(ii) Map of Unit LOGG–T–FL–16 follows:



(25)(i) Units:

(A) LOGG–T–FL–17—Longboat Key, Manatee and Sarasota Counties, Florida.

(B) LOGG–T–FL–18—Siesta and Casey Keys, Sarasota County, Florida.

(C) LOGG–T–FL–19—Venice Beaches and Manasota Key, Sarasota and Charlotte Counties, Florida.

(D) LOGG–T–FL–20—Knight, Don Pedro, and Little Gasparilla Islands, Charlotte County, Florida.

(ii) General descriptions of units:

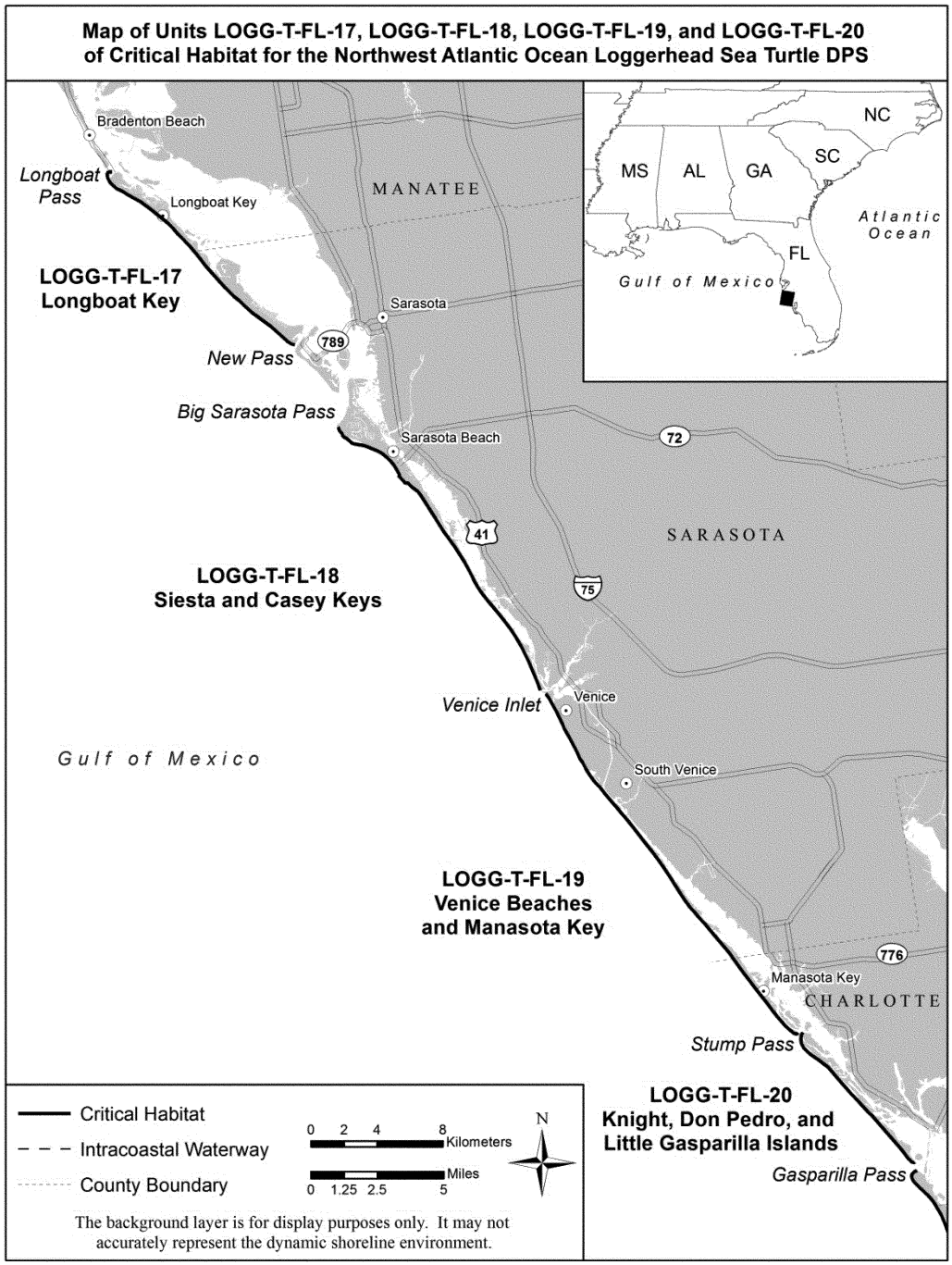
(A) LOGG–T–FL–17—Longboat Key: This unit consists of 16.0 km (9.9 mi) of island shoreline along the Gulf of Mexico and extends from Longboat Pass to New Pass.

(B) LOGG–T–FL–18—Siesta and Casey Keys: This unit consists of 20.8 km (13.0 mi) of island shoreline along the Gulf of Mexico and extends from Big Sarasota Pass to Venice Inlet.

(C) LOGG–T–FL–19—Venice Beaches and Manasota Key: This unit consists of 26.0 km (16.1 mi) of island shoreline along the Gulf of Mexico and extends from Venice Inlet to Stump Pass.

(D) LOGG–T–FL–20—Knight, Don Pedro, and Little Gasparilla Islands: This unit consists of 10.8 km (6.7 mi) of island shoreline along the Gulf of Mexico and extends from Stump Pass to Gasparilla Pass.

(iii) Map of Units LOGG–T–FL–17, LOGG–T–FL–18, LOGG–T–FL–19, and LOGG–T–FL–20 follows:



(26)(i) Units:

(A) LOGG–T–FL–21—Gasparilla Island, Charlotte and Lee Counties, Florida.

(B) LOGG–T–FL–22—Cayo Costa, Lee County, Florida.

(C) LOGG–T–FL–23—Captiva Island, Lee County, Florida.

(D) LOGG–T–FL–24—Sanibel Island West, Lee County, Florida.

(ii) General descriptions of units:

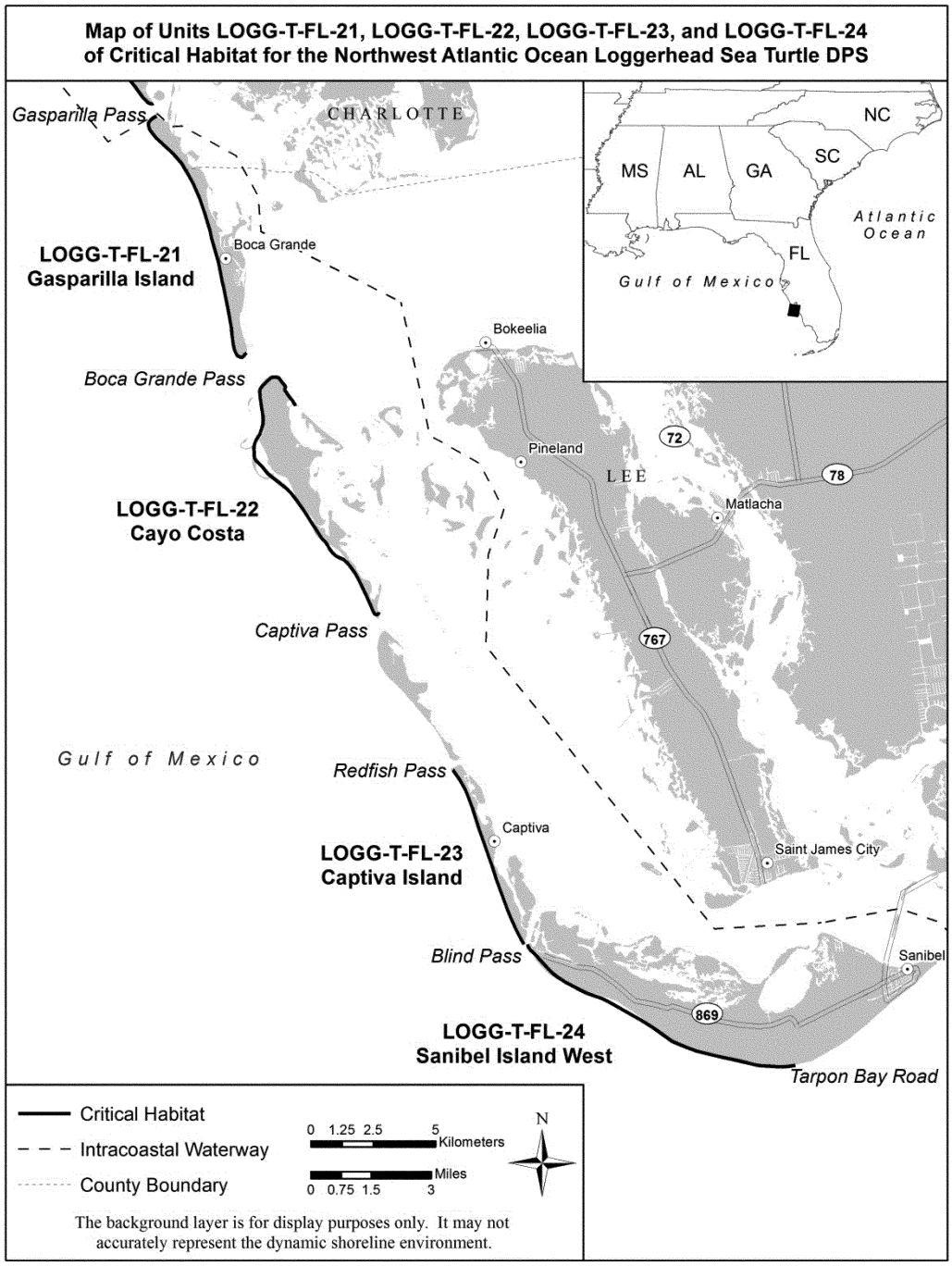
(A) LOGG–T–FL–21—Gasparilla Island: This unit consists of 11.2 km (6.9 mi) of island shoreline along the Gulf of Mexico and extends from Gasparilla Pass to Boca Grande Pass.

(B) LOGG–T–FL–22—Cayo Costa: This unit consists of 13.5 km (8.4 mi) of island shoreline along the Gulf of Mexico and extends from Boca Grande Pass to Captiva Pass.

(C) LOGG–T–FL–23—Captiva Island: This unit consists of 7.6 km (4.7 mi) of island shoreline along the Gulf of Mexico and extends from Redfish Pass to Blind Pass.

(D) LOGG–T–FL–24—Sanibel Island West: This unit consists of 12.2 km (7.6 mi) of island shoreline along the Gulf of Mexico and extends from Blind Pass to Tarpon Bay Road.

(iii) Map of Units LOGG–T–FL–21, LOGG–T–FL–22, LOGG–T–FL–23, and LOGG–T–FL–24 follows:



(27)(i) Units:

(A) LOGG–T–FL–25—Little Hickory Island, Lee and Collier Counties, Florida.

(B) LOGG–T–FL–26—Wiggins Pass-Clam Pass, Collier County, Florida.

(C) LOGG–T–FL–27—Clam Pass-Doctors Pass, Collier County, Florida.

(D) LOGG–T–FL–28—Keewaydin Island and Sea Oat Island, Collier County, Florida.

(ii) General descriptions of units:

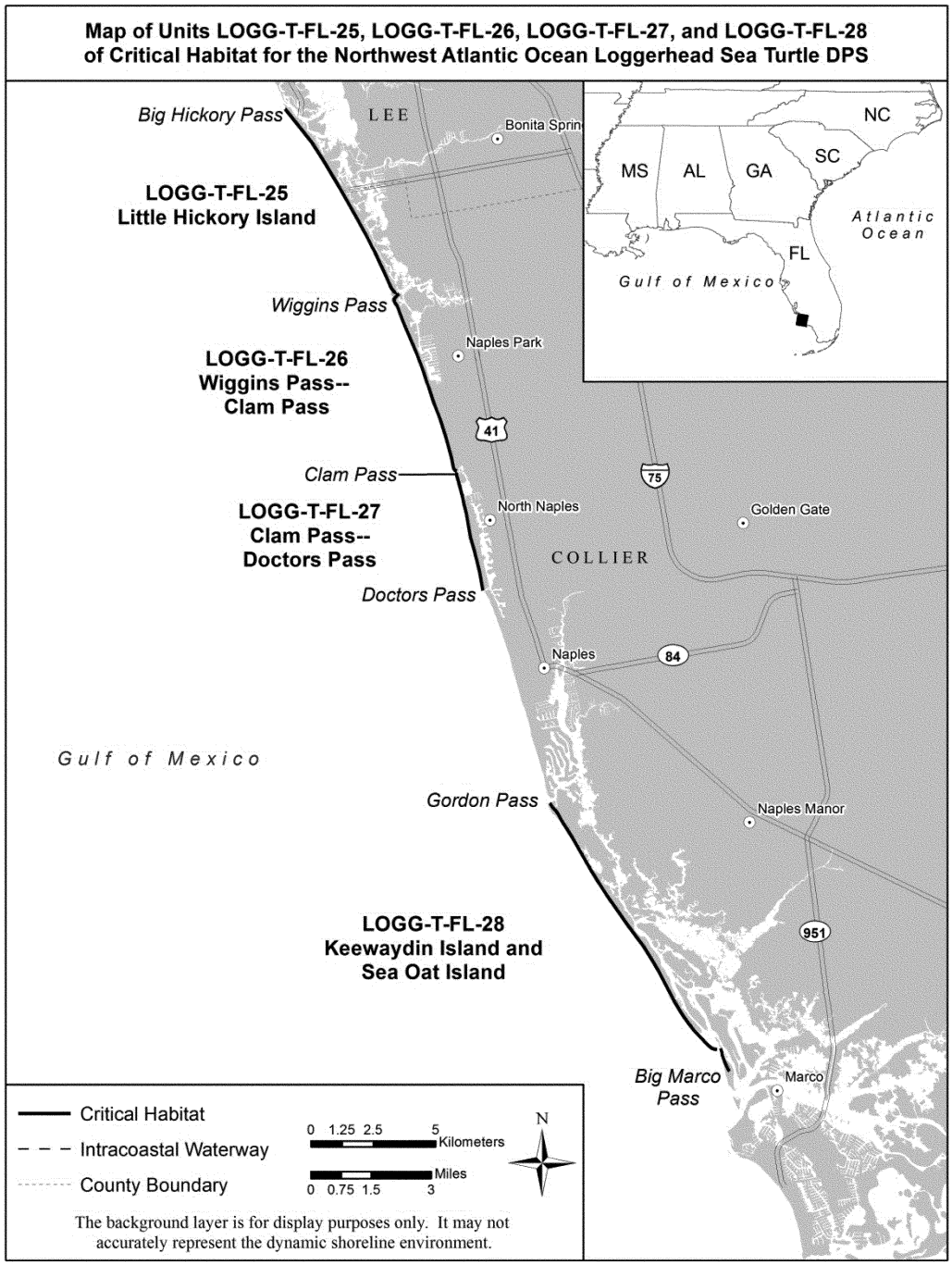
(A) LOGG–T–FL–25—Little Hickory Island: This unit consists of 8.7 km (5.4 mi) of island shoreline along the Gulf of Mexico and extends from Big Hickory Pass to Wiggins Pass.

(B) LOGG–T–FL–26—Wiggins Pass-Clam Pass: This unit consists of 7.7 km (4.8 mi) of mainland shoreline along the Gulf of Mexico and extends from Wiggins Pass to Clam Pass.

(C) LOGG–T–FL–27—Clam Pass-Doctors Pass: This unit consists of 4.9 km (3.0 mi) of island shoreline along the Gulf of Mexico and extends from Clam Pass to Doctors Pass.

(D) LOGG–T–FL–28—Keewaydin Island and Sea Oat Island: This unit consists of 13.1 km (8.1 mi) of island shoreline along the Gulf of Mexico and extends from Gordon Pass to Big Marco Pass.

(iii) Map of Units LOGG–T–FL–25, LOGG–T–FL–26, LOGG–T–FL–27, and LOGG–T–FL–28 follows:



(28)(i) Units:

(A) LOGG–T–FL–29—Cape Romano, Collier County, Florida.

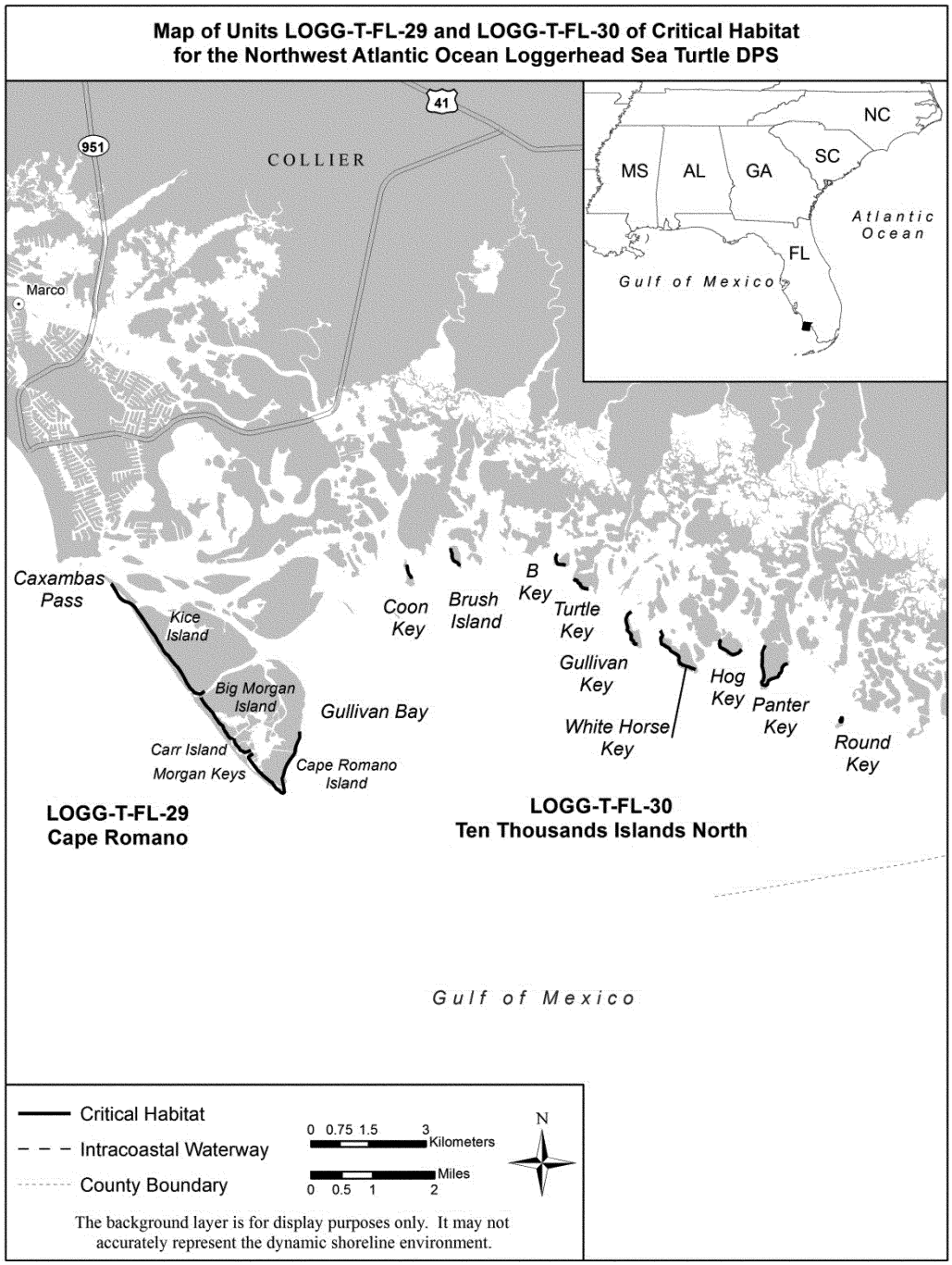
(B) LOGG–T–FL–30—Ten Thousand Islands North, Collier County, Florida.

(ii) General descriptions of units:

(A) LOGG–T–FL–29—Cape Romano: This unit consists of 9.2 km (5.7 mi) of island shoreline along the Gulf of Mexico and Gullivan Bay and extends from Caxambas Pass to Gullivan Bay.

(B) LOGG–T–FL–30—Ten Thousand Islands North: This unit consists of 7.8 km (4.9 mi) of island shoreline along the Gulf of Mexico and within Gullivan Bay.

(iii) Map of Units LOGG–T–FL–29 and LOGG–T–FL–30 follows:



(29)(i) Units:

(A) LOGG–T–FL–31—Highland Beach, Monroe County, Florida.

(B) LOGG–T–FL–32—Graveyard Creek-Shark Point, Monroe County, Florida.

(C) LOGG–T–FL–33—Cape Sable, Monroe County, Florida.

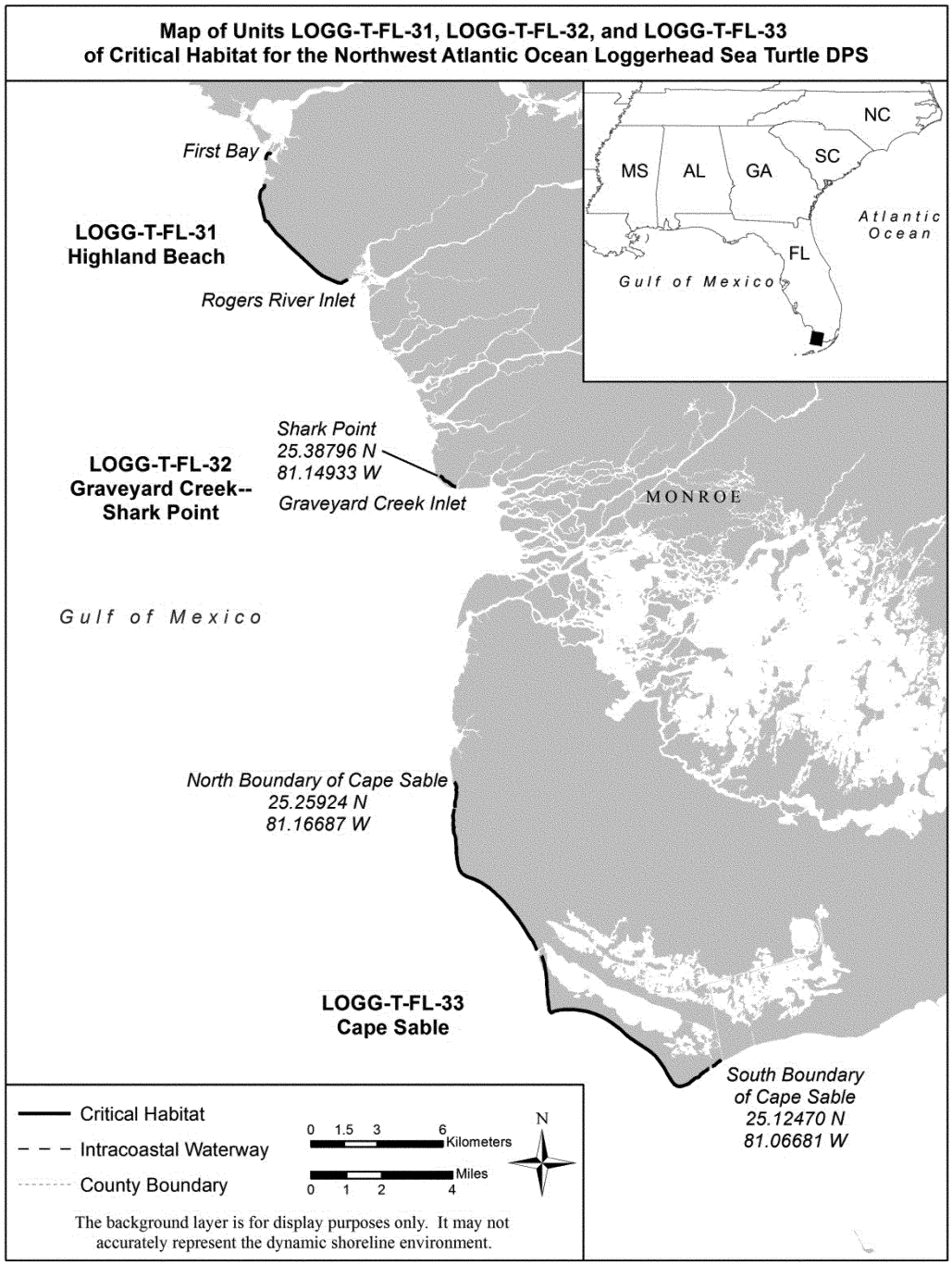
(ii) General descriptions of units:

(A) LOGG–T–FL–31—Highland Beach: This unit consists of 7.2 km (4.5 mi) of island (Key McLaughlin) shoreline along the Gulf of Mexico and extends from First Bay to Rogers River Inlet.

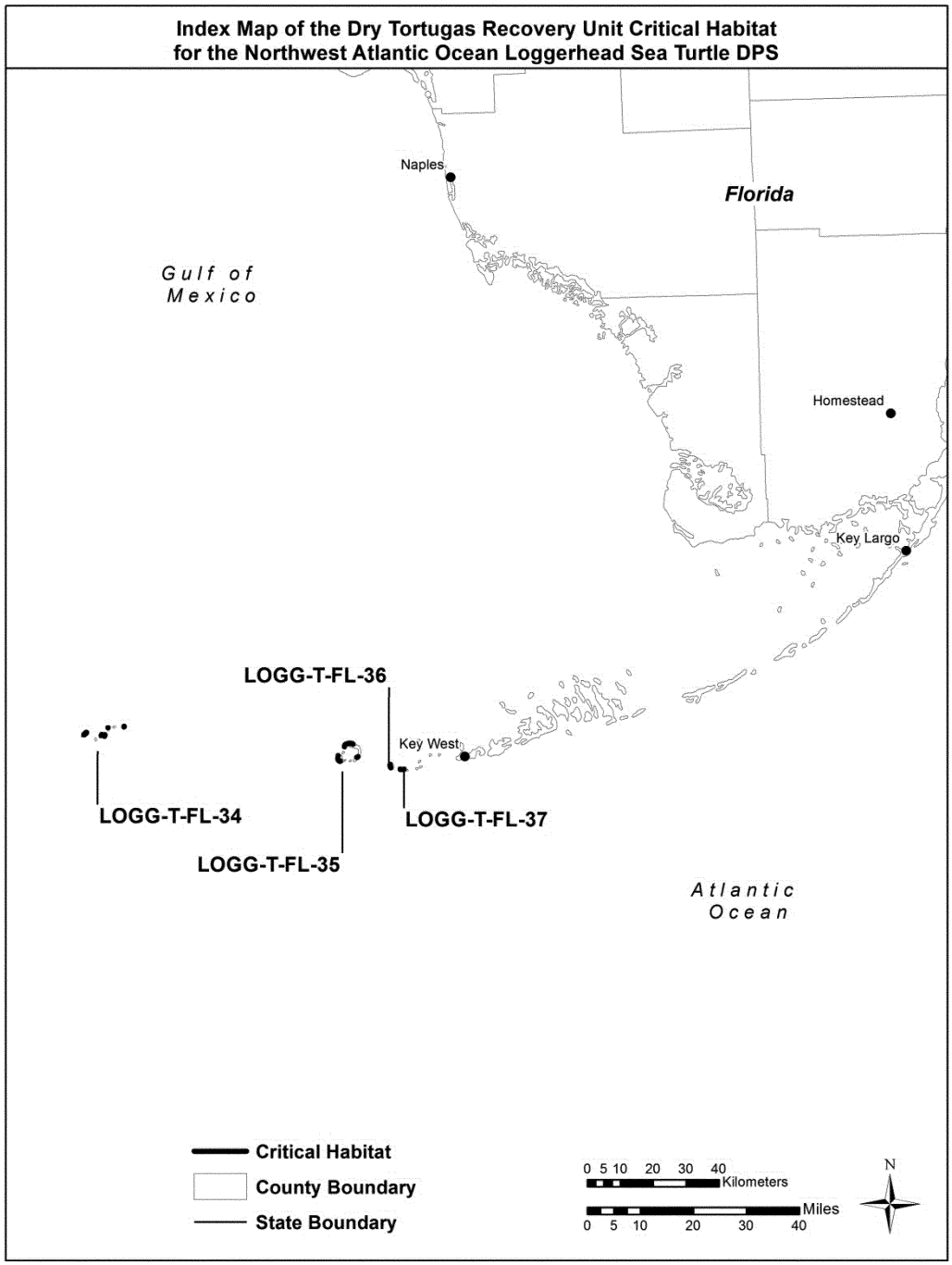
(B) LOGG–T–FL–32—Graveyard Creek-Shark Point: This unit consists of 0.9 km (0.6 mi) of mainland shoreline along the Gulf of Mexico and extends from Shark Point (25.38796 N, 81.14933 W) to Graveyard Creek Inlet.

(C) LOGG–T–FL–33—Cape Sable: This unit consists of 21.3 km (13.2 mi) of mainland shoreline along the Gulf of Mexico and extends from the north boundary of Cape Sable at 25.25924 N, 81.16687 W to the south boundary of Cape Sable at 25.12470 N, 81.06681 W.

(iii) Map of Units LOGG–T–FL–31, LOGG–T–FL–32, and LOGG–T–FL–33 follows:



(30) *Note:* Index map of critical habitat units in the Dry Tortugas Recovery Unit:



(31)(i) Units:

(A) LOGG–T–FL–34—Dry Tortugas, Monroe County, Florida.

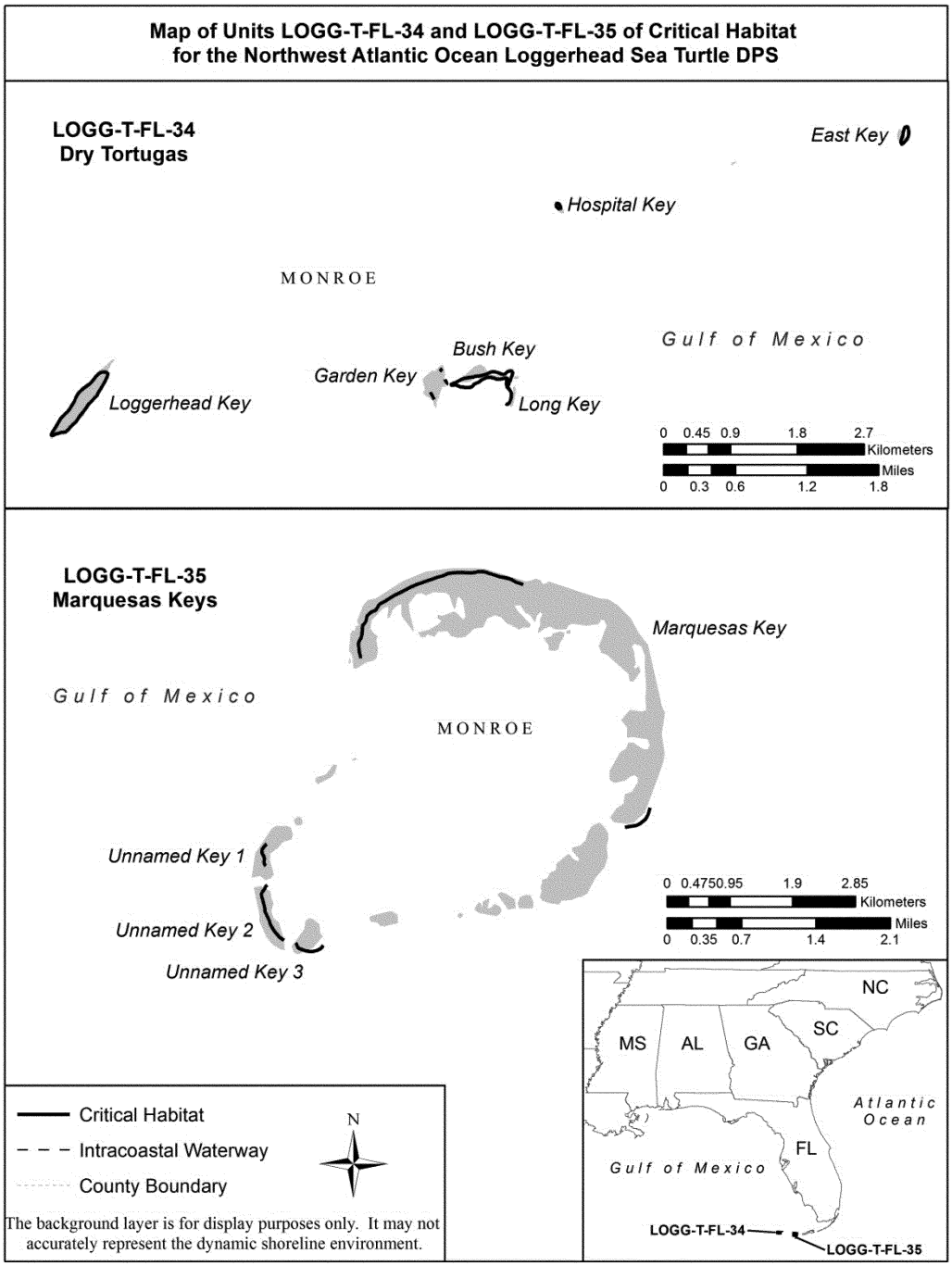
(B) LOGG–T–FL–35—Marquesas Keys, Monroe County, Florida.

(ii) General descriptions of units:

(A) LOGG–T–FL–34—Dry Tortugas: This unit consists of 5.7 km (3.6 mi) of shoreline along the Gulf of Mexico and consists of Loggerhead Key, Garden Key, Bush Key, Long Key, Hospital Key, and East Key located in the Dry Tortugas about 108 km (67 mi) west of Key West.

(B) LOGG–T–FL–35—Marquesas Keys: This unit consists of 5.6 km (3.5 mi) of shoreline along the Gulf of Mexico and consists of Marquesas Key, Unnamed Key 1, Unnamed Key 2, and Unnamed Key 3 located about 29.3 km (18.2 mi) west of Key West.

(iii) Map of Units LOGG–T–FL–34 and LOGG–T–FL–35 follows:



(32)(i) Units:

(A) LOGG–T–FL–36—Boca Grande Key, Monroe County, Florida.

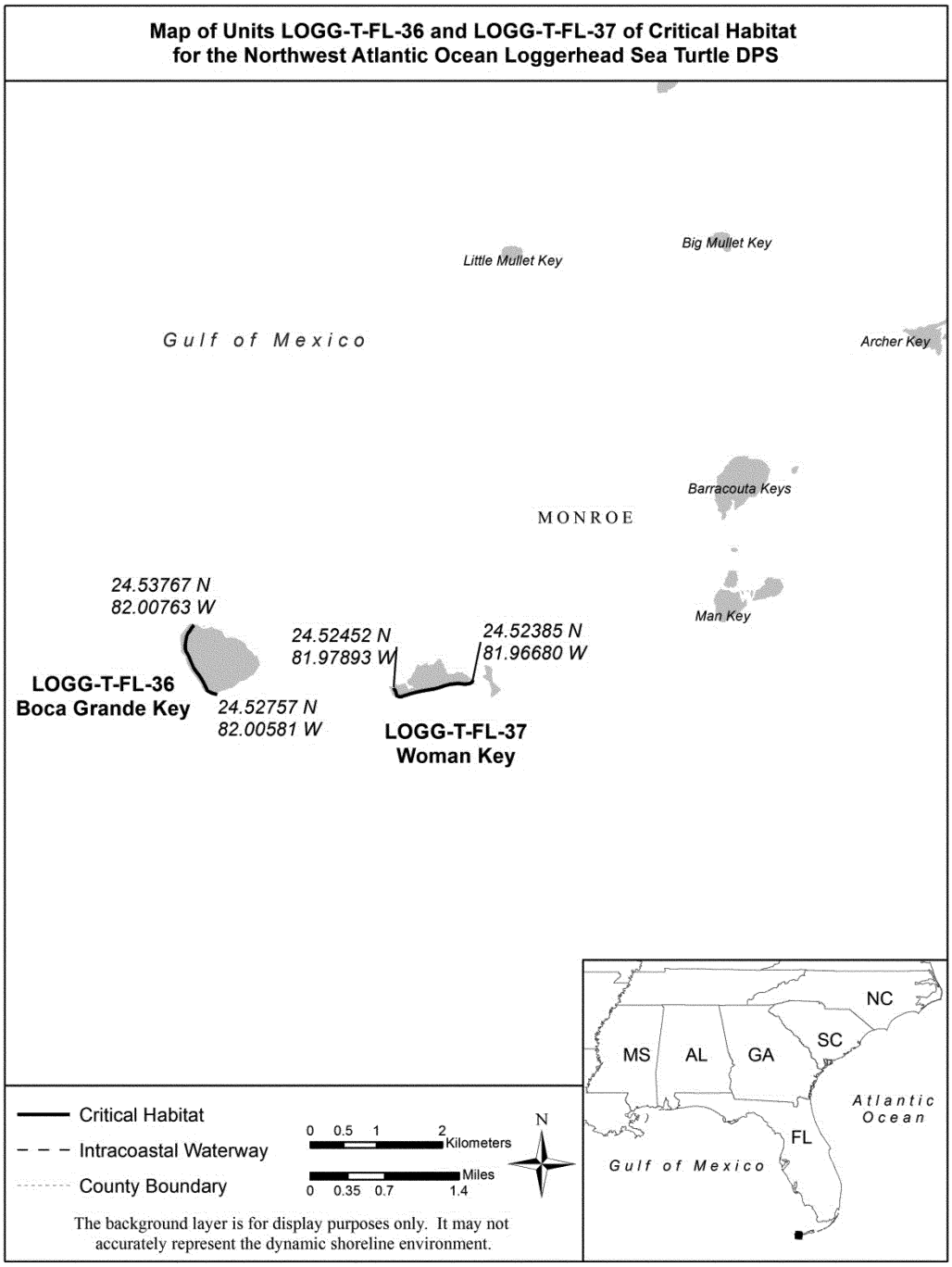
(B) LOGG–T–FL–37—Woman Key, Monroe County, Florida.

(ii) General descriptions of units:

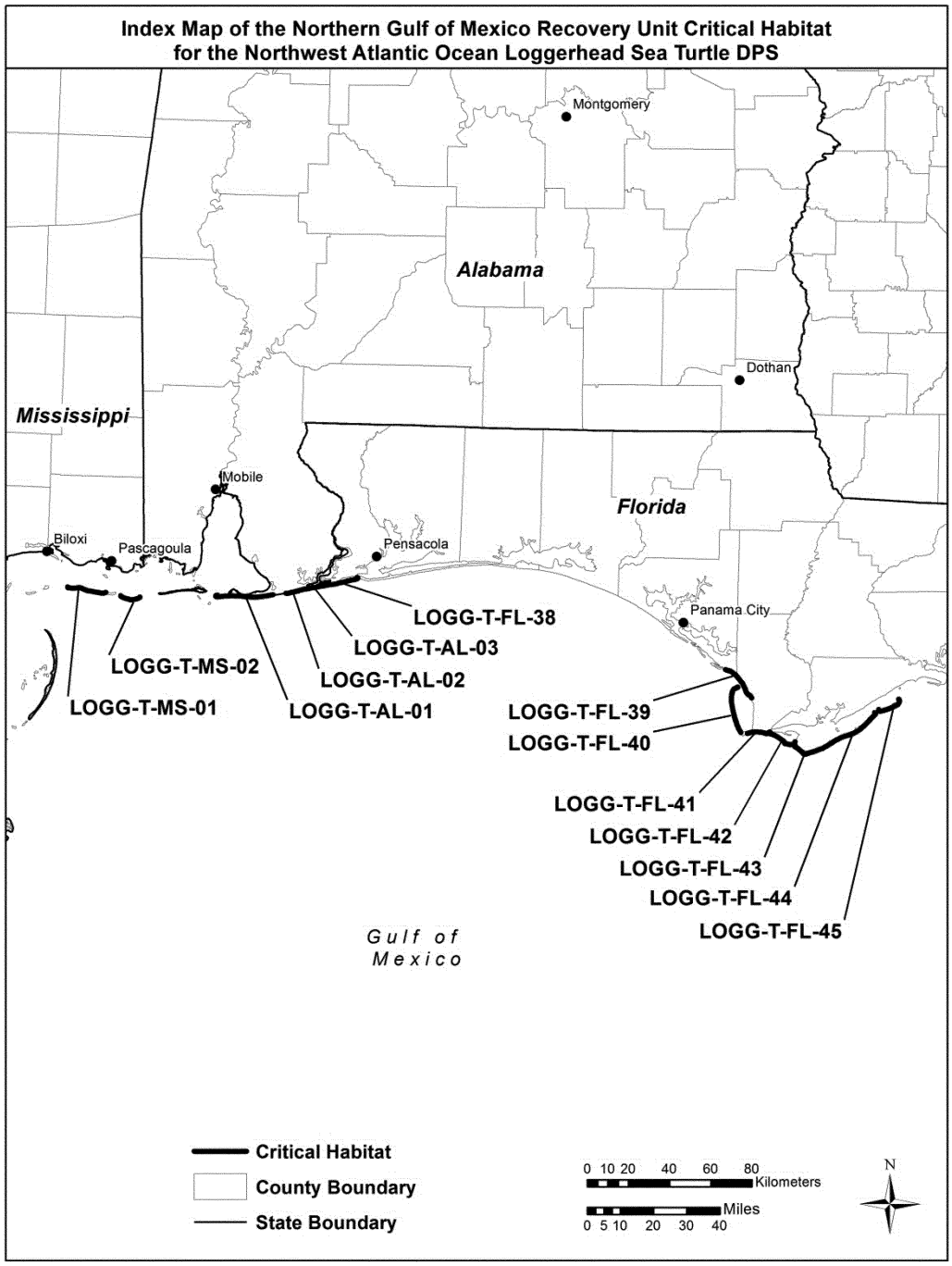
(A) LOGG–T–FL–36—Boca Grande Key: This unit consists of 1.3 km (0.8 mi) of island shoreline along the Gulf of Mexico and extends from 24.53767 N, 82.00763 W (at the northern end of the key) to 24.52757 N, 82.00581 W (at the southern end of the key).

(B) LOGG–T–FL–37—Woman Key: This unit consists of 1.3 km (0.8 mi) of island shoreline along the Gulf of Mexico and extends from 24.52452 N, 81.97893 N (at the western end of the key) to 24.52385 N, 81.96680 W (at the eastern end of the key).

(iii) Map of Units LOGG–T–FL–36 and LOGG–T–FL–37 follows:



(33) *Note:* Index map of critical habitat units in the Northern Gulf of Mexico Recovery Unit:



(34)(i) Units:

(A) LOGG–T–MS–01—Horn Island, Jackson County, Mississippi.

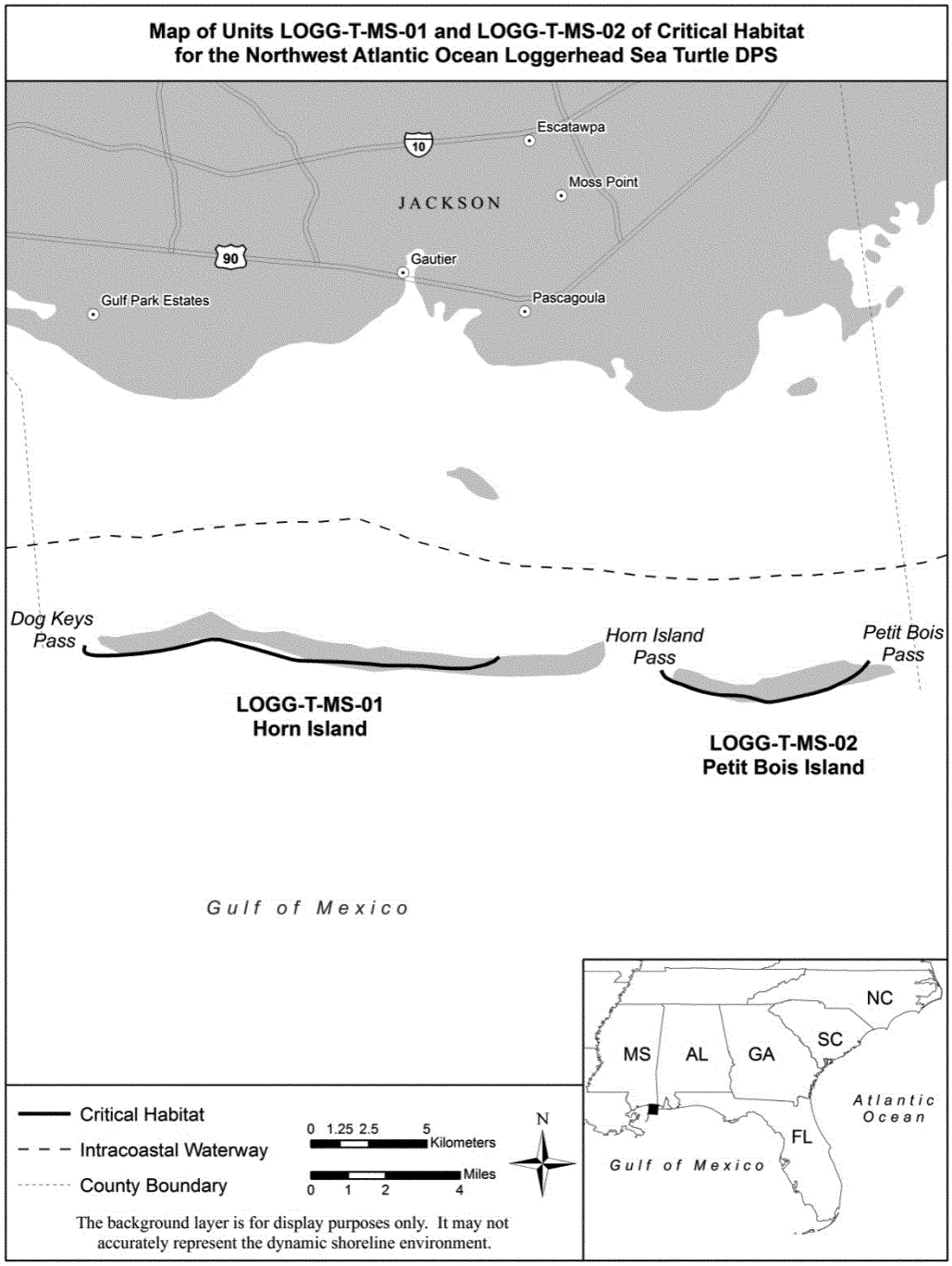
(B) LOGG–T–MS–02—Petit Bois Island, Jackson County, Mississippi.

(ii) General descriptions of units:

(A) LOGG–T–MS–01—Horn Island: This unit consists of 18.6 km (11.5 mi) of island shoreline along the Gulf of Mexico and extends from Dog Keys Pass to the easternmost point of the ocean facing island shore.

(B) LOGG–T–MS–02—Petit Bois Island: This unit consists of 9.8 km (6.1 mi) of island shoreline along the Gulf of Mexico and extends from Horn Island Pass to Petit Bois Pass.

(iii) Map of Units LOGG–T–MS–01 and LOGG–T–MS–02 follows:



(35)(i) Units:

(A) LOGG–T–AL–01—Mobile Bay-Little Lagoon Pass, Baldwin County, Alabama.

(B) LOGG–T–AL–02—Gulf State Park-Perdido Pass, Baldwin County, Alabama.

(C) LOGG–T–AL–03—Perdido Pass-Florida-Alabama line, Baldwin County, Alabama.

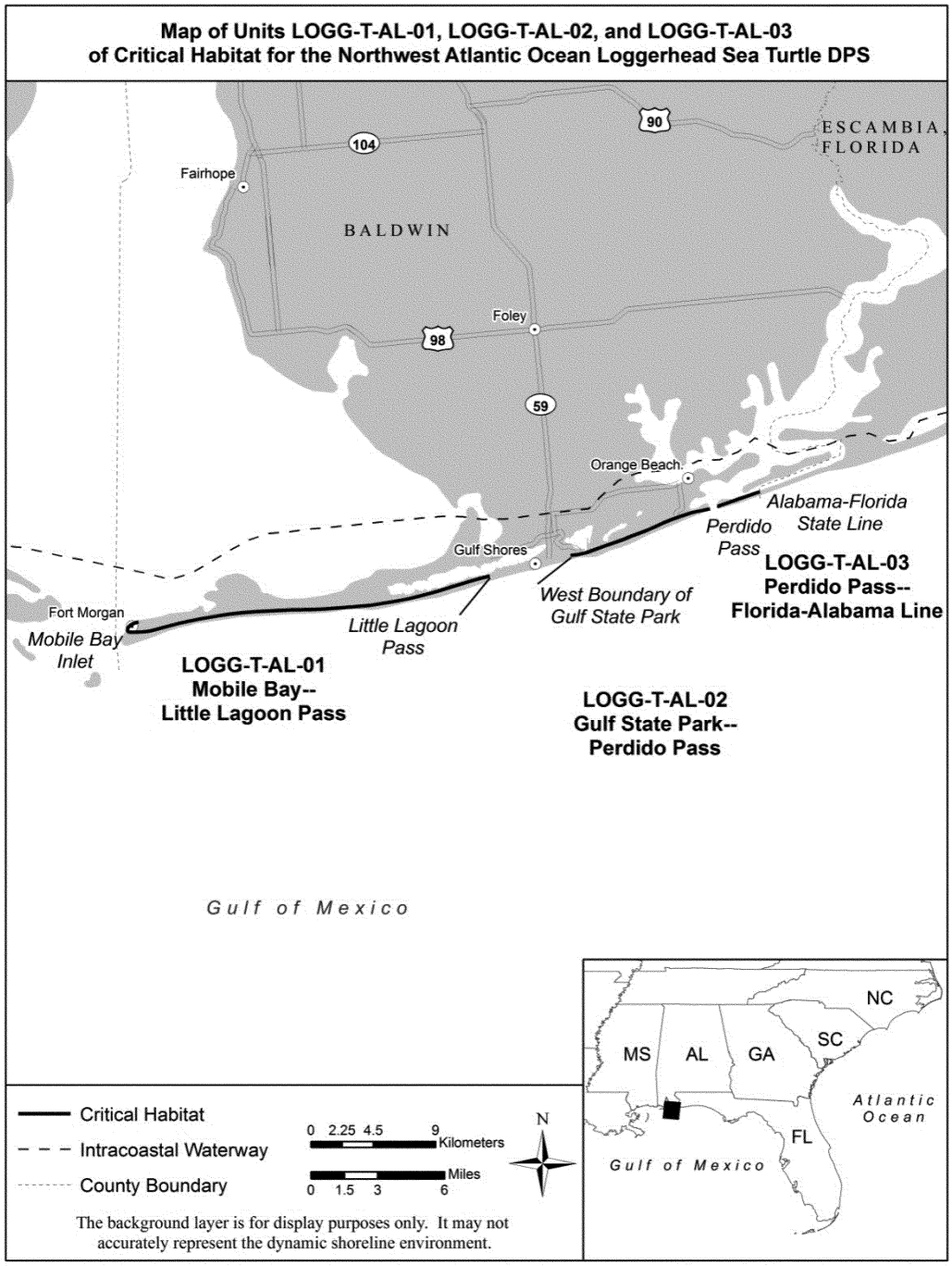
(ii) General descriptions of units:

(A) LOGG–T–AL–01—Mobile Bay-Little Lagoon Pass: This unit consists of 28.0 km (17.4 mi) of island shoreline along the Gulf of Mexico and extends from Mobile Bay Inlet to Little Lagoon Pass.

(B) LOGG–T–AL–02—Gulf State Park-Perdido Pass: This unit consists of 10.7 km (6.7 mi) of island shoreline along the Gulf of Mexico and extends from the west boundary of Gulf State Park to Perdido Pass.

(C) LOGG–T–AL–03—Perdido Pass-Florida-Alabama line: This unit consists of 3.3 km (2.0 mi) of island shoreline along the Gulf of Mexico and extends from Perdido Pass to the Alabama-Florida border.

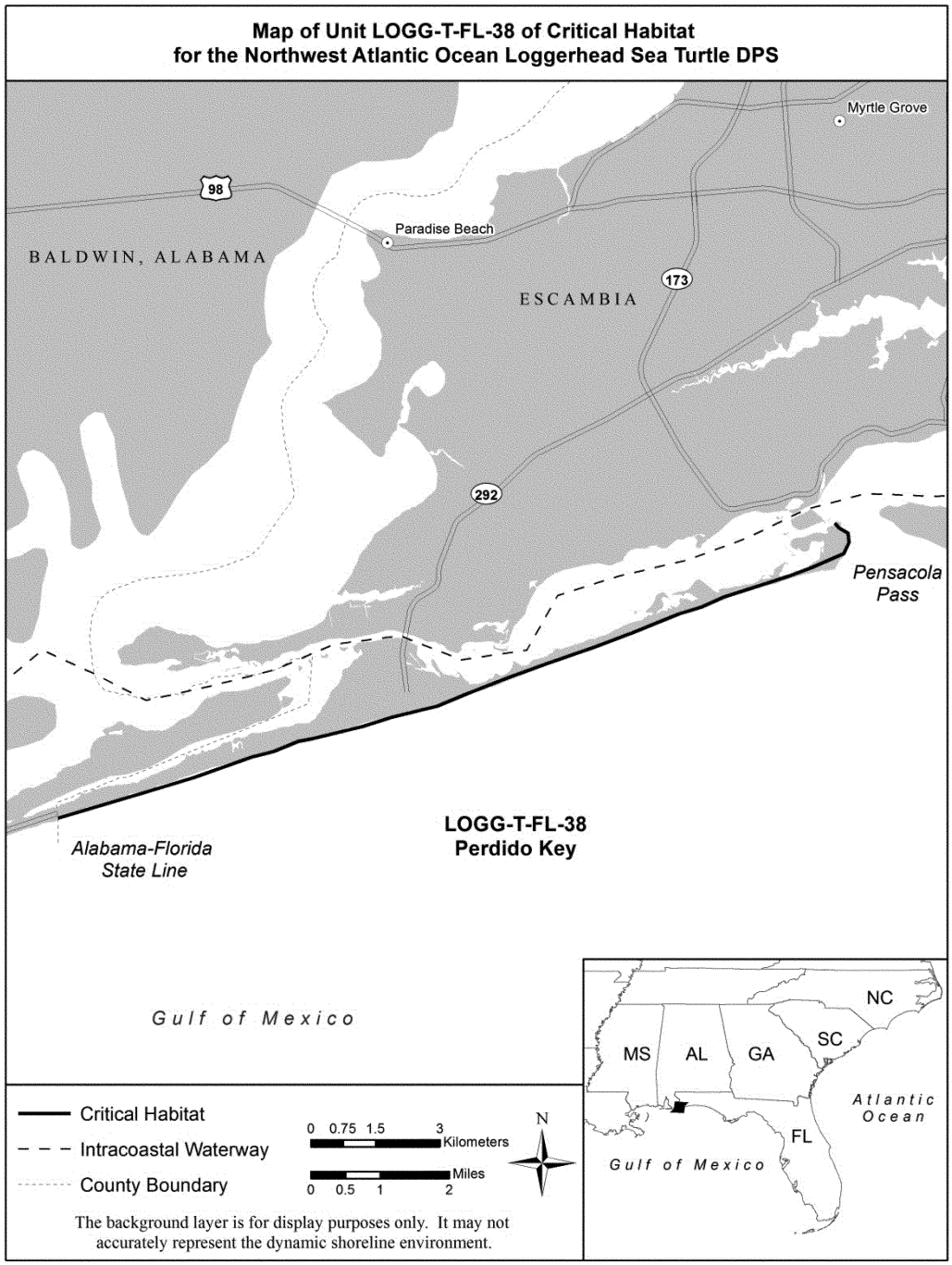
(iii) Map of Units LOGG–T–AL–01, LOGG–T–AL–02, and LOGG–T–AL–03 follows:



(36) Unit LOGG–T–FL–38—Perdido Key, Escambia County, Florida.

(i) *General description:* This unit consists of 20.2 km (12.6 mi) of island shoreline along the Gulf of Mexico and extends from the Alabama-Florida border to Pensacola Pass.

(ii) Map of Unit LOGG–T–FL–38 follows:



(37)(i) Units:

(A) LOGG–T–FL–39—Mexico Beach and St. Joe Beach, Bay and Gulf Counties, Florida.

(B) LOGG–T–FL–40—St. Joseph Peninsula, Gulf County, Florida.

(C) LOGG–T–FL–41—Cape San Blas, Gulf County, Florida.

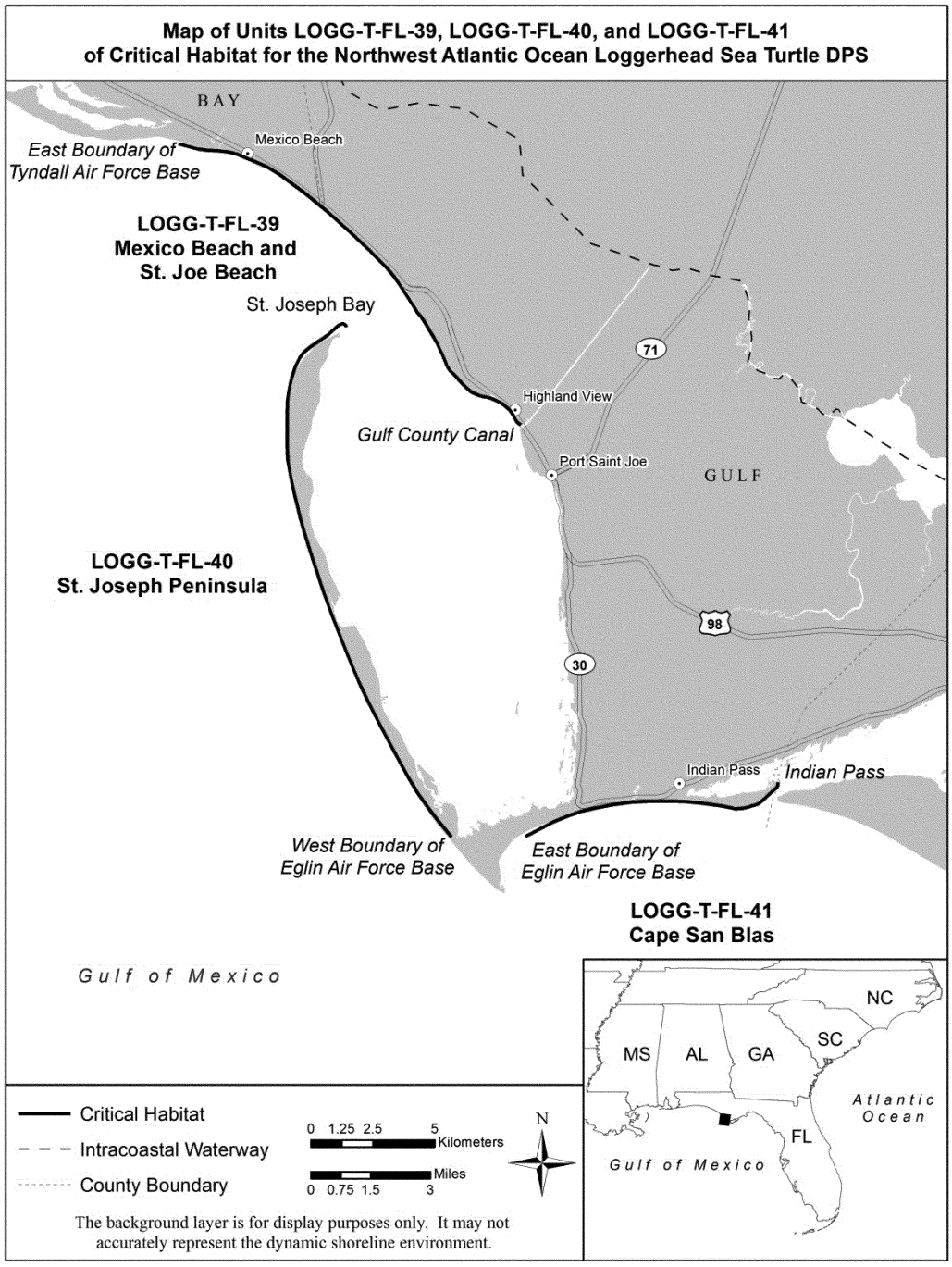
(ii) General descriptions of units:

(A) LOGG–T–FL–39—Mexico Beach and St. Joe Beach: This unit consists of 18.7 km (11.7 mi) of mainland shoreline along the Gulf of Mexico and extends from the eastern boundary of Tyndall Air Force Base to Gulf County Canal in St. Joseph Bay.

(B) LOGG–T–FL–40—St. Joseph Peninsula: This unit consists of 23.5 km (14.6 mi) of a spit shoreline along the Gulf of Mexico and extends from St. Joseph Bay to the west boundary of Eglin Air Force Base.

(C) LOGG–T–FL–41—Cape San Blas: This unit consists of 11.0 km (6.8 mi) of mainland and spit shoreline along the Gulf of Mexico and extends from the east boundary of Eglin Air Force Base to Indian Pass.

(iii) Map of Units LOGG–T–FL–39, LOGG–T–FL–40, and LOGG–T–FL–41 follows:



(38)(i) Units:

(A) LOGG–T–FL–42—St. Vincent Island, Franklin County, Florida.

(B) LOGG–T–FL–43—Little St. George Island, Franklin County, Florida.

(C) LOGG–T–FL–44—St. George Island, Franklin County, Florida.

(D) LOGG–T–FL–45—Dog Island, Franklin County, Florida.

(ii) General descriptions of units:

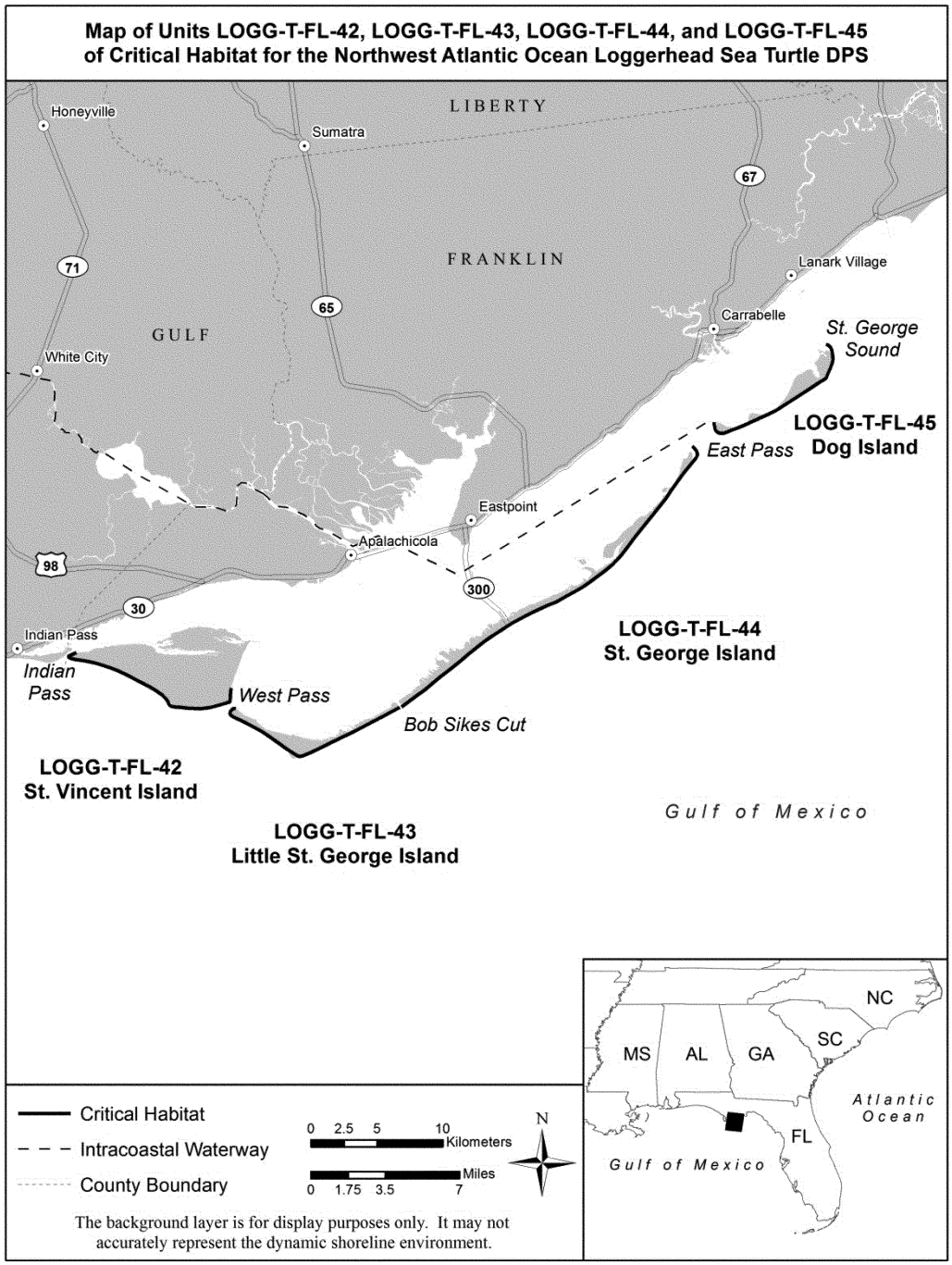
(A) LOGG–T–FL–42—St. Vincent Island: This unit consists of 15.1 km (9.4 mi) of island shoreline along the Gulf of Mexico and extends from Indian Pass to West Pass.

(B) LOGG–T–FL–43—Little St. George Island: This unit consists of 15.4 km (9.6 mi) of island shoreline along the Gulf of Mexico and extends from West Pass to Bob Sikes Cut.

(C) LOGG–T–FL–44—St. George Island: This unit consists of 30.7 km (19.1 mi) of island shoreline along the Gulf of Mexico and extends from Bob Sikes Cut to East Pass.

(D) LOGG–T–FL–45—Dog Island: This unit consists of 13.1 km (8.1 mi) of island shoreline along the Gulf of Mexico and extends from East Pass to St. George Sound.

(iii) Map of Units LOGG–T–FL–42, LOGG–T–FL–43, LOGG–T–FL–44, and LOGG–T–FL–45 follows:



* * * * *

Dated: June 6, 2014.

Rachel Jacobson,

Principal Deputy Assistant Secretary for Fish and Wildlife and Parks.

[FR Doc. 2014–15725 Filed 7–9–14; 8:45 am]

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Part IV

Department of Commerce

National Oceanic and Atmospheric Administration

50 CFR Part 226

Endangered and Threatened Species: Critical Habitat for the Northwest Atlantic Ocean Loggerhead Sea Turtle Distinct Population Segment (DPS) and Determination Regarding Critical Habitat for the North Pacific Ocean Loggerhead DPS; Final Rule

DEPARTMENT OF COMMERCE

National Oceanic and Atmospheric Administration

50 CFR Part 226

[Docket No. 130513467–4401–02]

RIN 0648–BD27

Endangered and Threatened Species: Critical Habitat for the Northwest Atlantic Ocean Loggerhead Sea Turtle Distinct Population Segment (DPS) and Determination Regarding Critical Habitat for the North Pacific Ocean Loggerhead DPS

AGENCY: National Marine Fisheries Service (NMFS), National Oceanic and Atmospheric Administration (NOAA), Commerce.

ACTION: Final rule.

SUMMARY: We, the National Marine Fisheries Service (NMFS), issue a final rule to designate critical habitat for the Northwest Atlantic Ocean Distinct Population Segment (DPS) of the loggerhead sea turtle (*Caretta caretta*) within the Atlantic Ocean and the Gulf of Mexico pursuant to the Endangered Species Act of 1973, as amended (ESA). Specific areas for designation include 38 occupied marine areas within the range of the Northwest Atlantic Ocean DPS. These areas contain one or a combination of habitat types: Nearshore reproductive habitat, winter area, breeding areas, constricted migratory corridors, and/or *Sargassum* habitat. The U.S. Fish and Wildlife Service (USFWS) is issuing a final rule for loggerhead critical habitat for terrestrial areas (nesting beaches) in a separate document. No marine areas meeting the definition of critical habitat were identified within the jurisdiction of the United States for the North Pacific Ocean DPS, and therefore we are not designating critical habitat for that DPS.

DATES: This rule becomes effective August 11, 2014.

ADDRESSES: The final rule and final Economic Analysis (including the Regulatory Flexibility Analysis) used in preparation of this final rule, as well as comments and information received, and accompanying documents are available at *http://www.nmfs.noaa.gov/pr/species/turtles/loggerhead.htm* or by contacting Susan Pultz, NMFS, Office of Protected Resources, 1315 East-West Highway, Silver Spring, MD 20910.

FOR FURTHER INFORMATION CONTACT: Susan Pultz, NMFS, Office of Protected Resources 301–427–8472 or *susan.pultz@noaa.gov;* or Angela Somma, NMFS, Office of Protected Resources, 301–427–8474 or *angela.somma@noaa.gov.*

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I. Background

The loggerhead sea turtle was originally listed under the ESA worldwide as a threatened species on July 28, 1978 (43 FR 32800). No critical habitat was designated for the loggerhead sea turtle at that time. Pursuant to a joint memorandum of understanding signed on July 18, 1977, the USFWS has jurisdiction over sea turtles on land and we, the National Oceanic and Atmospheric Administration's (NOAA's) NMFS, have jurisdiction over sea turtles in the marine environment. On September 22, 2011, NMFS and USFWS jointly published a final rule revising the loggerhead's listing from a single worldwide threatened species to nine DPSs (76 FR 58868). Five DPSs were listed as endangered (North Pacific Ocean, South Pacific Ocean, North Indian Ocean, Northeast Atlantic Ocean, and Mediterranean Sea), and four DPSs were listed as threatened (Northwest Atlantic Ocean, South Atlantic Ocean, Southeast Indo-Pacific Ocean, and Southwest Indian Ocean). Critical habitat cannot be designated in areas outside of U.S. jurisdiction (50 CFR 424.12). Two DPSs occur within U.S. jurisdiction: The Northwest Atlantic Ocean DPS (range defined as north of the equator, south of 60° N. lat., and west of 40° W. long.), and the North Pacific Ocean DPS (range defined as north of the equator and south of 60° N. lat.). At the time the final listing rule was developed, we lacked comprehensive data and information necessary to identify and describe physical or biological features (PBFs) of the terrestrial and marine habitats. As a result, we found designation of critical habitat to be ''not determinable'' (see 16 U.S.C. 1533(b)(6)(C)(ii)). In the final rule we stated that we would consider designating critical habitat for the two DPSs within U.S. jurisdiction in future rulemakings.

Following the 2011 listing, NMFS and USFWS convened a critical habitat

review team (CHRT) to assist in the assessment and evaluation of critical habitat areas for the Northwest Atlantic Ocean and North Pacific Ocean DPSs. Based on their biological report, the initial Regulatory Flexibility Analysis and section 4(b)(2) analysis (which considers exclusions to critical habitat based on economic, national security and other relvant impacts), we published a proposed rule (78 FR 43006, July 18, 2013) to designate critical habitat for the threatened Northwest Atlantic Ocean DPS and determined that there are no areas meeting the definition of critical habitat for the endangered North Pacific Ocean DPS.

We proposed designating 36 marine areas within the Northwest Atlantic Ocean DPS as critical habitat. Each of these areas consists of one or a combination of the following habitat types: nearshore reproductive habitat (directly off nesting beaches to 1.6 km (1 mile)), wintering habitat, breeding habitat, and constricted migratory corridors. In the proposed rule, we also asked for comment on whether to include as critical habitat in the final rule some areas that contain foraging habitat and two large areas that contain *Sargassum* habitat.

In the proposed rule we requested public comment through September 16, 2013. In response to requests, we extended the public comment period through November 29, 2013 (78 FR 59907) and held three public hearings.

The USFWS proposed terrestrial critical habitat (nesting beaches) in a separate rulemaking on March 25, 2013 (78 FR 18000). The proposed designations complement each other as the nearshore reproductive habitat we proposed is directly offshore of the nesting beaches proposed by the USFWS.

For a complete description of our proposed action, including the natural history of the loggerhead sea turtle, we refer the reader to the proposed rule (78 FR 43006, July 18, 2013).

II. Summary of Changes From the Proposed Critical Habitat Designation

We evaluated the comments submitted and new information received from public comments and hearings following the proposed rulemaking, and made the following changes from the proposed rule to the final rule:

(1) To the first PCE for Nearshore Reproductive Habitat (IV.B.1. and in the textual description), we added ''and their adjacent beaches'' and replaced the reference to the USFWS proposed rule for terrestrial critical habitat for the loggerhead sea turtle Northwest Atlantic Ocean DPS (78 FR 18000, March 25, 2013) to the appropriate place in the Code of Federal Regulations to read, ''Nearshore waters directly off the highest density nesting beaches and their adjacent beaches, as identified in 50 CFR 17.95(c), to 1.6 km offshore;

(2) To the PBFs, PCEs and Special Management Considerations for Concentrated Breeding areas (IV.B.1 and IV.C.1), we changed ''concentrations'' to ''densities.''

(3) To Special Management Considerations for *Sargassum* (section IV.C.1.), we added ''levels of ocean acidity'' to (5), which now reads, ''Global climate change, which can alter the conditions (such as currents and other oceanographic features, temperature, and levels of ocean acidity) that allow *Sargassum* habitat and communities to thrive in abundance and locations suitable for loggerhead developmental habitat.''

(4) Under VII. Final Determinations and Critical Habitat Designations, we added *Sargassum* habitat to the list of habitat areas.

(5) In the textual description for LOGG–N–4, we deleted reference to ''Onslow Beach (Marine Corps Base Camp Lejeune)'' as well as ''Browns Inlet'' because it was determined that the base's Integrated Natural Resources Management Plan (INRMP) benefited loggerheads and therefore the area should not be designated in accordance with section 4(a)(3) of the ESA.

(6) We added textual descriptions for two units of *Sargassum* habitat (LOGG–S–1 and LOGG–S–2) with associated regulatory text and map.

III. Public Comments and Responses

In response to the request for comments in the proposed rule and our public hearings, we received over 200 individual comment letters, one with 5,552 signatures. At least 42 individual comments consisted of general statements supporting the designation, many noting that they would like loggerheads to receive as much protection as possible, and some noting that they would be in favor of ''protecting more habitat,'' although they were not specific as to where. Two commenters expressed general statements opposing the designation but without reference to specific areas or issues. We received additional comments either expressing support or opposition with specific information regarding areas or issues. For the responses to comments, we do not include comments expressing general support or general opposition; only comments that are accompanied by specific details. We also did not respond to comments that were specific to terrestrial habitat, but did share those comments with USFWS so they could respond. We only include comments that are germane to the proposed rule and we sort our responses below by major topic area.

A. Comments on ESA Requirements and Process

Comment 1: Several commenters felt that NMFS took an inappropriately narrow reading of its conservation mandate for in-water designation of critical habitat. Commenters note that the ESA and its implementing regulations require the designation of critical habitat to focus on the biological features of the habitat that make it essential to the conservation of the species. The commenters said that NMFS declined to designate critical habitat in all areas where the PCEs are present and essential to the conservation of the species, instead repeatedly narrowing its proposed designation to include only a subset of these areas. The commenters argued if an area is essential for the conservation of the species, including both its survival and recovery, it must be designated unless the economic costs outweigh the benefits of designation.

Response: The ESA requires that in designating critical habitat, we identify ''physical or biological features (I) essential to the conservation of the species and (II) which may require special management consideration or protection'' (section 3(5)(A)(i)). Section 3(5)(C) of the ESA states that ''Except under those circumstances determined by the Secretary, critical habitat shall not include the entire geographical area which can be occupied by the . . . species.'' This species is naturally wide-ranging and a generalist forager. As such, it occurs throughout the east coast of the U.S. We identified Physical Biological Features (PBFs) and Primary Constituent Elements (PCEs) that help us identify habitat essential to the conservation of the species (as defined in the ESA), and not the entire historical range of the species.

Comment 2: Several commenters emphasized that NMFS should subject any requests for critical habitat exclusion to a thorough public review, including notice and opportunity for comment, just as it has its critical habitat proposal.

Response: While we appreciate the commenters' concern with transparency and public review, we do not request public comment on requests for exclusions. We do make all comments available on regulations.gov and we address them in this final rulemaking so

the public can see any requests that were made and our response.

Comment 3: Several commenters felt NMFS was obligated to prepare an environmental impact statement in connection with designating critical habitat pursuant to the National Environmental Policy Act, 42 U.S.C. 4321, *et seq.* (''NEPA''). Designation of critical habitat for the loggerhead sea turtle significantly affects the quality of the human environment, and NMFS is required to determine the extent of these impacts in compliance with NEPA.

Response: We have determined that an environmental analysis as provided for under NEPA for critical habitat designations made pursuant to the ESA is not required. *See Douglas County* v. *Babbitt,* 48 F.3d 1495 (9th Cir. 1995), *cert. denied,* 116 S.Ct. 698 (1996).

Comment 4: Several commenters cited data indicating that the loggerhead population is increasing and questioned whether designation of critical habitat in marine areas is in fact essential to the conservation of this species according to the requirements of the ESA.

Response: Whether the loggerhead population is increasing could have a bearing on whether and how it is listed (endangered or threatened), but does not have a bearing on whether critical habitat should be designated. Habitat is a key ingredient to the well-being of any species, and Congress determined that a species that is listed under the ESA should have critical habitat protected except in the very limited circumstances in which it is determined not to be prudent (see response to comment #5).

Comment 5: A number of commenters expressed concern about whether the critical habitat designation would add information requirements, or reasonable and prudent alternatives, to current and future Section 7 consultations, including whether consideration of additional risk factors would be required.

Response: NMFS anticipates that it is unlikely that this critical habitat designation will alter the factors considered in, or result in additional management efforts resulting from, future section 7 consultations. Regardless of whether critical habitat is designated, all listed species undergo section 7 consultation. Loggerhead sea turtles have been protected under the ESA since 1978, with Section 7 consultations proceeding regularly since that listing.

NMFS has engaged in a large number of consultations with Federal agencies that resulted in implementation of a suite of conservation measures that are used to avoid jeopardizing the continued existence of the species. In preparing the critical habitat designation, NMFS considered whether Section 7 consultations would need to consider additional or different conservation measures or risk factors to avoid destruction or adverse modification of the primary constituent elements that support the physical and biological features of critical habitat above and beyond those measures already taken to avoid jeopardizing the continued existence of the species. For example, NMFS has issued several biological opinions to the Bureau of Ocean Energy Management (BOEM) regarding authorized activities in the Gulf of Mexico and Atlantic that may affect *Sargassum* habitat. This long consultation history with BOEM has allowed NMFS and the action agency to identify direct and indirect effects of BOEM actions that may adversely affect the species (e.g., authorization of routine activities such as vessel traffic, drilling, dredging and surveys; and accidental events reasonably certain to occur, such as small oil spills from vessels or platforms) and measures to minimize and mitigate those impacts on the species. Conservation measures required by NMFS in biological opinions issued to BOEM include, but are not limited to, marine debris minimization guidance and training. Although the risk factors evaluated in the BOEM consultations and the conservation measures resulting from them were for the effects to the species, NMFS anticipates that they would be equally applicable to the determination of whether there is likely to be an adverse impact to, or an adverse modification of, critical habitat as designated in this final rule. Therefore, NMFS does not expect additional risk factors or conservation measures to be required as a result of this critical habitat designation, because the protection accorded the species through the Section 7 process has included consideration of measures necessary to protect its habitat from destruction or adverse modification.

B. Comments on Prudent and Determinable

Comment 6: Several commenters noted the ESA only allows critical habitat designations when special management considerations may be necessary, when designation is prudent, and where critical habitat is determinable. They believe the areas proposed for critical habitat designation do not meet these requirements. Several of these commenters specifically identified the *Sargassum* habitat discussed in the proposed rule as an example, due to the large uncertainties associated with those areas as described in the proposed rule.

Response: The commenters are correct that critical habitat is designated when special management considerations may be necessary, when designation is prudent, and where critical habitat is determinable. With regard to special management considerations, we have determined that *Sargassum* habitat is essential to loggerheads and may require special management considerations. In the proposed rule, we recognized that the *Sargassum* PCEs can be affected by the following activities which may require special management: Commercial harvest of *Sargassum,* oil and gas activities, vessel operations that result in the disposal of trash and wastes, ocean dumping, and global climate change.

With regard to the prudency of critical habitat designations, our implementing regulations for critical habitat designations (50 CFR 424.12(a)(1)) state that designating critical habitat is not prudent when (1) the species is threatened by taking or other human activity, and identification of critical habitat can be expected to increase the degree of such threat to the species (not the case for loggerheads); or (2) such designation would not be beneficial to the species. In the case of loggerhead sea turtles, identification of critical habitat would not increase the degree of threat to the species. Further, because there is value in highlighting critical habitat, including for planning and educational purposes, designation of critical habitat does contribute to the conservation of the species. Uncertainty in information does not mean a designation is not prudent.

Critical habitat is now determinable. At the time we listed the nine DPSs of loggerhead sea turtles in 2011, critical habitat was not determinable. If critical habitat is not determinable at the time of listing, the ESA allows the Secretary to extend the timeframe to designate, but only by one additional year. After this year, she must publish a final regulation based on such data as may be available at that time.

C. Comments on Coastal Zone Management Act

Comment 7: Several commenters were concerned that that our consistency determination submitted to the North Carolina Division of Coastal Management in connection with designating critical habitat is incomplete and does not meet the requirements of the Coastal Zone Management Act, 16 U.S.C. 1451, *et seq.* (CZMA) and its implementing regulations. Some requested that we

revisit this Federal consistency submission and include additional analysis of potential impacts, and that we include additional information on potential economic impacts and the data used to determine critical habitat boundaries.

Response: Upon further review of our proposed designation of critical habitat for the threatened loggerhead sea turtle Northwest Atlantic Ocean DPS and its supporting analysis, by letter dated January 23, 2014, we withdrew our consistency determination for North Carolina and instead provided a negative determination. While we recognize the State's goals of coastal resource protection and economic development, we determined that any effects of the proposed action on North Carolina's coastal uses and resources are not reasonably foreseeable at this time. As indicated in our negative determination, this designation of critical habitat will not restrict any coastal uses, affect land ownership, or establish a refuge or other conservation area; rather, the designation only affects the ESA section 7 consultation process. Through the ESA consultation process, we will receive information on proposed Federal actions and their effects on listed species and this critical habitat upon which we base our biological opinions. It will then be up to the Federal action agencies to decide how to comply with the ESA in light of our opinion, as well as to ensure that their actions comply with the CZMA's Federal consistency requirement. At this time, we do not anticipate that this designation is likely to result in any additional management measures by other Federal agencies.

D. Comments on the North Pacific Ocean DPS

Comment 8: Numerous commenters suggested that the designation should include migratory pathways for the North Pacific Ocean DPS between North American foraging grounds and/or their nesting grounds in Japan. They also raised concern about areas used by loggerheads along the U.S. west coast not being proposed for designation. One of these commenters went on to add that the Southern California Loggerhead Conservation Area and areas within the U.S. EEZ northwest of the Hawaiian Islands are occupied by loggerheads and contain PBFs essential to loggerhead conservation that may require special management considerations.

Response: Loggerheads are wide-ranging, opportunistic foragers, with individuals traveling long distances between nesting and foraging sites, and Pacific loggerheads are no exception. We closely examined whether migratory pathways should be included, particularly with respect to physical and biological features that are associated with loggerhead movement between foraging and nesting grounds in the Pacific Ocean. While loggerheads are known to migrate between foraging areas in the eastern Pacific and nesting areas in Japan, those migratory pathways overlap very minimally with U.S. waters in the EEZ northwest of Hawaii and off the U.S. west coast. Satellite telemetry data that currently exists is not sufficient to identify migration corridors to, from, or within the U.S. EEZ of either location. Loggerhead turtles transiting to the Eastern Pacific head primarily into Mexican waters. Indeed, there is a significant foraging ''hotspot'' at Ulloa Bay, Baja California peninsula at approximately 114° W. long. and 25° N. lat. (Wingfield *et al.* 2013), and turtle migratory habitat appears to dip south around 130° W. long. (which is outside of the California EEZ and runs south to Baja) where turtles follow optimal temperature to foraging grounds in Mexico (Abecassis *et al.* 2013).

With regard to the Southern California Loggerhead Conservation Area, the oceanographic feature thought to be correlated with loggerhead movements and the trigger for a drift gillnet time/area closure during the summer months off southern California is the El Niño-Southern Oscillation (ENSO). However, both tagging and stable isotope data have brought the ENSO-driven movement hypothesis into question. For example, no loggerheads that were tracked while foraging along the Pacific coast of Baja California, Mexico from 1996 to 2007 moved north into U.S. California EEZ waters (Peckham *et al.* 2011). This is particularly relevant considering that this time period encompassed at least one major ENSO event (1997–1998). The results of Peckham *et al.* (2011) underscore the strong tendency for loggerheads to maintain their presence in the waters off Mexico. The apparent absence of northward movements of tracked turtles may be due to the equatorial flow of the California Current, which would require northbound turtles off the Baja California peninsula to swim directly into the southerly currents (Allen *et al.* 2013). Allen *et al.* (2013) also compared skin samples from loggerheads captured in the California drift gillnet fishery with loggerheads from the central North Pacific (incidentally caught in the Hawaii-based longline fishery) and from turtles sampled during in-water research along the Baja California Peninsula, Mexico. The authors concluded that turtles in California most likely came from the central North Pacific and not from the Baja California peninsula, as was initially believed when the drift gillnet time/area closure was put in place off the Southern California Bight in 2003. In addition, Allen *et al.* (2013) note that loggerhead turtles, while rarely encountered in the Southern California Bight have been observed taken in small numbers by the CA drift gillnet fishery or found stranded during non-ENSO years.

Comment 9: One comment stated that the agencies did not propose designation of any critical habitat for the North Pacific Ocean DPS because of the lack of nesting in U.S. Pacific waters.

Response: Our decision not to propose designation of critical habitat in the EEZ around Hawaii and off the coast of southern California is not because there is no nesting adjacent to U.S. Pacific waters. A species does not have to nest within U.S. waters to have critical habitat designated. An occupied area only need contain the physical and biological features essential to the conservation of the species and which may require special management consideration or protection, and in the case of unoccupied habitat be essential to the conservation of the species in order for it to be designated as critical habitat. The U.S. waters around Hawaii and off the coast of southern California do not contain the physical and biological features essential to the conservation of the species and therefore do not meet the requirements for designation.

Comment 10: One commenter expressed the importance of using the best available information in designating critical habitat in Hawaii and California.

Response: As required by Section 4(b)(2) of the ESA we evaluated whether to designate critical habitat on the basis of the best scientific data available. The loggerhead habitat within the U.S. EEZ of the central North Pacific Ocean does not provide suitable conditions in sufficient quantity and frequency to support meaningful foraging, development, and/or transiting opportunities and, therefore, was not deemed to be essential to the conservation of the species.

Comment 11: Several commenters suggested that critical habitat should be designated for the North Pacific Ocean DPS simply because of the presence of loggerheads.

Response: The mere presence of a listed species in an area does not mean that the area qualifies as critical habitat. The ESA defines critical habitat as '' the

specific areas within the geographical area occupied by the species . . . on which are found those physical or biological features (I) essential to the conservation of the species and (II) which may require special management consideration or protection'' (section 3(5)(A)(i)). It further states, ''Except in those circumstances determined by the Secretary, critical habitat shall not include the entire geographical area which can be occupied by the threatened or endangered species'' (section 3(5)(C)). Habitat used by loggerheads within the U.S. EEZ of the central North Pacific Ocean does not provide suitable conditions in sufficient quantity and frequency to support meaningful foraging, development, and/or transiting opportunities and, therefore, could not be deemed to be essential to the conservation of the species.

Comment 12: Several commenters supported our decision not to designate critical habitat for the North Pacific Ocean DPS. One commenter also suggested that there is ''no data establishing that modification of the pelagic environment is a significant contributing factor to the risks faced by the North Pacific DPS'' and further added that ''longline fisheries that operate in those waters have, at best, negligible effects on the North Pacific DPS.'' Another commenter cited sea turtle interaction rates with U.S. fisheries, and also suggested that the U.S. fisheries around Hawaii have, at most, negligible effects on the species. The commenter also supplied information on conservation efforts, such as nesting beach projects at foreign beaches.

Response: We agree that based on the best available information no marine areas meeting the definition of critical habitat were identifiable within the jurisdiction of the United States for the North Pacific Ocean DPS. However, because we did not identify PBFs within the U.S. EEZs, we did not need to look further into the issues raised in these comments.

Comment 13: One commenter suggested that the agency use metrics when defining the foraging habitats as functional habitats (including the North Pacific Ocean DPS).

Response: The Biological Report uses both general and specific metrics when it describes the PBF deemed essential to loggerhead oceanic habitat in the North Pacific as well as the PCEs for both the central North Pacific and the eastern North Pacific. We describe the PBF of loggerhead turtle oceanic habitat in the North Pacific Ocean as waters that support suitable conditions in sufficient quantity and frequency to provide meaningful foraging, development, and/or transiting opportunities to the populations in the North Pacific. PCEs in the central North Pacific Ocean that support this habitat are (1) currents and circulation patterns of the North Pacific (Kuroshoi Extension Bifurcation Region, and the southern edge of the Kuroshio Extension Current characterized by the Transition Zone Chlorophyll Front) where physical and biological oceanography combine to promote high productivity (chlorophyll a = 0.11–0.31 mg/m 3) and sufficient prey quality (energy density ≥11.2 kJ/g) of species; and (2) appropriate sea surface temperatures (14.45° to 19.95 °C (58.01° to 67.91 °F)), primarily concentrated at the 17° to 18 °C (63° to 64 °F) isotherm. PCEs in the eastern North Pacific Ocean that support this habitat include the following: (1) Sites that support meaningful aggregations of foraging juveniles, and (2) sufficient prey densities of neustonic and oceanic organisms.

E. Comments on Northwest Atlantic Ocean DPS

Comments on Use of Best Available Data

Comment 14: One commenter felt that we failed to access and compile all the available data and, as a result, the proposed rule was not based on the best scientific data available. The commenter argued that NMFS did not include the synthesis of aerial survey and telemetry data for surfacing times collected seasonally in the Atlantic Ocean through the Atlantic Marine Assessment Program for Protected Species (AMAPPS) and in the Gulf of Mexico through the Deep Water Horizon Natural Resource Damage Assessment (NRDA) surveys.

Response: We did review available data from the AMAPPS project but did not note this in the preamble to the proposed rule. However, the telemetry data from AMAPPS has not been analyzed in a way similar to that done by the Loggerhead Turtle Expert Working Group (TEWG), which synthesized information for turtle presence based on satellite telemetry in the Gulf of Mexico and Atlantic Ocean and was therefore particularly useful for our analysis. Incorporation of the AMAPPS data would not alter the already known pattern of habitat use in the U.S. Atlantic as the tracks from the AMAPPS turtles overlay the areas already known to be extensively used by turtles from the TEWG report (NMFS 2011; NMFS 2012a; Richards 2012, pers. comm.). With regard to surveys conducted in response to the Deep Water Horizon incident, satellite tracks in the Gulf of Mexico were collected by the NMFS Southeast Fishery Science Center but not funded by NRDA. As with the AMAPPS data, review of these data did not yield any new or unknown patterns of habitat use by loggerheads in the Gulf of Mexico.

Comment 15: One commenter felt it was imperative for USFWS to include readily available data from the 2012 nesting season into their final analysis and critical habitat designation. Because NMFS' designation of nearshore reproductive habitat is based on the USFWS proposal, the commenter argued these must be closely coordinated and both agencies must examine the science relevant to their designation.

Response: Critical habitat is defined in section 3 of the Act as the specific areas within the geographical area occupied by the species at the time it was listed and contain physical or biological features (1) which are essential to the conservation of the species and (2) which may require special management considerations or protection. The Northwest Atlantic Ocean loggerhead sea turtle DPS was listed in 2011 (50 CFR 17.11(h)). USFWS defined the terrestrial portion of the geographical area occupied for the loggerhead sea turtle as those U.S. areas in the Northwest Atlantic Ocean DPS where nesting has been documented for the most part annually for the 10-year period from 2002 to 2011 as this time period represents the most consistent and standardized nest count surveys. NMFS defined the nearshore reproductive habitat as waters off those nesting beaches to 1.6 km. In addition, the proposed rule for this designation was being prepared in 2012 and early 2013, and not all of the nesting survey results from 2012 were available for all areas at the time. Thus, to insure data quality and consistency our determination of critical habitat used nesting data through the 2011 nesting season.

Comment 16: One commenter was concerned that much of the proposal was based on the 2009 assessment of loggerhead sea turtles in the Western North Atlantic Ocean conducted by the Turtle Expert Working Group (TEWG, 2009). The commenter noted that the TEWG's 2009 assessment presents considerable data which have been compiled and analyzed over the past 30 years, but is careful to point out significant shortcomings in current data and the need to improve and increase data collection in the future to better understand the population. The

commenter questioned the manner in which the collected data and its analysis was used by the NMFS and concluded the proposal falsely leads one to believe that considerable statistical data are available on which accurate population counts and spatial distribution can be determined. The commenter characterized the spatial distribution in the TEWG report as being driven by where studies were conducted rather than an attempt to consider the likely spatial distribution as a starting point in a comprehensive analysis.

The commenter further stated that the Florida east coast, between Ponce Inlet and Golden Beach/Miami, account for 79 percent of loggerhead nests within the DPS and stated that this should be used as the foundation for studying spatial distribution of the species.

Response: We recognize that there are limitations to the TEWG data, but it represents much of the best available science for loggerheads. Where we were able to supplement that data, we did. We did not infer that the TEWG report is a statistical accounting of accurate population counts. We do believe the TEWG report represents the best compilation of numerous data sets through 2007/2008 and we clearly identified the methods used in the TEWG report. The TEWG data can be used as a starting point for general distribution, but we recognize that the spatial distribution is largely based upon where studies were conducted. We considered those limitations in our analysis.

We do not disagree that further study for peninsular Florida loggerheads is warranted; however, while the Florida coast does contain the highest density of loggerhead nests, the basic tenets of conservation biology dictate the importance of conserving the range of habitats and individuals utilizing them in order to preserve both the adaptive capability of turtles (turtles that have adapted to different conditions, exhibit different life history strategies (such as overwintering off of North Carolina as opposed to migrating south) and/or those whose genetic makeup may reflect such adaptations), and a range of habitat options as conditions change, such as loss of habitat in low lying areas due to sea level rise.

Comment 17: One commenter claimed major shortcomings exist in the quantity and quality of the data relied upon by NMFS and particularly that associated with the marine population and distribution of loggerheads. They argued that these shortcomings make it impossible to accurately identify areas that are critical to the survival of the species, and that designation of critical habit requires more comprehensive data and analysis of the marine population than what is currently available. The commenter concluded that as a result, wintering, migratory and breeding habitats as well as foraging and *Sargassum* locations should not be designated as critical habitat until adequate data and analyses are available to correctly identify their importance to the survival of the species and their economic and social impact to the public.

Response: We conducted a comprehensive analysis of all the available information in identifying areas proposed for critical habitat designation. While we appreciate the commenter's desire to have comprehensive studies before assessing whether and where to designate critical habitat, the standard for data under the ESA is ''best scientific and commercial data available.'' We are required to base our designation on data that is the best available at the time we designate habitat. Further, we believe the record supports our decision to designate certain areas as loggerhead critical habitat based upon the best available data.

Comment 18: One commenter felt that NMFS had consulted the most appropriate studies in preparing the proposed rule, which accurately describe the current state of knowledge of population trends, habitat utilization, and distribution of habitats important to the survival of the threatened population segment of this species. However, this commenter encouraged NMFS to continue to collect data and consider the potential inclusion of foraging grounds in the designation in the future.

Response: We will endeavor to collect and support research that allows us to identify additional areas, including foraging habitat, in the future.

Comment 19: One commenter stated that NMFS has an obligation to make available the studies that form the basis of its proposed critical habitat designation.

Response: All information used to formulate the proposed rule was cited in the ''References'' document posted under the same docket as the proposed rule under 'Supporting Documents' on Regulations.gov. A ''References'' document is also available for the final rule (see **ADDRESSES** section above).

Comments on Sargassum Habitat

Comment 20: Several commenters argued that the fact that *Sargassum* habitat moves and changes should not be a reason to exclude it from designation. The commenters noted that the nature of habitat is inherently dynamic and there is nothing in the ESA that requires PCEs to be static. They presented the USFWS designation of vernal pools (seasonal wetlands) as an example of this practice, and noted that *Sargassum* habitat also has been identified in the Recovery Plan as essential to the survival of post-hatchlings.

Response: We appreciate the concern that *Sargassum* habitat be designated, and agree that it is possible to designate ephemeral and/or dynamic habitat. We also agree that *Sargassum* habitat is important to various loggerhead life stages, particularly post-hatchlings, hence our consideration of this habitat type in the critical habitat designation. This case was challenging as *Sargassum* basically occurs throughout the U.S. EEZ south of 40°N. We solicited comments to identify more accurately those areas where the highest use or value of *Sargassum* is most likely to occur. We have identified an area of *Sargassum* habitat that we believe is most beneficial to the species and included it in the final designation under Section IV., Critical Habitat Identification. Generally, the *Sargassum* habitat included in the designation consists of the western Gulf of Mexico to the eastern edge of the loop current, through the Straits of Florida and along the Atlantic coast from the western edge of the Gulf Stream eastward.

Comment 21: Several commenters noted the importance of *Sargassum* as developmental habitat for loggerhead sea turtles, but had concerns with the large area described in the proposed rule and recommended defining the area as discretely as practical. Some noted that, given the dynamic nature of *Sargassum* habitat, it is likely that at various times much of the suggested critical habitat area based on *Sargassum* would contain densities of *Sargassum* below that which would concentrate loggerhead sea turtles. They recommended designating *Sargassum* itself rather than designating a specified area, in much the same manner as polar ice is designated as critical habitat for polar bears.

Response: We recognize the *Sargassum* habitat identified in the proposed rule is a large area. It is precisely the dynamic and widespread nature of *Sargassum* habitat that made it a challenge to consider, and why we did not propose to designate but rather requested comments on where to designate in the proposed rule. We have identified an area of *Sargassum* habitat that we believe is most beneficial to the species and this is included in the final designation under Section IV., Critical

Habitat Identification. Generally, the *Sargassum* habitat included in the designation consists of the western Gulf of Mexico to the eastern edge of the loop current, through the Straits of Florida and along the Atlantic coast from the western edge of the Gulf Stream eastward.

With regard to the notion of designating *Sargassum* itself rather than a specific area, the ESA requires us to designate specific areas as critical habitat, not features or components of areas. While we recognize that it is possible that in any given portion of the critical habitat area at any given time *Sargassum* may not provide adequate cover and forage opportunities for loggerhead turtles, it is not necessary that PCEs of *Sargassum* habitat be present in the designated area at all times.

With regard to the polar bear critical habitat designation, the polar ice in that designation is treated much the same as we have treated *Sargassum.* Recognizing that it is dynamic in nature, particularly with the season, the entire U.S. area within which the polar bears use the ice was designated, knowing that they do not use all areas in all seasons or even all years. The sea ice habitat area identified in the final rule designating polar bear critical habitat includes all contiguous waters from the mean high tide line of the mainland coast of Alaska to the 300 m bathymetry depth contour or the EEZ (75 FR 76086, December 7, 2010).

Comment 22: One commenter was concerned with the high level of uncertainty of the location of *Sargassum* habitat at any point in time and noted that the designation of essentially the entire continental shelf of the northern Gulf of Mexico as loggerhead critical habitat appears to be based on an almost complete lack of knowledge of the natural variability in *Sargassum* distribution and concentration. Further, the first PCE of *Sargassum* habitat is ''Convergence zones, surface-water downwelling areas, and other locations where there are concentrated components of the *Sargassum* community in water temperatures suitable for the optimal growth of *Sargassum* and inhabitance of loggerheads.'' Yet Witherington et al. (2012) concludes that because they captured most turtles in *Sargassum* outside dense convergence zones, a direct correlation between strong convergences and essential loggerhead habitat cannot be made.

Response: We acknowledge it is difficult to forecast when *Sargassum* will be in a particular location on a particular date, given the variability of eddies, currents and weather; however, some trends may be anticipated (see Gower and King 2011). *Sargassum* moves with the currents so that *Sargassum* originating in the western Gulf typically spreads to the eastern Gulf and into the Atlantic, resulting in a dynamic habitat that is important to loggerheads wherever it occurs.

The section of the proposed rule that is quoted in this comment refers specifically to a correlation between density of convergence zones and that of loggerheads, but does not refute the importance of *Sargassum* to loggerheads. Read in its entirety, the proposed rule (and Witherington *et al.* 2012) clearly states that young loggerheads are indeed strongly associated with *Sargassum,* but a direct correlation between the strength of convergences and the density of loggerheads cannot be made. As we noted in the proposed rule, ''Witherington *et al.* (2012) found that the distribution of post-hatchling and early juvenile loggerheads was determined by the presence of *Sargassum.* Indeed, in surveys in which they measured the relative abundance of sea turtles in transects of surface-pelagic habitat across areas with and without *Sargassum,* Witherington *et al.* (2012) found that 89 percent of 1,884 post-hatchling and juvenile turtles were initially observed within 1 m of floating *Sargassum. Sargassum* rafts are likely not the only habitat of this life stage, as young turtles move through other areas where *Sargassum* does not occur (Carr and Meylan 1980); however, loggerheads may be actively selecting these habitats for shelter and foraging opportunities.'' (78 FR 43103, July 18, 2013). The proposed rule also notes that, while it has been suggested that turtle density increases with *Sargassum* density and consolidation, especially when *Sargassum* consolidation is linear (Witherington *et al.* 2012), ''Witherington *et al.* (2012) captured most turtles in *Sargassum* outside these dense convergence zones (i.e., in scattered patches, weak convergences, windrows), so a direct correlation between strong convergences and essential loggerhead habitat cannot be made'' (78 FR 43104, July 18, 2013).

Comment 23: One letter with 5,552 signatures supported the designation of *Sargassum* as discussed in the proposed rule, and encouraged NMFS to explore using existing methods of remote sensing to track the wide distribution and dynamic nature of *Sargassum.* Examples of ways to provide guidance on the near real-time distribution of *Sargassum* included Moderate Resolution Imaging Spectroradiometer (MODIS) and the newly launched Landsat-8. They also recommended NMFS elevate the need for remote-sensing science as a restoration funding priority for this species through the various funding mechanisms aimed at applied research for restoration and marine conservation.

Response: We appreciate the commenters' recommendation about elevating the need for remote-sensing as a funding priority. During the development of the proposed rule, we explored various ways to detect and predict *Sargassum* occurrence in the Atlantic and Gulf of Mexico, including the satellite imagery sources identified in the comment. In the biological report, we acknowledged that near-real time detection of *Sargassum* concentrations is possible using daily satellite imagery (MODIS) and the higher resolution Landsat imagery, but future predictions must rely on current systems to identify concentrations of possible habitat. Real time detection and tracking is currently available through some public sources like University of South Florida Optical Oceanography Laboratory. We agree that further high resolution imagery of specific *Sargassum* habitat from multiple years would be beneficial, but even with that information, it is probable that the habitat would continue to shift and exhibit variable patterns in the future. It is necessary to identify critical habitat areas in advance and give public notification of the designated area. That is why we identified a large area where *Sargassum* occurs, although in the final rule we were able to identify a more specific area that we believe is most beneficial to the species (see Section V., Critical Habitat Identification). Following the designation of *Sargassum* critical habitat, we will continue to explore options for real time monitoring of *Sargassum* and sources of funding for this work.

Comment 24: One commenter stated there is no basis for the claim that the designation will benefit loggerheads given the large uncertainties in habitat location and extent, loggerhead use and specific habitat needs. Further, if natural baseline conditions are not established, valid management criteria cannot be formulated and the effectiveness of management actions cannot be ascertained. Finally, they felt there are no management actions that can ''provide'' *Sargassum* habitat.

Response: While the habitat is dynamic and the specific location of *Sargassum* on any given day cannot be predicted, the benefit of this habitat to loggerheads is well established. Numerous references have explored the

relationship between sea turtles and *Sargassum* (Mellgren *et al.* 1994; Mellgren and Mann 1996; Witherington *et al.* 2002; Smith and Salmon 2009; Witherington *et al.* 2012), and it is known to be important forage and shelter habitat for multiple life stages. The magnitude of *Sargassum* in the Atlantic and Gulf of Mexico may vary from year to year, so it is difficult to establish natural baseline conditions that would calculate a biomass that needs to be protected. However, critical habitat designation is not dependent upon establishing a baseline condition. The PCEs were identified based upon the best available information and qualities that would support *Sargassum* habitat and be beneficial to loggerheads. Management actions will be evaluated via ESA section 7 consultations on a case by case basis considering these PCEs and in consideration of the magnitude of the project and potential impacts. This process does not differ from other section 7 consultations on other ESA listed species and their designated critical habitat. Finally, while we agree there are no management actions that can provide *Sargassum* habitat, there are management actions that can conserve *Sargassum* and thus essential forage, cover and transport habitat for a particularly vulnerable life stage.

Comment 25: Some commenters were concerned with NMFS' inability to determine suitable concentrations of *Sargassum,* including patch size or abundance of its associated loggerhead prey. Some felt the proposed rule did not present methods for determining what would be a natural, healthy *Sargassum* habitat condition. Some also noted that NMFS concedes that the specific density of *Sargassum* that may result in a high concentration of loggerhead turtles is unknown. The implication is that ''high concentration'' is the desired condition, but this concept is not directly addressed anywhere in the proposed rule, and the range of abundances for loggerheads that constitute ''high'' numbers is never defined.

Response: We agree that it would be ideal to have a scientific study that conclusively states the concentration of *Sargassum* that would congregate loggerheads or their prey. However, such a study is not currently available, nor is it necessary to designate critical habitat. While a specific prey concentration cannot be determined, the PCEs include ''*Sargassum* in concentrations that support adequate prey abundance and cover'' to address the question of whether the critical habitat designation applies to a small piece of *Sargassum* wherever it may occur. It was not our intent to classify every piece of *Sargassum* as critical habitat, only the habitat that provides shelter and forage.

We have not identified a ''high'' concentration target for loggerheads in *Sargassum* in part because ''high concentration'' of loggerheads is not a PCE, and in part because it is unknown. The best information on concentrations of turtles in *Sargassum* can be found in Witherington *et al.* (2012). That study found that relative densities of post-hatchling loggerheads in *Sargassum* were higher in the Atlantic (~267 turtles per km^2) compared to the Gulf of Mexico (~2 turtles per km^2). However, given the limitations in sampling, these numbers cannot necessarily be translated into a target ''high'' concentration of turtles.

Comment 26: Some commenters noted that NMFS acknowledged that *''Sargassum* rafts are likely not the only habitat of this life stage, as young turtles move through other areas where *Sargassum* does not occur.'' The commenters believe the science shows that there are other significant factors that influence loggerhead use of *Sargassum,* including time of year, nesting intensity and cohort size, migration behaviors, and the vagaries of habitat location.

Response: The most recent and comprehensive study on this topic (Witherington *et al.* 2012) found that turtle densities were 100 times higher in targeted *Sargassum* patches than in open water between consolidated patches. Certainly there are other factors that may influence the loggerhead's use of *Sargassum,* but those factors are not necessarily features of the habitat. PBFs and PCEs refer to the elements of the habitat type (e.g., *Sargassum*) that are essential to the conservation of the species, and may require special management considerations. Time of year, nesting intensity and cohort size, migration behavior and vagaries of habitat location are not features of the *Sargassum* habitat, *per se,* although they may allow us to anticipate whether special management considerations may be required.

Comment 27: Several commenters provided detailed information on the crucial role *Sargassum* plays in the loggerhead's life cycle. They noted why this habitat fits the ''may require special management'' definition, including the fact that currents that aggregate *Sargassum* also facilitate the accumulation of synthetic marine debris and petroleum or petroleum-contaminated debris within the convergence lines that aggregate *Sargassum.* They noted that in the aftermath of the 2010 Deepwater Horizon spill, rescuers collected nearly 500 juvenile turtles from lines of oil and *Sargassum.* They also identified direct harvest of the habitat and fishing activities that could predictably remove *Sargassum.*

Response: We agree that *Sargassum* habitat is important to loggerheads and meets the ''may require special management considerations'' portion of the critical habitat definition. In the proposed rule, we recognized that the PCEs can be affected by the following activities which may require special management: Commercial harvest of *Sargassum,* oil and gas activities, vessel operations that result in the disposal of trash and wastes, ocean dumping, and global climate change. Commercial fishing gear may have some interactions with *Sargassum* during deployment and retrieval, but these effects are temporary and isolated in nature and because of the fluid nature of the pelagic environment, recovery time is rapid. It is important to point out that we also believe that additional management—beyond that already required—is not anticipated.

Comment 28: One commenter stated that not only would designation of the *Sargassum* habitat cause the proposed critical habitat designation to be the largest in the history of the ESA, it would be based on physical and biological features that are poorly understood, ephemeral, and largely disconnected from the post-hatchling populations it is intended to protect. The commenter requested the entire proposed critical habitat designation be withdrawn as unnecessary and impermissible under the ESA and its implementing regulations, or narrowly delineate critical habitat and exclude from the designation all existing and proposed oil and gas development areas, as well as the areas containing industry's support infrastructure.

Response: Numerous references have explored the relationship between sea turtles and *Sargassum* (Mellgren *et al.* 1994; Mellgren and Mann 1996; Witherington *et al.* 2002; NMFS and USFWS, 2008; Smith and Salmon 2009; Witherington *et al.* 2012, Mansfield *et al.* 2014), and it is known to be important forage and shelter habitat for multiple life stages. Given the available literature, we disagree that the designation of *Sargassum* critical habitat is disconnected from post-hatchling populations. We also disagree that the features of the *Sargassum* habitat are poorly understood. The physical and biological feature of *Sargassum* (developmental and foraging

habitat for young loggerheads where surface waters form accumulations of floating material, especially *Sargassum*) is clear, we just do not know exactly when and where it will occur in future years. We acknowledge that the *Sargassum* critical habitat area is large, but there is no reason this is not permissible under the ESA, and the features are dynamic and not present at all times in all areas. Nonetheless, based on public comment and new information we were able to identify a more specific area that we believe is most beneficial to the species (see Section IV., Critical Habitat Identification). Finally, we completed a 4(b)(2) analysis that considered economic, national security and other impacts, and did not identify any additional impacts to oil and gas development areas, and thus do not have a basis to exclude existing and proposed oil and gas development areas (see Section VIII, ESA Section 4(b)(2) Analysis).

Comment 29: Several commenters noted the designation of a large critical habitat area will not pose an undue regulatory burden, especially given the unique *Sargassum* ecosystem. One commenter specifically stated that agency consultations concerning *Sargassum* critical habitat would be made easier because (1) *Sargassum's* seasonal presence and consistency from year to year makes its general location predictable, and (2) scientists are able to track the movement of large aggregations of *Sargassum* through satellite telemetry data.

Response: We agree that the designation of critical habitat will not pose an undue regulatory burden, given the few special management considerations that might affect the habitat and lack of any foreseeable activities that would rise to the scale of significant impacts. Although there is some consistency, it is generally difficult to predict specific *Sargassum* occurrence for a given location and time, and we are only able to forecast a general area where *Sargassum* may be present. This is the reason we identified a large geographical area where *Sargassum* is likely to occur. We agree that real time detection through satellite telemetry is possible in some areas however.

Comment 30: Several commenters were concerned that designation of *Sargassum* as critical habitat is likely to present significant new regulatory and compliance hurdles for Federal actions in the Gulf of Mexico. They felt it would be virtually impossible and most certainly impracticable for commercial fishing, oil and gas activities, and other types of regulated Federal actions to monitor for *Sargassum* presence, or to ascertain in real time a need for impact avoidance and minimization requirements which have yet to be promulgated.

Response: We do not believe that this rule will cause significant new regulatory and management measures for Federal actions. The loggerhead turtle has been listed since 1978 and, during this time, consultations on Federal activities have addressed habitat needs of the species. Further, when we identified the possible activities that may require special management considerations, commercial fishing activities were not included. While commercial fishing gear may have some interactions with *Sargassum* during deployment and retrieval, we anticipate that these effects will be temporary and isolated in nature and, because of the fluid nature of the pelagic environment, recovery time is rapid.

Comment 31: Two commenters raised the issue of how climate change may affect *Sargassum.* One commenter supported the inclusion of potential impacts of global climate change on the ecological relationships between climate, oceanographic features, *Sargassum* abundance, and location, with the evaluation of required habitat for loggerhead development. The commenter also noted that impacts of global climate change are expected to increase the acidification of the world's oceans, which is still an unknown factor in the health of the *Sargassum* community and the resulting effects on loggerhead development. Another commenter had concerns about including global climate change as an ''activity'' potentially affecting *Sargassum* habitat, including through related changes in currents and other oceanographic features. That commenter stated that decades of research show that it is the reverse, that climate is greatly influenced by oceanic currents. The commenter strongly urged NMFS to avoid any management considerations of global warming effects on *Sargassum* habitat.

Response: In the proposed rule, climate change was included as a special management consideration for *Sargassum* habitat, as this list includes various anthropogenic factors that may affect one or more PBF or PCE. We agree that global climate change should not be called an ''activity'' and changed that wording in the final rule. However, we must consider global climate change, which could have significant impacts on a variety of oceanographic features, including ocean temperature (and resulting stratification), currents, and ocean acidification. In response to one comment, we added ocean acidification to the list of impacts from climate change in the final rule. In response to the other, we note that while we agree that climate is influenced by oceanic currents, the opposite is also true. For example, changes in sea surface temperature and large-scale global wind patterns (influenced by climate change) may create divergences in surface currents (which may affect *Sargassum* distribution and consolidation). Climate change may also increase the frequency and magnitude of storm events, which could then lead to increased disruption of *Sargassum* consolidation. While the direct impacts are still unknown, global climate change may indeed affect *Sargassum* habitat.

Comment 32: Several commenters noted the existing Federal *Sargassum* Fishery Management Plan (FMP) which restricts harvest of *Sargassum* in the South Atlantic Region in the U.S. EEZ. Some noted that, while *Sargassum* is currently afforded minimum protection as essential fish habitat and harvest is limited in the South Atlantic under the current FMP, these designations do not sufficiently reflect the critical role this habitat plays in the development and survival of long-lived loggerhead sea turtles. One commenter also cited a court decision (*Natural Resources Defense Council* v. *United States Department of the Interior*) that the existence of management plans is indisputable proof that the area qualifies as critical habitat and that the existence of other protections for listed species' habitat, even if equal to or allegedly greater than the protection that critical habitat provides, cannot excuse the service's failure to designate critical habitat.

Response: We recognize that there is a *Sargassum* FMP in place that could assist in conserving turtles. As some commenters noted, the existence of an FMP is considered indicative of the fact that management measures may be required, a condition indicating the need for critical habitat designation (and certainly does not preclude the need for designation). Moreover, that is not the only activity which may require special management. The release of hydrocarbons, trash and toxic waste, and synthetic debris are among other threats to turtles in *Sargassum,* as they would also be likely to accumulate in *Sargassum* due to the same oceanographic features that form *Sargassum* mats and windrows.

Comments on Foraging Habitat

Comment 33: Several commenters felt NMFS was obligated to designate

foraging areas as critical habitat because such areas were identified in the proposed rule as occupied by loggerhead sea turtles and are essential for the conservation of the species. They felt NMFS' inability to identify specific high value sites as foraging critical habitat for loggerheads was not a reason to exclude foraging areas from consideration. Many felt that NMFS should not require information on specific prey density as a PCE before identifying foraging habitat as critical habitat. Some commenters noted that prioritization of specific habitats was not a requirement of the ESA; that if the PCEs are identified and the area is essential to the conservation of the species, it should be designated regardless of its relative ''priority.''

Commenters asserted that the ESA does not allow a lack of information concerning PCEs to preclude critical habitat designation. Such designations must be made on the basis of the best available scientific data. The commenters stated that where sufficient scientific data exist to enable NMFS to determine critical habitat through the identification of physical and biological features and corresponding PCEs, NMFS is obligated to designate critical habitat to the maximum extent prudent and determinable.

Response: We agree that foraging areas are important to loggerhead conservation. Sites were identified in the proposed rule as known foraging areas based upon a review of the available literature. However, we do not have information that shows those areas to be any more important or essential than much of the rest of the continental shelf and associated bays and sounds. The existing data identifies foraging areas that have been documented through research. However, because loggerhead sea turtles are generalist foragers, it is unknown whether these specific foraging areas are essential to loggerhead conservation or if those areas are simply where research has been conducted. As explained in the proposed rule, the potential PCEs of foraging habitat—(1) Sufficient prey availability and quality, such as benthic invertebrates, including crabs (spider, rock, lady, hermit, blue, horseshoe), mollusks, echinoderms and sea pens; and (2) Water temperatures to support loggerhead inhabitance, generally above 10 °C—do not differentiate any particular area of the continental shelf from other areas. Loggerheads are generalist foragers that have been shown to forage on a wide variety of prey organisms, among a wide variety of habitat types, throughout the continental shelf and associated bays and sounds in the Gulf of Mexico and western North Atlantic. However, we were unable to identify any specific areas that meet the definition of critical habitat under section 3(5)(A)(i) of the ESA. Given the wide distribution of loggerhead prey items, we could not identify ''specific areas'' where the essential features are found within areas believed to be occupied by loggerheads. The entire continental shelf basically serves as foraging areas for loggerheads.

Comment 34: One commenter suggested that NMFS should examine the most recent Recovery Plan updates, which note the need to evaluate the foraging habitats most important to the species' survival and recovery.

Response: We appreciate the importance of foraging habitat, and are aware that the Recovery Plan calls for identification and protection of marine habitats important to loggerheads. The Recovery Plan itself, however, does not identify the most important loggerhead foraging grounds but calls for further work to identify and then protect such habitat if it can be determined. The CHRT's efforts in this regard are discussed in the proposed rule.

Comment 35: One commenter recommended that NMFS designate as foraging habitat Delaware Bay, Chesapeake Bay, off the Outer Banks, Pamlico and Core Sounds, Savannah Harbor ocean bar channel, Charleston Harbor entrance channel, and Brunswick Harbor ocean bar channel. NMFS specifically identifies these areas as foraging habitat supported by the best available science. The Recovery Plan includes an entire section on the Pamlico-Albemarle Estuarine Complex, noting that it is the largest estuarine system in the southeast U.S. and the third largest in North America, and that it is important developmental habitat for loggerheads. The Recovery Plan also notes that long-term in-water studies indicate that juvenile loggerheads reside in particular developmental foraging areas for many years. This same area has also been recognized in multiple scientific studies regarding the capture of loggerheads in North Carolina state gillnet fisheries (e.g., McClellan 2011 and Byrd 2011).

Response: Sites, including those noted in the comment, were identified in the proposed rule as known foraging areas (and thus potential critical habitat candidates) based upon a review of the available literature. We agree that foraging areas are important to loggerhead conservation. However, we do not have information showing those areas to have unique habitat features that would result in them being any more important or essential than much of the rest of the continental shelf and associated bays and sounds. While individual studies may highlight specific areas, such areas are often reflective of where research is being conducted due to access or because of concerns due to fisheries in the areas. When looking at the information more holistically, both considering all of the individual studies together, and looking at broader datasets such as AMAPPS aerial surveys and the TEWG report, the widespread use of the vast majority of the continental shelf and inshore bays and sounds by adult and juvenile loggerheads stands out. Additionally, the generalist nature of loggerhead foraging and the lack of any specific habitat feature, prey type, or prey concentration that is deemed essential to loggerheads precludes the identification of specific habitat to be protected. We were concerned about the inability to prioritize foraging habitats, but perhaps more so about the inability to draw a box (as is the requirement for critical habitat) around any one area with unique PCEs that may represent critical loggerhead foraging habitat compared to another neighboring area.

Comment 36: One commenter provided the most recent study by Griffin *et al.* (2013) which identifies four areas of concentrated foraging use within the Mid Atlantic Bight. The commenter felt the information was sufficient for NMFS to propose these four areas as critical habitat.

Response: While we carefully considered the Griffin et al. (2013) study and its identification of foraging areas in the mid-Atlantic Bight—one of the few studies that identified ''hot spots'' in a larger study area—those areas do not represent any specific habitat feature, prey type, or prey concentration on which to base a designation.

Comment 37: Several commenters felt that foraging areas should not be designated as critical habitat until adequate data and analysis are available to correctly identify their importance to the survival of the species. They felt the data are inadequate particularly for Delaware Bay, Chesapeake Bay, Pamlico and Core Sounds, Savannah Harbor, Charleston Harbor and Brunswick Harbor.

Response: While we appreciate the commenter's desire to have comprehensive studies before assessing whether and where to designate critical habitat, the ESA requires us to designate critical habitat based on the best scientific and commercial data available. While individual studies may highlight specific areas, such areas are often reflective of where research is being conducted due to access or

because of concerns due to fisheries in the areas. When looking at the information more holistically, both considering all of the individual studies together and looking at broader datasets such as the TEWG data, it is clear that adult and juvenile loggerheads use not just inshore bays and sounds as foraging areas, but the vast majority of the continental shelf as well. Additionally, as noted above, loggerhead sea turtles are generalist feeders. No specific habitat feature, prey type, prey concentration, or area has been identified as essential to their conservation.

Comment 38: Two commenters recommended NMFS adopt a strategy to designate representative areas to ensure that at least some portion of the population in each of the neritic life stages and subpopulations will benefit from protected foraging habitat. One argued that this is similar to the approach used by USFWS to designate terrestrial habitat on some low density beaches, and recommended NMFS convene a group of experts to synthesize available data to select the appropriate size and location for foraging habitats based on this strategy in order to designate representative nearshore/inshore juvenile foraging critical habitat areas.

Response: First, while we do appreciate the commenters' desire to identify a means to designate foraging critical habitat, the ESA does not allow us to designate ''representative'' areas. We must designate those specific areas that are essential to the conservation of the species based on specific physical or biological features and associated PCEs. We could not identify specific areas that are essential to the species.

Second, the USFWS strategy for designating nesting habitat is not analogous to what is being suggested. The USFWS selection of nesting beaches to be proposed as critical habitat was based on a near complete understanding of which beaches loggerheads use for nesting and in what densities. As such, the most important/high density beaches for each major nesting region could be identified to ensure the maintenance of genetic diversity. With regard to foraging, we cannot identify high density foraging areas or specific habitat features, prey type, or prey concentrations essential to loggerhead conservation. While there are some areas where concentrated foraging has been identified, the PBFs and PCEs in those areas are not necessarily different than those in nearby areas.

Comment 39: The proposed rule identifies several notable foraging aggregations, some of which are occupied on a seasonal basis. Several of these sites have been the subject of multi-decadal mark-recapture studies that demonstrate consistent aggregations of juvenile and sub-adult loggerhead turtles with year-round or seasonal residency, i.e., in Florida: Indian River Lagoon (University of Central Florida); in North Carolina: Core-Pamlico-Albemarle Sound Complex (National Marine Fisheries Service Beaufort Lab); and in Virginia: Chesapeake Bay (Virginia Institute of Marine Science). The commenter noted a number of papers that provide quantitative data on foraging distributions of post-nesting females from the northern recovery unit (Griffin *et al.* 2013, Hawkes *et al.* 2007, Hawkes *et al.* 2011), foraging areas for adult male loggerheads (Arendt *et al.* 2011), and foraging areas for post-nesting adult females for the Peninsular Florida and Northern Gulf recovery units (Foley *et al.* 2013 and Hart *et al.* 2012), and noted that satellite telemetry and/or stable isotope analysis have corroborated the value of these sites, as well as identifying additional foraging areas for both juvenile and adult loggerhead turtles (McClellan *et al.* 2010). The commenter believes that representative sites could be selected on the southwest, central and northern Florida shelf based on these data.

Moreover, in many of these neritic loggerhead foraging grounds (i.e., Florida, North Carolina, Virginia) special management consideration and protection is already in place (i.e., fisheries bycatch reduction measures). The commenter believes that sites where juvenile loggerheads may reside warrant designation despite the lack of particular physical or biological features that might be used in modelling approaches. The commenter felt that presence of loggerheads was proof of importance. Therefore, the commenter encourages NMFS to include the neritic foraging grounds identified in the proposed rule as part of their designation of critical loggerhead habitat and to use the wealth of information on known sites as part of this process.

Response: All of the studies cited were reviewed by the CHRT. While individual studies may highlight specific areas, such areas are often reflective of where research is being conducted due to access or because of concerns due to fisheries in the areas. When looking at the information more holistically, both considering all of the individual studies together and looking at broader datasets such as the TEWG data, it is clear that adult and juvenile loggerheads use not just inshore bays and sounds as foraging areas, but the vast majority of the continental shelf as well. Additionally, as noted above, loggerhead sea turtles are generalist feeders. No specific habitat feature, prey type, prey concentration, or area has been identified as essential to their conservation. With regard to identifying ''representative sites,'' please see Response 37.

Comment 40: One commenter felt that the omission of loggerhead foraging grounds in the proposed rule is inconsistent with NMFS' designation of critical habitat for the leatherback in the North Pacific Ocean (77 FR 4170; January 26, 2012) and with Canada DFO's (Fisheries and Oceans Canada) designation of critical habitat for the leatherback in the Northwest Atlantic Ocean. In those designations, both countries identified only leatherback foraging grounds as critical habitat in their territorial waters. No nesting or breeding occurs in the territorial waters of either region. In both cases, the foraging grounds designated were but a small proportion of the total foraging grounds of the species, but nevertheless the country-specific foraging grounds were recognized as essential. Further the commenter recommended that NMFS base the designation of critical foraging habitat for loggerheads in the Northwest Atlantic Ocean on the Atlantic Strategy Steering Committee's synthesis, and include the Gulf of Mexico. NMFS should define the foraging habitats as functional habitats with some metrics (available prey, depth <200m, etc.).

Response: A comparison of foraging habitat for the leatherback turtle in the North Pacific Ocean with foraging habitat for the loggerhead, whether in the North Pacific or Northwest Atlantic Ocean, is not analogous. The leatherback turtle has very specific preferred prey, Scyphomedusae, and critical habitat units were identified, in large part, on areas where their prey concentrate. Loggerheads do not have a preferred prey and there are no habitat features necessary for foraging beyond water temperature and sufficient prey availability and quality. These factors make it much more difficult to identify foraging critical habitat for loggerheads than Pacific leatherbacks. Indeed, in the Northwest Atlantic Ocean DPS, both adequate water temperature and sufficient prey occur year-round in the Gulf of Mexico and the Atlantic coast up to North Carolina, and as far north as Massachusetts in the summer. The CHRT considered defining critical foraging habitat by some metric such as prey or depth. However, the extensive foraging throughout the continental

shelf, bays and sounds, and the generalist foraging habits of loggerheads did not allow us to identify metrics that would differentiate any particular, essential foraging habits or habitat features from the entire foraging habitat.

Comment 41: One commenter was concerned that NMFS defined the physical or biological features of loggerhead foraging habitat as areas ''frequently used by large numbers of juveniles or adults.'' They argued that the lack of comprehensive shelf-wide surveys makes it impossible to define high use areas. In addition, the consideration of only high use areas may not be an appropriate strategy for aspecies that occurs in a uniform distribution across the foraging habitat (no definable high use area). The commenter recommended that NMFS modify the PBF by removing the ''frequently used by large numbers of juveniles or adults'' language from the definition for foraging habitat.

Response: We focused on areas frequently used by large numbers of juveniles or adults as a means of identifying habitat that is essential to the species. If we removed that portion of the definition for the PBF, we would be left with ''specific sites on the continental shelf or in estuarine waters used as foraging areas'' but we would likely have maintained the PCEs as they are (sufficient prey availability and quality, and water temperatures above 10 °C). This would not assist in identifying areas essential to the conservation of the species.

Comment 42: One commenter pointed out that the TEWG's 2009 analysis of habitat usage resulted in the identification of relatively high use areas ''which served as a proxy for identifying important habitat areas, especially as there is little quantitative data on loggerhead use of offshore waters.'' Thus, NMFS admits that the best available science uses species use as a surrogate for identification of specific habitat characteristics. Where the agency knows that areas are important, highly used, and may be in need of special management considerations, these should be designated as critical habitat, bolstered by PCEs to the extent and with the specificity that can be identified.

Response: While we used the TEWG analysis to make an initial identification of high use areas to consider as possible foraging critical habitat, we can only designate occupied areas as critical habitat if they contain PBFs essential to the conservation of the species. We were unable to identify PBFs and PCEs associated with the high use foraging areas because we could not identify any specific habitat feature, prey type, prey concentration, or area as essential to their conservation.

Comment 43: One commenter recommended that NMFS designate as foraging habitat Delaware Bay, Chesapeake Bay, off the Outer Banks, Pamlico and Core Sounds, Savannah Harbor ocean bar channel, Charleston Harbor entrance channel, and Brunswick Harbor ocean bar channel. NMFS specifically identifies these areas as foraging habitat supported by the best available science. The Recovery Plan includes an entire section on the Pamlico-Albemarle Estuarine Complex, noting that it is the largest estuarine system in the southeast U.S. and the third largest in North America, and that it is important developmental habitat for loggerheads. The Recovery Plan also notes that long-term in-water studies indicate that juvenile loggerheads reside in particular developmental foraging areas for many years. This same area has also been recognized in multiple scientific studies regarding the capture of loggerheads in North Carolina state gillnet fisheries (e.g., McClellan 2011 and Byrd 2011).

Response: Sites, including those noted in the comment, were identified in the proposed rule as known foraging areas (and thus potential critical habitat candidates) based upon a review of the available literature. We agree that foraging areas are important to loggerhead conservation. However, we do not have information showing those areas to have unique habitat features that would result in them being any more important or essential than much of the rest of the continental shelf and associated bays and sounds. While individual studies may highlight specific areas, such areas are often reflective of where research is being conducted due to access or because of concerns due to fisheries in the areas. When looking at the information more holistically, both considering all of the individual studies together, and looking at broader datasets such as AMAPPS aerial surveys and the TEWG report, the widespread use of the vast majority of the continental shelf and inshore bays and sounds by adult and juvenile loggerheads stands out. Additionally, the generalist nature of loggerhead foraging and the lack of any specific habitat feature, prey type, or prey concentration that is deemed essential to loggerheads precludes the identification of specific habitat to be protected. We were concerned about the inability to prioritize foraging habitats, but perhaps more so about the inability to draw a box (as is the requirement for critical habitat) around any one area with unique PCEs that may represent critical loggerhead foraging habitat compared to another neighboring area.

Comment 44: One commenter requested NMFS to designate the neritic area in and around the Chesapeake Bay as critical habitat. The commenter felt that the available information supports the designation for this area. Specifically, surveys show a relatively large abundance and density of loggerheads in neritic Virginia waters between the months of May and September. Satellite telemetry studies show that individual loggerheads have core habitat in the Chesapeake Bay. Dive data collected from Virginia show dynamic behaviors for loggerheads in Chesapeake Bay and preliminary analysis of these data show potential foraging hotspots. Furthermore, resource selection analysis modeling on existing data could provide a statistically reportable probability that loggerheads will forage in specific areas. The commenter felt that this type of modeling should be conducted to identify critical foraging habitat. A large proportion of Virginia stranded loggerheads exhibit signs of anthropogenic injury. The commenter felt that these numbers qualify Virginia as a specific geographic area which may require special management considerations or protection. Finally, diet studies have shown that the primary prey of stranded Virginia loggerheads has shifted away from crustaceans and mollusks to bony fish over the past years—potentially putting the population at greater risk of fishery related serious injury and mortality. This may be due to a decrease in the availability of primary prey types in the Bay. The commenter asserted this shift creates a conservation concern directly related to foraging behavior in the Chesapeake Bay.

Response: See response to Comment 42.

Comments on Nearshore Reproductive Habitat

Comment 45: Several commenters were concerned that the proposed 1.6 km (1 mile) from the mean high water (MHW) datum seaward is too narrow an area to be identified as nearshore reproductive habitat for hatchling swim frenzy and for females during the internesting period. They argued that females utilize nearshore waters at least out to 5.0 km (3 mi). They stated that NMFS should designate areas up to 3 miles or further due to the dangers of fishing, offshore energy activities, and vessel traffic. The commenters suggest that NMFS did not determine whether a distance of three miles was essential

to the conservation of the species, but rather that a distance of one mile was more essential to the conservation of the species. Rather than the dispersal of sea turtles as they move farther from shore providing a reason to designate less critical habitat, it arguably should be reason to designate across more of the dispersal area.

Response: We considered using 1.6 km (1 mile), 4.8 km (3 mile), and distances further from shore, and weighed which distance was essential to the conservation of the species. As noted, the data indicate loggerheads use habitat even greater than 5.0 km (3 miles) from shore. However, in considering habitat needs of these turtles, waters closest to shore pose the greatest opportunity for disruption of the habitat functions necessary for offshore egress for hatchlings and transit to and from the nesting beach by nesting females. Internesting females use waters to 4.8 km (3 mile) and beyond, but they move up and down the shoreline as well. We chose not to attempt to include all habitat used by the internesting females and hatchlings; rather, we identified the physical or biological feature necessary to the conservation of loggerheads as the portion of nearshore waters adjacent to nesting beaches that are used by hatchlings to egress to the open-water environment as well as by nesting females to transit between beach and open water during the nesting season. For example, threats to the essential function of the hatchling swim frenzy habitat include physical impediments to offshore egress, predator concentration, disruption of wave angles used for orientation to open water, and the formation of strong longshore currents resulting from artificial structures (such as breakwaters or groins). The vast majority of threats would occur well within the 1.6 km line. Likewise, internesting female use of in-water habitats beyond the very nearshore waters is expected to be much more dispersed as discussed previously. A distance of 1.6 km from the MHW line includes the areas most in need of protection from potential habitat disruptions such as the construction and placement of structures that could alter the nearshore habitat conditions and thus affect nesting female transit to and from the nesting beaches.

Comment 46: Several commenters were concerned that the proposed rule may not adequately address critical habitat for reproductively active adult females during the internesting period. They argued that the location of nearshore reproductive habitat should not be based on the locations of certain nesting beaches. Females move laterally along the shore and often occupy nearshore waters that are not seaward of the designated nesting beaches. Therefore, many of them will not be protected by the critical habitat designation if their internesting habitat is not off one of these designated beaches. The proposed critical habitat should extend along the entire shoreline in which loggerhead nesting occurs, not just off some of the beaches.

Response: We agree that internesting females move laterally along the shore and often occupy nearshore waters that are not seaward of the designated nesting beaches. However, we have determined that the portion of nearshore waters adjacent to nesting beaches that are used by hatchlings to egress to the open-water environment as well as by a large portion of nesting females to transit between beach and open water during the nesting season are the areas that contain the features that are essential to the conservation of loggerheads. These waters contain the vast majority of threats to expeditious ingress and egress from the beach that are experienced both by nesting females and hatchlings in their swim frenzy (see also Response 44).

Comment 47: One commenter felt that NMFS must designate waters off all occupied nesting beaches, and not only the beaches with the highest nesting density, as proposed. They believe NMFS should designate waters off all occupied beaches because the physical and biological feature of nearshore reproductive habitat and its corresponding PCEs are present regardless of how the beaches rank in density. Additionally, they argued that tagging studies show that many sea turtles nesting on high-density beaches in the northern Gulf of Mexico will also nest on other low-density beaches as well.

Response: Section 3(5)(C) of the ESA states that, ''Except under those circumstances determined by the Secretary, critical habitat shall not include the entire geographical area which can be occupied by the . . . species.'' We defined the first PCE for nearshore reproductive habitat as ''Nearshore waters directly off the highest density nesting beaches and their adjacent beaches as identified in 50 CFR 17.95(c) to 1.6 km (1 mile) offshore.'' Therefore the PBF and PCEs are not present in nearshore reproductive habitat off of all occupied nesting beaches but are in all those we designated. Most importantly, we defined the PBF and PCEs the way we did because we believe that the amount and distribution of critical habitat being designated for terrestrial and nearshore reproductive habitat is adequate to conserve (recover) all recovery units of this DPS.

The nearshore reproductive habitat off of high density beaches will conserve the species because they represent the highest nesting densities within each of the four recovery units, have a good geographic spatial distribution that will help ensure the protection of genetic diversity, and collectively provide a good representation of total nesting. The beaches and nearshore habitat adjacent to the primary high-density nesting beaches currently support loggerhead nesting and can serve as expansion areas should the high-density nesting beaches be significantly degraded or temporarily or permanently lost through natural processes or upland development.

Comment 48: Several commenters felt USFWS and NMFS did not consider the historical nesting data distribution when they proposed critical habitat on nesting beaches and in nearshore reproductive habitat. They believe historical nesting data distribution shows that the geographical area most critical to the survival of the species occurs on the beaches of Florida. The commenters stated the data show that 79 percent of nesting activity occurs on 363 km of the Florida east coast between Ponce Inlet and Miami Beach (15 percent of the total of all beaches within the Northwest Atlantic Ocean DPS) while only 21 percent of nesting activity occurs within the 2,078 km (85 percent) comprising the rest of the DPS. Further, the data show that geographical locations at the northern extreme of the DPS (North Carolina) and the northern Gulf of Mexico have very low populations and nesting density.

Response: We understand that most nesting occurs along the east coast of Florida; however, highest density nesting is not the sole criteria by which to identify geographic areas that are critical to the conservation of the species. We intentionally divided loggerhead reproductive areas into the Recovery Units identified in the Recovery Plan (NMFS and USFWS 2008) and, within these areas, by State or regions within the State (for Florida). We did this to identify the following: (1) Beaches with a good geographic spatial distribution to ensure protection of genetic diversity and thus adaptive potential of the DPS, (2) beaches that collectively provide a good representation of total nesting, and (3) beaches adjacent to high density nesting beaches that can serve as expansion areas as the DPS recovers or allow for movement of nesting, since loggerheads nest on dynamic ocean beaches that can

be degraded or lost over time through natural and anthropogenic processes.

While the geographical locations at the northern end of the DPS (North Carolina) and the northern Gulf of Mexico have very low populations and nesting density in comparison with Florida, they may also represent important genetic diversity and adaptive potential for the DPS, especially as our climate changes. In the case of the northern end of the DPS, these beaches also represent the portion of the DPS most likely to produce male loggerheads because lower nest temperatures result in a higher proportion of males. As a result, these areas serve a very important and unique purpose within the DPS.

Comment 49: One commenter requested NMFS add seven beach segments and exclude 23 beach segments of proposed nearshore reproductive habitat. The commenter argued that the seven beach segments, all located in Florida, should be added due to the high concentration of historical nesting activity at these locations and/or the proximity of these segments to other high density segments proposed for critical habitat. These segments have an average nest density of 55.3 nests/km and account for 10 percent of total nests. They consist of Ponce Inlet through New Smyrna Beach, Cape Canaveral Air Force Station, Jetty Park through Cocoa Beach, Patrick Air Force Base, Vero Beach to Ft. Pierce Inlet, Hillsboro Inlet to Port Everglades, and Port Everglades through Golden Beach.

The 23 beach segments recommended for exclusion are due to the low number of nests/low density they produce. These include eight in North Carolina, two in Mississippi, three in Alabama, and 10 in Florida. These segments have an average nest density of 2.7 nests/km and account for 1.6 percent of total nests. They consist of Bogue Banks and Bear Island, North Carolina (LOGG–N–03), Topsail Island and Lea-Hutaff Island, North Carolina (LOGG–N–04), Pleasure Island, Bald Head Island, Oak Island and Holden Beach, North (LOGG–N–05), Long Key and Bahia Honda, Florida (LOGG–N–19), Perdido Key, including Gulf Islands National Seashore, Florida (LOGG–N–33), St. Joe Beach and Mexico Beach, Florida (LOGG–N–32), St. Joseph Peninsula (LOGG–N–31), St. Vincent Island, Little St George Island, St. George Island, and Dog Island, Florida (LOGG–N–31), Horn Island, MS (LOGG–N–35), Petit Bois Island, MS (LOGG–N–36), Mobile Bay-Little Lagoon Pass, AL (LOGG–N–34), Gulf State Park-Perdido Pass, AL (LOGG–N–33), Perdido Pass-Florida-Alabama line, AL (LOGG–N–33). The net effects of the changes would be (1) Number of Critical Habitat units would drop from 90 to 74; (2) critical habitat unit length would drop from 1,189.9 km (48 percent) to 927.9 km (38 percent); (3) average annual nesting event included in critical habitat units would increase from 55,204 (86 percent) to 60,691 (94 percent). These changes would increase the coverage of historical nesting activity but reduce the area that would be subjected to additional regulations and management processes as a result of designation.

Response: We appreciate the commenter's desire to include the greatest density of loggerhead nests and nearshore reproductive areas within the shortest span of coastline. However, while the Florida coast does contain the highest density of loggerhead nests, tenets of conservation biology dictate the importance of conserving the range of habitats and individuals in order to preserve both adaptive capability of turtles (turtles that have adapted to different conditions, exhibit different life history strategies (such as overwintering off of North Carolina as opposed to migrating south) and/or those whose genetic makeup may reflect such adaptations), and a range of habitat options as conditions change, such as loss of habitat in low lying areas due to sea level rise. In the designation of critical habitat, we purposely identified high density nesting habitat in each state in order to protect a portion of nesting in each recovery unit. See Response 47 for more discussion of this subject.

Comment 50: Several commenters noted that 2012 nesting density for North Carolina was 3.25 nests per mile of beach. Bogue Banks nesting density was half of that at 1.6 nests per mile. Bogue Banks has had an average nesting density of 1.25 since 1996. When compared to South Carolina (24.8 nests per mile), Georgia (24 nests per mile of beach), and Florida (120 nests per mile), Bogue Banks does not qualify for critical habitat designation for either terrestrial or nearshore reproductive habitat.

Response: We are aware that the beaches in North Carolina have lower nesting densities than in some of the other parts of the species' nesting range. Please see Responses to Comments 47 and 48.

Comment 51: One commenter disagreed with designating nearshore reproductive habitat in Mississippi (LOGG–N–35 and LOGG–N–36). The commenter argued that there are far fewer nests annually in Mississippi compared to other identified habitat recovery units and nesting locations. They state that estimated densities of sea turtles in shelf areas seaward of the Mississippi barrier islands have historically been low (e.g., McDaniel *et al.,* 2000). The commenter felt the data did not support designation of critical habitat for the two nearshore reproductive areas in Mississippi.

Response: Please see Responses to Comments 47 and 48.

Comment 52: Several commenters felt the inclusion of low density nesting sites adjacent to high density nesting sites was inappropriate. Some noted that 34 areas covering 739.3 miles of coastal waters proposed by NMFS for marine critical habitat designation are comprised of waters offshore beaches that are not high nesting density beaches. Marine habitat off of beaches that presently host low density nesting activity is not essential to the conservation of the loggerhead turtle because the ''egress'' and ''transit'' behaviors of a relatively small percentage of the total number of hatchlings or nesting females could be affected by activities in these proposed areas. They further note that the proposed rule indicates these adjacent beaches may or may not become important nesting beaches based on two future events which may be plausible, but which do not exist today and which may or may not occur in the future. Thus, the designation of these adjacent beaches and the marine areas offshore of these beaches is neither prudent nor determinable.

Response: Beaches adjacent to high density nesting beaches were proposed for designation by USFWS to serve as expansion areas as the DPS recovers and/or allow for movement of nesting because loggerheads nest on dynamic ocean beaches that can be degraded or lost over time through natural and anthropogenic processes. We support this and proposed designation of waters offshore of these beaches because it is important not only to identify high density nesting with a broad geographic representation but also to identify sufficient geographic area to allow the DPS to continue to recover and thrive. Given the strong nest site fidelity of loggerhead sea turtles, it made the most sense to identify areas adjacent to high density nesting beaches.

Comment 53: One commenter asked for clarity on designating areas offshore of beaches, which collectively account for 84 percent of all documented nests in order to satisfy the statutory standards of it being both prudent and essential to the conservation of the species. The commenter questioned whether some lower percent would be

sufficient for the essential conservation of loggerhead turtles.

Response: Designating nearshore areas off of beaches that account for a high percentage of documented nests is appropriate, given that the species is threatened and needs to continue to recover. As stated in the rule, this habitat has been deemed essential to the conservation of the species because it does the following: (1) Protects nearshore habitat adjacent to a broad distribution of nesting sites; (2) allows for movement between beach areas depending on habitat availability (response to changing nature of coastal beach habitat) and supports genetic interchange; (3) allows for an increase in the size of each recovery unit to a level at which the threats of genetic, demographic, and normal environmental uncertainties are diminished; and (4) maintains its ability to withstand local or unit level environmental fluctuations or catastrophes.

Comment 54: NMFS proposed 36 marine areas for potential designation as critical habitat that relate to four specific aspects of loggerhead life history including nearshore reproductive habitat, wintering areas, breeding areas and migratory corridors (LOGG–N–1 through LOGG–N–36). Several aspects of loggerhead life history are seasonal and do not normally occur year-round. In turn, the proposed rule confirms that the use or occupation of these areas by loggerhead turtles is also seasonal. For example, it is obvious that by definition, wintering habitat is occupied by certain turtles during the winter. The commenter felt the critical habitat designations did not adequately include a component that reflects seasonal behavior and occupation of the areas by loggerheads.

Response: Seasonal behavior and occupation of an area by loggerheads can be influenced by environmental conditions, which may vary year to year. Wherever possible, we specified seasonal components that reflect seasonal use by or behavior of loggerheads. For instance, where appropriate we specified the time of year or even months during which the physical or biological features in the proposed designated critical habitat occur or are of interest. For example, in the proposed rule, winter habitat is described as warm water (above 10 °C from November through April) used by a high concentration of juveniles and adults during the winter months. These seasonal descriptors will assist Federal agencies when consulting under ESA section 7 on their activities in the area.

Comment 55: The proposed rule does not provide an adequate description of the PBF's and PCE's to support the inclusion of inlets as a component of nearshore reproductive habitat. The proposed rule should cite specific scientific research supporting the designation of inlets as nearshore reproductive habitat.

Response: We may designate an inclusive area when several habitats, each satisfying the requirements for designation as critical habitat, are located in proximity to one another (50 CFR 424.12(d)). In the cases of beaches along islands or that wrap around into an inlet, we started with the furthest point from the far end of the unit and extended it out seaward. Where beaches are adjacent and within 1.6 km (1 mile) of each other, nearshore areas are connected, either along the shoreline or by delineating on GIS a straight line from the end of one beach to the beginning of another, either from island to island, or across an inlet or the mouth of an estuary. The furthest point at each end of the combined unit was extended seaward to identify the nearshore reproductive habitat area. This will provide more connectivity to the multiple adjacent areas and a clear designation for nearshore reproductive habitat. We did not designate critical habitat within inlets when linking nearshore reproductive units—just across the inlet from beach to beach.

Comment 56: One commenter was concerned that the proposed rule did not define what constitutes a ''sufficient'' condition of minimal obstructions and artificial lighting to allow transit through the surf zone. They felt such ambiguity is likely to result in inconsistency in regulatory requirements depending on the type and timing of future Federal actions.

Response: It is not possible to define what constitutes a ''sufficient'' condition because every situation will be different. It is not possible to apply one standard as the impact of the obstructions and lighting could vary depending on many variables about the obstructions themselves, the configuration, and other details of the nesting beach and nearshore waters. Although the condition is not standardized, we will be as consistent as possible in our consultations, given these constraints.

Comment 57: One commenter urged NMFS to include in its designation of nearshore reproductive habitat the areas offshore the following nesting beaches: Cape Hatteras and Cape Lookout, Figure 8 Island, Ocean Isle, and Sunset (North Carolina); Bay Point, Hilton Head, North, Pritchards, Bull, and Hunting (South Carolina); Little St. Simon and Jekyll Islands (Georgia).

Response: Both NMFS and USFWS acknowledge the importance of all loggerhead nesting beaches and nearshore reproductive habitat. These beaches and their associated nearshore habitat did not meet the critical habitat selection criteria either because the nesting density was not in the upper quartile of nesting density by state or the island was not adjacent to a high density nesting beach. For this reason, we are not designating the areas as critical habitat. However, loggerheads, their nests and nearshore habitat will continue to be protected along these beaches because the DPS is listed as threatened under the ESA and any impacts to the habitat that affect individual turtles will be considered in a consultation with Federal action agencies.

Comment 58: Several commenters requested NMFS also consider additional nearshore habitat off nesting beaches in Lee and Collier Counties, Florida. Specifically, they requested beaches in Collier County from Doctor's Pass to Gordon Pass, as well as the beaches of Marco Island be designated. Likewise, the eastern end of Sanibel Island in Lee County should be designated. While these stretches of beach do not contain the same density as other areas proposed for designation under the USFWS proposal, these beaches are currently occupied and do appear to contain the physical and biological features, as well as constituent elements, of critical habitat as described in the USFWS **Federal Register** notice. Thus, the final NMFS rule should also reflect these areas in its designation. Specifically, areas adjacent to LOGG–N–28, between LOGG–N–27 and LOGG–N–26, and adjacent to LOGG–N–25, should be designated where neritic and nearshore habitats occur.

Response: We acknowledge the importance of the loggerhead nesting beaches and nearshore reproductive habitat in Lee and Collier Counties. However, these beaches and their associated nearshore habitat did not meet the critical habitat selection criteria either because the nesting density was not in the upper quartile of nesting density by state or the island was not adjacent to a high density nesting beach. For this reason, we are not designating the areas as critical habitat. However, it is important to note that loggerheads, their nests and nearshore habitat will continue to be protected along these beaches because the DPS is listed as threatened under the ESA and any impacts to the habitat that

affect individual turtles will be considered in a consultation with Federal action agencies.

Comment 59: Multiple commenters opposed designating critical habitat for either terrestrial or nearshore reproductive habitat for the Cape Hatteras National Seashore Recreational Area (CAHA) and Cape Lookout (CALO) and areas south along the North Carolina coast. CAHA and CALO to its south are far beyond the historical nesting range that has proven critical to the species. They argued that neither of these beaches have historically had a sufficient number of nests or density to warrant designation. Foreseeable events are unlikely to ever change this conclusion. USFWS and NMFS correctly excluded CAHA and CALO in the proposed designations.

Response: We determined that CAHA and CALO did not meet the critical habitat selection criteria because the nesting density was not in the upper quartile of nesting density by state or the island was not adjacent to a high density nesting beach. Loggerhead nests and nearshore reproductive habitat will continue to be protected along these beaches because the DPS is listed as threatened under the ESA and any impacts to the habitat that affect individual turtles will have to be considered in a consultation with Federal action agencies. The determination with regard to CAHA and CALO remained the same in the final rule.

Comment 60: One commenter felt that the nearshore waters out to the *Sargassum* weed should be designated as critical habitat during the loggerhead nesting season. USFWS should designate as critical habitat the beaches from Currituck, North Carolina, and south, and concurrently NMFS should designate nearshore reproductive habitat off those beaches.

Response: With regard to the extent to which nearshore waters should be designated off the beach, it would be very difficult to tie it to a dynamic habitat feature such as *Sargassum,* and particularly difficult to tie it to *Sargassum* given that *Sargassum* can occur right up to shore. In our proposed rule, we discussed designating *Sargassum* habitat starting at the 10 m depth contour only to ensure that the *Sargassum* we might designate was out of the tidal influence (although we identified critical habitat for *Sargassum* more narrowly in the final rule, starting it at the western edge of the Gulf Stream in the Atlantic). With regard to designating nearshore reproductive habitat off of all beaches from Currituck, North Carolina and south, we appreciate the commenter's desire to protect these beaches and their nearshore habitat, but we used selection criteria to identify critical habitat (see responses to Comment 56) and many of these beaches and their associated nearshore habitat did not meet these criteria. For this reason, we are not designating them as critical habitat. However, loggerheads, their nests and nearshore habitat will continue to be protected along these beaches because the DPS is listed as threatened under the ESA and any impacts to the habitat that affect individual turtles will be considered in consultations with Federal action agencies.

Comment 61: Several commenters requested that NMFS not designate nearshore reproductive waters as critical habitat in Carteret County, North Carolina. They felt that existing active coastal shore protection programs, which include maintaining and enhancing ''on land'' and ''in the water'' habitats for loggerhead sea turtles, negated the necessity of designating critical habitat in the area. The commenters stated these programs are compliant with stringent state and federal regulations, including sediment criteria, mandated construction windows, tilling requirements and other provisions, to ensure that habitat for threatened and endangered species, including the loggerhead sea turtle, are protected before, during and after beach nourishment activities.

Response: We appreciate all the efforts that are being made by Carteret County on behalf of loggerhead turtles and their habitat. However, ongoing conservation measures are not a cause for excluding an area from critical habitat. The nearshore reproductive habitat off Carteret County was designated based upon nesting beach selection criteria that was consistently applied throughout the DPS.

Comment 62: One commenter requested NMFS reduce the proposed 11.5 miles of nearshore reproductive critical habitat designation (LOGG–N–5-Pleasure Island, Bald Head Island, Oak Island, and Holden Beach, New Hanover and Brunswick Counties, North Carolina) to 4.5 miles to include the oceanfronts of Fort Fisher State Park, portions of the Zeke's Island Reserve south to the ephemeral Corncake Inlet and waterward east one mile. They stated that documented nesting data within the suggested 4.5 mile area has a 17-year average of 19 nests per year compared to eight and seven nests per year for Kure Beach and Carolina Beach, respectively. They highlighted several ongoing sea turtle monitoring and protection programs for this area, and felt the 4.5 mile area coincides more closely with the PBFs and PCEs for supporting reproductive and high-density nesting beaches described in the proposed rule. Conversely, they felt that the Kure Beach and Carolina Beach municipal oceanfronts and Freeman Park (totaling approximately seven miles) marginally contain the PBFs and PCEs for critical habitat designation. Over one mile of Pleasure Island has shore parallel hardened structures located at the southern and northern termini of Kure Beach and Carolina Beach, respectively. In addition, Freeman Park has year-round off-road vehicle access averaging 2,200 vehicle visits per month. They felt designating a 4.5 mile area of virtually pristine habitat was more appropriate than an additional seven miles with marginal PBFs/PCEs.

Response: We appreciate the thought given to this proposal and gave it serious consideration, which included discussions with USFWS. However, we determined that these beaches do meet the selection criteria used to identify critical habitat and therefore they should be designated.

Comment 63: One commenter recommended NMFS develop and implement an agreement with Marine Corps Base (MCB) Camp Lejeune, North Carolina, that provides protection equivalent to critical habitat designation to those nearshore waters adjacent to the base.

Response: We consulted with the U.S. Marine Corps on their INRMP for MCB Camp Lejeune, which is the vehicle for such an agreement. Section 4(a)(3)(B)(i) of the ESA states that ''the Secretary shall not designate as critical habitat any lands or other geographical areas owned or controlled by the Department of Defense, or designated for its use, that are subject to an integrated natural resources management plan prepared under section 101 of the Sikes Act (16 U.S.C. 670a), if the Secretary determines in writing that such a plan provides a benefit to the species for which critical habitat is proposed for designation.'' We did not designate critical habitat in the waters off Camp Lejeune because the base's INRMP was determined to provide a benefit to loggerheads through reference to Base Order 3570. 1C, Range and Training Regulations—Standing Operating Procedures for Range Control. Camp Lejeune is currently in the process of updating their INRMP and the revised INRMP will explicitly detail loggerhead conservation measures for nearshore reproductive habitat rather than incorporating them by reference.

Comment 64: One commenter noted that a turtle sanctuary has existed since

1991 in the Atlantic Ocean in the vicinity of Hammock's Beach State Park and MCB Camp Lejeune, North Carolina, by Rule of the Marine Fisheries Commission (15A NCAC 03R.0101), which prohibits use of any commercial fishing gear within the bounds of the sanctuary between June 1 and August 31 each year. If this area also receives designation as critical habitat, the commenter encouraged NMFS to issue a minimal number of incidental take permits in order to maintain the functionality of the sanctuary.

Response: The sea turtle sanctuary and its prohibitions on fishing will remain in place with or without a critical habitat designation. It is not affected by a designation.

Comments on Wintering Habitat

Comment 65: One commenter was concerned that the migratory/winter (LOGGN–01) and winter (LOGGN–02) areas were too large and may entail no wake zones or slower speed restrictions for large vessels operating in the areas.

Response: The migratory and winter habitats do encompass a large portion of the waters off North Carolina, but that is due to the location and nature of the important habitat features off the North Carolina coast. We identified several factors/activities that may have an effect on one or more PBF or PCE and may require special management considerations. For winter habitat, those factors/activities include large-scale water temperature changes resulting from global climate change, and shifts in the patterns of the Gulf Stream resulting from climate change. For the migratory habitat, the primary impact to the functionality of the migratory corridors would be a loss of passage conditions that allow for the free and efficient migration along the corridor. The activities that are anticipated to result in an impact to the PCEs and potential altered habitat conditions needed for efficient passage are oil and gas activities; power generation activities; dredging and disposal of sediments; channel blasting; marina and dock/pier development; offshore breakwaters; aquaculture structures; fishing activities, particularly those using fixed gear and arranged closely together over a wide geographic area; and noise pollution from construction, shipping and/or military activities. None of the identified special management considerations for winter or migratory habitat involve large vessel transiting impacts. We do not anticipate the designation of winter and migratory critical habitat will result in no wake zones or slower speed restrictions for large vessels operating in the areas.

Comments on Constricted Migratory Corridors

Comment 66: One commenter supported NMFS' proposed critical habitat designation of constricted migratory habitat. However, they felt NMFS should identify other migration routes, such as the waters off New England and designate them as critical habitat. Additionally, female loggerheads are known to transit between nesting beaches as far as 250 km apart during the same nesting season. Loggerhead occupation in these instances means that the species is utilizing some area to migrate from one place to another.

Response: We appreciate the commenter's desire to identify as critical habitat migratory paths that are well used in additional places, such as off the waters of New England. Because loggerheads move readily up and down the east coast of the U.S. and within the Gulf of Mexico to forage, and move between foraging and reproductive areas, we focused on migratory corridors that are both highly used and constricted (limited in width) by land on one side and the edge of the continental shelf and Gulf Stream on the other side, and therefore might be more vulnerable to perturbations than other migratory areas. These constricted, high use corridors are used for traveling from nesting, breeding, and foraging sites by both juvenile and adult loggerheads. They provide the function of a relatively safe, efficient route for a large proportion of the population to move between areas that are vital to the species. During our review of the best available information, only the two migratory corridors off Florida and North Carolina fit the identified criteria (e.g., high use and constricted in width).

Comment 67: One commenter was concerned that the proposed critical habitat designation focused narrowly on a very small segment of the life cycle (nesting females and hatchlings) and areas used during a small proportion of a calendar year. They also recommended that NMFS designate migratory habitat in the Gulf of Mexico. The commenter argued that the absence of migratory habitat appears to represent the relative dearth of information, not lack of importance, as the loggerhead clearly does migrate seasonally through the Gulf of Mexico.

Response: The critical habitat designation does address nesting female and hatchling habitat use, but it is not limited to those life stages; juvenile and adult habitat use is considered in the migratory corridor, breeding, and winter habitat designations. As stated in Response 65, because loggerheads move readily up and down the east coast of the U.S. and within the Gulf of Mexico to forage, and move between foraging and reproductive areas, we focused on migratory corridors that are both highly used and constricted (limited in width) by land on one side and the edge of the continental shelf and/or Gulf Stream on the other side, and therefore might be more vulnerable to perturbations than other migratory areas. The commenter is correct that the loggerhead sea turtle does migrate seasonally through the Gulf of Mexico, but we are unaware of similar constricted migratory routes in this area as those off Florida and North Carolina.

Comment 68: One commenter was concerned about the effects a critical habitat designation would have on dredging operations in Bogue Sound, North Carolina. The commenter asked if this proposal does not ''impose an enforceable duty on state or local'' governments, whether dredging would happen without Federal intervention.

Response: The critical habitat designation does not include any areas inside of Bogue Sound, North Carolina. The nearshore reproductive habitat (LOGG–N–03) being designated spans the nearshore waters from Beaufort Inlet to Bear Inlet (crossing Bogue Inlet) from the MHW line seaward 1.6 km. While it does cross Bogue Inlet, dredging operations at the inlets are not expected to be impacted beyond what is already required under ESA section 7 consultations.

Comments on Special Management Considerations

Comment 69: Multiple commenters felt the ESA only allows critical habitat designations when special management considerations may be necessary as evidenced by threat levels for that area. They felt that the physical and biological features of the areas proposed as designated critical habitat for loggerhead sea turtles already require special management consideration; therefore, additional protections are not necessary, are likely to be redundant, and are unlikely to result in a measurable increase in conservation benefits.

Response: Whether an area ''may require special management'' is one criterion we use to identify critical habiat. The presence or lack of adequate management of an area prior to designation does not determine its consideration as critical habitat. *See Natural Resources Defense Council* v. *United States Department of the*

Interior, 113 F.3d 1121, 1127 (9th Cir. 1997). Critical habitat is defined as ''(i) the specific areas within the geographical area occupied by the species, at the time it is listed [under Section 4], on which are found those physical or biological features (I) essential to the conservation of the species and (II) which may require special management considerations or protection; and (ii) specific areas outside the geographical area occupied by the species at the time it is listed, upon a determination by the Secretary that such areas are essential for the conservation of the species'' (16 U.S.C. section 1532(5)(A)). The fact that special management is ongoing has been interpreted in court cases to mean that it fits the portion of the definition of critical habitat that states it may require special management considerations or protection. *See, e.g., The Cape Hatteras Access Preservation Alliance* v. *United States Department of the Interior,* 731 F. Supp. 2d 15, 26 (D.D.C. 2010); *Center for Biological Diversity* v. *Norton,* 240 F. Supp. 2d 1090, 1097–1100 (D. Ariz. 2003).

Comment 70: Several commenters stated that the assumption that economic impacts associated with critical habitat designation are limited to the administrative costs of consultation is not fully consistent with the discussion in the ''special management considerations'' section of the proposed rule. One commenter stated that this section of the proposed rule is vague and ambiguous, creating a concern that new conservation measures may be required for certain activities (e.g., dredging or disposal). For example, the proposed rule discusses ''geographical areas occupied by the species,'' on page 43012 (Breeding habitat), and states that ''we were unable to identify specific habitat features within the breeding areas to distinguish them from other areas not used for breeding. In the face of a lack of clear habitat features, we believe it is reasonable to conclude that the importance of the breeding areas is based primarily on their locations.'' However, on page 43024 under the ''special management considerations'' section for ''Breeding Habitat'' the proposed rule includes ''Dredging and disposal of sediments that affect concentrations of reproductive loggerheads.'' This raises the concern that some vaguely defined aspect of a dredging or disposal action would be deemed an adverse modification of critical habitat. The proposed rule also states that for wintering habitat ''the water depth PCE could potentially be affected by extensive dredging and sediment disposal activities.'' This statement is ambiguous and should be clarified. The proposed rule should be revised to clearly identify how or whether the dredging and disposal of sediments would affect loggerheads.

Response: The descriptions under ''Special Management Considerations'' include, in the broadest terms possible, potential sources of impacts to critical habitat from various activity types that have been considered. That does not equate to an expectation that those impacts are in fact likely to occur; merely that they were in the universe of potential impacts considered. Our consideration of effects to the habitat has been ongoing since the original listing of loggerheads in 1978. Although we can now consider effects to habitat more directly, we do not anticipate changes in requirements of Federal projects and those with a Federal nexus—particularly because of our long experience with the types of projects that are occurring and their effects. In particular, as part of the analysis of potential impacts ''dredging and disposal of sediments that affect concentrations of reproductive loggerheads'' was considered among the possible sources of adverse impacts to breeding habitat and ''the water depth PCE could potentially be affected by extensive dredging and sediment disposal activities'' was similarly considered for winter habitat. However, we could not determine reasonable scenarios where such adverse impacts to those habitat features would occur to any extent that would rise to the level of adversely affecting the essential features and/or PCEs identified for the critical habitat.

Comment 71: The proposed rule discusses ''Dredging and disposal of sediments that results in altered habitat conditions needed for efficient passage.'' The proposed rule should more specifically identify the dredging and disposal actions believed to result in ''altered habitat conditions.''

Response: Because each project and project location varies, we cannot specifically identify which actions would alter the essential features of the proposed habitat. However, as stated in the draft Economic Analysis for the proposed rule:

> NMFS' primary concerns relative to construction, dredging, and disposal activities include obstructions to transit through the surf zone in nearshore reproductive habitat, manmade structure that attract predators or disrupt wave patterns in nearshore reproductive habitat, artificial lighting in nearshore reproductive habitat, and barriers to passage in constricted migratory corridors. Existing regulations and recommendations provide significant baseline protections to loggerhead habitat. In particular, NMFS makes recommendations to reduce disturbance of loggerheads including timing restrictions, equipment requirements, lighting limits, and turtle monitoring as part of section 7 consultation due to the listing of the species. NMFS has not identified any conservation efforts that may be recommended to avoid adverse effects of these activities on the essential features of critical habitat that would not already be recommended to avoid potential adverse effects on the species itself. That is, NMFS anticipates that it is unlikely that critical habitat designation will generate a change in the outcome of future section 7 consultations due to the presence of critical habitat. This analysis accordingly does not forecast any changes to the scope, scale, or management of construction, dredging, or disposal activities due to critical habitat.

Comment 72: The proposed rule states that ''For ongoing activities, we recognize that designation of critical habitat may trigger reinitiating past consultations. In most cases, we do not anticipate the outcome of reinitiated consultation to require significant additional conservation measures, because effects to habitat would likely have been assessed in the original consultation.'' The commenter requests that previously established conservation measures from past consultations be specifically identified and listed to help determine whether additional conservation measures would be needed to avoid the adverse modification of critical habitat.

Response: Due to the volume of past consultations and associated conservation measures, cataloging them all in the rule's preamble is not appropriate. Additionally, the potential need for additional conservation measures would be highly project specific, depending on the details of the project scope and the particular project location. However, all past consultations are public records and can be accessed by any interested party, either through NMFS regional and headquarters Web sites, through the Public Consultation Tracking System (PCTS; also through the Web sites), and/or by requesting copies of specific consultations from the regional office that conducts them.

Comment 73: The proposed rule assumes that ''Critical habitat designation is unlikely to change the conservation efforts recommended to avoid adverse effects on the loggerhead and its habitat as part of future section 7 consultations on most construction, dredging, and disposal activities'' and states that the likely significance with respect to estimated impacts is ''minor.'' The commenter felt that language

within the proposed rule does not reflect this position. Impact categories from dredging and disposal that are discussed in the proposed rule are not addressed by the current conservation efforts that are documented in this report suggesting that additional conservation measures or reasonable and prudent alternatives may be required to avoid adverse modification of critical habitat.

Response: We do not agree that potential impacts discussed in the proposed rule will likely require additional conservation measures to avoid adverse modification of the critical habitat. The proposed rule included an extensive account of the various possible routes of effect to critical habitat by construction, dredging, and disposal activities. However, many of those possible impacts are not expected to occur, or to occur at a level that would affect or modify the essential features of the critical habitat. This issue is also addressed in the draft Economic Analysis for the proposed critical habitat rule, as quoted in the response to Comment 70 above.

Comment 74: The U.S. Army Corps of Engineers (USACE) expressed concerns about safety of and costs to their operations should light be restricted at night as a result of the designations.

Response: We do not anticipate any additional lighting restrictions or required lighting modifications beyond those already typically required by the Services for nighttime operations at or near sea turtle nesting beaches during the nesting and hatchling emergence seasons. While the critical habitat designation focuses on the habitat features important to loggerhead sea turtles, lighting requirements have been required for protection of the nesting sea turtles and hatchlings themselves in the past and should not change in the future due to designation of critical habitat.

Additional Comments

Comment 75: One commenter specified that the health of the Earth's geomagnetic fields of the ocean be included as a physical or biological feature and primary constituent element for loggerhead habitats because sea turtles depend upon the Earth's geomagnetic field to navigate. NMFS must recognize the potential of research to ascertain the absolute measures of *cheloniid* turtle navigational science, by preservation of all ocean regions that contribute to the health and procreation of the loggerhead.

Response: We acknowledge that research studies have indicated that sea turtles use the Earth's magnetic field as a source of navigational information (Lohmann et al. 2008, Lohmann et al. 2012, Lohmann et al. 2013). However, to make a determination that habitat is critical habitat in accordance with the ESA, it must have PBFs which ''may require special management considerations or protection.'' We are unaware of special management considerations that may apply to the earth's geomagnetic fields of the ocean. As such, the Earth's magnetic field was not identified as a PBF that would support critical habitat for loggerheads. We do acknowledge the benefit of continuing research on sea turtle navigational science.

F. Comments on Draft 4(b)(2) Report and the Draft Economic Analysis (DEA)

Comment 76: Multiple commenters state that the DEA underestimates the impacts of the proposed critical habitat designation in utilizing an incremental approach (i.e., it does not consider costs associated with baseline protections already afforded the loggerhead either as a result of its listing as a threatened DPS or as a result of other Federal, state, and local regulations). The commenters reference a decision by the U.S. Tenth Circuit Court of Appeals in 2001, which instructed USFWS to conduct a full analysis of all the economic impacts of proposed critical habitat, regardless of whether those impacts are attributable co-extensively to other causes (see, e.g., *New Mexico Cattle Growers Assoc.* v. *United States Fish & Wildlife Service,* 248 F.3d 1277, 1285 (10th Cir. 2001)).

Response: As stated in Section 1.2 of the DEA, subsequent to the U.S. Tenth Circuit Court of Appeals' decision, other courts have held that an incremental analysis of impacts stemming solely from the critical habitat rulemaking is proper (*The Cape Hatteras Access Preservation Alliance* v. *United States Department of the Interior,* 344 F. Supp. 2d 108 (D.D.C. 2004); *Center for Biological Diversity* v. *United States Bureau of Land Management,* 422 F. Supp.2d 1115 (N.D. Cal. 2006)). Relevant court decisions, and the use of an incremental approach for impact analyses, are addressed in a final rule issued by NMFS and USFWS on August 28, 2013, (78 FR 53058), revising the regulations pertaining to impact analyses of critical habitat. In order to provide the most complete information to decision-makers, the DEA employs ''without critical habitat'' (baseline) and ''with critical habitat'' (incremental) scenarios. The DEA describes how baseline conservation efforts for the loggerhead may be implemented across the proposed designation, and describes and monetizes, where possible, the incremental impacts due specifically to the designation of critical habitat.

Comment 77: Multiple commenters expressed concern that the critical habitat designation will affect a wide variety of activities due to additional or new management efforts, operational conditions, and regulatory review. The commenters state that the designation may result in additional costs, regulatory hurdles, restrictions, delays, and prohibitions for a wide variety of activities, including coastal and inlet management; dredging and offshore disposal; beach maintenance and restoration; commercial and recreational fishing; boating, boatbuilding and marina activities; oil spill response; hurricane recovery; offshore energy development; power generation; aquaculture; shipping and/or military activities; dock and pier development; and tourism. The commenters state that these impacts will affect local, state and Federal economies and the public's access and enjoyment of marine waters, and that the DEA does not account for these impacts. Several commenters further assert that the NMFS determination that section 7 consultation analyses will result in no differences between recommendations to avoid jeopardy or adverse modification in occupied areas of critical habitat leads to an underestimate of the economic impacts of critical habitat designation for the loggerhead.

Response: As summarized on page ES–2 and detailed throughout the draft DEA, we anticipate that the impacts of critical habitat designation will most likely be limited to incremental administrative effort to consider potential adverse modification as part of future section 7 consultations. This is because we anticipate that the substantial ongoing and currently recommended conservation efforts to avoid take of and jeopardy to the species would also most likely avoid adverse modification of critical habitat. Our consideration of effects to the habitat has been ongoing since the original listing of loggerheads in 1978. Although we can now consider effects to habitat more directly, we do not anticipate changes in requirements of Federal projects and those with a Federal nexus—particularly because of our long experience with the types of projects that are occurring and their effects. As a result, it is unlikely that critical habitat will generate new or different recommendations for conservation efforts for the loggerhead. The economic analysis accordingly quantifies costs of the designation in terms of additional effort for section 7 consultations and

anticipates that the additional categories of costs described by the commenters (additional restrictions or prohibitions on activities) are unlikely. A potential exception to this finding identified in the economic analysis are activities that may alter the habitat in such a way as to impact transit back and forth from the nearshore waters to the beach for nesting loggerhead sea turtles (e.g., construction of large emergent structures parallel to the shore). Such projects have the potential to generate adverse modification of critical habitat but may or may not constitute a jeopardy concern. We may request modifications to these activities specifically to avoid adverse modification (e.g., recommending that structures be located farther offshore), therefore generating incremental costs of critical habitat. However, based on experience consulting on projects due to the presence of loggerheads, we have not identified a circumstance in which the presence of critical habitat would have changed the conservation recommendations made.

Comment 78: One commenter states that the DEA is inconsistent on page ES–2 because it first states that the quantified impacts of the designation are limited to administrative costs, but then states that NMFS may recommend changes to activities to avoid destruction or adverse modification of critical habitat.

Response: Page ES–2 of the DEA describes the quantified impacts as being limited to additional administrative costs of consultations because we anticipate that it is unlikely that critical habitat designation will generate new or different recommendations for loggerhead conservation efforts. The DEA further describes, however, that the possible exceptions to this finding are activities that may alter the habitat in such a way as to impact transit back and forth from the nearshore waters to the beach for nesting loggerhead sea turtles (e.g., construction of large emergent structures parallel to the shore). Based on our experience consulting on projects due to the presence of the species and the suite of projects forecast to occur over the next ten years, however, we do not anticipate circumstances in which the presence of critical habitat would change the conservation recommendations made.

Comment 79: Multiple commenters state that the analysis did not account for the indirect impacts associated with litigation and project delays because forecasting the likelihood of litigation and the length of associated project delays is speculative and likely to be minor. The commenters assert that these indirect costs are likely and would be significant. One commenter states that in comments on the proposed polar bear critical habitat designation, the oil and gas industry estimated the incremental cost of defending an additional claim related to adverse modification to be around $50,000.

Response: Section 3.4 of the DEA acknowledges the concern that critical habitat designation may generate project delays due to either increasing the length of time for us to review projects due to ESA section 7 consultation or litigation. In particular, the DEA recognizes that project delays may increase costs in two key ways: (1) The value of a project is maximized if its benefits are realized as soon as possible and its costs are postponed as long as possible and, therefore, changes in schedule can reduce the present value of the project; and (2) delays can result in additional logistical costs (e.g., extra expense of renting equipment during delays) and, potentially, the loss of low cost bids on projects. While potential exists for third party lawsuits to result from critical habitat designation, the likelihood, timing, and outcome of such lawsuits are uncertain. Quantifying costs associated with hypothetical outcomes of the critical habitat designation would be speculative. Therefore, the DEA qualitatively discusses these potential incremental impacts so that they can be considered along with the monetized costs presented in the report. In addition, the DEA does quantify some additional time required to consider adverse modification as part of the section 7 consultation process. We anticipate that this additional time, as reflected in the incremental administrative costs, will most likely be minor as it is unlikely that the proposed critical habitat designation will result in changes in the outcome of future ESA section 7 consultations.

Comments on Construction and Dredging Activities

Comment 80: One commenter states that the DEA identifies the restriction of hopper dredging to the months of December to March as a baseline impact that would be recommended by NMFS for construction, dredging, and disposal projects carried out in areas being proposed for critical habitat designation. The commenter asserts that this is incorrect, as this measure is ''self-imposed on many projects and was based on the risk of entrainment to sea turtles due to dredging activities and did not consider disposal activities.'' In addition, the commenter notes that the DEA documents the concern raised by the USACE that any additional timing restrictions placed on dredging activities due to the designation of critical habitat could result in significant cost increases. An additional comment expressed concern about timing restrictions for hopper dredging and the potential impact on the BOEM's Marine Minerals Program.

Response: The commenter is correct in that the DEA lists timing restrictions on hopper dredging among the measures that may be recommended under the baseline for dredging and disposal activities. While the potential conservation measures relevant to dredging and disposal activities are provided as a combined list in the DEA, the timing restrictions would only apply to dredging activities. Restrictions on hopper dredging for specific areas were included in the South Atlantic Regional Biological Opinion (SARBO) and Gulf Regional Biological Opinion (GRBO) for hopper dredging. As is explained in the DEA, we do not anticipate requesting further timing restrictions due to the designation of critical habitat and, therefore, incremental costs to these activities are not expected.

Comment 81: One commenter states that there are multiple borrow, beach placement, and offshore disposal areas associated with the USACE's coastal storm damage reduction and navigation missions that are located outside of 'harbors and channels' and overlap with the proposed designations. The comment suggests that further coordination with the USACE is necessary to assure that all projects are documented and to better evaluate the project area overlaps and associated economic implications.

Response: In preparation of the DEA, we requested information from the USACE South Atlantic Division (encompassing the Wilmington, Charleston, Savannah, Jacksonville, and Mobile Districts) on USACE activities that may be affected by the proposed designation of critical habitat for the loggerhead. The information provided was discussed in the DEA and used to verify that the consultation history is a reasonable indicator of the frequency and location of future projects. The Final Economic Analysis (FEA) integrates additional information provided by BOEM during the public comment period on sand placement projects undertaken or authorized by USACE that rely on sand from OCS borrow areas.

Comment 82: One comment stated that BOEM expects an increase in future requests for sand to restore shoreline habitat and that the DEA does not

adequately address all future nourishment projects. The commenter provided a ten-year projection of all future projects, including USACE regulatory and civil works projects. Lastly, the commenter noted that BOEM should be included in the discussion regarding consultations on construction, dredging, and channelization projects, and in exhibits describing Marine Minerals Program projects.

Response: Chapter 3 of the FEA incorporates additional information provided on future nourishment and renourishment projects using outer continental shelf (OCS) sand. In total, BOEM is expected to consult with us on offshore dredging for 101 beach nourishment and renourishment projects between 2014 and 2023. In addition, the FEA incorporates a discussion of areas in which BOEM expects that dredging of OCS sand may increase. However, this increase will be offset by a decrease in consultations between the USACE and NMFS or USFWS for dredging of state sand resources. Therefore, the rate of consultation is not expected to change. The discussion and exhibits in the FEA are updated accordingly.

Comment 83: One commenter notes that the potential mitigation measures listed in the DEA as standard are not standard and/or consistent across all sand nourishment projects. For example, recycling bins and educational signage have not been regularly included in Biological Opinions from NMFS. Inclusion of additional mitigation measures would increase costs and should be included in the DEA.

Response: Section 3.3.1 of the DEA provides a description of baseline protections for loggerhead related to construction, dredging, and disposal activities. Included in this description is a list of measures that we regularly recommend in consultations to minimize the impact of construction activities on the loggerhead, which include displaying educational signage and providing recycling bins for used fishing line to decrease turtle entanglement or ingestion of marine debris. This list is not comprehensive, nor are all of the listed measures recommended in all section 7 consultations; rather, it is meant to convey the breadth of conservation efforts that may be undertaken in the baseline, regardless of the presence of critical habitat. As described in the DEA, it is unlikely that we will recommend additional conservation measures for such projects as a result of critical habitat designation for the loggerhead.

Comment 84: One commenter states that while the nearshore reproductive habitat does not extend into the outer continental shelf (OCS) waters, it may include areas that are potential rehandling sites for dredged material and the impact to the potential use of these sites and any associated costs should be considered in the DEA.

Response: Costs associated with dredging of OCS sand were attributed to particular critical habitat units using GIS data of borrow sites provided by BOEM. No additional information was provided in this comment on the location of rehandling sites or the projects that may make use of such sites. If consultation on rehandling sites in nearshore reproductive habitat does occur, we anticipate that baseline protections for the loggerhead would provide adequate protection of loggerhead habitat and, as such, incremental costs would be limited to the additional administrative cost of considering adverse modification during consultation.

Comments on Oil and Gas Activities

Comment 85: One commenter stated that the DEA significantly underestimates costs of the designation to offshore oil and gas activities because it only accounts for consultation costs in areas where there are existing offshore oil and gas operations, and not the South- and Mid-Atlantic planning areas where additional oil and gas leasing is being considered and renewable energy projects are already occurring. In addition, for the entire Western and Central Gulf of Mexico Planning areas, the DEA estimates that there will be only three programmatic consultations in the next ten years, but there have been six consultations in this area in the last five years. Also, the commenter states that because the DEA assumes section 7 consultations will already be required due to the presence of the loggerhead, it assigns a value of $4,200 as the incremental administrative cost the government would incur in each of the consultations and assumes no costs for industry, which results in an underestimate of costs.

Response: Chapter 5 of the DEA describes the potential for future expansion of oil and gas activities into the South and Mid-Atlantic Planning Areas. In particular, the DEA describes a recent (2013) programmatic consultation on seismic studies in these planning areas; however, leasing in these areas is not anticipated before 2017. While the DEA acknowledges that additional consultations may occur on oil and gas drilling activities after 2017 in the Mid- and South Planning areas, absent the findings of the ongoing seismic testing, the frequency and locations of these potential activities is significantly uncertain and forecasting the nature of these activities for the purposes of this analysis would be speculative. The analysis accordingly describes that administrative costs of consultations in these areas is likely underestimated. However, as described in the DEA, critical habitat designation for the loggerhead is unlikely to change the outcome of future consultations on oil and gas activities. Furthermore, the DEA describes that, although six consultations have occurred in the Western and Central Gulf of Mexico Planning Areas over the last five years, these consultations are sporadic and relate to unpredictable incidents (e.g., oil spills). We are unable to predict the frequency of such events into the future but anticipate the additional costs associated with critical habitat on these consultations would be minimal.

To minimize consultation on individual projects, we consult on oil and gas activities at the programmatic level in the Western and Central Gulf of Mexico Planning Areas. Thus, we anticipate approximately three programmatic-level consultations with BOEM occurring at the time of lease sales. We do not anticipate third parties (i.e., industry) will be a party to the programmatic consultations. To the extent that third parties are involved, the analysis underestimates administrative costs. However, these consultations would occur regardless of critical habitat designation for the loggerhead and any incremental administrative effort on the part of third parties to consider critical habitat would most likely be minimal. Furthermore, the critical habitat designation is unlikely to change the outcome of these programmatic consultations.

Comment 86: One commenter states that the DEA is incorrect in stating that ''additional requirements placed on operators mandate that industry surveyors be present during exploration and operations that look specifically for sea turtles and *Sargassum.''* The commenter states that BOEM does not require operators to look for *Sargassum* but does require the industry to have Protected Species Observers onboard seismic survey vessels.

Response: The FEA clarifies that Protected Species Observers, and not *Sargassum* surveyors, are aboard seismic survey vessels.

Comments on Fisheries

Comment 87: One commenter states that all of the shrimp fishing activities in the nearshore reproductive habitat

areas proposed for designation in the Southeast region are limited to State waters and therefore lack a Federal nexus and requests that this be clarified in the final report. The commenter also requests that potential impacts on the penaeid and rock shrimp fisheries caused by the designation of critical habitat in LOGG–N–17 and LOGG–N–19 be described in the final report.

Response: Section 4.2.1 of the DEA states that the fisheries operating in nearshore reproductive habitat are state-managed and therefore typically lack the Federal nexus to trigger section 7 consultation. Critical habitat designation for the loggerhead is therefore unlikely to generate the need for section 7 consultation and associated economic impacts to fisheries occurring in nearshore reproductive habitat. With respect to the penaeid and rock shrimp fisheries in Units LOGG–N–17 and LOGG–N–19, the DEA quantifies relatively minor additional administrative costs to consider critical habitat as part of consultations on any amendments to Fisheries Management Plans (FMPs). However, as described in Chapter 4 of the DEA, we have not identified any conservation efforts that may be recommended to avoid adverse effects of fisheries on critical habitat that would not already be recommended due to the listing status of the species. That is, critical habitat is not expected to result in any additional changes to the scope, scale, or management of these fisheries.

Comment 88: One commenter asserted that the DEA underestimates costs on commercial fishing activities. First, the DEA quantifies only $29,000 in costs annually for fisheries and the salary of one NMFS enforcement agent in the State would cost more than $29,000 for his salary. Second, the DEA states that most fisheries occur in state waters and are not subject to a Federal nexus; however, NMFS and U.S. Coast Guard enforcement agents board vessels to check compliance on turtle excluder devices. In addition, this year the sea scallop fishery was required to pull new fishing gear at a cost to the industry of $2.0 million.

Response: The costs described in this comment are not related to critical habitat designation. Critical habitat designation does not require presence of enforcement officers nor is critical habitat designation for the loggerhead anticipated to result in new gear restrictions for fisheries. Critical habitat requires that activities with a Federal nexus be subject to consultation with NMFS or USFWS to assure that they do not adversely modify critical habitat. The costs associated with regulations pertaining to turtle excluder devices and other fisheries regulations described here are outside the scope of the economic analysis because they are not affected by decisions related to the designation of critical habitat.

Comments on Other Economic Activities or Issues

Comment 89: One commenter stated that there are several inaccuracies in the DEA regarding the status and process of BOEM's offshore wind leasing program, and that the DEA must be updated to best represent these activities.

Response: Chapter 6 of the FEA integrates updated information from BOEM regarding the status of their offshore wind energy programs. These updates include revising the schedule of three proposed informal consultations in New Jersey (2014), Maryland (2016), and North Carolina (2016) into one formal consultation currently being undertaken (2014), and adding potential costs associated with reinitiation of six previously completed informal consultations as a result of the designation of loggerhead critical habitat.

Comment 90: One commenter asked how critical habitat affects private property owners if a Federal permit is required. The commenter requested clarification regarding whether critical habitat would devalue the property if the private landowner cannot do anything with it.

Response: The areas being considered for marine critical habitat for the loggerhead do not include private lands. Thus, the economic analysis does not forecast impacts to values of private lands. With regard to federally permitted projects, we have been considering the effects to loggerhead habitat since the original listing of loggerheads in 1978, and we do not anticipate changes in requirements of federally permitted projects as a result of this designation.

Comment 91: One commenter agreed with the conclusion of the DEA that the designation is not likely to result in additional conservation efforts to benefit the loggerhead. They further stated that NMFS attempted to remediate this DEA conclusion by stating, without support, that critical habitat designation results in improved 'education and outreach' and 'additional protections under state and local authorities.' The commenter felt that not only are such statements unsupported and somewhat questionable, they are undermined by, and in direct conflict with, the DEA.

Response: We do not believe that our statement that critical habitat designation can have non-regulatory impacts is in conflict with the DEA. In the many years since critical habitat has been designated for listed species, we have found that awareness of the importance of that habitat on the part of the public as well as planners, government entities and others has promoted the conservation of the species. As stated in responses to other comments and in the DEA, we do not anticipate that Federal agencies or others with a Federal nexus will be required to take additional conservation efforts for any ongoing actions because the habitat has been addressed, albeit in a less direct way, through section 7 jeopardy consultations for many years. This is the reason that the DEA concludes that no conservation actions will need to be taken and very minimal economic costs will be incurred as a result of designation.

Comment 92: Another commenter stated that the economic analysis provides inadequate information to do the balancing test regarding whether the benefits of excluding an area outweigh the benefits of including it as critical habitat.

Response: We believe the economic analysis provides adequate information to do the balancing test. The economic impacts for each unit were estimated to the best of our ability and, because we selected our critical habitat units to reflect areas that have high conservation value, we were able to do the balancing test regarding the benefits of exclusion vs. the benefits of inclusion.

Comment 93: One commenter requested clarification that the Federal requirement for certain shrimp trawl fisheries to use compliant turtle excluder devices does not constitute a Federal nexus.

Response: The requirement to use turtle excluder devices is not related to the designation of critical habitat, even if related to the conservation of loggerhead sea turtles, because it exists regardless of this designation, i.e., is part of the baseline and not an additional cost or incremental impact. For this reason, costs associated with regulations pertaining to turtle excluder devices and other fisheries regulations are outside the scope of the economic analysis.

Comment 94: The North Carolina Department of Transportation (NCDOT) requested exclusion of critical habitat in order to maintain the operation of the NC 12 transportation facility. If a beach nourishment alternative is pursued, then the designated critical habitat will be impacted both by the placement of sand along the ocean beach face and the dredging of sand from an offshore borrow site. They requested information

on whether a programmatic agreement between NMFS, USFWS, and the NCDOT would be required to allow flexibility in the construction and maintenance of our transportation projects along the coast. They were concerned that this designation could create obstacles that would make fulfilling their mission to the travelling public an impossibility.

Response: We do not consider an exclusion from critical habitat to be appropriate in this case as the expected economic impacts are expected to be minimal and do not warrant exclusion under the ESA. Although beach nourishment falls primarily under the purview of the USFWS, neither beach nourishment nor the dredging of sand from offshore borrow sites are expected to be significantly impacted by the critical habitat designation as proposed. Those activities are already considered under ESA section 7 consultations, with resulting associated required conservation measures. Such measures already limit the impacts to the essential features now described in the proposed critical habitat designation and thus, such operations are not expected to be impacted beyond what is already required under existing ESA consultations.

Comment 95: Multiple commenters believe the designation will actually increase the degree of threat to loggerhead sea turtles by making it much more difficult for local governments and others to conduct active coastal shore damage reduction projects, which serve to increase and enhance loggerhead sea turtle nesting area and habitat. They claim designation of critical habitat would affect a wide variety of coastal projects involving a Federal nexus. They believe that if critical habitat is designated for the loggerhead sea turtle, these existing, successful programs will be burdened with additional and unnecessary measures and will become more costly and difficult to implement, which increases the threat to the loggerhead sea turtle and its habitat.

Response: We cannot foresee how designation of critical habitat would increase the threat to loggerhead sea turtles. As stated throughout the rule and the DEA, we do not anticipate requiring additional conservation measures beyond those already employed, and therefore do not anticipate that projects such as these will be more costly and difficult to implement.

Comment 96: Multiple commenters felt that designation of critical habitat would benefit local economies by increasing tourism. These commenters felt the designation would raise awareness of the environmental significance of the area and draw more visitors. Other commenters felt the designation would have a negative impact on tourism by increasing restrictions to access.

Response: We do not anticipate any restrictions to access to loggerhead critical habitat. It is possible that designation of critical habitat will draw more visitors, but we were not able to incorporate this into the economic analysis as we do not have data on which to base this possibility.

Comment 97: One commenter felt NMFS had prepared an inaccurate and incomplete draft economic analysis and failed to recognize the successful programs that North Carolina and its local governments and communities have in place to ensure the survival and recovery of the loggerhead sea turtle. Thus, they felt NMFS did not properly consider whether the benefits of excluding the area actually outweighed the benefits of including it.

Response: We believe our economic analysis is thorough and represents the best available information. It accurately portrays costs of designation, which are minimal. While we appreciate North Carolina's ongoing conservation efforts, we do not have a basis to exclude areas from critical habitat.

IV. Critical Habitat Identification

Section 4 of the ESA requires the designation of critical habitat for threatened and endangered species ''to the maximum extent prudent and determinable,'' and provides for the revision of critical habitat based on the best scientific data available, as appropriate (16 U.S.C. 1533(a)(3)(A); 16 U.S.C. 1533(b)(2)). Critical habitat may only be designated in areas under U.S. jurisdiction (50 CFR 424.12(h)).

Section 4(b)(2) of the ESA requires designation of critical habitat for threatened and endangered species ''on the basis of the best scientific data available and after taking into consideration the economic impact, the impact on national security, and any other relevant impact, of specifying any particular area as critical habitat.'' Section 4(b)(2) also grants the Secretary of Commerce (Secretary) discretion to exclude any area from critical habitat if she determines ''the benefits of such exclusion outweigh the benefits of specifying such area as part of the critical habitat.'' However, the Secretary may not exclude areas that ''will result in the extinction of the species.''

The ESA defines critical habitat in section 3(5)(A) as: ''(i) The specific areas within the geographical area occupied by the species, at the time it is listed . . . on which are found those physical or biological features (I) essential to the conservation of the species and (II) which may require special management considerations or protection; and (ii) specific areas outside the geographical area occupied by the species at the time it is listed upon a determination by the Secretary that such areas are essential for the conservation of the species.''

Joint NMFS–USFWS regulations emphasize that in identifying critical habitat, the agencies shall consider those PBFs that are essential to the conservation of a given species and that may require special management considerations or protection (50 CFR 424.12(b)). The regulations provide examples of the kinds of essential features to consider, which may include but are not limited to:

(1) Space for individual and population growth, and for normal behavior;

(2) Food, water, air, light, minerals, or other nutritional or physiological requirements;

(3) Cover or shelter;

(4) Sites for breeding, reproduction, rearing of offspring, germination, or seed dispersal; and generally

(5) Habitats that are protected from disturbance or are representative of the historic geographical and ecological distributions of a species.

The regulations also require agencies to ''focus on the principal biological or physical constituent elements'' (hereafter referred to as ''Primary Constituent Elements'' or PCEs) within the specific areas considered for designation, which ''may include, but are not limited to, the following: . . . nesting grounds, spawning sites, feeding sites, seasonal wetland or dryland, water quality or quantity, . . . geological formation, vegetation type, tide, and specific soil types'' (50 CFR 424.12(b)). There is inherent overlap between what may constitute a PBF and what can be enumerated as a PCE. When we set out a list of PCEs with a PBF, our intent is that the PBF exists whenever a sufficient subset of PCEs is present to allow the habitat to serve the conservation function for a single life stage. It is not necessary for all the PCEs to occur simultaneously. Section 4(b)(2) of the ESA and our implementing regulations (50 CFR 424.12(a)), require designation of critical habitat to be based on the best scientific data available.

Once critical habitat is designated, section 7 of the ESA requires Federal agencies to ensure they do not fund, authorize, or carry out any actions that are likely to result in the ''destruction or

adverse modification'' of that habitat (16 U.S.C. 1536(a)(2)). This standard is separate from the section 7 requirement that Federal agencies must ensure that their actions are not likely to ''jeopardize the continued existence of'' listed species.

We reviewed the best available assessments for loggerheads by habitat category (e.g., neritic, oceanic), which for most cases was the ''Assessment of the loggerhead turtle population in the western North Atlantic Ocean'' conducted by the TEWG (2009). This review resulted in the identification of relatively high use areas (generally those with 60 or more turtle days in the TEWG satellite tracking analysis figures), which served as a proxy for identifying important habitat areas, especially as there is little quantitative data on loggerhead use of offshore waters. This information was supplemented by known and available studies that were not included in the TEWG analysis or occurred subsequent to it. For the nearshore reproductive habitat, we relied on data and information on nesting distribution and patterns to identify nearshore reproductive areas associated with high density nesting beaches, as described in the USFWS proposed rule to designate critical habitat for the Northwest Atlantic Ocean DPS (78 FR 18000, March 25, 2013). For the *Sargassum* habitat, we reviewed data on the distribution of *Sargassum,* its relationship to loggerhead habitat needs, and its use by loggerheads.

A. Geographical Area Occupied by the Species

As noted above, the statutory definition of ''critical habitat'' requires that we initially identify the geographical area occupied by the species at the time of its listing. We have interpreted ''geographical area occupied'' in the definition of critical habitat to mean the range of the species at the time of listing. For both of these DPSs, there is no known unoccupied marine habitat within their historic range. Critical habitat can only be designated in U.S. territory, and thus designation is limited to the Northwest Atlantic Ocean and North Pacific Ocean DPSs within the U.S. Economic Exclusive Zone (EEZ). We identified the geographical area occupied for the Northwest Atlantic Ocean DPS as south of 60° N. lat., north of the equator, and west of 40° W. long., and for the North Pacific Ocean DPS as south of 60° N. lat. and north of the equator. While this is the range occupied by the species, we reviewed data for only U.S. EEZ waters within that range. Within the U.S. EEZ, loggerhead sea turtle nesting occurs only within the Northwest Atlantic Ocean DPS. Terrestrial (nesting) habitat was identified by the USFWS and addressed in a separate rulemaking.

1. Northwest Atlantic Ocean DPS

We analyzed three ecosystem types when identifying critical habitat: Terrestrial, neritic, and oceanic. Because we have jurisdiction only in the marine environment, the proposed rule (78 FR 43006, July 18, 2013) examined areas within the broad categories of neritic and oceanic habitat. *Sargassum* habitat was added as a separate category, as it occurs in both neritic and oceanic habitat. For more information on each of these habitats and the methods we used to identify them, we refer the reader to the proposed rule (78 FR 43006, July 18, 2013).

Neritic habitat consists of the nearshore marine environment from the surface to the sea floor where water depths do not exceed 200 m (656 ft), including inshore bays and estuaries. For purposes of describing potential critical habitat in the Atlantic Ocean and the physical or biological features essential to the conservation of the species, we divided consideration of neritic habitat into several habitat types that reflect key life history phases of the loggerhead sea turtle: (1) Nearshore Reproductive Habitat (which includes hatchling swim frenzy and internesting female habitat); (2) Foraging Habitat; (3) Wintering Habitat; (4) Breeding Habitat; and (5) Constricted Migratory Habitat. All of these habitat types were labeled Neritic Habitat in units identified as critical habitat.

Sargassum habitat occurs in both the neritic and oceanic environment. Most pelagic *Sargassum* in the Atlantic Ocean circulates between 20° N. and 40° N. lat., and between 30° W. long. and the western edge of the Florida Current/Gulf Stream, and the Gulf of Mexico (SAFMC 2002; Dooley 1972; Gower and King 2011). The survival of loggerhead sea turtles, in particular the post-hatchling and small oceanic juvenile stages, is dependent upon suitable foraging and shelter habitat, both of which are provided by the algae of the genus *Sargassum* in the Atlantic Ocean and Gulf of Mexico (Witherington *et al.* 2012). Although no *Sargassum* habitat was proposed for designation, we specifically requested comments on whether to include *Sargassum* habitat as critical habitat and, if so, whether we should include the entire areas, features, and elements described in the ''Description of Physical or Biological Features and Primary Constituent Elements and Identification of Specific Sites'' section of the proposed rule. Potential *Sargassum* habitat included all U.S. waters south of 40° N. lat. in the Atlantic Ocean and Gulf of Mexico from the 10 m depth contour to the outer boundary of the EEZ, separated into two large contiguous areas, the Gulf of Mexico and the U.S. Atlantic Ocean.

Although adults transition between neritic and oceanic habitat, oceanic habitat is predominantly used by young loggerhead sea turtles that leave neritic areas as neonates or young juveniles and remain in oceanic habitat moving with the predominant ocean gyres for several years. The ocean currents and gyres, such as the Gulf Stream and Florida Loop Current, serve as important dispersal mechanisms for hatchlings and neonate sea turtles as well as vital developmental habitat for those early age classes. The presence of *Sargassum* is important for the oceanic juvenile life stage, as it offers a concentrated, protected foraging area, with facilitated dispersal by associated oceanic currents. Aside from *Sargassum* habitat, we were unable to identify oceanic habitat essential to conservation of the species within the Northwest Atlantic Ocean DPS.

2. North Pacific Ocean DPS

In the proposed rule (78 FR 43006, July 18, 2013), we did not divide the north Pacific Ocean by ecosystem (i.e., terrestrial, neritic, and oceanic zones) and habitat type, as with the Northwest Atlantic Ocean DPS, due to the limited occurrence of loggerheads within the North Pacific Ocean DPS in habitats under U.S. jurisdiction. Loggerhead sea turtle habitat in the North Pacific Ocean occurs between 28° N. and 40° N. lat. (Polovina *et al.* 2004). Within the U.S. EEZ, loggerheads are found only in waters northwest of the Hawaiian Islands, and off the U.S. west coast, primarily the Southern California Bight, south of Point Conception. No loggerhead nesting occurs within U.S. jurisdiction. In the central North Pacific Ocean, the Transition Zone Chlorophyll Front is favored foraging and developmental habitat for juvenile loggerhead turtles (Polovina *et al.* 2001; Kobayashi *et al.* 2008). Within the U.S. EEZ around Hawaii, North Pacific Ocean DPS developmental, foraging and transiting habitat occurs seasonally within the southernmost fringe of the Transition Zone Chlorophyll Front, north and northwest of Hawaii (Polovina *et al.* 2006); however, the area extending into the U.S. EEZ is very limited compared to the foraging area overall. Loggerheads documented off the U.S. west coast are primarily found south of Point Conception, the northern

boundary of the Southern California Bight, in very low numbers. No critical habitat was identified in the proposed rule. For more information on loggerhead habitat in the North Pacific Ocean DPS, we refer the reader to the proposed rule (78 FR 43006, July 18, 2013).

B. Description of Physical or Biological Features and Primary Constituent Elements, and Identification of Specific Areas

Based on the best available scientific information, we identified PBFs of habitat essential for the conservation of the loggerhead sea turtle, the PCEs that support the PBFs, and the specific areas identified using these PBFs and PCEs. A description of the means used to identify PBFs, PCEs and specific areas can be found in the proposed rule (78 FR 18000, March 25, 2013), with the exception of the *Sargassum* units which were not proposed but were discussed in the proposed rule, and are described fully here. Because information that allowed us to use quantitative criteria (such as was done for terrestrial habitat) was lacking, we necessarily identified most marine habitat in a more qualitative manner.

1. Northwest Atlantic Ocean DPS

PBFs and PCEs were identified for Neritic (nearshore reproductive, foraging, winter, breeding, and migratory) and *Sargassum* Habitat. No PBFs or PCEs were identified for Oceanic Habitat in the Northwest Atlantic Ocean DPS because we could find no specific habitat features that were essential to the conservation of the species within this area other than *Sargassum*.

The PBFs and PCEs of neritic habitat occur in the five categories of habitat discussed above: Nearshore reproductive, foraging, winter, breeding, and constricted migratory.

Nearshore Reproductive Habitat

We describe the PBF of nearshore reproductive habitat as a portion of the nearshore waters adjacent to nesting beaches that are used by hatchlings to egress to the open-water environment as well as by nesting females to transit between beach and open water during the nesting season.

PCEs that support this habitat are the following:

(1) Nearshore waters directly off the highest density nesting beaches and their adjacent beaches as identified in 50 CFR 17.95(c) to 1.6 km (1 mile) offshore;

(2) Waters sufficiently free of obstructions or artificial lighting to allow transit through the surf zone and outward toward open water; and

(3) Waters with minimal manmade structures that could promote predators (i.e., nearshore predator concentration caused by submerged and emergent offshore structures), disrupt wave patterns necessary for orientation, and/or create excessive longshore currents.

The identification of nearshore reproductive habitat was based primarily on the location of beaches identified as high density nesting beaches by the USFWS (50 CFR 17.95(c)), as well as beaches adjacent to the high density nesting beaches that can serve as expansion areas, in accordance with the process described by the USFWS in their proposed rule (78 FR 18000, March 25, 2013). In doing so, we identified 36 units of nearshore reproductive critical habitat.

Because the nesting beach habitat being designated by the USFWS has the densest nesting within given geographic locations, the greatest number of hatchlings is presumed to be produced on these beaches and either the greatest number of nesting females and/or the most productive females presumably nest on these beaches. Nearshore reproductive habitat includes waters off of three high density or expansion nesting beaches that are not being designated as terrestrial critical habitat by USFWS because the beaches occur on military lands that are not designated due to the existence of an adequate INRMP. They are identified here as essential nearshore reproductive habitat because their INRMPs do not address waters off the beach. However, there are two nearshore areas under military control that we did not designate due to existence of an adequate INRMP: Naval Air Station Key West and MCB Camp Lejeune. Although the latter was included in our proposed rule, it is not included in the final designation because we determined that their INRMP benefits loggerheads in waters off the beach.

Designation of nearshore reproductive habitat will conserve the Northwest Atlantic Ocean DPS by doing the following: (1) Protecting nearshore habitat adjacent to a broad distribution of nesting sites; (2) allowing for movement between nearshore reproductive areas depending on habitat availability (response to changing nature of coastal beach habitat) and support genetic interchange; (3) allowing for an increase in the size of each recovery unit to a level at which the threats of genetic, demographic, and normal environmental uncertainties are diminished; and (4) maintaining their ability to withstand local or unit level environmental fluctuations or catastrophes.

Foraging Habitat

We describe the PBF of foraging habitat as specific sites on the continental shelf or in estuarine waters frequently used by large numbers of juveniles or adults as foraging areas.

The PCEs that support this habitat are the following:

(1) Sufficient prey availability and quality, such as benthic invertebrates, including crabs (spider, rock, lady, hermit, blue, horseshoe), mollusks, echinoderms and sea pens; and

(2) Water temperatures to support loggerhead inhabitance, generally above 10° C.

We identified high use areas throughout the Atlantic Ocean and Gulf of Mexico, as these areas likely have habitat features that are essential to the conservation of the species. In order to identify high use foraging areas, available data on sea turtle distribution were considered. Specifically, we evaluated information from aerial and shipboard surveys, stable isotope analyses, satellite telemetry studies, and in-water studies to identify areas of known high use foraging habitat.

Given the wide-spread nature of foraging loggerheads in the Northwest Atlantic Ocean and the lack of clear habitat features of foraging areas, we were unsuccessful in identifying specific high value sites as foraging critical habitat for loggerheads in the proposed rule (78 FR 43006, July 18, 2013). Although we identified numerous sites of known foraging habitat in the proposed rule and requested information from the public as to the importance of these areas or other areas to foraging, as well as habitat features for foraging areas (78 FR 43006, July 18, 2003), we remain unable to identify areas that are more essential than the rest of the continental shelf and associated bays and sounds, and have not identified any units of foraging critical habitat in this final rule.

Winter Habitat

We describe the PBF of winter habitat as warm water habitat south of Cape Hatteras, North Carolina near the western edge of the Gulf Stream used by a high concentration of juveniles and adults during the winter months.

PCEs that support this habitat are the following:

(1) Water temperatures above 10° C from November through April;

(2) Continental shelf waters in proximity to the western boundary of the Gulf Stream; and

(3) Water depths between 20 and 100 m.

In the consideration of winter habitat, the same data sets as those for foraging habitat were evaluated. The same steps were also followed as above, but greater emphasis was placed on the satellite telemetry data to identify seasonal differences in distribution. While there were other high use areas identified, this analysis revealed a consistent high use area during the colder months off the coast of North Carolina that serves as a particularly important area for northern foraging loggerheads.

We identified one specific area of winter critical habitat which extends from Cape Hatteras at the 20 m depth contour straight across 35.27° N. lat. to the 100 m (328 ft) depth contour, south to Cape Fear at the 20 m (66 ft) depth contour (approximately 33.47° N. lat., 77.58° W. long.) extending in a diagonal line to the 100 m (328 ft) depth contour (approximately 33.2° N. lat., 77.32° W. long.). This southern diagonal line (in lieu of a straight latitudinal line) was chosen to encompass the loggerhead concentration area (observed in satellite telemetry data) and identified habitat features, while excluding the less appropriate habitat (e.g., nearshore waters at 33.2° N. lat.).

The designation of winter critical habitat will conserve loggerhead sea turtles by (1) maintaining the habitat in an area where sea turtles are concentrated during a discrete time period and for a distinct group of loggerheads (e.g., northern foragers); and (2) allowing for variation in seasonal concentrations based on water temperatures and Gulf Stream patterns.

Breeding Habitat

We describe the PBFs of concentrated breeding habitat as sites with high densities of both male and female adult individuals during the breeding season.

PCEs that support this habitat are the following:

(1) High densities of reproductive male and female loggerheads;

(2) Proximity to primary Florida migratory corridor; and

(3) Proximity to Florida nesting grounds.

Concentrated breeding aggregations were identified via a review of the literature and expert opinion. We determined that such areas are essential to the conservation of the species because, as a result of the high density of breeding individuals, the areas likely represent important locations for breeding activities and the propagation of the species. Although there is no distinct boundary for these concentrated breeding sites, we chose to constrain the boundaries of the proposed designation to what we consider the ''core'' areas where data indicate adult males congregate to gain access to receptive females.

We identified two units of breeding critical habitat that have been noted in the scientific literature as containing large densities of reproductively active male and female loggerheads in the spring, prior to the nesting season. The first is contained within the Southern Florida migration corridor from the shore out to the 200 m (656 ft) depth contour along the stretch of the corridor between the Marquesas Keys and the Martin County/Palm Beach County line. The second area identified as a concentrated breeding site is located in the nearshore waters just south of Cape Canaveral, Florida.

The designation of critical habitat in breeding areas will help conserve loggerhead sea turtles by maintaining the habitat in a documented high use area for behavior essential to the propagation of the species.

Constricted Migratory Habitat

We describe the PBF of constricted migratory habitat as high use migratory corridors that are constricted (limited in width) by land on one side and the edge of the continental shelf and Gulf Stream on the other side.

PCEs that support this habitat are the following:

(1) Constricted continental shelf area relative to nearby continental shelf waters that concentrate migratory pathways; and

(2) Passage conditions to allow for migration to and from nesting, breeding, and/or foraging areas.

Satellite telemetry information, in-water studies, and available mid-Atlantic fishery bycatch assessments show the majority of neritic stage loggerhead migratory tracks to be on the continental shelf, with two defined shelf constriction areas off North Carolina and southern Florida (NEFSC and Coonamessett Farm Foundation, unpublished data; McClellan and Read 2007; Hawkes *et al.* 2007; Mansfield *et al.* 2009; Murray 2009; TEWG 2009; Hawkes *et al.* 2011; Warden 2011; Virginia Aquarium 2011a, 2011b, 2012a, 2012b; Arendt *et al.* 2012b; Arendt *et al.* 2012c; Ceriani *et al.* 2012; Griffin *et al.,* 2013; Murray and Orphanides 2013, Foley *et al. 2013*). They are also associated with near-land contact by the Gulf Stream (Putman *et al.* 2010) which results in the available neritic habitat being more narrowly confined in these areas. Both constricted corridors were identified as high use (Murray 2009; Warden 2011; Foley *et al.,* 2013; Murray and Orphanides 2013). This information included both neritic stage juveniles and adults from multiple Recovery Units. We identified two specific areas of constricted migratory critical habitat: One off the coast of North Carolina, and the other off the coast of southern Florida.

The constricted migratory corridor off North Carolina serves as a concentrated migratory pathway for loggerheads transiting to neritic foraging areas in the north, and back to winter, foraging, and/or nesting areas in the south. The majority of loggerheads pass through this migratory corridor in the spring (April to June) and fall (September to November), but loggerheads are also present in this area from April through November and, given variations in water temperatures and individual turtle migration patterns, these time periods are variable.

The constricted migratory corridor in Florida stretches from the westernmost edge of the Marquesas Keys (82.17° W. long.) to the tip of Cape Canaveral (28.46° N. lat.). The northern border stretches from shore to the 30 m depth contour. The seaward border then stretches from the northeastern-most corner to the intersection of the 200 m depth contour and 27° N. lat. parallel. The seaward border then follows the 200 m depth contour to the westernmost edge at the Marquesas Keys. Adult male and female turtles use this corridor to move from foraging sites to the nesting beach or breeding sites from March to May, and then use this corridor to move from the nesting beach or breeding sites to foraging sites from August to October, while juveniles and adults use it to move south during fall migrations to warmer waters (Mansfield 2006; Mansfield *et al.* 2009; Arendt *et al.* 2012b; Foley *et al. in review*).

The designation of critical habitat in the constricted migratory corridors will help conserve loggerhead sea turtles by (1) preserving passage conditions to and from important nesting, breeding, and foraging areas; and (2) protecting the habitat in a narrowly confined area of the continental shelf with documented high use by loggerheads.

Sargassum Habitat

We describe the PBF of loggerhead *Sargassum* habitat as developmental and foraging habitat for young loggerheads where surface waters form accumulations of floating material, especially *Sargassum.*

PCEs that support this habitat are the following:

(i) Convergence zones, surface-water downwelling areas, the margins of major boundary currents (Gulf Stream), and

other locations where there are concentrated components of the *Sargassum* community in water temperatures suitable for the optimal growth of *Sargassum* and inhabitance of loggerheads;

(ii) *Sargassum* in concentrations that support adequate prey abundance and cover;

(iii) Available prey and other material associated with *Sargassum* habitat including, but not limited to, plants and cyanobacteria and animals native to the *Sargassum* community such as hydroids and copepods; and

(iv) Sufficient water depth and proximity to available currents to ensure offshore transport (out of the surf zone), and foraging and cover requirements by *Sargassum* for post-hatchling loggerheads, i.e., >10 m depth.

Witherington *et al.* (2012) found that the presence of floating *Sargassum* itself, irrespective of other detectable surface features, defined habitat used by young juvenile sea turtles. However, we found it challenging to identify specific areas where these *Sargassum* concentrations are likely to form consistently, given its dynamic nature. In the proposed rule, we specifically requested comments on whether to include *Sargassum* habitat as critical habitat and, if so, whether or not we should include the entire areas, features, and elements described in the ''Description of Physical or Biological Features and Primary Constituent Elements and Identification of Specific Areas'' section. We also requested information on specific areas that frequently encompass convergence zones, surface water downwelling areas and/or other locations where concentrated components of the *Sargassum* community are likely to be found in the Atlantic Ocean and Gulf of Mexico. Finally, we requested information on times or areas that loggerheads are most likely to co-occur with *Sargassum* habitat. We received numerous comments on the designation of *Sargassum* (see Section III, Summary of Comments and Responses). While many comments supported designation of *Sargassum* habitat, and some in the form presented in the proposed rule, some expressed concern with the magnitude of the areas discussed. New literature was supplied by one commenter in the form of Mansfield *et al.,* 2014. We considered this reference and also reevaluated oceanographic information and again consulted with *Sargassum* experts in order to define the *Sargassum* area as specifically as possible.

Gower and King (2011) evaluated satellite imagery data from 2002–2008 and found high concentrations of *Sargassum* in the northwest Gulf of Mexico from March to June. *Sargassum* then spreads eastward into the central and eastern Gulf of Mexico, and then into the Atlantic starting in about July. *Sargassum* was found in a widespread area of the Atlantic Ocean east of Cape Hatteras in July, spreading further north and east by September. Observations from 2003 to 2007 suggest that *Sargassum* has a lifespan of approximately 1 year or less, and that the northwest Gulf of Mexico is a major nursery area (Gower and King 2011). High resolution imagery from 2010 suggested that *Sargassum* was more abundant and widespread in the western Gulf of Mexico compared to the central and eastern Gulf of Mexico, with the latter areas having smaller and more dispersed patches of *Sargassum* (Hardy et al. 2011). Further, NMFS has collected *Sargassum* on Gulf of Mexico ichthyoplankton surveys since 2002. While there are various sampling limitations, available data from 2006–2011 fall surveys indicate the highest volume of *Sargassum* is found in the western Gulf, with very little *Sargassum* collected in locations on the eastern Gulf of Mexico shelf (G. Zapfe, NMFS, 2013, pers. comm.). Based upon the best available data on the distribution of *Sargassum* in the Gulf of Mexico, it is apparent that the western Gulf contains the most predictable and abundant *Sargassum* habitat, and in the eastern Gulf (western Florida shelf) *Sargassum* concentrations are lower, more dispersed and transient. The presence or absence of major and persistent circulation features may offer guidance as to where *Sargassum* drift habitats might persist and where they may be extremely transient. Gower *et al.* (2006) reported that freely floating pelagic *Sargassum* may be expected to reach highest concentrations in ocean areas where surface water remains for long periods of time in a slowly rotating gyre, such as the western Gulf of Mexico. Continental shelf waters in the western Gulf of Mexico are relatively narrow and may be influenced by the mesoscale eddies that have travelled westward after separating from the Loop Current (Ohlmann *et al.* 2001). The broad continental shelf within the eastern Gulf of Mexico lacks such circulation features. The relatively fast moving Loop Current and the Florida Current both serve to distribute *Sargassum* from the western and central Gulf into the Atlantic.

In the Atlantic, the highest *Sargassum* production has been found in the Gulf Stream, the lowest on the shelf, and intermediate in the Sargasso Sea (outside of the U.S. EEZ), with *Sargassum* contributing about 0.5 percent of the total primary production in the area, but nearly 60 percent of the total in the upper 1 m (3 ft) of the water column (Howard and Menzies 1969; Carpenter and Cox 1974; Hanson 1977). Witherington *et al.* (2012) found that transects on which turtles were observed in the Atlantic were typically found near the western wall of the Gulf Stream and its associated frontal boundaries. Further, Mansfield *et al.* (2014) satellite tracked 17 neonate loggerheads released into the Gulf Stream off Florida within *Sargassum* mats. Tracked turtles rarely occupied continental shelf waters and, with one exception, none of the turtles moved westward of the Gulf Stream boundary. Turtles did move east of the Gulf Stream boundary in association with meso-scale eddies, and some turtles moved east into the Sargasso Sea (Mansfield *et al.* 2014). *Sargassum* production varies by season and, in the Atlantic, has the greatest biomass occurring off the southeastern U.S. coast after July (Gower and King 2011). This roughly coincides with peak hatchling production in the southeastern United States (Mansfield and Putman 2013). The physical forces that aggregate *Sargassum* also aggregate pollutants and debris, making this habitat especially vulnerable.

Based on the above information, we identified two specific areas of *Sargassum:* The western Gulf of Mexico to the eastern edge of the Loop Current, and the Atlantic Ocean from the Gulf of Mexico along the northern/western boundary of the Gulf Stream and east to the outer edge of the U.S. EEZ.

Specifically, the Gulf of Mexico area has as its northern and western boundaries the 10 m depth contour starting at the mouth of South Pass of the Mississippi River and proceeding west and south to the outer boundary of the U.S. EEZ. The southern boundary of the area is the U.S. EEZ from the 10 m depth contour off of Texas to the Gulf of Mexico-Atlantic border (83° W. long.). The eastern boundary follows the 10 m depth contour from the mouth of South Pass of the Mississippi River at 28.97° N. lat., 89.15° W. long., in a straight line to the northernmost boundary of the Loop Current (28° N. lat., 89° W. long.) and along the eastern edge of the Loop Current roughly following the velocity of 0.101–0.20 m/second as depicted by Love *et al.* (2013) using the Gulf of Mexico summer mean sea surface currents from 1993–2011, to the Gulf of Mexico-Atlantic border (24.58° N. lat., 83° W. long.). The

delineation between the Gulf of Mexico and the Atlantic Ocean starts at 24.58° N. lat., 83° W. long. (near the Dry Tortugas), and proceeds southward along 83° W. long. to the outer boundary of the EEZ (23.82° N. lat.).

The Atlantic Ocean area has as its outer boundary the U.S. EEZ, starting at the Gulf of Mexico-Atlantic border (23.82° N. lat., 83° W. long.) and proceeding east and north until the EEZ coincides with the Gulf Stream at 37.84° N. lat., 70.59° W. long. The inner boundary of the unit starts at the Gulf of Mexico-Atlantic border (24.58° N. lat., 83° W. long.) to the outer edge of the breeding/migratory critical habitat (LOGG–N–19) at 24.34° N. lat., 82.16° W. long., along the outer edge of the corridor (following the 200 m depth contour) until it coincides with the breeding habitat off of Cape Canaveral (LOGG–N–17) at 27.97° N. lat., 80.14° W. long., and from there roughly following the velocity of 0.401–0.50 m/second (Ocean Conservancy 2012; PMEL 2012) until it coincides with the outer edge of the EEZ at 37.84° N. lat., 70.59° W. long.

The designation of *Sargassum* critical habitat will help conserve loggerhead sea turtles by protecting essential forage, cover and transport habitat for post-hatchlings and early juveniles.

2. North Pacific Ocean DPS

Within the range of the North Pacific Ocean DPS, neither neritic nor *Sargassum* habitat are used by loggerheads within U.S. jurisdiction; therefore, no areas were identified for these habitat types. PBFs (and PCEs) were identified for Oceanic Habitat. Although the Central North Pacific and the Eastern Pacific/U.S. West Coast share the same PBFs, they have different accompanying PCEs.

Central North Pacific Ocean

We describe the essential PBFs of loggerhead sea turtle oceanic habitat in the central North Pacific Ocean as waters that support suitable conditions in sufficient quantity and frequency to provide meaningful foraging, development, and/or transiting opportunities to the population in the North Pacific Ocean.

PCEs in the central North Pacific Ocean that support this habitat include the following:

(1) Currents and circulation patterns of the North Pacific Ocean (KEBR, and the southern edge of the KEC characterized by the Transition Zone Chlorophyll Front) where physical and biological oceanography combine to promote high productivity (chlorophyll a = 0.11–0.31 mg/m^3) and sufficient prey quality (energy density ≥11.2 kJ/g) of species; and

(2) Appropriate SSTs (14.5° to 20.0° C (58.1° to 68.0 °F)), primarily concentrated at the 17° to 18° C (63° to 64 °F) isotherm.

Loggerhead foraging and developmental habitat in the North Pacific Ocean occurs between 28° N. and 40° N. lat. (Polovina *et al.* 2004). Despite historical population decline and nesting trend variability (Kamezaki *et al.* 2003; Conant *et al.* 2009; Van Houtan and Halley 2011), loggerheads appear to have remained widely distributed and continue to occupy most, if not all, of their historical range in the central North Pacific Ocean. Accordingly, those oceanic areas within loggerhead range that are infrequently used generally do not provide the significant function that they might for a species with a constricted range. The potential loggerhead habitat occurring in the U.S. EEZ around Hawaii represents between 0.68 percent and 4.2 percent of the total habitat in the central portion of the Pacific Ocean. This habitat represents a small percentage of suitable habitat, and the variables that make it suitable only occur within the U.S. EEZ around Hawaii a portion of the year in spite of loggerheads using areas north of it throughout the year.

Given the information presented above, we conclude that the habitat within the U.S. EEZ of the central North Pacific Ocean does not provide meaningful foraging, development, and/or transiting opportunities to the North Pacific Ocean DPS, and therefore does not contain PBFs described in the previous section.

Eastern Pacific/U.S. West Coast

We describe the essential PBFs of loggerhead sea turtle oceanic habitat in the eastern North Pacific Ocean as waters that support suitable conditions in sufficient quantity and frequency to provide meaningful foraging, development, and/or transiting opportunities to the population in the North Pacific Ocean.

PCEs in the eastern North Pacific Ocean that support this habitat include the following:

(1) Sites that support meaningful aggregations of foraging juveniles; and

(2) Sufficient prey densities of neustonic and oceanic organisms.

Loggerheads documented off the U.S. west coast are primarily found south of Point Conception, the northern boundary of the Southern California Bight. Based on interactions with the California drift gillnet fishery and stranding records, recorded observations of loggerheads in the Southern California Bight are rare events, with 16 loggerheads taken in 4,165 observed sets from 1990–2010 (Allen *et al.* 2013) and 28 loggerheads observed stranded from 1990 to 2012 (average ~1.3 loggerheads/year). In contrast, waters off the Pacific coast of Baja California, and particularly within the shelf waters of Ulloa Bay, are highly productive with loggerheads documented in the thousands in this area (Pitman 1990; Seminoff *et al.* 2006).

Due to the rarity of loggerheads and their prey both historically and currently in waters off the U.S. west coast, U.S. waters in the eastern Pacific Ocean do not provide meaningful foraging, development, and/or transiting opportunities to the loggerhead population in the North Pacific Ocean DPS, and therefore do not contain the PBFs described in the previous section.

C. Special Management Considerations

An occupied area may be designated as critical habitat if it contains one or more of the PBFs essential to conservation, and if such features ''may require special management considerations or protection'' (16 U.S.C. 1532(5)(a)(i)(II)). Joint NMFS and USFWS regulations (50 CFR 424.02(j)) define special management considerations or protection to mean any methods or procedures useful in protecting PBFs of the environment for the conservation of listed species. We determined that the PBFs identified earlier may require special management considerations due to a number of factors that may affect them. These factors include activities, structures, or other byproducts of human activities. The list below is not necessarily inclusive of all factors.

Major categories of factors, by habitat type, follow. All of these may have an effect on one or more PBF or PCE within the range of the Northwest Atlantic Ocean DPS and may require special management considerations as described below.

1. Northwest Atlantic Ocean DPS

Nearshore Reproductive Habitat

The primary impact to the PBFs and PCEs of the nearshore reproductive habitat (habitat from MHW to 1.6 km offshore of high density nesting beaches and adjacent beaches) for loggerhead sea turtles would be from activities or byproducts of human activities that result in a loss of habitat conditions that allow for (a) hatchling egress from the water's edge to open water; and (b) nesting female transit back and forth between the open water and the nesting beach during nesting season. The loss of such habitat conditions could come

from, but is not limited to, the following:

(1) Offshore structures including, but not limited to, breakwaters, groins, jetties, and artificial reefs, that block or otherwise impede efficient passage of hatchlings or females and/or which concentrate hatchling predators and thus result in greater predation on hatchlings;

(2) Lights on land or in the water, which can disorient hatchlings and nesting females and/or attract predators, particularly lighting that is permanent or present for long durations and has a short wave length (below 540nm);

(3) Oil spills and response activities, that affect habitat conditions for efficient passage of hatchlings or females;

(4) Alternative offshore energy development (turbines or similar structures) that affects habitat conditions for efficient passage of hatchlings or females;

(5) Fishing or aquaculture gear that blocks or impedes efficient passage of hatchlings or females; and

(6) Dredging and disposal activities that affect habitat conditions for efficient passage of hatchlings or females by creating barriers or dramatically altering the slope of the beach approach.

Winter Habitat

The PBF, water temperature PCE, and Gulf Stream boundary PCE of the winter habitat for loggerhead sea turtles could be affected by the following:

(1) Large-scale water temperature changes resulting from global climate change; and

(2) Shifts in the patterns of the Gulf Stream resulting from climate change.

While unlikely to be affected to a significant extent by human activities, the water depth PCE (20–100 m) could potentially be affected by extensive dredging or sediment disposal activities.

Breeding Habitat

The PBF of a concentrated breeding habitat and the associated PCE of high densities of reproductive male and female loggerheads (which facilitates breeding for individuals migrating to that area) could be affected by the following:

(1) Fishing activities that disrupt use of habitat and thus affect densities of reproductive loggerheads;

(2) Dredging and disposal of sediments that affect densities of reproductive loggerheads;

(3) Oil spills and response activities that affect densities of reproductive loggerheads;

(4) Alternative offshore energy development (turbines or similar structures) that affect densities of reproductive loggerheads; and

(5) Climate change, which can affect currents and water temperatures and affect densities of reproductive loggerheads.

Constricted Migratory Habitat

The primary impact to the functionality of the identified corridors as migratory routes for loggerhead sea turtles would be a loss of passage conditions that allow for free and efficient migration along the corridor. The loss of these passage conditions could come from large-scale and or multiple construction projects that result in the placement of substantial structures along the path of the migration, or other similar habitat alterations, requiring large-scale deviations in the migration movements. This impact is expected to be much more likely, and have a greater impact, in the most constricted areas of the migratory routes. Other activities or byproducts of human activities that may, but are less likely to result in an impact to the PCEs include the following:

(1) Oil and gas activities, such as construction and removal of platforms, lighting and noise that alter habitat conditions needed for efficient passage;

(2) Power generation activities such as turbines, wind farms, conversion of wave or tidal energy into power that result in altered habitat conditions needed for efficient passage;

(3) Dredging and disposal of sediments that results in altered habitat conditions needed for efficient passage;

(4) Channel blasting, including use of explosives to remove existing bridge or piling structures or to deepen navigation channels, that results in altered habitat conditions needed for efficient passage;

(5) Marina and dock/pier development that results in altered habitat conditions needed for efficient passage;

(6) Offshore breakwaters that result in altered habitat conditions needed for efficient passage;

(7) Aquaculture structures such as net pens and fixed structures and artificial lighting that result in altered habitat conditions needed for efficient passage;

(8) Fishing activities, particularly those using fixed gear (pots, pound nets), that, when arranged closely together over a wide geographic area, result in altered habitat conditions needed for efficient passage; and

(9) Noise pollution from construction, shipping and/or military activities that results in altered habitat conditions needed for efficient passage.

Sargassum Habitat

The PBF of developmental and foraging habitat in accumulations of floating materials, especially *Sargassum,* and its associated PCEs of convergence zones and other areas of concentration, adequate concentrations of *Sargassum* to support abundant prey and cover, and the existence of the community of flora and fauna typically associated with *Sargassum* habitat could be affected by the following:

(1) Commercial harvest of *Sargassum,* which would directly decrease the amount of habitat;

(2) Oil and gas exploration, development, and transportation that affects the *Sargassum* habitat itself and the loggerhead prey items found within this habitat—this could occur both in the process of normal operations and during blowouts and oil spills, which release toxic hydrocarbons and also require other toxic chemicals for cleanup;

(3) Vessel operations that result in the routine disposal of trash and wastes and/or the accidental release or spillage of cargo, trash or toxic substances, and/or result in the transfer and introduction of exotic and harmful organisms through ballast water discharge, which may then impact the loggerhead prey species found in *Sargassum* habitat;

(4) Ocean dumping of anthropogenic debris and toxins that affects the *Sargassum* habitat itself and the loggerhead prey items found within this habitat; and

(5) Global climate change, which can alter the conditions (such as currents and other oceanographic features, temperature, and levels of ocean acidity) that allow *Sargassum* habitat and communities to thrive in abundance and locations suitable for loggerhead developmental habitat.

2. North Pacific Ocean DPS

We did not identify any specific areas within the U.S. EEZ in the North Pacific Ocean that contain PBFs essential to the conservation of the North Pacific Ocean DPS; therefore, we did not analyze special management considerations.

D. Unoccupied Areas

Section 3(5)(A)(ii) of the ESA authorizes designation of ''specific areas outside the geographical areas occupied by the species at the time it is listed'' if those areas are determined to be essential to the conservation of the species. Joint NMFS and USFWS regulations (50 CFR 424.12(e)) emphasize that the agency shall designate as critical habitat areas outside the geographical area presently

occupied by a species only when a designation limited to its present range would be inadequate to ensure the conservation of the species. We have not identified additional specific areas outside the geographic area occupied by loggerheads at the time of their listing that may be essential for the conservation of the species.

V. Military Lands: Application of ESA Section 4(a)(3)

The ESA precludes the Secretary from designating military lands as critical habitat if those lands are subject to an INRMP under the Sikes Act Improvement Act of 1997 (Sikes Act; 16 U.S.C. 670a) and the Secretary certifies in writing that the plan benefits the listed species (Section 4(a)(3), Pub. L. 108–136).

We have determined that the INRMPs for NAS Key West (Florida) and MCB Camp Lejeune (North Carolina) both confer benefits to the loggerhead sea turtle and enhance its habitat, and therefore we are not designating the waters subject to these INRMPs as critical habitat. Management actions described in the NAS Key West INRMP that benefit loggerhead sea turtles include water quality improvement measures, invasive species control, re-establishment of historic tidal connections for mangrove/saltmarsh and shallow open water (including areas containing seagrasses), completion of a marine benthic survey, installation of turtle-friendly lights, and community outreach and information. Management actions described in the MCB Camp Lejeune INRMP that benefit loggerhead sea turtles include air sweeps before and lookouts during live fire exercises with halting of live fire if a sea turtle is spotted, and avoidance of sea turtles when in boats, keeping a distance of 200 yd (183 m) if feasible.

VI. Exclusions: ESA Section 4(b)(2) Analysis

Section 4(b)(2) of the ESA states that the Secretary shall designate and make revisions to critical habitat on the basis of the best available scientific data after taking into consideration the economic impact, national security impact, and any other relevant impact of specifying any particular area as critical habitat (16 U.S.C. section 1533(b)(2)). In addition to this mandatory consideration of impacts, this section also gives the Secretary discretion to exclude any area from critical habitat if the benefits of such exclusion outweigh the benefits of designating such area as part of the critical habitat (the conservation benefits to the species), unless the failure to designate such area as critical habitat will result in the extinction of the species (16 U.S.C. 1533(b)(2)). In making this determination, the statute, as well as the legislative history, are clear that the Secretary has broad discretion regarding whether to proceed to the optional weighing of benefits, which factor(s) to use, how much weight to give to any factor, and whether or not to exclude any area.

A. Benefits of Designation

The benefits of designating the particular areas include the protection afforded under section 7(a)(2) of the ESA, requiring all Federal agencies to ensure that their actions are not likely to destroy or adversely modify critical habitat. This is in addition to the requirement that all Federal agencies ensure that their actions are not likely to jeopardize the continued existence of the species, and to the take prohibitions of section 9 of the ESA. The designation of critical habitat also provides conservation benefits such as improved education and outreach by informing the public about areas and features important to the species conservation, as well as additional protections that may exist or be created under state and local authorities.

We find that, because the PBFs and PCEs of the proposed critical habitat inherently focus on the areas that best support the needs of the species (i.e., those that support meaningful aggregations of the species) and the areas were selected expressly to ensure maximum consistency with the goals in the Recovery Plan, each of the proposed areas is of high conservation value.

B. Economic Benefits of Exclusion

According to the final Economic Analysis, the total estimated present value of the quantified impacts is $950,000 over the next 10 years. On an annualized basis, this is equivalent to impacts of $110,000 (IEc 2013). The quantified economic impacts of designation are the same as the economic benefits of exclusion. Costs for each area can be found in Exhibit ES–1 of the final Economic Analysis (IEc 2013). Impacts are anticipated to be greatest in LOGG–S–1 (37 percent of the total costs or $40,000 annually), the Atlantic *Sargassum* habitat area, and the Gulf of Mexico Sargassum area (13 percent or $14,000 annually) although these impacts are based on the proposed Sargassum areas, which are appreciably larger (virtually the entire area between the 10 m depth contour and the extent of the U.S. EEZ in the Atlantic Ocean and Gulf of Mexico below 40 N. Lat.) than the areas in the final rule, which do not include areas between the 10 m depth contour and the northern/western edge of the Gulf Stream in the Atlantic, and the eastern Gulf of Mexico. Impacts reflect the very large size of these areas, rather than the potential for significant activities that may adversely affect this habitat type. Because the majority of anticipated impacts are administrative costs associated with consultation on nearshore and in-water construction, dredging, and sediment disposal activities and fisheries and related activities, impacts in the designated areas should be considerably reduced. Impacts to LOGG–N–19, a large area that extends from Martin County/Palm Beach County line to the Marquesas Keys in Monroe County and which includes several nearshore reproductive areas as well as the southern-most constricted migratory corridor and concentrated breeding habitat in Florida, have the next greatest cost at 12 percent of the total or $12,000 annually. These costs are due primarily to the number of consultations anticipated for in-water construction, dredging, and sediment disposal activities, but also to the size of the area relative to most of the other areas. The final Economic Analysis describes in more detail the types of activities that may be affected by the designation and the estimated relative level of economic impacts (IEc 2014).

The highest estimated annual economic cost associated with the designation of loggerhead critical habitat is less than $40,000 for a very large area, LOGG–S–1, and the estimated cost associated with the designation of most areas as critical habitat is below $1,000. Because these numbers are so low, all areas are considered to have a ''low'' economic impact. Typically, to be considered ''high,'' an economic value would need to be above several million dollars (sometimes tens of millions), and ''medium'' may fall between several hundred thousand and millions of dollars.

C. Exclusions of Particular Areas Based on Economic Impacts

Because all particular areas identified for loggerheads have a high conservation value and a low economic impact, no areas are being excluded based on economic impacts. This has not changed from the proposed rule. Because no areas are being excluded, we did not need to further consider whether exclusions would result in the extinction of the Northwest Atlantic Ocean DPS of the loggerhead sea turtle.

D. Exclusions Based on Impacts to National Security

The Secretary must consider possible impacts to national security when determining critical habitat (16 U.S.C. 1533(b)(2)). We shared the draft Biological Report with the Departments of the Navy (including Marine Corps), Army, Air Force and the Department of Homeland Security. The Navy, Air Force, and Department of Homeland Security provided comments (see proposed rule for further discussion of the comments). Although there is overlap between areas proposed for critical habitat and their activities, we do not believe that these activities, as currently conducted, are the types of activities that may affect or adversely modify critical habitat proposed for the loggerhead sea turtle or its PBF/PCEs. Therefore, we conclude that Navy, Air Force and DHS activities are not likely to be affected by this proposed designation, and the designation would not affect national security.

No additional national security concerns have been raised at this time; therefore, we have not excluded any areas due to national security concerns.

E. Exclusions for Tribal Lands

No Tribal lands occur in the areas being recommended for designation, and no Tribal activities are anticipated to be affected by designation. Therefore no exclusions are recommended for Indian Lands.

VII. Final Determinations and Critical Habitat Designation

We conclude that specific areas meet the definition of critical habitat for the Northwest Atlantic Ocean DPS, that a critical habitat designation is prudent, and that critical habitat is determinable. We found 38 specific marine areas for critical habitat designation occupied within the range of the Northwest Atlantic Ocean DPS. These areas contain one or a combination of nearshore reproductive habitat, winter habitat, breeding habitat, constricted migratory corridors, and *Sargassum* habitat. These areas are described in detail in the proposed rule (78 FR 43006, July 18, 2013).

We conclude that no specific areas exist within U.S. jurisdiction that meet the definition of critical habitat for the North Pacific Ocean DPS. We did not identify any critical habitat within the U.S. EEZ in the Pacific Ocean for the North Pacific Ocean DPS because occupied habitat within the U.S. EEZ did not support suitable conditions in sufficient quantity and frequency to provide meaningful foraging, development, and/or transiting opportunities to the population in the North Pacific Ocean.

VIII. Effects of Critical Habitat Designation

Section 7(a)(2) of the ESA requires Federal agencies to insure that any action authorized, funded, or carried out by the agency (agency action) does not jeopardize the continued existence of any threatened or endangered species or destroy or adversely modify designated critical habitat (16 U.S.C. 1536(a)(2)). When a species is listed or critical habitat is designated, Federal agencies must consult with NMFS on any agency actions they authorize, fund, or carry out that may affect the species or its critical habitat (16 U.S.C. 1536(a)(2)). During the consultation, we evaluate the agency action to determine whether the action may adversely affect listed species or critical habitat and issue our findings in a biological opinion or, if appropriate, in a letter concurring with a finding of the action agency that their action is not likely to adversely affect the species. If we conclude in the biological opinion that the action would likely result in the destruction or adverse modification of critical habitat, we would also recommend any reasonable and prudent alternatives to the action (16 U.S.C. 1536(b)(4)(2)). Reasonable and prudent alternatives (defined in 50 CFR 402.02) are alternative actions identified during formal consultation that can be implemented in a manner consistent with the intended purpose of the action, that are consistent with the scope of the Federal agency's legal authority and jurisdiction, that are economically and technologically feasible, and that would avoid the destruction or adverse modification of critical habitat. Regulations (50 CFR 402.16) require Federal agencies that have retained discretionary involvement or control over an action, or where such discretionary involvement or control is authorized by law, to reinitiate consultation on previously reviewed actions in instances where (1) critical habitat is subsequently designated, or (2) new information or changes to the action may result in effects to critical habitat not previously considered in the biological opinion. Consequently, some Federal agencies may request reinitiation of a consultation or conference with us on actions for which formal consultation has been completed, if those actions may affect designated critical habitat or adversely modify or destroy proposed critical habitat.

Activities subject to the ESA section 7 consultation process include Federal activities and non-Federal activities requiring a permit from a Federal agency (e.g., a Clean Water Act, Section 404 dredge or fill permit from the USACE) or some other Federal action, including funding (e.g., Federal Highway Administration funding for transportation projects). ESA section 7 consultation would not be required for Federal actions that do not affect listed species or critical habitat and for non-Federal activities or activities on non-federal and private lands that are not federally funded, authorized, or carried out.

IX. Activities That May Be Affected

ESA section 4(b)(8) requires in any final rule to designate critical habitat an evaluation and brief description, to the maximum extent practicable, of those activities that may adversely modify such habitat or that may be affected by the designation. A wide variety of activities may affect the critical habitat and may be subject to the ESA section 7 consultation process when carried out, funded, or authorized by a Federal agency. These include (1) nearshore and in-water construction, dredging, and sediment disposal, such as construction and maintenance of offshore structures such as breakwaters, groins, jetties, and artificial reefs; construction and maintenance of transportation projects (e.g., bridges) and utility projects; dredging and sediment disposal; channel blasting; (2) fisheries management, such as Federal commercial fisheries and related activities; (3) oil and gas exploration and development, such as decommissioning of old oil and gas platforms, construction of nearshore oil and gas platforms, oil and gas activity transport in the nearshore environment; (4) renewable energy projects, such as ocean thermal energy, wave energy, and offshore wind energy; (5) some military activities, such as in-water training and research; and (6) aquaculture, such as marine species propagation.

For ongoing activities, we recognize that designation of critical habitat may trigger reinitiation of past consultations. Although we cannot predetermine the outcome of section 7 consultations, we do not anticipate at this time that the outcome of reinitated consultation would likely require additional conservation measures, because effects to habitat would likely have been assessed in the original consultation. We commit to working closely with other Federal agencies to implement these reinitiated consultations in an efficient and streamlined manner that, as much as possible and consistent with our statutory and regulatory obligations,

minimizes the staff and resource burden and recognizes existing habitat conservation measures from previously completed ESA consultations. Further, we will continue to work with other agencies to refine and revise cost estimates associated with such consultations.

X. Information Quality Act and Peer Review

The data and analyses supporting this designation have undergone a pre-dissemination review and have been determined to be in compliance with applicable information quality guidelines implementing the Information Quality Act (IQA) (Section 515 of Pub. L. 106–554). In December 2004, the Office of Management and Budget (OMB) issued a Final Information Quality Bulletin for Peer Review pursuant to the IQA. The Bulletin established minimum peer review standards, a transparent process for public disclosure of peer review planning, and opportunities for public participation with regard to certain types of information disseminated by the Federal Government. The peer review requirements of the OMB Bulletin apply to influential or highly influential scientific information disseminated on or after June 16, 2005. To satisfy our requirements under the OMB Bulletin, we obtained independent peer review of the Biological and Economic Reports that support the designation of critical habitat for the loggerhead sea turtle and incorporated the peer review comments prior to the proposed rule and within this rulemaking.

XI. Classification

A. Regulatory Planning and Review

The Office of Management and Budget (OMB) has determined that this final rule is significant under Executive Order 12866. A final Economic Analysis and 4(b)(2) analysis as set forth herein have been prepared to support the exclusion process under section 4(b)(2) of the ESA. To review these documents see **ADDRESSES** section above.

B. National Environmental Policy Act

We have determined that an environmental analysis as provided for under the National Environmental Policy Act of 1969 for critical habitat designations made pursuant to the ESA is not required. See *Douglas County* v. *Babbitt,* 48 F.3d 1495 (9th Cir. 1995), *cert. denied,* 116 S.Ct. 698 (1996).

C. Regulatory Flexibility Act

Under the Regulatory Flexibility Act (RFA; 5 U.S.C. 601 *et seq.,* as amended by the Small Business Regulatory Enforcement Fairness Act (SBREFA) of 1996), whenever an agency publishes a notice of rulemaking for any final rule (other than one regarding the listing of a species under the Endangered Species Act), it must prepare and make available for public comment a regulatory flexibility analysis describing the effects of the rule on small entities (i.e., small businesses, small organizations, and small government jurisdictions). We prepared a final regulatory flexibility analysis (FRFA) pursuant to section 603 of the Regulatory Flexibility Act (RFA; 5 U.S.C. 601 *et seq.;* IEc, 2014), which is an appendix to the final Economic Analysis. The FRFA incorporates the Initial Regulatory Flexibility Analysis (IRFA), which was part of the draft economic analysis that accompanied the proposed rule to designate critical habitat. This document is available upon request (*see* **ADDRESSES** section above). The results are summarized below.

A statement of the need for and objectives of this final rule is provided earlier in the preamble and is not repeated here. This final rule will not impose any recordkeeping or reporting requirements.

Three types of small entities identified in the analysis are (1) small business, (2) small governmental jurisdiction, and (3) small organization. The regulatory mechanism through which critical habitat protections are enforced is section 7 of the ESA, which directly regulates only those activities carried out, funded, or permitted by a Federal agency. By definition, Federal agencies are not considered small entities, although the activities they may fund or permit may be proposed or carried out by small entities. This analysis considers the extent to which this designation could potentially affect small entities, regardless of whether these entities would be directly regulated by NMFS through the final rule or by a delegation of impact from the directly regulated entity.

The small entities that may bear the incremental impacts of this rulemaking are quantified in chapters 3 through 6 of the final Economic Analysis on four categories of economic activity potentially requiring modification to avoid destruction or adverse modification of loggerhead sea turtle critical habitat. Small entities also may participate in ESA section 7 consultation as an applicant or may be affected by a consultation if they intend to undertake an activity that requires a permit, license, or funding from the Federal Government. It is therefore possible that the small entities may spend additional time considering critical habitat during section 7 consultation for the loggerhead sea turtle. Potentially affected activities include nearshore and in-water construction, dredging and disposal, fisheries, oil and gas exploration and development, and alternative energy projects.

Estimated impacts to small entities are summarized by industry in Exhibit A–1 Exhibit A–2 describes potentially affected small businesses by NAICS code, highlighting the relevant small business thresholds. Although businesses affected indirectly are considered, this analysis considers only those entities for which impacts would not be measurably diluted, i.e., it focuses on those entities that may bear some additional costs associated with participation in section 7 consultation.

Based on the number of past consultations and information about potential future actions likely to take place within proposed critical habitat areas, this analysis forecasts the number of additional consultations that may take place as a result of critical habitat (see Chapters 3 through 6 of the draft Economic Analysis). Based on this forecast, annual incremental consultation costs that may be borne by small entities are forecast at $18,000 (discounted at seven percent).

Ideally this analysis would directly identify the number of small entities which may engage in activities that overlap with the proposed designation; however, while we track the Federal agencies involved in the consultation process, we do not track the identity of past permit recipients or the particulars that would allow us to determine whether the recipients were small entities. Nor do we track how often Federal agencies have hired small entities to complete various actions associated with these consultations. In the absence of this information, this analysis utilizes Dun and Bradstreet databases to determine the number of small businesses operating within the NAICS codes identified in Exhibit A–2. Exhibit A–3 presents the potentially affected small counties.

The final rule does not directly mandate ''reporting'' or ''record keeping'' within the meaning of the Paperwork Reduction Act, and does not impose record keeping or reporting requirements on small entities. A critical habitat designation requires Federal agencies to initiate a section 7 consultation to insure their actions do not destroy or adversely modify critical habitat. During formal section 7 consultation under the ESA, NMFS, the action agency (Federal agency), and a

third party participant applying for Federal funding or permitting may communicate in an effort to minimize potential adverse impacts to the habitat and/or the essential features. Communication may include written letters, phone calls, and/or meetings. Project variables such as the type of consultation, the location, affected essential features, and activity of concern, may in turn dictate the complexity of these interactions. Third party costs may include administrative work, such as cost of time and materials to prepare for letters, calls, or meetings. The cost of analyses related to the activity and associated reports may be included in these administrative costs. In addition, following the section 7 consultation process, entities may be required to monitor progress during the activity to ensure that impacts to the habitat and features have been minimized.

A FRFA must identify any duplicative, overlapping, and conflicting Federal rules. The protections afforded to threatened and endangered species and their habitat are described in section 7, 9, and 10 of the ESA. A final determination to designate critical habitat requires Federal agencies to consult, pursuant to section 7 of the ESA, with NMFS on any activities the Federal agency funds, authorizes, or carries out, including permitting, approving, or funding non-Federal activities (e.g., a Clean Water Act, Section 404 dredge or fill permit from USACE). The requirement to consult is to ensure that any Federal action authorized, funded, or carried out will not likely jeopardize the continued existence of any endangered or threatened species or result in the destruction or adverse modification of critical habitat. The incremental impacts forecast in this report and contemplated in this analysis are expected to result from the critical habitat designation and not other Federal regulations.

In accordance with the requirements of the RFA (as amended by SBREFA, 1996) this analysis considers alternatives to the proposed critical habitat designation for the loggerhead sea turtle. The alternative of not designating critical habitat for the loggerhead sea turtle was considered and rejected because such an approach does not meet the legal requirements of the ESA.

D. Coastal Zone Management Act

Under section 307(c)(1)(A) of the Coastal Zone Management Act (CZMA) (16 USC 1456(c)(1)(A)) and its implementing regulations, each Federal activity within or outside the coastal zone that has reasonably foreseeable effects on any land or water use or natural resource of the coastal zone shall be carried out in a manner which is consistent to the maximum extent practicable with the enforceable policies of approved state coastal zone management programs. We initially determined that the proposed designation of critical habitat is consistent to the maximum extent practicable with the enforceable policies of approved Coastal Zone Management Programs of New Jersey, Delaware, Maryland, Virginia, North Carolina, South Carolina, Georgia, Florida, Alabama, Mississippi, Louisiana, and Texas, and submitted this to the responsible agencies in the aforementioned states for review. Upon further review of the proposed designation and its supporting analysis, we have determined that any effects of the designation on coastal uses and resources are not reasonably foreseeable at this time. This designation does not restrict any coastal uses, affect land ownership, or establish a refuge or other conservation area; rather, the designation only affects the ESA section 7 consultation process. Through the consultation process, we will receive information on proposed Federal actions and their effects on listed species and the designated critical habitat upon which we base our biological opinion. It will then be up to the Federal action agencies to decide how to comply with the ESA in light of our opinion, as well as to ensure that their actions comply with the CZMA's Federal consistency requirement. At this time, we do not anticipate that this designation is likely to result in any additional management measures by other Federal agencies.

E. Federalism

Executive Order 13132 requires agencies to take into account any Federalism impacts of regulations under development. It includes specific consultation directives for situations in which a regulation will preempt state law, or impose substantial direct compliance costs on state and local governments (unless required by statute). We have determined that the final rule to designate critical habitat for the loggerhead sea turtle under the ESA does not have Federalism implications. The designation of critical habitat directly affects only the responsibilities of Federal agencies. As a result, the rule does not have substantial direct effects on the States, on the relationship between the Federal Government and the States, or on the distribution of power and responsibilities among the various levels of government, as specified in the Order. State or local governments may be indirectly affected by the proposed revision if they require Federal funds or formal approval or authorization from a Federal agency as a prerequisite to conducting an action. In these cases, the State or local government agency may participate in the section 7 consultation as a third party. One of the key conclusions of the incremental analysis of economic impacts is that we do not expect critical habitat designation to generate additional requests for project modification in any of the critical habitat units. Incremental impacts of the designation will likely be limited to minor additional administrative costs to NMFS, Federal agencies, and third parties when considering critical habitat as part of the forecast section 7 consultations. Therefore, the designation of critical habitat is also not expected to have substantial indirect impacts on State or local governments.

F. Paperwork Reduction Act

This final rule does not contain a collection-of-information requirement for purposes of the Paperwork Reduction Act.

G. Unfunded Mandates Reform Act

In accordance with the Unfunded Mandates Reform Act, we make the following findings: The designation of critical habitat does not impose an ''enforceable duty'' on state, local, tribal governments, or the private sector and therefore does not qualify as a Federal mandate. In general, a Federal mandate is a provision in legislation, statute, or regulation that would impose an ''enforceable duty'' upon non-federal governments or the private sector, and includes both ''Federal intergovernmental mandates'' and ''Federal private sector mandates.''

Under the ESA, the only direct regulatory effect of this final rule is that Federal agencies must ensure that their actions do not destroy or adversely modify critical habitat under section 7. While non-Federal entities who receive Federal funding, assistance, permits, or otherwise require approval or authorization from a Federal agency for an action may be indirectly affected by the designation of critical habitat, the legally binding duty to avoid the destruction or adverse modification of critical habitat rests squarely on the Federal agency. Furthermore, to the extent that non-Federal entities are indirectly affected because they receive Federal assistance or participate in a voluntary Federal aid program, the

Unfunded Mandates Reform Act would not apply.

We do not believe that this rule will significantly or uniquely affect small governments because it is not likely to produce a Federal mandate of $100 million or greater in any year; that is, it is not a ''significant regulatory action'' under the Unfunded Mandates Reform Act. In addition, the designation of critical habitat imposes no obligations on local, state or tribal governments. Therefore, a Small Government Agency Plan is not required.

H. Takings

Under Executive Order 12630, Federal agencies must consider the effects of their actions on constitutionally protected private property rights and avoid unnecessary takings of property. A taking of property includes actions that result in physical invasion or occupancy of private property, and regulations imposed on private property that substantially affect its value or use.

In accordance with Executive Order 12630, the critical habitat designation does not pose significant takings implications. A takings implication assessment is not required. This final designation affects only Federal agency actions (i.e. those actions authorized, funded, or carried out by Federal agencies). Therefore, the critical habitat designation does not affect landowner actions that do not require Federal funding or permits.

This critical habitat designation would not increase or decrease the current restrictions on private property concerning take of loggerhead sea turtles, nor do we expect the designation to impose substantial additional burdens on land use or substantially affect property values. Additionally, the final critical habitat designation does not preclude the development of Conservation Plans and issuance of incidental take permits for non-Federal actions. Owners of property included or used within the final critical habitat designation would continue to have the opportunity to use their property in ways consistent with the survival of listed loggerhead sea turtles.

I. Government to Government Relationships With Tribes

The longstanding and distinctive relationship between the Federal and tribal governments is defined by treaties, statutes, executive orders, judicial decisions, and agreements, which differentiate tribal governments from the other entities that deal with, or are affected by, the Federal Government. This relationship has given rise to a special Federal trust responsibility involving the legal responsibilities and obligations of the United States toward Indian Tribes and the application of fiduciary standards of due care with respect to Indian lands, tribal trust resources, and the exercise of tribal rights.

Executive Order 13175, Consultation and Coordination with Indian Tribal Governments, outlines the responsibilities of the Federal Government in matters affecting tribal interests. If we issue a regulation with tribal implications (defined as having a substantial direct effect on one or more Indian tribes, on the relationship between the Federal Government and Indian tribes, or on the distribution of power and responsibilities between the Federal Government and Indian tribes), we must consult with those governments or the Federal Government must provide funds necessary to pay direct compliance costs incurred by tribal governments. The critical habitat designation does not have tribal implications. The final critical habitat designation does not include any tribal lands and does not affect tribal trust resources or the exercise of tribal rights.

J. Energy Effects

Executive Order 13211 requires agencies to prepare a Statement of Energy Effects when undertaking a ''significant energy action.'' According to Executive Order 13211, ''significant energy action'' means any action by an agency that is expected to lead to the promulgation of a final rule or regulation that is a significant regulatory action under Executive Order 12866 and is likely to have a significant adverse effect on the supply, distribution, or use of energy. We have considered the potential impacts of this action on the supply, distribution, or use of energy (see final Economic Analysis). Oil and gas exploration and alternative energy projects may affect the essential features of critical habitat for the loggerhead sea turtle. Due to the extensive requirements of oil and gas development and renewable energy projects to consider environmental impacts, including impacts on marine life, even absent critical habitat designation for the loggerhead sea turtle, we anticipate it is unlikely that critical habitat designation will change conservation efforts recommended during section 7 consultation for these projects. Consequently, it is unlikely the identified activities and projects will be affected by the designation beyond the quantified administrative impacts. Therefore, the designation is not expected to impact the level of energy production. It is unlikely that any impacts to the industry that remain unquantified will result in a change in production above the one billion kilowatt-hour threshold identified in the Executive Order. Therefore, it is unlikely that the energy industry will experience ''a significant adverse effect'' as a result of the critical habitat designation for the loggerhead sea turtle.

XII. References Cited

A complete list of all references cited in this rule making can be found on our Web site at *http://www.nmfs.noaa.gov/pr/species/turtles/loggerhead.htm* and is available upon request from the NMFS (see **ADDRESSES**).

List of Subjects in 50 CFR Part 226

Endangered and threatened species.

Dated: July 1, 2014.

Eileen Sobeck,

Assistant Administrator, National Marine Fisheries Service.

For the reasons set out in the preamble, 50 CFR part 226 is amended as set forth below:

PART 226—DESIGNATED CRITICAL HABITAT

■ 1. The authority citation of part 226 continues to read as follows:

Authority: 16 U.S.C. 1533.

■ 2. Add § 226.223 to read as follows:

§ 226.223 Critical habitat for the Northwest Atlantic Ocean Distinct Population Segment of the loggerhead sea turtle (Caretta caretta).

Critical habitat is designated for the Northwest Atlantic Ocean Distinct Population Segment of the loggerhead sea turtle (*Caretta caretta*) as described in this section. The textual descriptions of critical habitat in this section are the definitive source for determining the critical habitat boundaries. For nearshore reproductive areas, the areas extend directly from the mean high water (MHW) line datum at each end of the area seaward 1.6 km. Where beaches are within 1.6 km of each other, nearshore areas are connected, either along the shoreline (MHW line) or by delineating on GIS a straight line from the end of one beach to the beginning of another (either from island to island, or across an inlet or the mouth of an estuary). Although generally following these rules, the exact delineation of each area was determined individually because each was unique. The overview maps are provided for general guidance only and not as a definitive source for determining critical habitat boundaries.

(a) *Critical habitat boundaries.* Critical habitat is designated to include the following areas:

(1) *LOGG–N–1—North Carolina Constricted Migratory Corridor and Northern Portion of the North Carolina Winter Concentration Area.* This unit contains constricted migratory and winter habitat. The unit includes the North Carolina constricted migratory corridor and the overlapping northern half of the North Carolina winter concentration area. The constricted migratory corridor off North Carolina consists of waters between 36° N. lat. and Cape Lookout (approximately 34.58° N. lat.) from the edge of the Outer Banks, North Carolina, barrier islands to the 200 m (656 ft) depth contour (continental shelf). The constricted migratory corridor overlaps with the northern portion of winter concentration area off North Carolina. The western and eastern boundaries of winter habitat are the 20 m and 100 m (65.6 and 328 ft) depth contours, respectively. The northern boundary of winter habitat starts at Cape Hatteras (35°16′ N lat.) in a straight latitudinal line between 20 and 100 m (65.6–328 ft) depth contours and ends at Cape Lookout (approximately 34.58° N. lat.).

(2) *LOGG–N–2—Southern Portion of the North Carolina Winter Concentration Area.* This unit contains winter habitat only. The boundaries include waters between the 20 and 100 m (65.6 and 328 ft) depth contours between Cape Lookout to Cape Fear. The eastern and western boundaries of winter habitat are the 20 m and 100 m (65.6 and 328 ft) depth contours, respectively. The northern boundary is Cape Lookout (approximately 34.58° N). The southern boundary is a 37.5 km (23.25 mile) line that extends from the 20 m (65.6 ft) depth contour at approximately 33.47° N, 77.58° W (off Cape Fear) to the 100 m (328 ft) depth contour at approximately 33.2° N, 77.32° W.

(3) *LOGG–N–3—Bogue Banks and Bear Island, Carteret and Onslow Counties, North Carolina.* This unit contains nearshore reproductive habitat only. The unit consists of nearshore area from Beaufort Inlet to Bear Inlet (crossing Bogue Inlet) from the MHW line seaward 1.6 km.

(4) *LOGG–N–4—Topsail Island and Lea-Huttaf Island, Onslow and Pender Counties, North Carolina.* This unit contains nearshore reproductive habitat only. The unit consists of nearshore area from New River Inlet to Rich Inlet (crossing New Topsail Inlet) from the MHW line seaward 1.6 km.

(5) *LOGG–N–5—Pleasure Island, Bald Head Island, Oak Island, and Holden Beach, New Hanover and Brunswick Counties, North Carolina.* This unit contains nearshore reproductive habitat only. The unit consists of nearshore area from Carolina Beach Inlet around Cape Fear to Shallotte Inlet (crossing the mouths of the Cape Fear River and Lockwoods Folly Inlet), from the MHW line seaward 1.6 km.

(6) *LOGG–N–6—North, Sand, South and Cedar Islands, Georgetown County, South Carolina; Murphy, Cape, Lighthouse Islands and Racoon Key, Charleston County, South Carolina.* This unit contains nearshore reproductive habitat only. The unit consists of nearshore area from North Inlet to Five Fathom Creek Inlet (crossing Winyah Bay, North Santee Inlet, South Santee Inlet, Cape Romain Inlet, and Key Inlet) from the MHW line seaward 1.6 km.

(7) *LOGG–N–7—Folly, Kiawah, Seabrook, Botany Bay Islands, Botany Bay Plantation, Interlude Beach, and Edingsville Beach, Charleston County, South Carolina; Edisto Beach State Park, Edisto Beach, and Pine and Otter Islands, Colleton County, South Carolina.* This unit contains nearshore reproductive habitat only. The unit consists of nearshore area from Lighthouse Inlet to Saint Helena Sound (crossing Folly River, Stono, Captain Sam's, North Edisto, Frampton, Jeremy, South Edisto and Fish Creek Inlets) from the MHW line seaward 1.6 km.

(8) *LOGG–N–8—Harbor Island, Beaufort County, South Carolina.* This unit contains nearshore reproductive habitat only. The unit consists of nearshore area from Harbor Inlet to Johnson Inlet from the MHW line seaward 1.6 km.

(9) *LOGG–N–9—Little Capers, St. Phillips, and Bay Point Islands, Beaufort County, South Carolina.* This unit contains nearshore reproductive habitat only. The unit consists of nearshore area from Pritchards Inlet to Port Royal Sound (crossing Trenchards Inlet and Morse Island Creek Inlet East) from the MHW line seaward 1.6 km.

(10) *LOGG–N–10—Little Tybee Island, Chatham County, Georgia:* This unit contains nearshore reproductive habitat only. The boundaries of this unit are from Tybee Creek Inlet to Wassaw Sound from the MHW line seaward 1.6 km.

(11) *LOGG–N–11—Wassaw Island, Chatham County, Georgia:* This unit contains nearshore reproductive habitat only. The boundaries of the unit are from Wassaw Sound to Ossabaw Sound from the MHW line seaward 1.6 km.

(12) *LOGG–N–12—Ossabaw Island, Chatham County, Georgia; St. Catherines Island, Liberty County, Georgia; Blackbeard and Sapelo Islands, McIntosh County, Georgia:* This unit contains nearshore reproductive habitat only. The boundaries of this unit are nearshore areas from the Ogeechee River to Deboy Sound (crossing St. Catherines Sound, McQueen Inlet, Sapelo Sound, and Cabretta Inlet), extending from the MHW line and seaward 1.6 km.

(13) *LOGG–N–13—Little Cumberland Island and Cumberland Island, Camden County, Georgia:* This unit contains nearshore reproductive habitat only. The boundaries of this unit are nearshore areas from St. Andrew Sound to the St. Marys River (crossing Christmas Creek) from the MHW line seaward 1.6 km.

(14) *LOGG–N–14—Southern Boundary of Kathryn Abbey Hanna Park to Mantanzas Inlet, Duval and St. Johns Counties, Florida:* This unit contains nearshore reproductive habitat only. The boundaries of the unit are nearshore areas from the south boundary of Kathryn Abbey Hanna Park to Matanzas Inlet (crossing St. Augustine Inlet) from the MHW line seaward 1.6 km.

(15) *LOGG–N–15—Northern Boundary of River to Sea Preserve at Marineland to Granada Blvd., Flagler and Volusia Counties, Florida:* This unit contains nearshore reproductive habitat only. The boundaries of the unit are nearshore areas from the north boundary of River to Sea Preserve at Marineland to Granada Boulevard in Ormond Beach from the MHW line seaward 1.6 km.

(16) *LOGG–N–16—Canaveral National Seashore to 28.70° N, 80.66° W near Titusville, Volusia and Brevard Counties, Florida:* This unit contains nearshore reproductive habitat only. Boundaries of the unit are nearshore areas from the north boundary of Canaveral National Seashore to 28.70° N, 80.66° W near Titusville (at the start of the Titusville—Floridana Beach concentrated breeding area) from the MHW line seaward 1.6 km.

(17) *LOGG–N–17—Titusville to Floridana Beach Concentrated Breeding Area, Northern Portion of the Florida Constricted Migratory Corridor, Nearshore Reproductive Habitat from 28.70° N, 80.66° W near Titusville to Cape Canaveral Air Force Station; and Nearshore Reproductive Habitat from Patrick Airforce Base and Central Brevard Beaches, Brevard County, Florida:* This unit includes overlapping areas of nearshore reproductive habitat, constricted migratory habitat, breeding habitat, and *Sargassum* habitat. The concentrated breeding habitat area is from the MHW line on shore at 28.70° N, 80.66° W near Titusville to depths less than 60 m and extending south to Floridana Beach. This overlaps with waters in the northern portion of the

Florida constricted migratory corridor, which begins at the tip of Cape Canaveral Air Force Station (28.46° N. lat.) and ends at Floridana beach, including waters from the MHW line on shore to the 30 m depth contour. Additionally, the above two habitat areas overlap with two nearshore reproductive habitat areas. The first begins near Titusville at 28.70° N, 80.66° W to the south boundary of the Cape Canaveral Air Force Station/Canaveral Barge Canal Inlet from the MHW line seaward 1.6 km. The second begins at Patrick Air Force Base, Brevard County, through the central Brevard Beaches to Floridana Beach from the MHW line seaward 1.6 km.

(18) *LOGG–N–18—Florida Constricted Migratory Corridor from Floridana Beach to Martin County/Palm Beach County Line; Nearshore Reproductive Habitat from Floridana Beach to the south end of Indian River Shores; Nearshore Reproductive Habitat from Fort Pierce inlet to Martin County/Palm Beach County Line, Brevard, Indian River and Martin Counties, Florida*—This unit contains nearshore reproductive habitat and constricted migratory habitat. The unit contains a portion of the Florida constricted migratory corridor, which is located in the nearshore waters from the MHW line to the 30 m depth contour off Floridana Beach to the Martin County/Palm Beach County line. This overlaps with two nearshore reproductive habitat areas. The first nearshore reproductive area includes nearshore areas from Floridana Beach to the south end of Indian River Shores (crossing Sebastian Inlet) from the MHW line seaward1.6 km. The second nearshore reproductive habitat area includes nearshore areas from Fort Pierce inlet to Martin County/Palm Beach County line (crossing St. Lucie Inlet) from the MHW line seaward 1.6 km.

(19) *LOGG–N–19—Southern Florida Constricted Migratory Corridor; Southern Florida Concentrated Breeding Area; and Six Nearshore Reproductive Areas: Martin County/Palm Beach County line to Hillsboro Inlet, Palm Beach and Broward Counties, Florida; Long Key, Bahia Honda Key, Woman Key, Boca Grande Key, and Marquesas Keys, Monroe County, Florida*—This unit contains nearshore reproductive habitat, constricted migratory habitat, and breeding habitat. The unit contains the southern Florida constricted migratory corridor habitat, overlapping southern Florida breeding habitat, and overlapping nearshore reproductive habitat. The southern portion of the Florida concentrated breeding area and the southern Florida constricted migratory corridor are both located in the nearshore waters starting at the Martin County/Palm Beach County line to the westernmost edge of the Marquesas Keys (82.17° W. long.), with the exception of the waters under the jurisdiction of NAS Key West. The seaward border then follows the 200 m depth contour to the westernmost edge at the Marquesas Keys. The overlapping nearshore reproductive habitat includes nearshore waters starting at the Martin County/Palm Beach County line to Hillsboro Inlet (crossing Jupiter, Lake Worth, Boyton, and Boca Raton Inlets) from the MHW line seaward 1.6 km; Long Key, which is bordered on the east by the Atlantic Ocean, on the west by Florida Bay, and on the north and south by natural channels between Keys (Fiesta Key to the north and Conch Key to the south), and has boundaries following the borders of the island from the MHW line seaward to 1.6 km; Bahia Honda Key, from the MHW line seaward 1.6 km; 4) Woman Key, from the MHW line and seaward to 1.6 km; 5) Boca Grande Key, from the MHW line seaward to 1.6 km; 6) the Marquesas Keys unit boundary, including nearshore areas from the MHW line seaward to 1.6 km from four islands where loggerhead sea turtle nesting has been documented within the Marquesas Keys: Marquesas Key, Unnamed Key 1, Unnamed Key 2, and Unnamed Key 3.

(20) *LOGG–N–20—Dry Tortugas, Monroe County, Florida:* This unit contains nearshore reproductive habitat only. The unit boundary includes nearshore areas from the MHW line and seaward to 1.6 km (1.0 mile) from six islands where loggerhead sea turtle nesting has been documented within the Dry Tortugas. From west to east, these six islands are: Loggerhead Key, Garden Key, Bush Key, Long Key, Hospital Key, and East Key.

(21) *LOGG–N–21—Cape Sable, Monroe County, Florida:* This unit contains nearshore reproductive habitat only. The boundaries of the unit are nearshore areas from the MHW line and seaward to 1.6 km from the north boundary of Cape Sable at 25.25° N, 81.17° W to the south boundary of Cape Sable at 25.12° N, 81.07° W.

(22) *LOGG–N–22—Graveyard Creek to Shark Point, Monroe County, Florida:* This unit contains nearshore reproductive habitat only. The boundaries of this unit are nearshore areas from Shark Point (25.39° N, 81.15° W) to Graveyard Creek Inlet from the MHW line seaward 1.6 km.

(23) *LOGG–N–23—Highland Beach, Monroe County, Florida:* This unit contains nearshore reproductive habitat only. The boundaries of this unit are from First Bay to Rogers River Inlet from the MHW line seaward 1.6 km.

(24) *LOGG–N–24—Ten Thousand Islands North, Collier County, Florida:* This unit contains nearshore reproductive habitat only. The unit boundary includes nearshore areas from the MHW line seaward 1.6 km of nine keys where loggerhead sea turtle nesting has been documented within the northern part of the Ten Thousand Islands in Collier County in both the Ten Thousand Islands NWR and the Rookery Bay NERR.

(25) *LOGG–N–25—Cape Romano, Collier County, Florida:* This unit contains nearshore reproductive habitat only. The boundaries of the unit are nearshore areas from Caxambas Pass to Gullivan Bay from the MHW line seaward 1.6 km.

(26) *LOGG–N–26—Keewaydin Island and Sea Oat Island, Collier County, Florida:* This unit contains nearshore reproductive habitat only. The boundaries of the unit are nearshore areas from Gordon Pass to Big Marco Pass from the MHW line seaward 1.6 km.

(27) *LOGG–N–27—Little Hickory Island to Doctors Pass, Lee and Collier Counties, Florida:* This unit contains nearshore reproductive habitat only. The boundaries of the unit are nearshore areas from Little Hickory Island to Doctors Pass (crossing Wiggins Pass and Clam Pass) from the MHW line seaward 1.6 km.

(28) *LOGG–N–28—Captiva Island and Sanibel Island West, Lee County, Florida:* This unit contains nearshore reproductive habitat only. The boundaries of the unit are nearshore areas from the north end of Captiva/Captiva Island Golf Club (starting at Redfish Pass and crossing Blind Pass) and along Sanibel Island West to Tarpon Bay Road, from the MHW line seaward 1.6 km.

(29) *LOGG–N–29—Siesta and Casey Keys, Sarasota County; Venice Beaches and Manasota Key, Sarasota and Charlotte Counties; Knight, Don Pedro, and Little Gasparilla Islands, Charlotte County; Gasparilla Island, Charlotte and Lee Counties; Cayo Costa, Lee County, Florida:* This unit contains nearshore reproductive habitat only. The boundaries of this unit are nearshore areas from Big Sarasota Pass to Catliva Pass (crossing Venice Inlet, Stump Pass, Gasparilla Pass, and Boca Grande Pass), from the MHW line seaward 1.6 km.

(30) *LOGG–N–30—Longboat Key, Manatee and Sarasota Counties, Florida:* This unit contains nearshore reproductive habitat only. The boundaries of this unit are the north point of Longboat Key at Longboat Pass

to New Pass, from the MHW line seaward 1.6 km.

(31) *LOGG–N–31—St. Joseph Peninsula, Cape San Blas, St. Vincent, St. George and Dog Islands, Gulf and Franklin Counties, Florida:* This unit contains nearshore reproductive habitat only. The boundaries of this unit are from St. Joseph Bay to St. George Sound (crossing Indian, West, and East Passes) from the MHW line seaward 1.6 km.

(32) *LOGG–N–32—Mexico Beach and St. Joe Beach, Bay and Gulf Counties, Florida:* This unit contains nearshore reproductive habitat only. The boundaries of the unit are from the eastern boundary of Tyndall Air Force Base to Gulf County Canal in St. Joseph Bay from the MHW line seaward 1.6 km.

(33) *LOGG–N–33—Gulf State Park to FL/AL state line, Baldwin County, Alabama; FL/AL state line to Pensacola Pass, Escambia County, Florida:* This unit contains nearshore reproductive habitat only. The boundaries of the unit are nearshore areas from the west boundary of Gulf State Park to the Pensacola Pass (crossing Perido Pass and the Alabama-Florida border) from the MHW line and seaward to 1.6 km.

(34) *LOGG–N–34—Mobile Bay — Little Lagoon Pass, Baldwin County, Alabama:* This unit contains nearshore reproductive habitat only. The boundaries of the unit are nearshore areas from Mobile Bay Inlet to Little Lagoon Pass from the MHW line and seaward to 1.6 km.

(35) *LOGG–N–35—Petit Bois Island, Jackson County, Mississippi:* This unit contains nearshore reproductive habitat only. The boundaries of the unit are nearshore areas from Horn Island Pass to Petit Bois Pass from the MHW line and seaward to 1.6 km.

(36) *LOGG–N–36—Horn Island, Jackson County, Mississippi:* This unit contains nearshore reproductive habitat only. The boundaries of the unit are nearshore areas from Dog Keys Pass to the eastern most point of the ocean facing island shore from the MHW line and seaward to 1.6 km.

(37) *LOGG–S–1—Atlantic Ocean Sargassum:* This unit contains *Sargassum* habitat and overlaps with breeding habitat (LOGG–N–17). The western edge of the unit is the Gulf of Mexico-Atlantic border (83° W. long.) from 24.58° N. lat. to 23.82° N. lat. The outer boundary of the unit is the U.S. EEZ, starting at the Gulf of Mexico-Atlantic border (23.82° N. lat., 83° W. long.) and proceeding east and north until the EEZ coincides with the Gulf Stream at 37.84° N. lat., 70.59° W. long. The inner boundary of the unit starts at the Gulf of Mexico-Atlantic border (24.58° N. lat., 83° W. long.) to the outer edge of the breeding/migratory critical habitat (LOGG–N–19) at 24.34° N. lat., 82.16° W. long., along the outer edge of the corridor (following the 200 m depth contour) until it coincides with the breeding habitat off of Cape Canaveral (LOGG–N–17) at 27.97° N. lat., 80.14° W. long., and from there roughly following the velocity of 0.401–0.50 m/second (Ocean Conservancy 2012; PMEL 2012) until it coincides with the outer edge of the EEZ at 37.84° N. lat., 70.59° W. long.

(38) *LOGG–S–2—Gulf of Mexico Sargassum.* This unit contains *Sargassum* habitat only. The northern and western boundaries of the unit follow the 10 m depth contour starting at the mouth of South Pass of the Mississippi River proceeding west and south to the outer boundary of the U.S. EEZ. The southern boundary of the unit is the U.S. EEZ from the 10 m depth contour off of Texas to the Gulf of Mexico-Atlantic border (83° W. long.). The eastern boundary follows the 10 m depth contour from the mouth of South Pass of the Mississippi River at 28.97° N. lat., 89.15° W. long., in a straight line to the northernmost boundary of the Loop Current (28° N. lat., 89° W. long.) and along the eastern edge of the Loop Current roughly following the velocity of 0.101–0.20 m/second as depicted by Love *et al.* (2013) using the Gulf of Mexico summer mean sea surface currents from 1993–2011, to the Gulf of Mexico-Atlantic border (24.58° N. lat., 83° W. long.).

(b) Physical or biological features and primary constituent elements essential for conservation. The physical or biological features (PBFs) and primary constituent elements (PCEs) essential for conservation of the Northwest Atlantic Ocean DPS of the loggerhead sea turtle are identified by habitat type below.

(1) *Nearshore reproductive habitat.* The PBF of nearshore reproductive habitat as a portion of the nearshore waters adjacent to nesting beaches that are used by hatchlings to egress to the open-water environment as well as by nesting females to transit between beach and open water during the nesting season. The following PCEs support this habitat:

(i) Nearshore waters directly off the highest density nesting beaches and their adjacent beaches, as identified in 50 CFR 17.95(c), to 1.6 km offshore;

(ii) Waters sufficiently free of obstructions or artificial lighting to allow transit through the surf zone and outward toward open water; and

(iii) Waters with minimal manmade structures that could promote predators (i.e., nearshore predator concentration caused by submerged and emergent offshore structures), disrupt wave patterns necessary for orientation, and/or create excessive longshore currents.

(2) *Winter habitat.* We describe the PBF of the winter habitat as warm water habitat south of Cape Hatteras near the western edge of the Gulf Stream used by a high concentration of juveniles and adults during the winter months. PCEs that support this habitat are the following:

(i) Water temperatures above 10° C from November through April;

(ii) Continental shelf waters in proximity to the western boundary of the Gulf Stream; and

(iii) Water depths between 20 and 100 m.

(3) *Breeding habitat.* We describe the PBF of concentrated breeding habitat as those sites with high densities of both male and female adult individuals during the breeding season. PCEs that support this habitat are the following:

(i) High densities of reproductive male and female loggerheads;

(ii) Proximity to primary Florida migratory corridor; and

(iii) Proximity to Florida nesting grounds.

(4) *Constricted migratory habitat.* We describe the PBF of constricted migratory habitat as high use migratory corridors that are constricted (limited in width) by land on one side and the edge of the continental shelf and Gulf Stream on the other side. PCEs that support this habitat are the following:

(i) Constricted continental shelf area relative to nearby continental shelf waters that concentrate migratory pathways; and

(ii) Passage conditions to allow for migration to and from nesting, breeding, and/or foraging areas.

(5) *Sargassum habitat.* We describe the PBF of loggerhead *Sargassum* habitat as developmental and foraging habitat for young loggerheads where surface waters form accumulations of floating material, especially *Sargassum.* PCEs that support this habitat are the following:

(i) Convergence zones, surface-water downwelling areas, the margins of major boundary currents (Gulf Stream), and other locations where there are concentrated components of the *Sargassum* community in water temperatures suitable for the optimal growth of *Sargassum* and inhabitance of loggerheads*;*

(ii) *Sargassum* in concentrations that support adequate prey abundance and cover;

(iii) Available prey and other material associated with *Sargassum* habitat including, but not limited to, plants and cyanobacteria and animals native to the

Sargassum community such as hydroids and copepods; and

(iv) Sufficient water depth and proximity to available currents to ensure offshore transport (out of the surf zone), and foraging and cover requirements by *Sargassum* for post-hatchling loggerheads, i.e., >10 m depth.

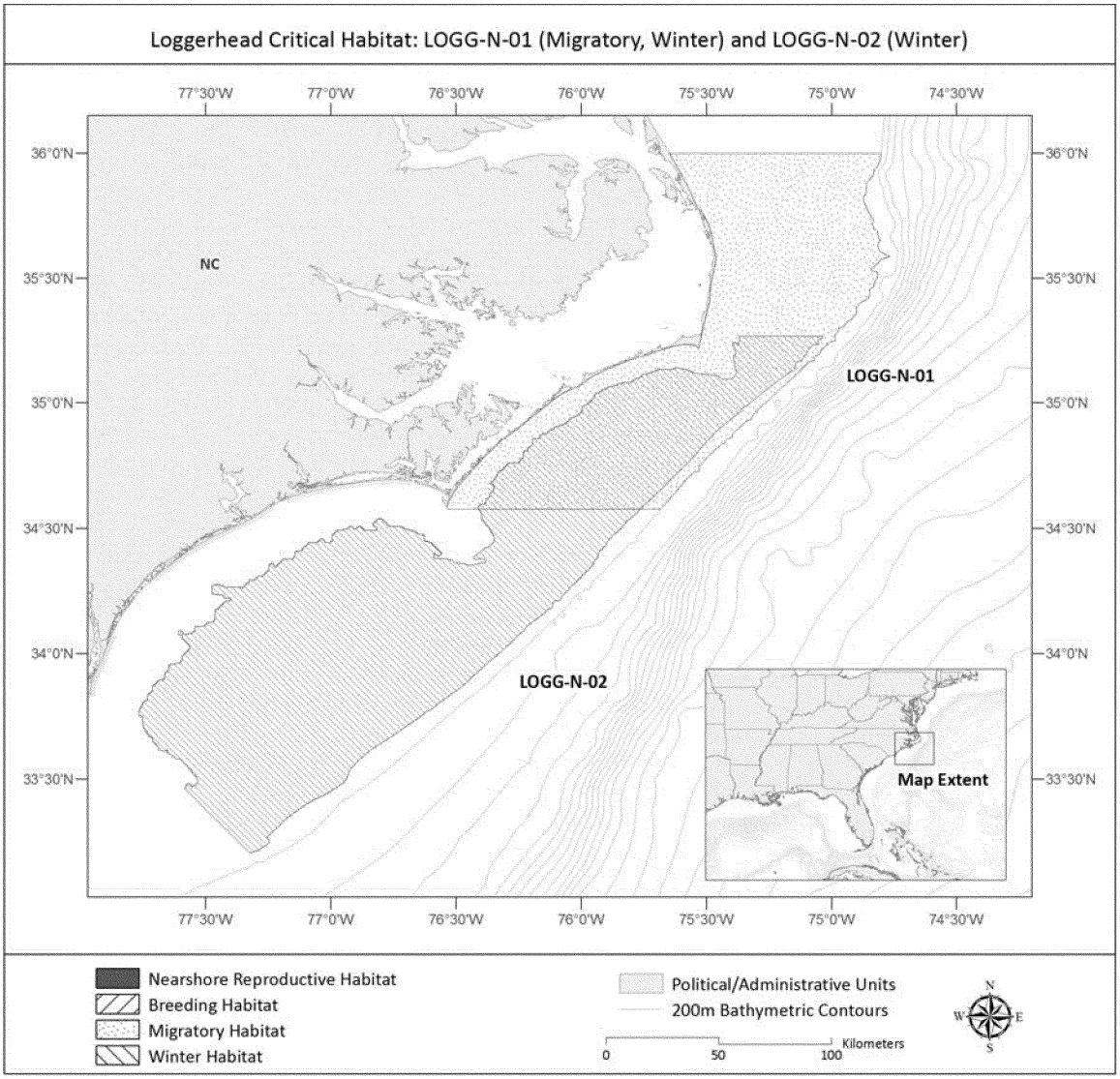
(c) Areas not included in critical habitat. Critical habitat does not include the following particular areas where they overlap with the areas described in paragraph (a) of this section:

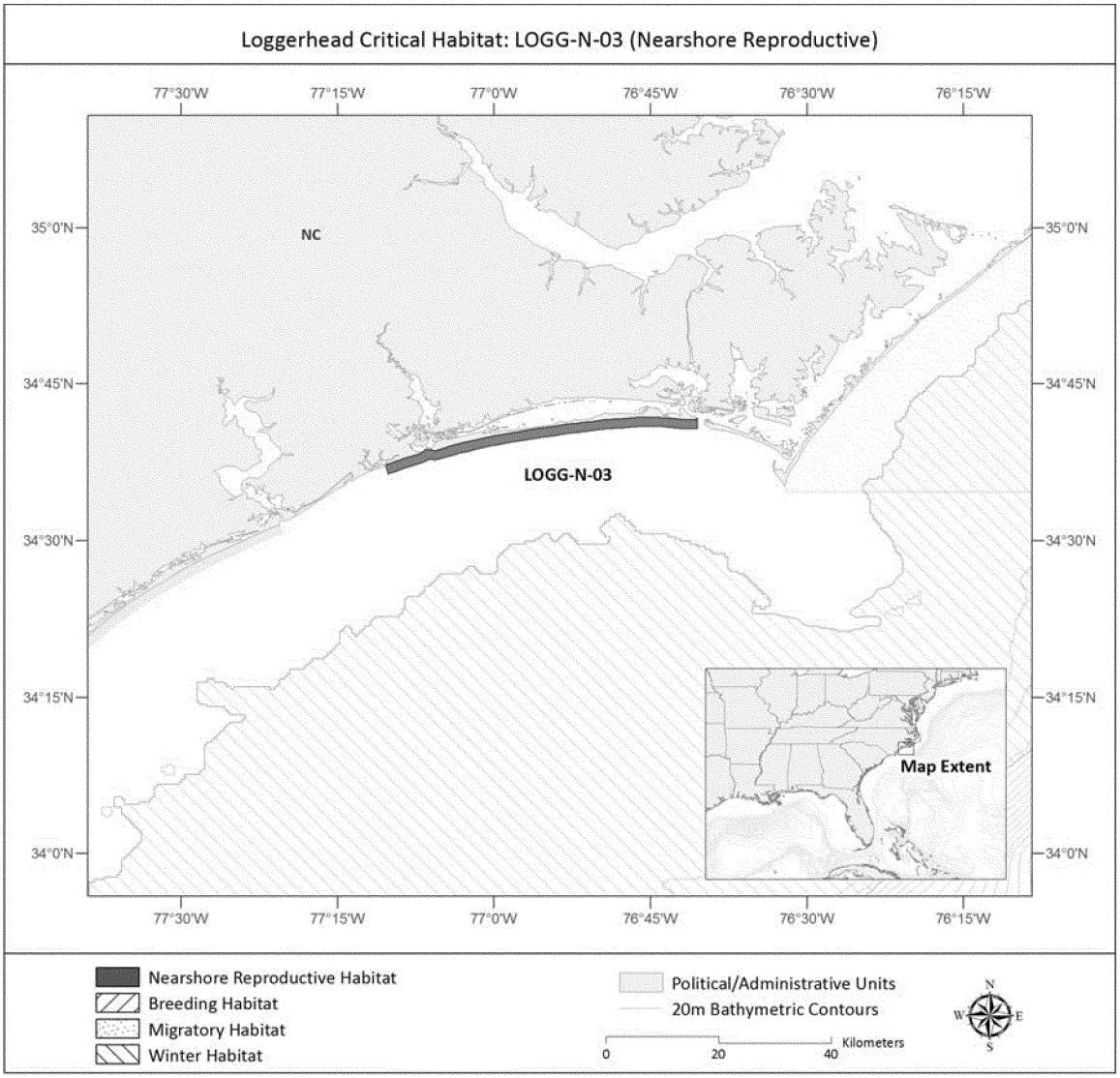
(1) Pursuant to ESA section 4(a)(3)(B), all areas subject to the Naval Air Station Key West Integrated Natural Resources Management Plan.

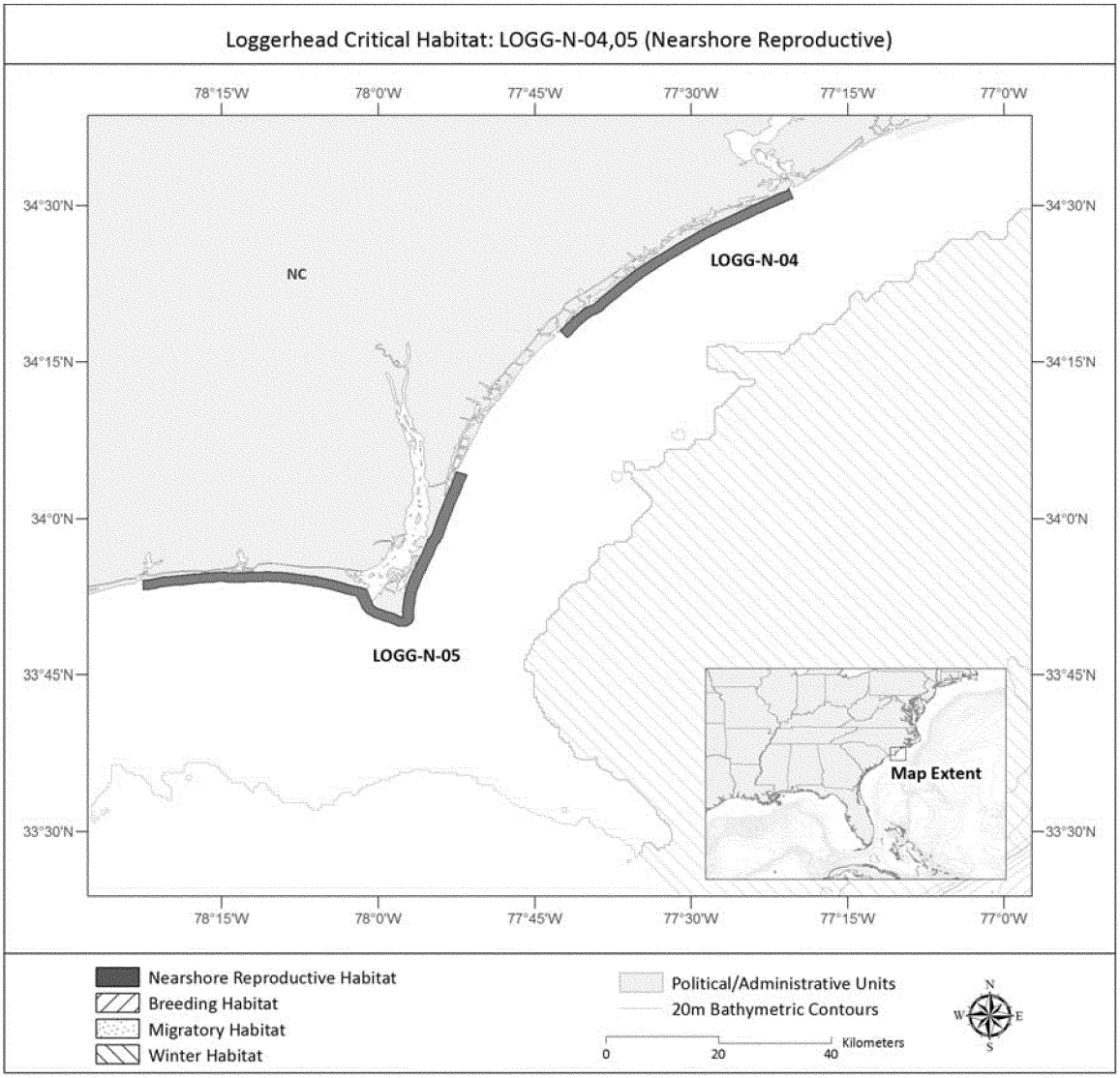
(2) Pursuant to ESA section 3(5)(A)(i), all federally authorized or permitted manmade structures such as aids-to-navigation, boat ramps, platforms, docks, and pilings existing within the legal boundaries on August 11, 2014.

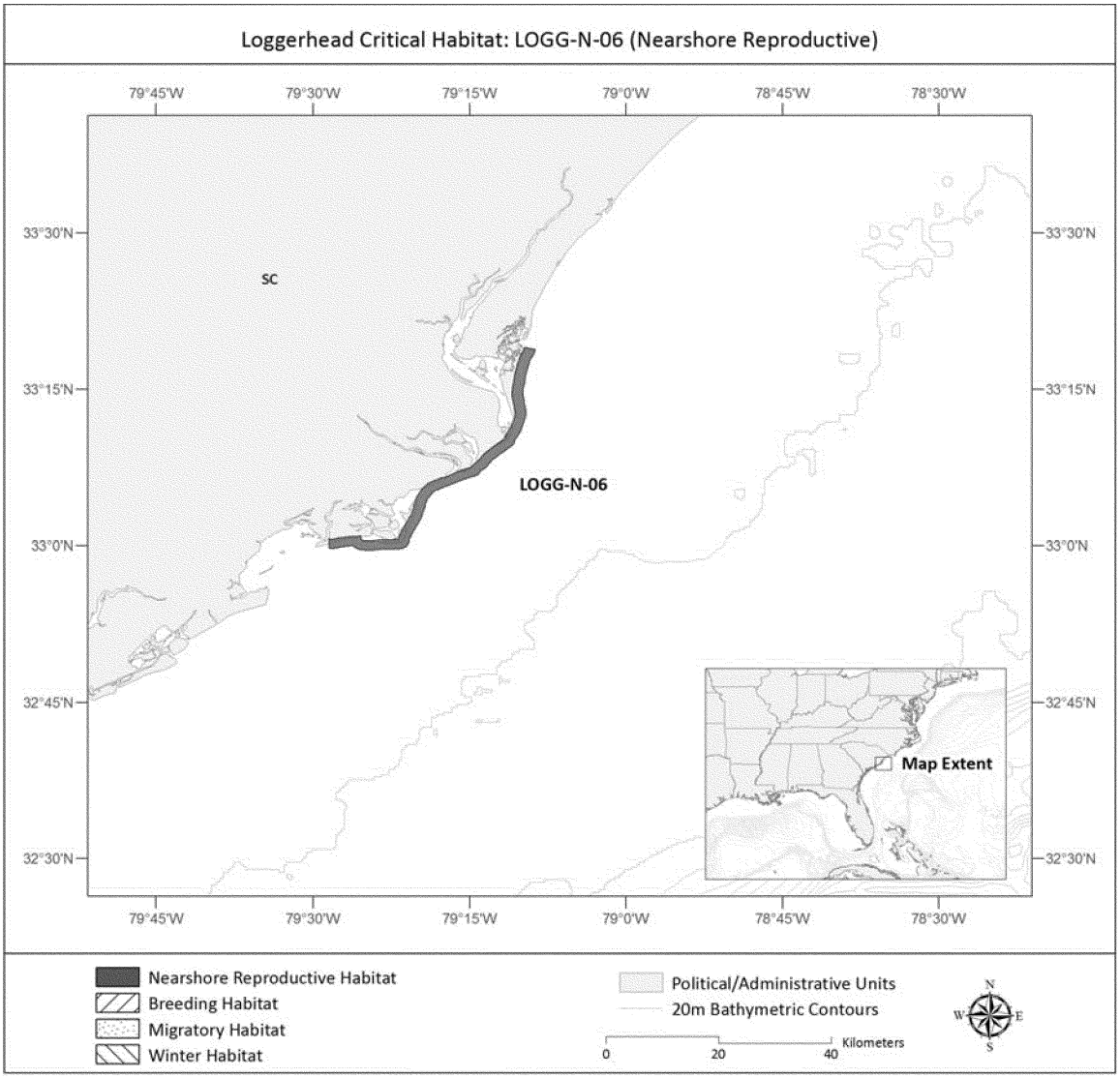
(d) Maps of loggerhead critical habitat follow:

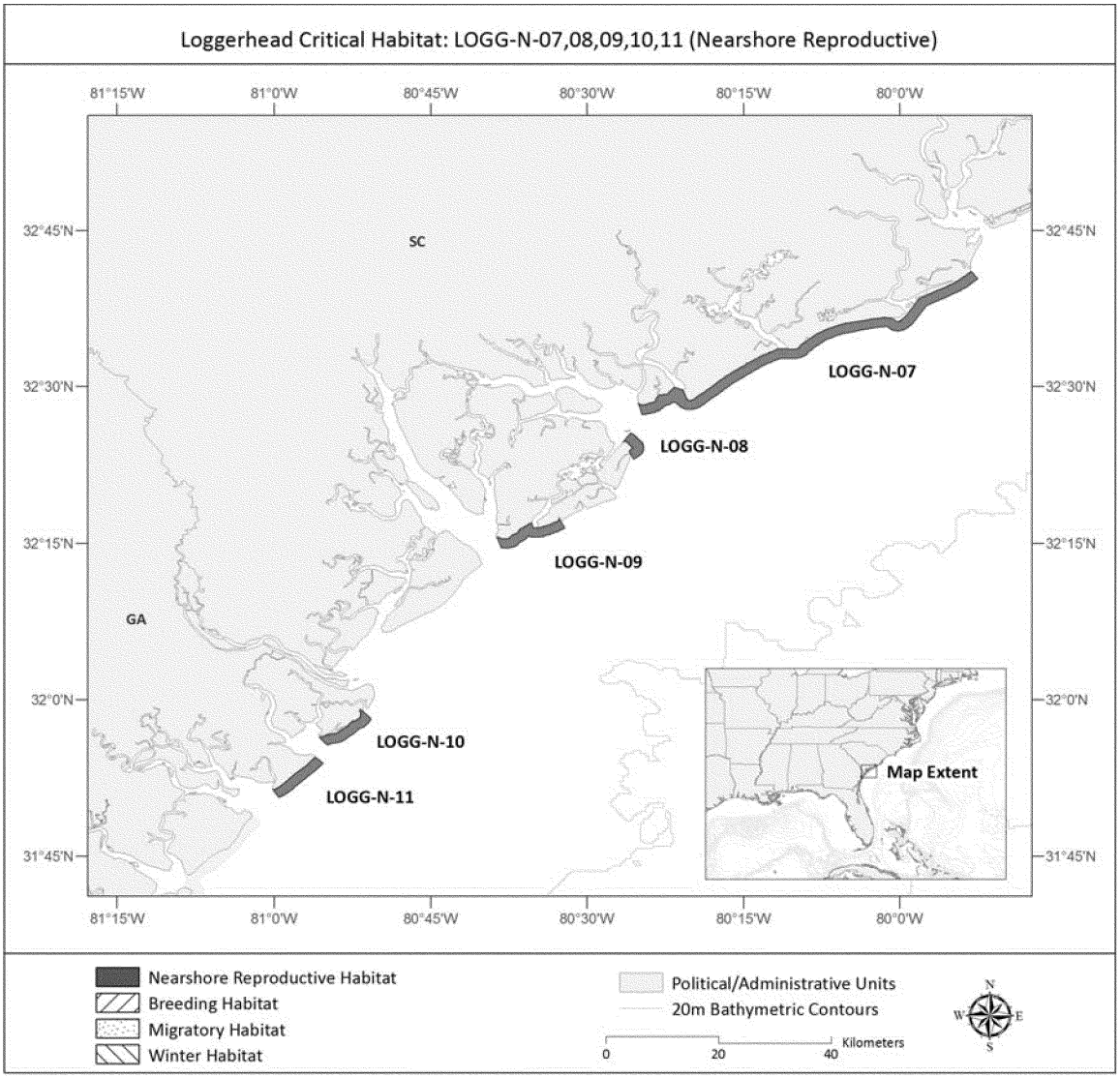
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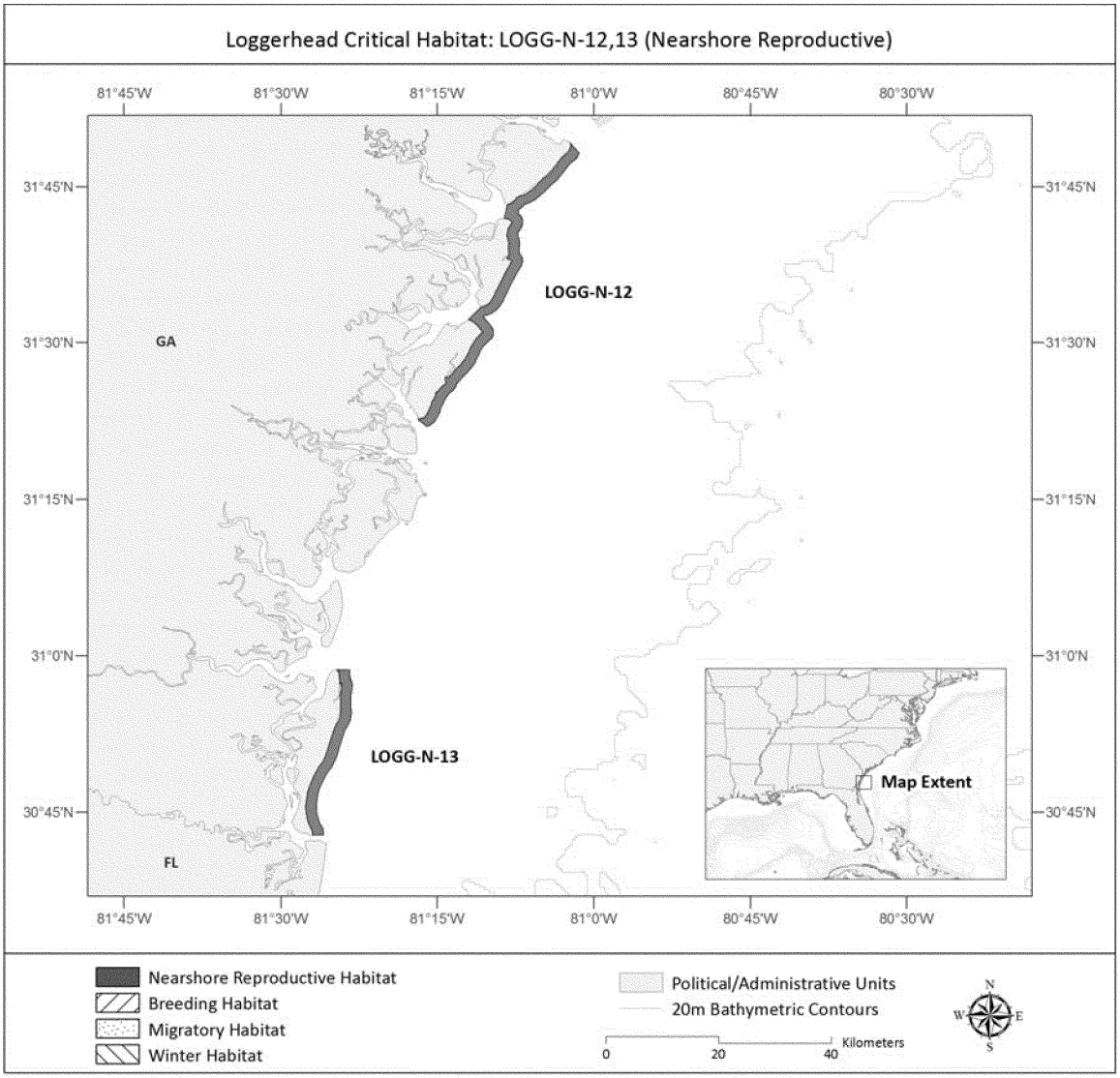


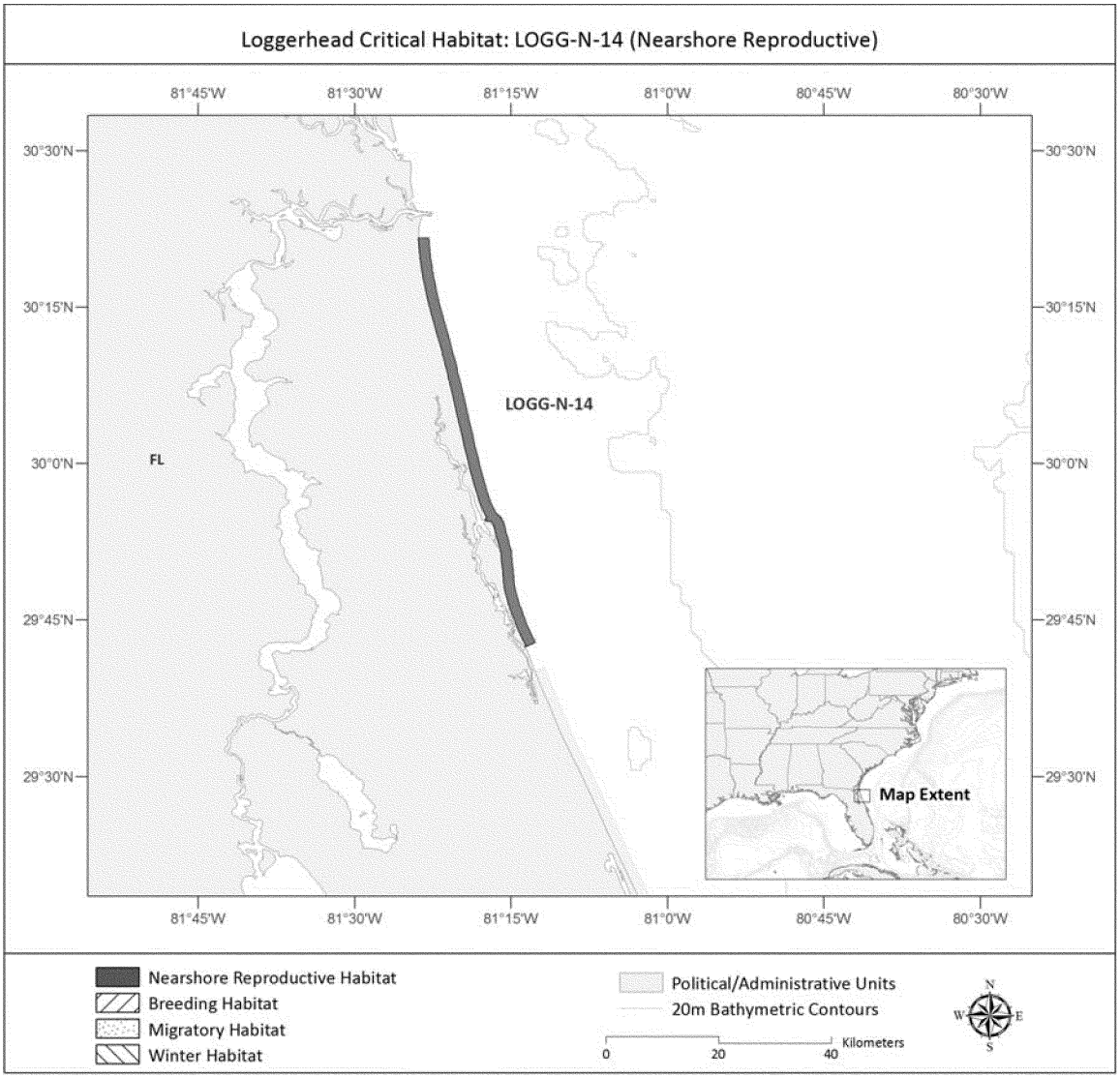

Loggerhead Critical Habitat: LOGG-N-03 (Nearshore Reproductive)
77°30'W
77°15'W
77°0'W
76°45'W
76°30'W
76°15'W
35°0'N
34°45'N
34°30'N
34°15'N
34°0'N
NC
LOGG-N-03
Map Extent
Nearshore Reproductive Habitat
Breeding Habitat
Migratory Habitat
Winter Habitat
Political/Administrative Units
20m Bathymetric Contours
0
20
40
Kilometers
N
W
E
S

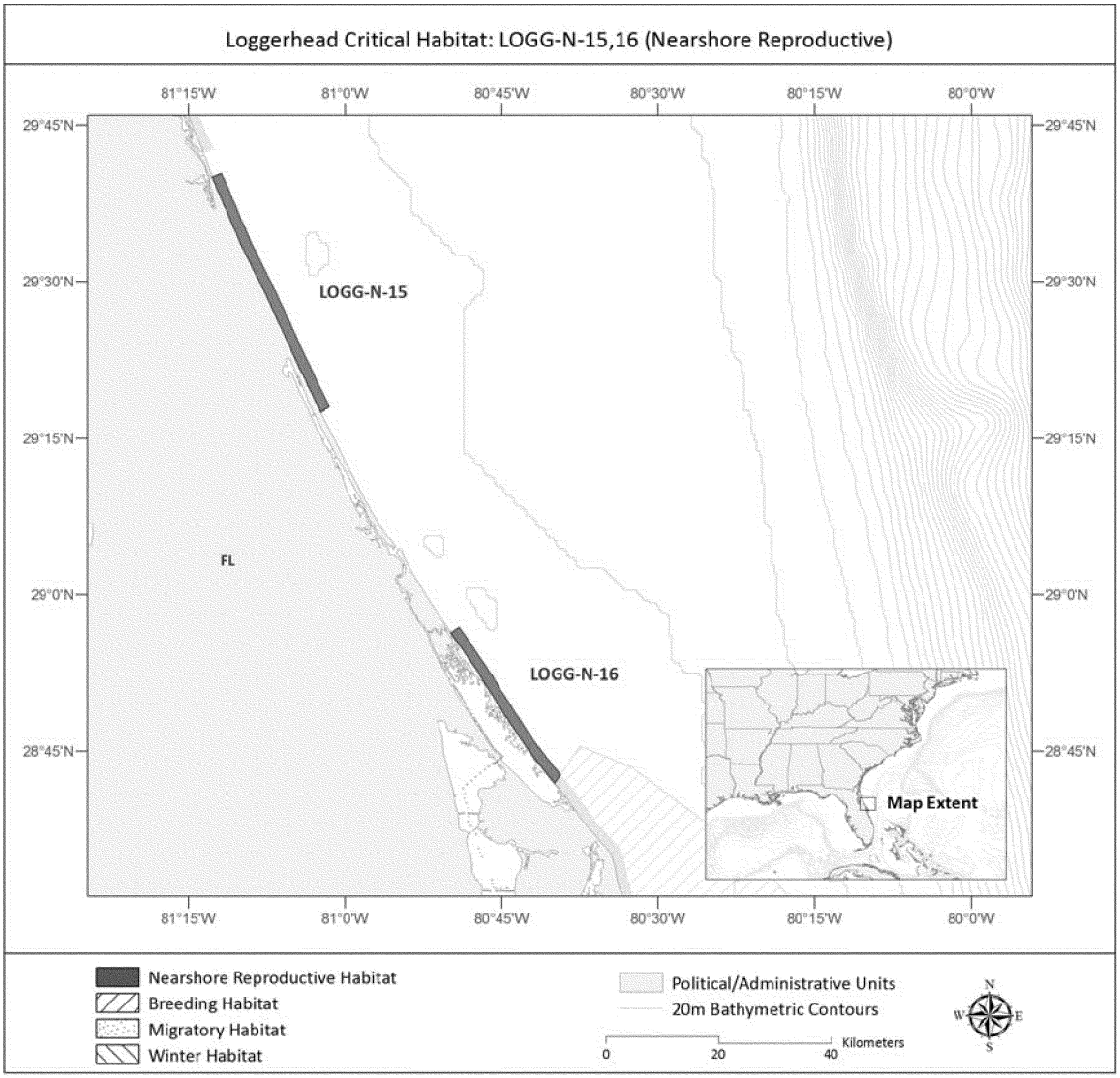

Loggerhead Critical Habitat: LOGG-N-04,05 (Nearshore Reproductive)
78°15'W
78°0'W
77°45'W
77°30'W
77°15'W
77°0'W
34°30'N
34°15'N
34°0'N
33°45'N
33°30'N
NC
LOGG-N-04
LOGG-N-05
Map Extent
Nearshore Reproductive Habitat
Breeding Habitat
Migratory Habitat
Winter Habitat
Political/Administrative Units
20m Bathymetric Contours
0
20
40
Kilometers
N
W
E
S

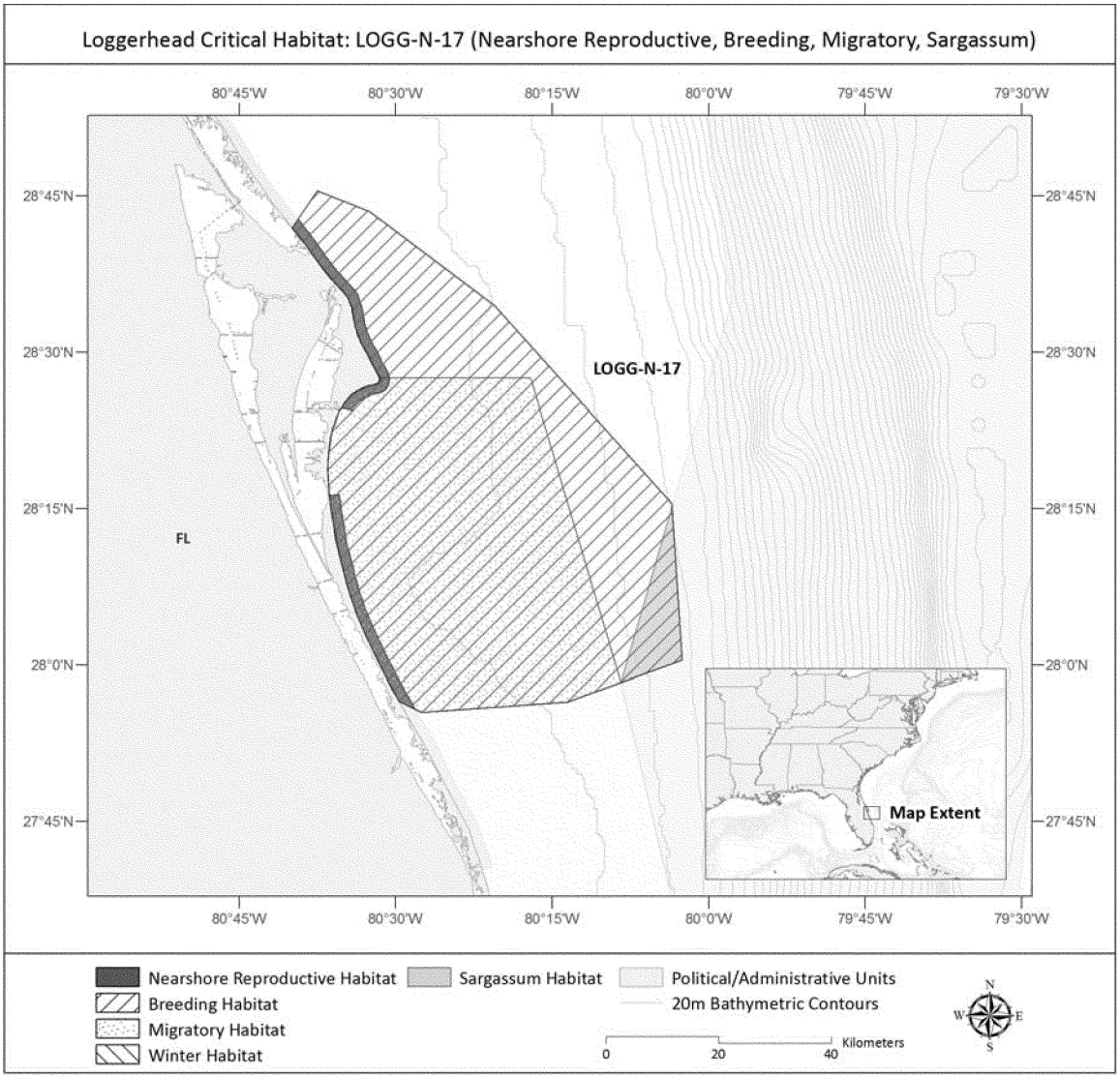

Loggerhead Critical Habitat: LOGG-N-06 (Nearshore Reproductive)
79°45'W
79°30'W
79°15'W
79°0'W
78°45'W
78°30'W
33°30'N
33°15'N
33°0'N
32°45'N
32°30'N
SC
LOGG-N-06
Map Extent
Nearshore Reproductive Habitat
Breeding Habitat
Migratory Habitat
Winter Habitat
Political/Administrative Units
20m Bathymetric Contours
0
20
40
Kilometers
N
W
E
S

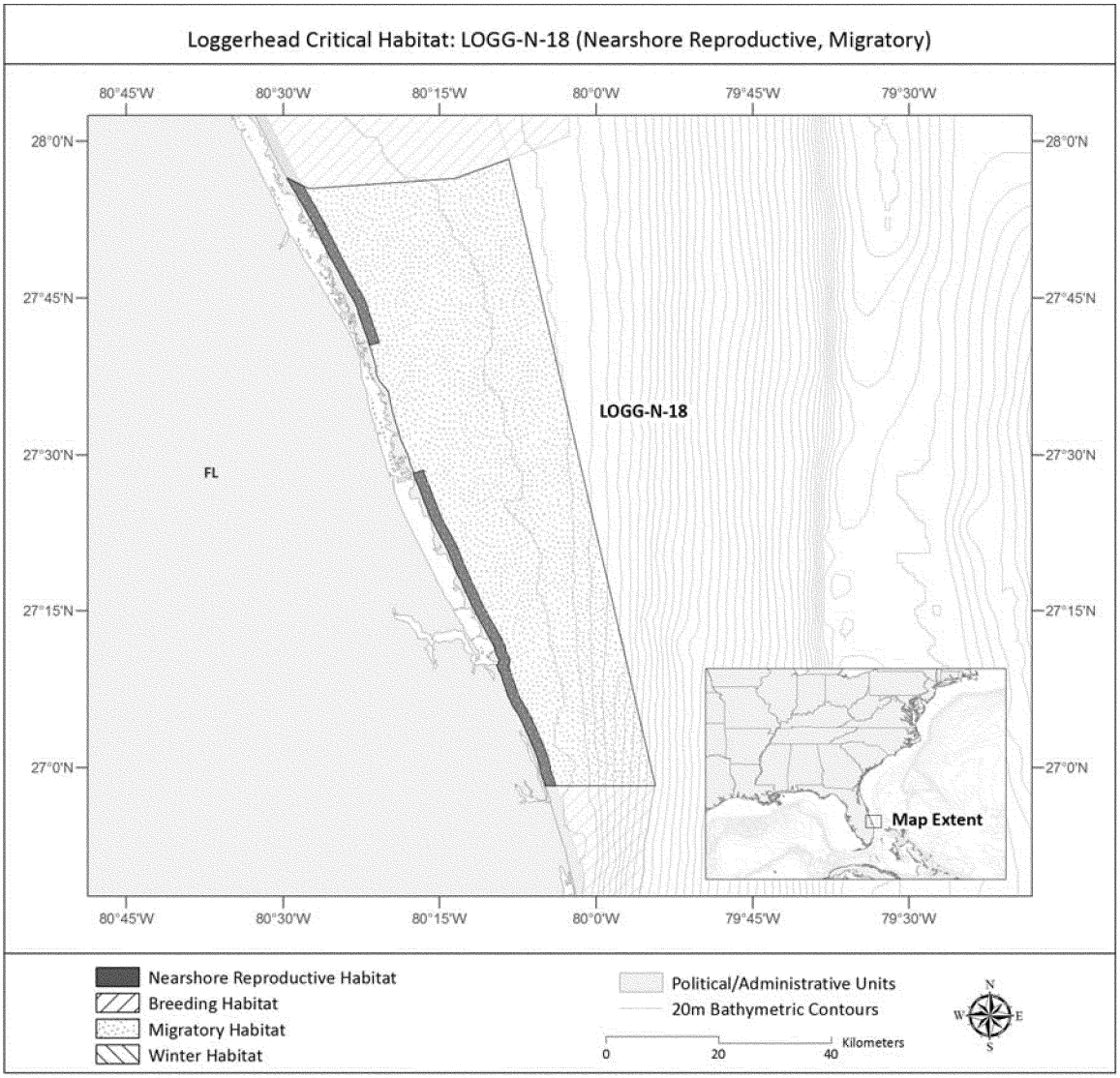

Loggerhead Critical Habitat: LOGG-N-07,08,09,10,11 (Nearshore Reproductive)
81°15'W
81°0'W
80°45'W
80°30'W
80°15'W
80°0'W
32°45'N
32°30'N
32°15'N
32°0'N
31°45'N
SC
GA
LOGG-N-07
LOGG-N-08
LOGG-N-09
LOGG-N-10
LOGG-N-11
Map Extent
Nearshore Reproductive Habitat
Breeding Habitat
Migratory Habitat
Winter Habitat
Political/Administrative Units
20m Bathymetric Contours
0
20
40
Kilometers
N
W
E
S

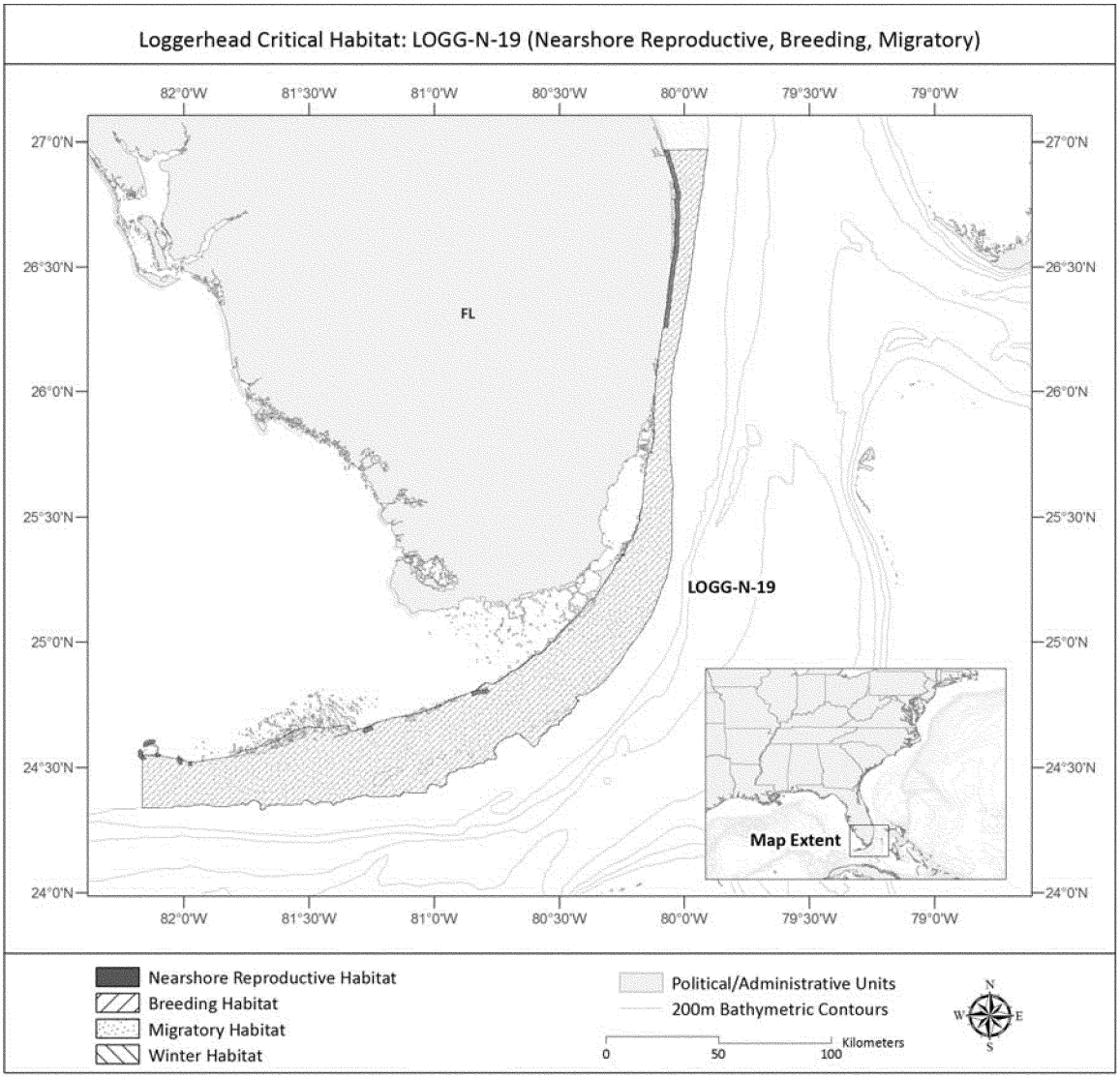

Loggerhead Critical Habitat: LOGG-N-12,13 (Nearshore Reproductive)
81°45'W
81°30'W
81°15'W
81°0'W
80°45'W
80°30'W
31°45'N
31°30'N
31°15'N
31°0'N
30°45'N
GA
FL
LOGG-N-12
LOGG-N-13
Map Extent
Nearshore Reproductive Habitat
Breeding Habitat
Migratory Habitat
Winter Habitat
Political/Administrative Units
20m Bathymetric Contours
0
20
40
Kilometers
N
W
E
S

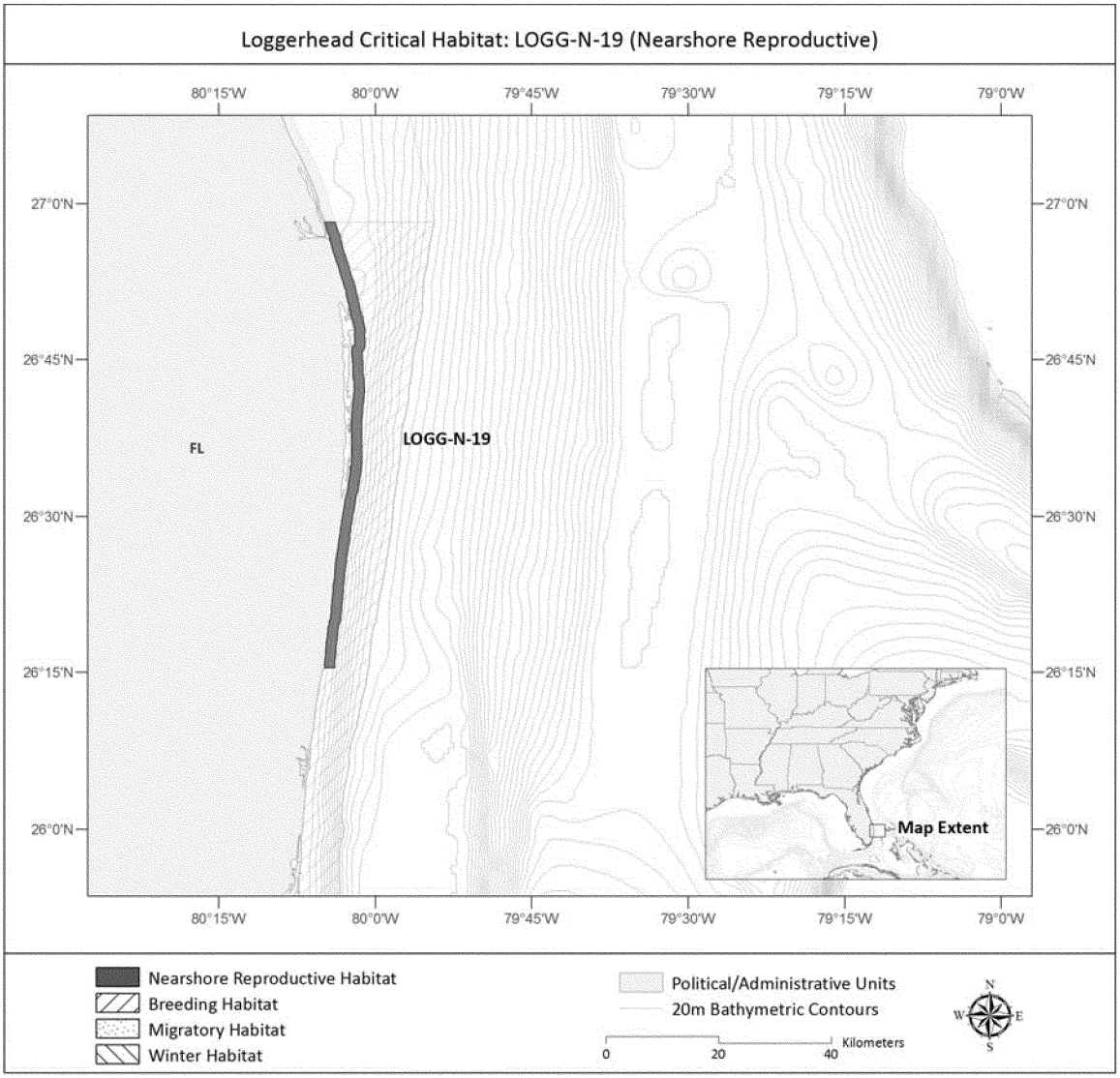

Loggerhead Critical Habitat: LOGG-N-14 (Nearshore Reproductive)
81°45'W
81°30'W
81°15'W
81°0'W
80°45'W
80°30'W
30°30'N
30°15'N
30°0'N
29°45'N
29°30'N
LOGG-N-14
FL
Map Extent
Nearshore Reproductive Habitat
Breeding Habitat
Migratory Habitat
Winter Habitat
Political/Administrative Units
20m Bathymetric Contours
0
20
40
Kilometers
N
W
E
S

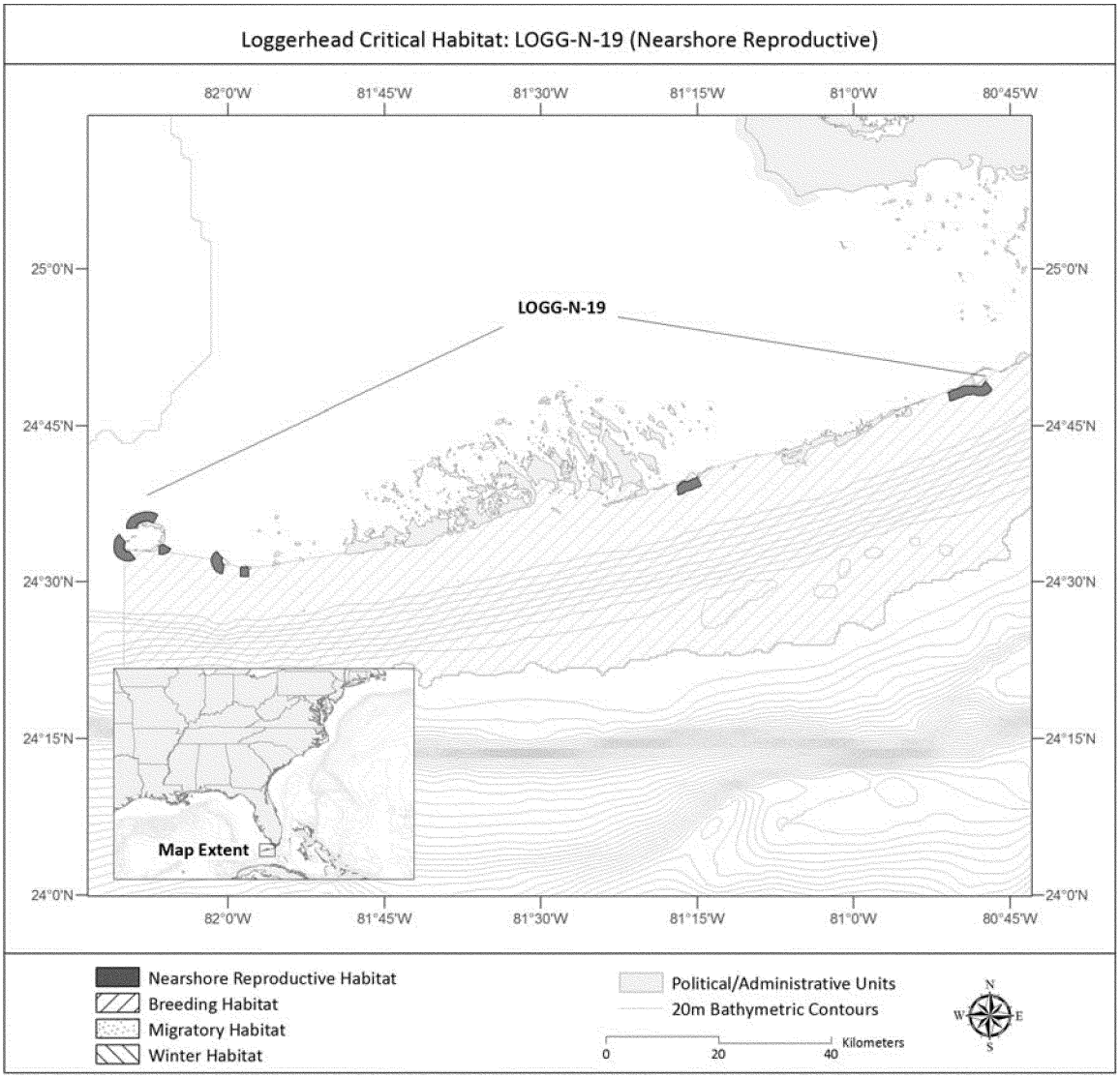

Loggerhead Critical Habitat: LOGG-N-15,16 (Nearshore Reproductive)
81°15'W
81°0'W
80°45'W
80°30'W
80°15'W
80°0'W
29°45'N
29°30'N
29°15'N
29°0'N
28°45'N
LOGG-N-15
LOGG-N-16
FL
Map Extent
Nearshore Reproductive Habitat
Breeding Habitat
Migratory Habitat
Winter Habitat
Political/Administrative Units
20m Bathymetric Contours
0
20
40
Kilometers
N
W
E
S

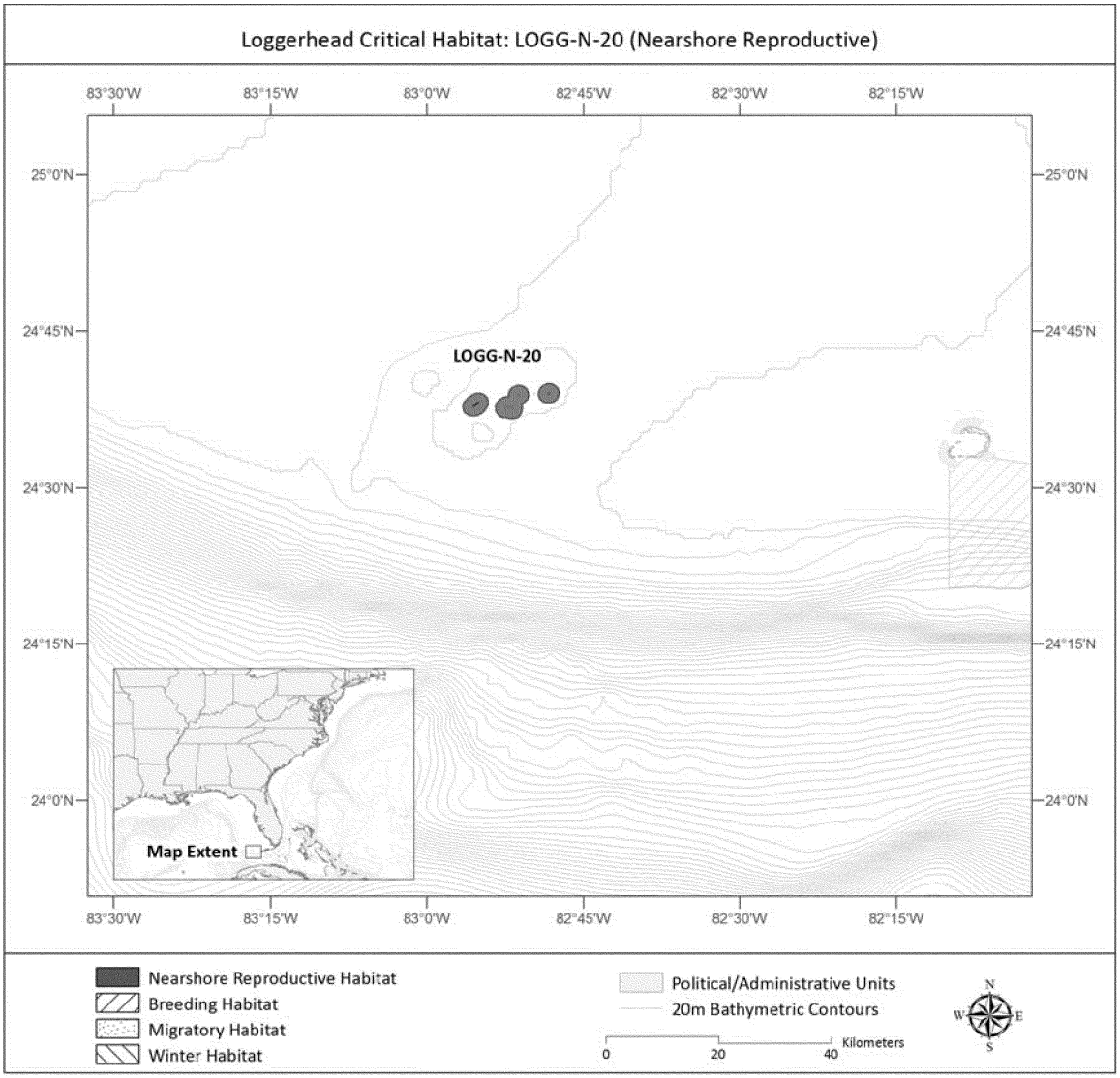

Loggerhead Critical Habitat: LOGG-N-17 (Nearshore Reproductive, Breeding, Migratory, Sargassum)
80°45'W
80°30'W
80°15'W
80°0'W
79°45'W
79°30'W
28°45'N
28°30'N
28°15'N
28°0'N
27°45'N
LOGG-N-17
FL
Map Extent
Nearshore Reproductive Habitat
Breeding Habitat
Migratory Habitat
Winter Habitat
Sargassum Habitat
Political/Administrative Units
20m Bathymetric Contours
0
20
40
Kilometers
N
W
E
S

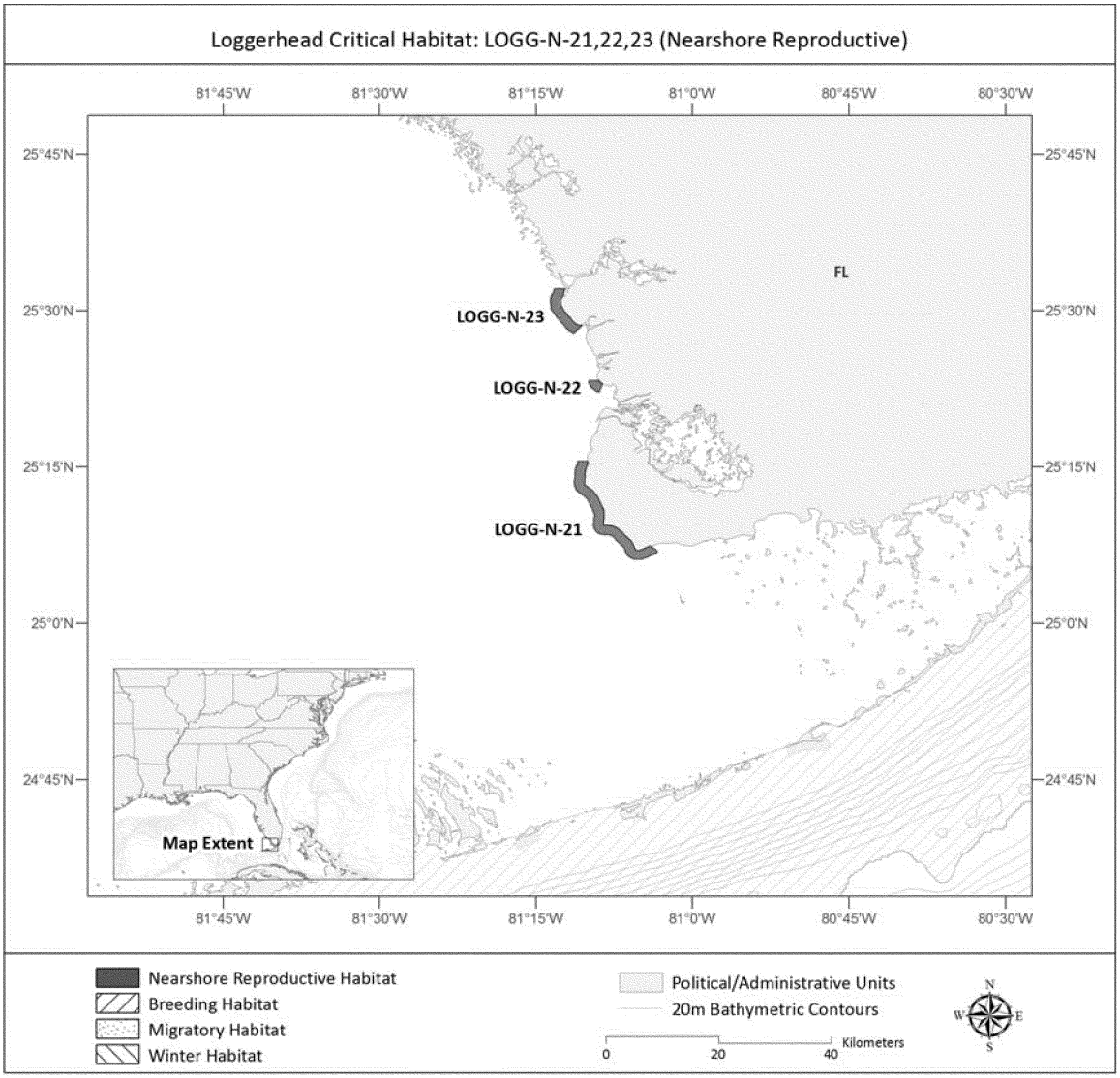

Loggerhead Critical Habitat: LOGG-N-18 (Nearshore Reproductive, Migratory)
80°45'W
80°30'W
80°15'W
80°0'W
79°45'W
79°30'W
28°0'N
27°45'N
27°30'N
27°15'N
27°0'N
LOGG-N-18
FL
Map Extent
Nearshore Reproductive Habitat
Breeding Habitat
Migratory Habitat
Winter Habitat
Political/Administrative Units
20m Bathymetric Contours
0
20
40
Kilometers
N
W
E
S

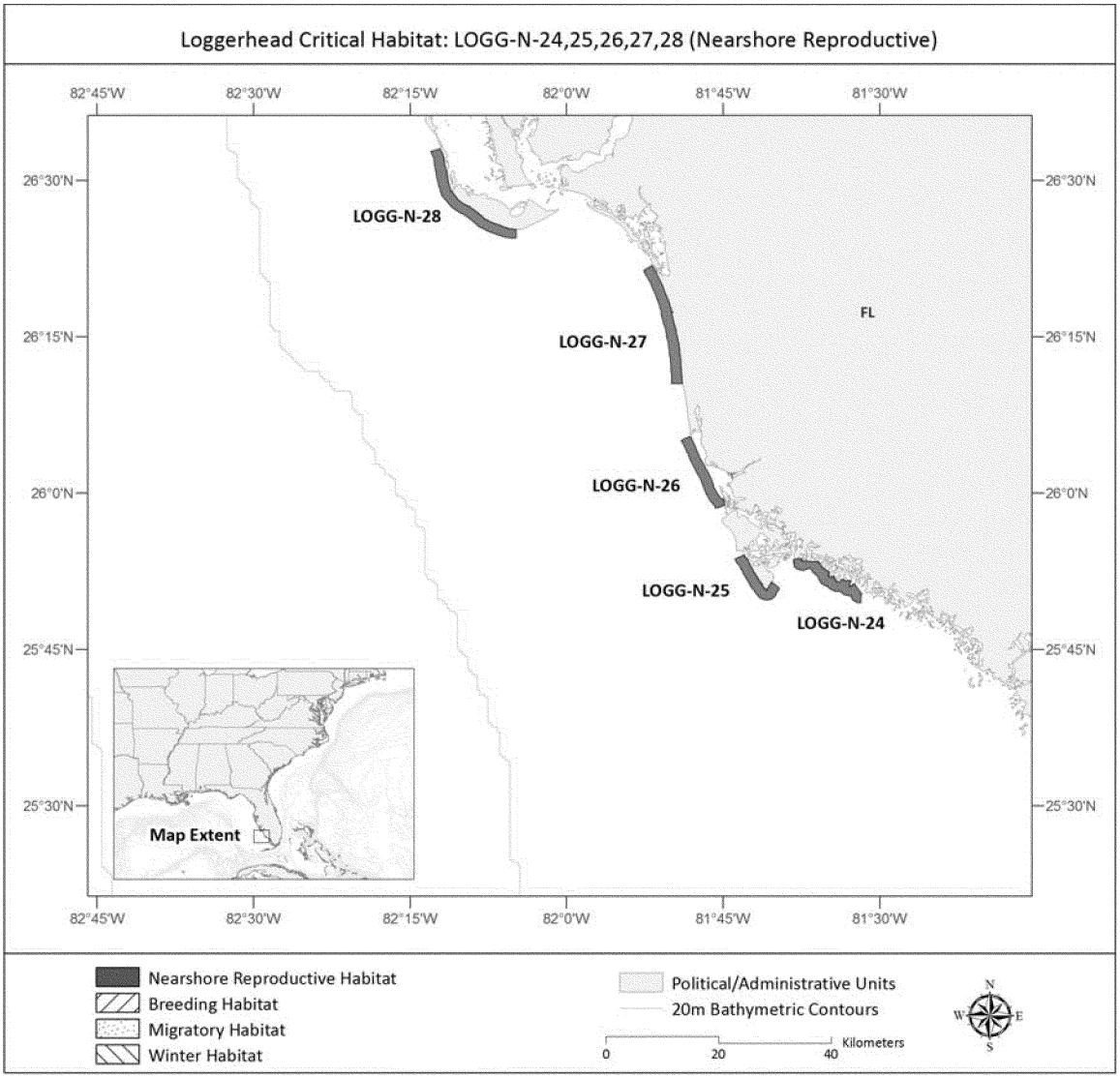

Loggerhead Critical Habitat: LOGG-N-19 (Nearshore Reproductive, Breeding, Migratory)
82°0'W
81°30'W
81°0'W
80°30'W
80°0'W
79°30'W
79°0'W
27°0'N
26°30'N
26°0'N
25°30'N
25°0'N
24°30'N
24°0'N
FL
LOGG-N-19
Map Extent
Nearshore Reproductive Habitat
Breeding Habitat
Migratory Habitat
Winter Habitat
Political/Administrative Units
200m Bathymetric Contours
0
50
100
Kilometers
N
W
E
S

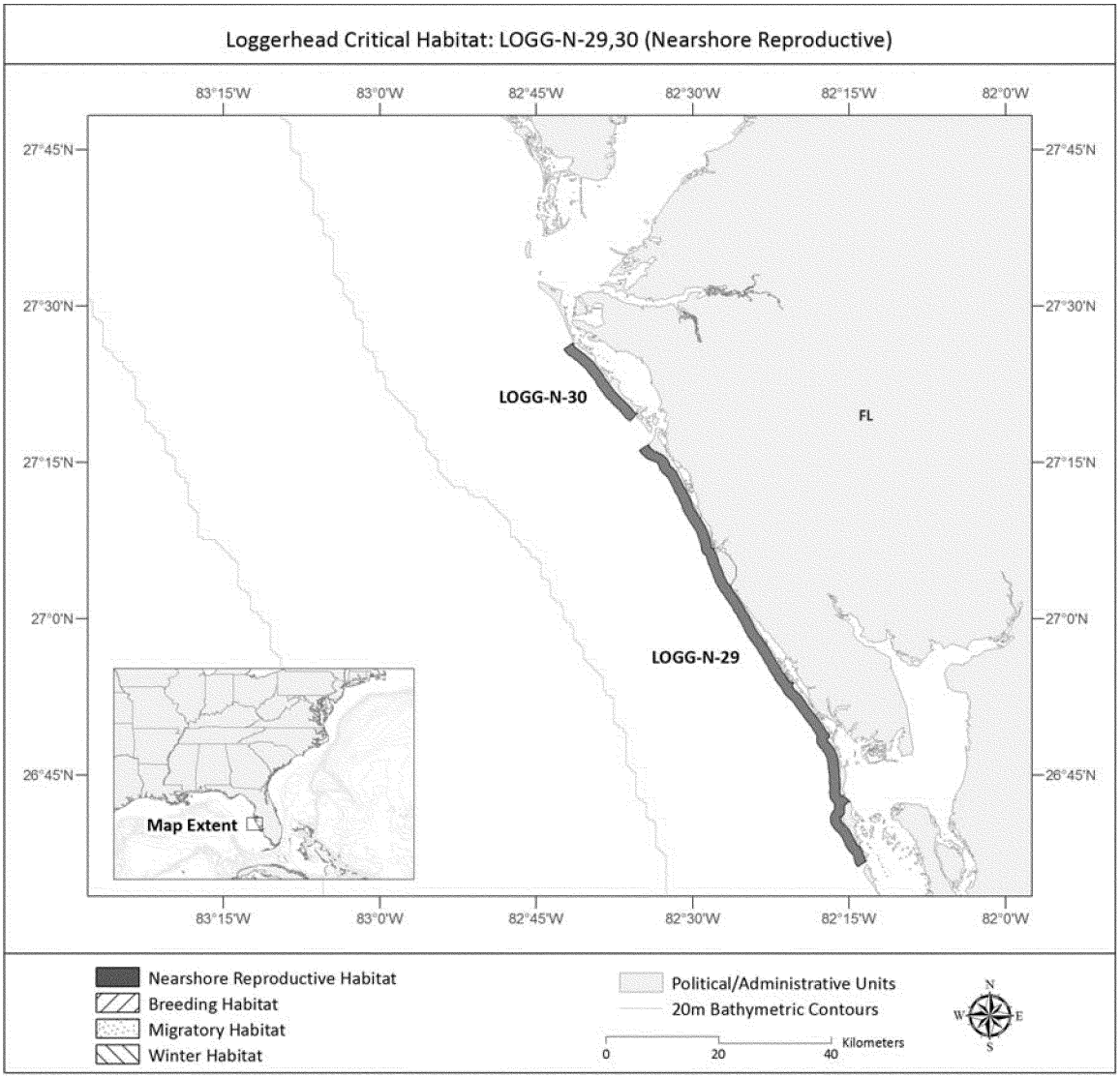

Loggerhead Critical Habitat: LOGG-N-19 (Nearshore Reproductive)
80°15'W
80°0'W
79°45'W
79°30'W
79°15'W
79°0'W
27°0'N
26°45'N
26°30'N
26°15'N
26°0'N
FL
LOGG-N-19
Map Extent
Nearshore Reproductive Habitat
Breeding Habitat
Migratory Habitat
Winter Habitat
Political/Administrative Units
20m Bathymetric Contours
0
20
40
Kilometers
N
W
E
S

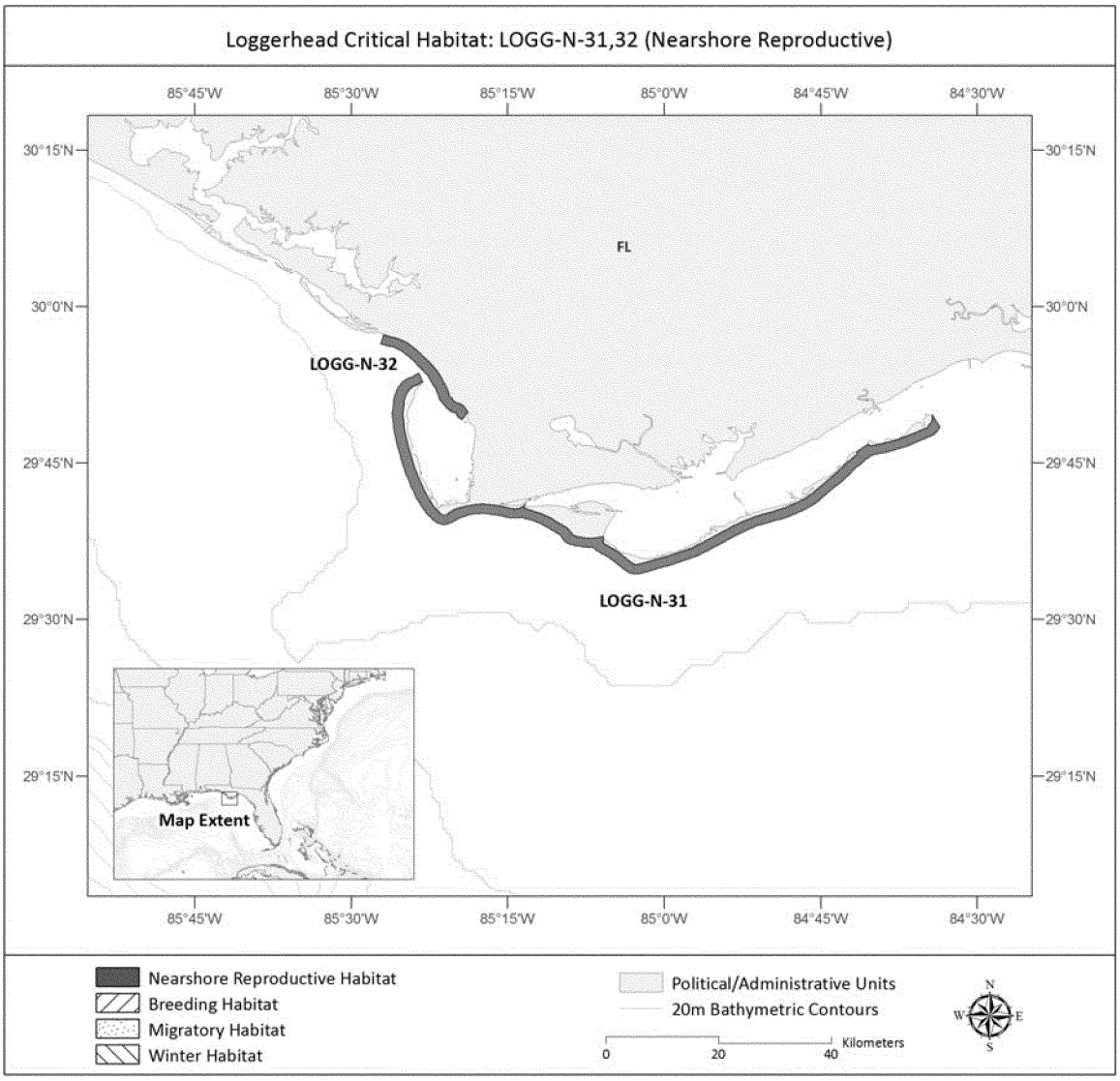

Loggerhead Critical Habitat: LOGG-N-19 (Nearshore Reproductive)
82°0'W
81°45'W
81°30'W
81°15'W
81°0'W
80°45'W
25°0'N
24°45'N
24°30'N
24°15'N
24°0'N
LOGG-N-19
Map Extent
Nearshore Reproductive Habitat
Breeding Habitat
Migratory Habitat
Winter Habitat
Political/Administrative Units
20m Bathymetric Contours
0
20
40
Kilometers
N
W
E
S

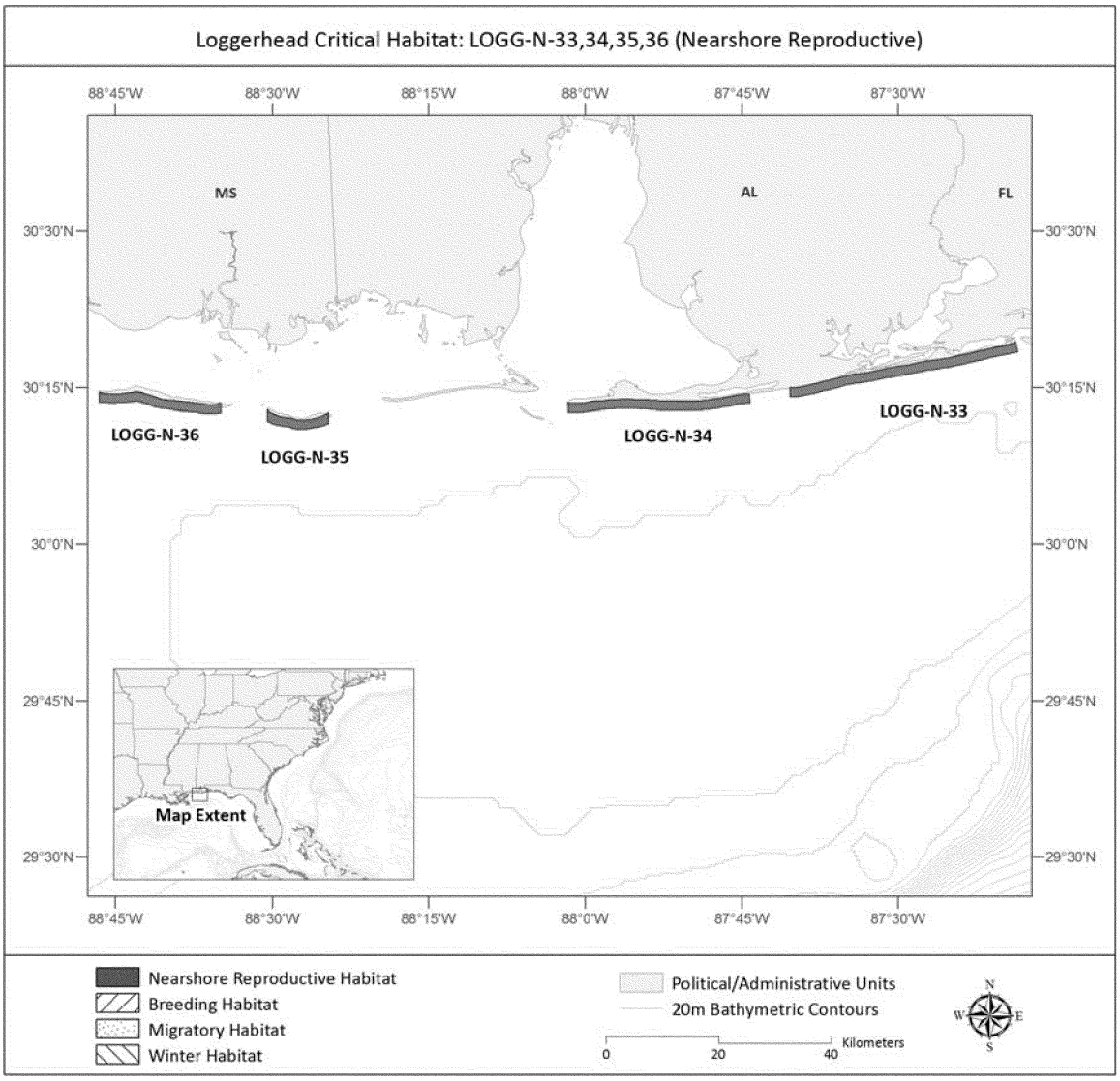

Loggerhead Critical Habitat: LOGG-N-20 (Nearshore Reproductive)
83°30'W
83°15'W
83°0'W
82°45'W
82°30'W
82°15'W
25°0'N
24°45'N
24°30'N
24°15'N
24°0'N
LOGG-N-20
Map Extent
Nearshore Reproductive Habitat
Breeding Habitat
Migratory Habitat
Winter Habitat
Political/Administrative Units
20m Bathymetric Contours
0
20
40
Kilometers
N
W
E
S

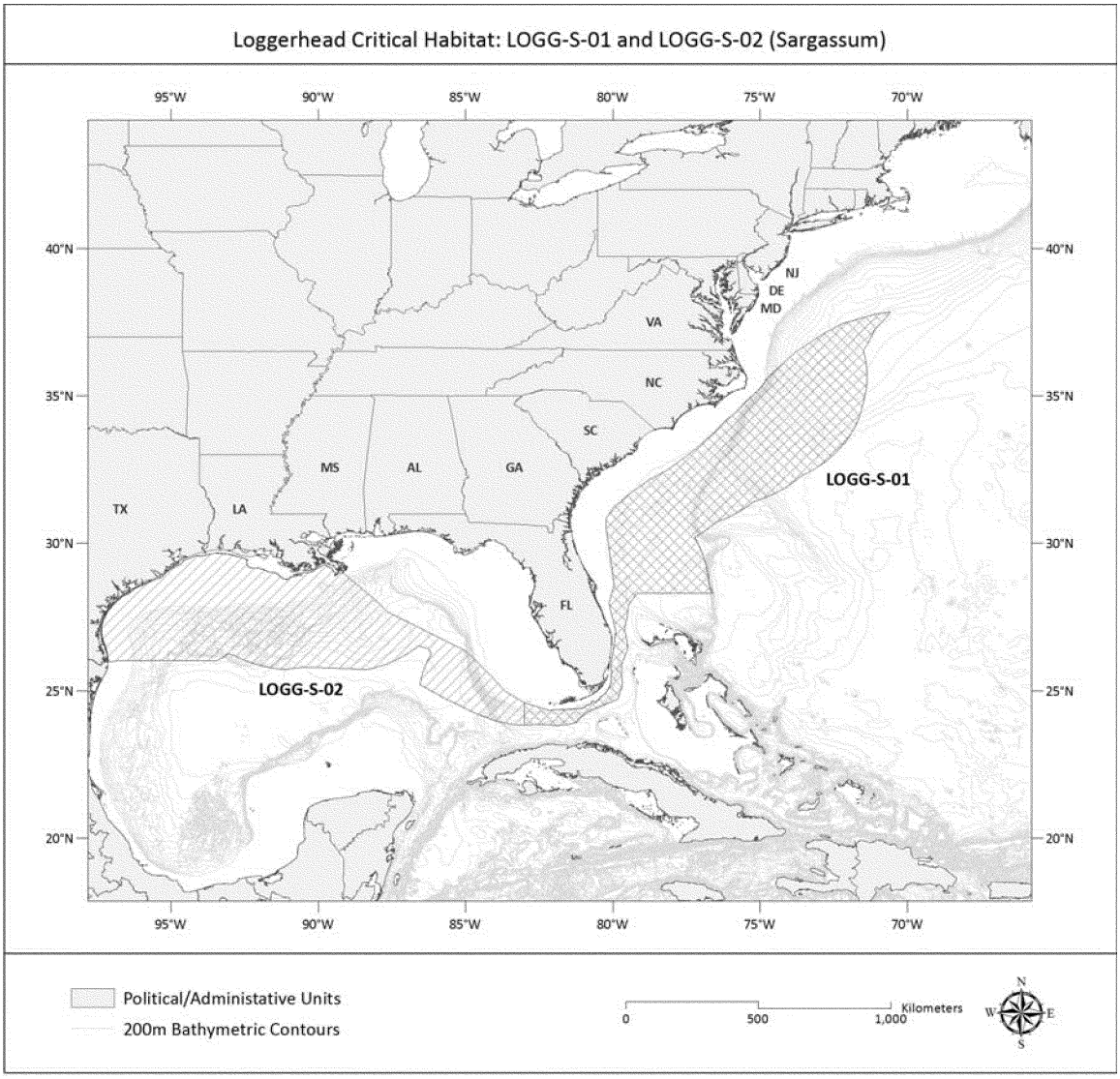

Loggerhead Critical Habitat: LOGG-N-21,22,23 (Nearshore Reproductive)
81°45'W
81°30'W
81°15'W
81°0'W
80°45'W
80°30'W
25°45'N
25°30'N
25°15'N
25°0'N
24°45'N
FL
LOGG-N-23
LOGG-N-22
LOGG-N-21
Map Extent
Nearshore Reproductive Habitat
Breeding Habitat
Migratory Habitat
Winter Habitat
Political/Administrative Units
20m Bathymetric Contours
0
20
40
Kilometers
N
W
E
S


Loggerhead Critical Habitat: LOGG-N-24,25,26,27,28 (Nearshore Reproductive)
82°45'W
82°30'W
82°15'W
82°0'W
81°45'W
81°30'W
26°30'N
26°15'N
26°0'N
25°45'N
25°30'N
LOGG-N-28
LOGG-N-27
LOGG-N-26
LOGG-N-25
LOGG-N-24
FL
Map Extent
Nearshore Reproductive Habitat
Breeding Habitat
Migratory Habitat
Winter Habitat
Political/Administrative Units
20m Bathymetric Contours
0
20
40
Kilometers
N
W
E
S


Loggerhead Critical Habitat: LOGG-N-29,30 (Nearshore Reproductive)
83°15'W
83°0'W
82°45'W
82°30'W
82°15'W
82°0'W
27°45'N
27°30'N
27°15'N
27°0'N
26°45'N
LOGG-N-30
LOGG-N-29
FL
Map Extent
Nearshore Reproductive Habitat
Breeding Habitat
Migratory Habitat
Winter Habitat
Political/Administrative Units
20m Bathymetric Contours
0
20
40
Kilometers
N
W
E
S


Loggerhead Critical Habitat: LOGG-N-31,32 (Nearshore Reproductive)
85°45'W
85°30'W
85°15'W
85°0'W
84°45'W
84°30'W
30°15'N
30°0'N
29°45'N
29°30'N
29°15'N
FL
LOGG-N-32
LOGG-N-31
Map Extent
Nearshore Reproductive Habitat
Breeding Habitat
Migratory Habitat
Winter Habitat
Political/Administrative Units
20m Bathymetric Contours
0
20
40
Kilometers
N
W
E
S


Loggerhead Critical Habitat: LOGG-N-33,34,35,36 (Nearshore Reproductive)
88°45'W
88°30'W
88°15'W
88°0'W
87°45'W
87°30'W
MS
AL
FL
30°30'N
30°15'N
30°0'N
29°45'N
29°30'N
LOGG-N-36
LOGG-N-35
LOGG-N-34
LOGG-N-33
Map Extent
Nearshore Reproductive Habitat
Breeding Habitat
Migratory Habitat
Winter Habitat
Political/Administrative Units
20m Bathymetric Contours
0
20
40
Kilometers
N
W
E
S



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Part V

Department of Commerce

National Oceanic and Atmospheric Administration

Takes of Marine Mammals Incidental to Specified Activities; Taking Marine Mammals Incidental to Marine Seismic Survey in the Beaufort Sea, Alaska; Notice

DEPARTMENT OF COMMERCE

National Oceanic and Atmospheric Administration

RIN 0648–XD145

Takes of Marine Mammals Incidental To Specified Activities; Taking Marine Mammals Incidental to Marine Seismic Survey in the Beaufort Sea, Alaska

AGENCY: National Marine Fisheries Service (NMFS), National Oceanic and Atmospheric Administration (NOAA), Commerce.

ACTION: Notice; proposed incidental harassment authorization; request for comments.

SUMMARY: NMFS has received an application from SAExploration, Inc. (SAE) for an Incidental Harassment Authorization (IHA) to take marine mammals, by harassment, incidental to a marine 3-dimensional (3D) ocean bottom node (OBN) seismic surveys program in the state and federal waters of the Beaufort Sea, Alaska, during the open-water season of 2014. Pursuant to the Marine Mammal Protection Act (MMPA), NMFS is requesting comments on its proposal to issue an IHA to SAE to incidentally take, by Level B Harassment only, marine mammals during the specified activity.

DATES: Comments and information must be received no later than August 11, 2014.

ADDRESSES: Comments on the application should be addressed to Jolie Harrison, Supervisor, Incidental Take Program, Permits and Conservation Division, Office of Protected Resources, National Marine Fisheries Service, 1315 East-West Highway, Silver Spring, MD 20910. The mailbox address for providing email comments is *itp.guan@noaa.gov.* Comments sent via email, including all attachments, must not exceed a 25-megabyte file size. NMFS is not responsible for comments sent to addresses other than those provided here.

Instructions: All comments received are a part of the public record and will generally be posted to *http://www.nmfs.noaa.gov/pr/permits/incidental.htm* without change. All Personal Identifying Information (for example, name, address, etc.) voluntarily submitted by the commenter may be publicly accessible. Do not submit Confidential Business Information or otherwise sensitive or protected information.

An electronic copy of the application may be obtained by writing to the address specified above, telephoning the contact listed below (see **FOR FURTHER INFORMATION CONTACT**), or visiting the internet at: *http://www.nmfs.noaa.gov/pr/permits/incidental.htm.* The following associated documents are also available at the same internet address: Plan of Cooperation. Documents cited in this notice may also be viewed, by appointment, during regular business hours, at the aforementioned address.

NMFS is also preparing an Environmental Assessment (EA) in accordance with the National Environmental Policy Act (NEPA) and will consider comments submitted in response to this notice as part of that process. The EA will be posted at the foregoing internet site once it is finalized.

FOR FURTHER INFORMATION CONTACT: Shane Guan, Office of Protected Resources, NMFS, (301) 427–8401.

SUPPLEMENTARY INFORMATION:

Background

Sections 101(a)(5)(A) and (D) of the MMPA (16 U.S.C. 1361 *et seq.*) direct the Secretary of Commerce to allow, upon request, the incidental, but not intentional, taking of small numbers of marine mammals by U.S. citizens who engage in a specified activity (other than commercial fishing) within a specified geographical region if certain findings are made and either regulations are issued or, if the taking is limited to harassment, a notice of a proposed authorization is provided to the public for review.

An authorization for incidental takings shall be granted if NMFS finds that the taking will have a negligible impact on the species or stock(s), will not have an unmitigable adverse impact on the availability of the species or stock(s) for subsistence uses (where relevant), and if the permissible methods of taking and requirements pertaining to the mitigation, monitoring and reporting of such takings are set forth. NMFS has defined ''negligible impact'' in 50 CFR 216.103 as ''an impact resulting from the specified activity that cannot be reasonably expected to, and is not reasonably likely to, adversely affect the species or stock through effects on annual rates of recruitment or survival.''

Except with respect to certain activities not pertinent here, the MMPA defines ''harassment'' as: any act of pursuit, torment, or annoyance which (i) has the potential to injure a marine mammal or marine mammal stock in the wild [Level A harassment]; or (ii) has the potential to disturb a marine mammal or marine mammal stock in the wild by causing disruption of behavioral patterns, including, but not limited to, migration, breathing, nursing, breeding, feeding, or sheltering [Level B harassment].

Summary of Request

On December 8, 2013, NMFS received an application from SAE for the taking of marine mammals incidental to a 3D OBN seismic survey program in the Beaufort Sea. After receiving NMFS comments, SAE made revision and updated its IHA application on February 14, 2014, and again on April 23, 2014. In addition, NMFS received the marine mammal mitigation and monitoring plan from SAE on May 15, 2014. NMFS determined that the application was adequate and complete on May 25, 2014.

SAE proposes to conduct 3D ocean bottom node (OBN) seismic surveys in the state and federal waters of the U.S. Beaufort Sea during the 2014 Arctic open-water season. The proposed activity would occur between August 15 and October 15, 2014. The actual seismic survey is expected to take approximately 70 days, dependent of weather. The following specific aspects of the proposed activities are likely to result in the take of marine mammals: seismic airgun operations and associated navigation sonar and vessel movements. Take, by Level B Harassment only, of individuals of five species of marine mammals is anticipated to result from the specified activity.

Description of the Specified Activity

Overview

On December 8, 2013, NMFS received an application from SAE requesting an authorization for the harassment of small numbers of marine mammals incidental to conducting an open-water 3D OBN seismic survey in the Beaufort Sea off Alaska. After addressing comments from NMFS and the peer-review panel, SAE modified its application and submitted revised applications on February 14, 2014 and on April 24, 2014. SAE's proposed activities discussed here are based on its April 24, 2014 IHA application.

Dates and Duration

The proposed 3D OBN seismic survey is planned for the 2014 open-water season (August 15 to October 15). The actual data acquisition is expected to take approximately 70 days, dependent of weather. Based on past similar seismic shoots in the Beaufort Sea, SAE expects that effective shooting would occur over about 70% of the 70 days (or about 49 days).

Specified Geographic Region

SAE's proposed 3D OBN seismic survey would occur in the nearshore waters of the Colville River Delta in the Alaska Beaufort Sea (see Figure 1–1 of the IHA application). The area represents a total area of 1,882 km^2 (727 mi^2).

Detailed Description of Activities

I. Survey Design

The proposed 3D OBN seismic survey will be based on a ''recording patch'' or similar approach. Patches are groups of six receiver lines and 32 source lines. Each receiver line has submersible marine sensor nodes tethered equidistant (50 m or 165 ft) from each other along the length of the line. Each node is a multicomponent system containing three velocity sensors and a hydrophone. Each receiver line is approximately 8 km (5 mi) in length, and are spaced approximately 402 m (1,320 ft) apart. Each receiver patch is 19.4 km^2 (7.5 mi^2) in area. The receiver patch is oriented such that the receiver lines run parallel to the shoreline.

Source lines would be 12 km (7.5 mi) long and spaced 502 m (1,650 ft) apart, run perpendicular to the receiver lines (and perpendicular to the coast) and, where possible, will extend approximately 5 km (3 mi) beyond the outside receiver lines and approximately 4 km (2.5 mi) beyond each of the ends of the receiver lines. The outside dimensions of the maximum shot area during a patch shoot will be 12 km by 16 km (7.5 mi by 10 mi) or 192 km^2 (75 mi^2). It is expected to take three to five days to shoot a patch, or 48 km^2 (18.75 mi^2) per day. All shot areas will be wholly contained within the 1,882-km^2 survey box depicted in Figure 1–1 of the IHA application. Shot intervals along each source line will be 50 m (165 ft).

During recording of one patch, nodes from the previously surveyed patch will be retrieved, recharged, and data downloaded prior to redeployment of the nodes to the next patch. As patches are recorded, receiver lines are moved side to side or end to end to the next patch location so that receiver lines have continuous coverage of the recording area.

Autonomous recording nodes lack cables but will be tethered together using a thin rope for ease of retrieval. This rope will lay on the seabed surface, as will the nodes, and is expected to have no effect on marine traffic. Primary vessel positioning will be achieved using GPS with the antenna attached to the airgun array. Pingers deployed from the node vessels will be used for positioning of nodes. The geometry/patch could be modified as operations progress to improve sampling and operational efficiency.

II. Acoustical Sources

The acoustic sources of primary concern are the airguns that will be deployed from the seismic source vessels. However, there are other noise sources to be addressed including the pingers and transponders associated with locating receiver nodes, as well as propeller noise from the vessel fleet.

Seismic Source Array

The seismic sources to be used will include 880 and 1,760 cubic inch (in^3) sleeve airgun arrays for use in the deeper waters, and a 440 in^3 array in the very shallow (<1.5 m deep) water locations. The arrays will be towed approximately 15 to 22 m (50 to 75 ft) behind the source vessel stern, at a depth of 4 m (12 ft), and towed along predetermined source lines at speeds between 4 and 5 knots. In the shallower waters the smaller arrays will be raised to shallower depths up to 1.3 m (4.3 ft). Two vessels with full arrays will be operating simultaneously in an alternating shot mode; one vessel shooting while the other is recharging. Shot intervals are expected to be about 8 to 10 seconds for each array, resulting in an overall shot interval of 4 to 5 seconds, considering the two arrays. Operations are expected to occur 24 hours a day.

Based on the manufacturer's specifications, the 440 in^3 array has a peak-peak estimated source level of 239.1 dB re 1 µPa @1 m (9.0 bar-m), and root mean square (rms) at 221.1 dB re 1 µPa. The 880 in^3 array produces sound levels at source estimated at peak-peak 244.86 dB re 1 µPa @1 m (17.5 bar-m), and rms at 226.86 dB re 1 µPa. The 1,760 in^3 array has a peak-peak estimated sound source of 254.55 dB re 1 µPa @1 m (53.5 bar-m), with an rms sound source of 236.55 dB re 1 µPa. The 1,760 in^3 array has a sound source level approximately 10 dB higher than the 880 in^3 array.

Pingers and Transponders

An acoustical positioning (or pinger) system will be used to position and interpolate the location of the nodes. A vessel-mounted transceiver calculates the position of the nodes by measuring the range and bearing from the transceiver to a small acoustic transponder fitted to every third node. The transceiver uses sonar to interrogate the transponders, which respond with short pulses that are used in measuring the range and bearing. The system provides a precise location of every node, as needed for accurate interpretation of the seismic data. The transceiver to be used is the Sonardyne Scout USBL, while transponders will be the Sonardyne TZ/OBN Type 7815–000–06. Because the transceiver and transponder communicate via sonar, they produce underwater sound levels. The Scout USBL transceiver has a transmission source level of 197 dB re 1 µPa @1 m and operates at frequencies between 35 and 55 kilohertz (kHz). The transponder produces short pulses of 184 to 187 dB re 1 µPa @1 m at frequencies also between 35 and 55 kHz.

Vessels

Several offshore vessels will be required to support recording, shooting, and housing in the marine and transition zone environments. The exact vessels that will be used have not yet been determined. However, the types of vessels that will be used to fulfill these roles are found in Table 1.

TABLE 1—VESSELS TO BE USED DURING SAE'S 3D OBN SEISMIC SURVEYS

Vessel	Size (ft)	Activity and frequency	Source level (dB)
Source vessel 1	120 × 25	Seismic data acquisition; 24 hr operation	179
Source vessel 2	80 × 25	Seismic data acquisition; 24 hr operation	166
Node equipment vessel 1	80 × 20	Deploying and retrieving nodes; 24 hr operation	165
Node equipment vessel 2	80 × 20	Deploying and retrieving nodes; 24 hr operation	165
Housing vessel	90 × 20	House crew; 24 hr operation	200
Mitigation vessel	30 × 20	House PSOs and crew; 24 hr operation	172
Crew transport vessel	30 × 20	Transport crew; intermittent 8 hrs	192
Bow picker 1	30 × 20	Deploying and retrieving nodes; intermittent operation	172

TABLE 1—VESSELS TO BE USED DURING SAE'S 3D OBN SEISMIC SURVEYS—Continued

Vessel	Size (ft)	Activity and frequency	Source level (dB)
Bow picker 2	30 × 20	Deploying and retrieving nodes; intermittent operation	172

Source Vessels—Source vessels will have the ability to deploy two arrays off the stern using large A-frames and winches and have a draft shallow enough to operate in waters less than 1.5 m (5 ft) deep. On the source vessels, the airgun arrays are typically mounted on the stern deck with an umbilical that allow the arrays to be deployed and towed from the stern without having to re-rig or move arrays. A large bow deck will allow for sufficient space for source compressors and additional airgun equipment to be stored. The marine vessels likely to be used will be the same or similar to those that were acoustically measured by Aerts *et al.* (2008).

Recording Deployment and Retrieval Vessels—Jet-driven shallow draft vessels and bow pickers will be used for the deployment and retrieval of the offshore recording equipment. These vessels will be rigged with hydraulically-driven deployment-and-retrieval squirters allowing for automated deployment and retrieval from the bow or stern of the vessel. These vessels will also carry the recording equipment on the deck in fish totes.

Housing and Transfer Vessels—The housing vessel will be larger than the recording deployment and retrieval vessels, with sufficient berthing to house crews and management. The housing vessel will have ample office and bridge space to facilitate its role as the mother ship and central operations. The crew transfer vessel will be sufficiently large to safely transfer crew between vessels as needed. The crew transfer vessel travels only infrequently, relative to other vessels, and is usually operated at different speeds.

Mitigation Vessel—To facilitate marine mammal monitoring of the Level B harassment zone, one dedicated vessel will be deployed a few kilometers northeast of the active seismic source vessels to provide a survey platform for 2 or 3 Protected Species Observers (PSOs). These PSOs will work in concert with PSOs stationed aboard the source vessels, and will provide an early warning of the approach of any bowhead whale, beluga, or other marine mammal. It is assumed that the vessel will be of similar size and acoustical signature as a bow picker.

Description of Marine Mammals in the Area of the Specified Activity

The Beaufort Sea supports a diverse assemblage of marine mammals. Table 2 lists the 12 marine mammal species under NMFS jurisdiction with confirmed or possible occurrence in the proposed project area.

Table 2. Marine mammal species with confirmed or possible occurrence in the proposed seismic survey area.

Common Name	Scientific Name	Status	Occurrence	Seasonality	Range	Abundance
Odontocetes Beluga whale (Beaufort Sea stock)	Delphinapterus leucas	-	Common	Mostly spring and fall with some in summer	Russia to Canada	39,258
Killer whale	Orcinus orca	-	Occasional/ Extralimital	Mostly summer and early fall	California to Alaska	552
Harbor porpoise	Phocoena phocoena	-	Occasional/ Extralimital	Mostly summer and early fall	California to Alaska	48,215
Narwhal	Monodon monoceros	-				45,358
Mysticetes Bowhead whale	Balaena mysticetus	Endangered; Depleted	Common	Mostly spring and fall with some in summer	Russia to Canada	16,892
Gray whale	Eschrichtius robustus	-	Somewhat common	Mostly summer	Mexico to the U.S. Arctic Ocean	19,126
Minke whale	Balaenoptera acutorostrata	-				810-1,003
Humpback whale (Central North Pacific stock)	Megaptera novaeangliae	Endangered; Depleted				21,063
Pinnipeds Bearded seal (Beringia distinct population segment)	Erigathus barbatus	Threatened; Depleted	Common	Spring and summer	Bering, Chukchi, and Beaufort Seas	155,000
Ringed seal (Arctic stock)	Phoca hispida	Threatened; Depleted	Common	Year round	Bering, Chukchi, and Beaufort Seas	300,000
Spotted seal	Phoca largha	-	Common	Summer	Japan to U.S. Arctic Ocean	141,479
Ribbon seal	Histriophoca fasciata	Species of concern	Occasional	Summer	Russia to U.S. Arctic Ocean	49,000

Endangered, threatened, or species of concern under the Endangered Species Act (ESA); Depleted under the MMPA

The highlighted (grayed out) species in Table 2 are so rarely sighted in the proposed project area that take is unlikely. Minke whales are relatively common in the Bering and southern Chukchi Seas and have recently also been sighted in the northeastern Chukchi Sea (Aerts *et al.,* 2013; Clarke *et al.,* 2013). Minke whales are rare in the Beaufort Sea. They have not been reported in the Beaufort Sea during the Bowhead Whale Aerial Survey Project/ Aerial Surveys of Arctic Marine Mammals (BWASP/ASAMM) surveys (Clarke *et al.,* 2011, 2012, 2013; Monnet and Treacy, 2005), and there was only one observation in 2007 during vessel-based surveys in the region (Funk *et al.,* 2010). Humpback whales have not generally been found in the Arctic Ocean. However, subsistence hunters have spotted humpback whales in low numbers around Barrow, and there have been several confirmed sightings of humpback whales in the northeastern Chukchi Sea in recent years (Aerts *et al.,* 2013; Clarke *et al.,* 2013). The first confirmed sighting of a humpback whale in the Beaufort Sea was recorded in August 2007 (Hashagen *et al.,* 2009), when a cow and calf were observed 54 mi east of Point Barrow. No additional sightings have been documented in the Beaufort Sea. Narwhal are common in the waters of northern Canada, west Greenland, and in the European Arctic, but rarely occur in the Beaufort Sea (COSEWIC, 2004). Only a handful of sightings have occurred in Alaskan

waters (Allen and Angliss, 2013). These three species are not considered further in this proposed IHA notice. Both the walrus and the polar bear could occur in the U.S. Beaufort Sea; however, these species are managed by the U.S. Fish and Wildlife Service (USFWS) and are not considered further in this Notice of Proposed IHA.

The Beaufort Sea is a main corridor of the bowhead whale migration route. The main migration periods occur in spring from April to June and in fall from late August/early September through October to early November. During the fall migration, several locations in the U.S. Beaufort Sea serve as feeding grounds for bowhead whales. Small numbers of bowhead whales that remain in the U.S. Arctic Ocean during summer also feed in these areas. The U.S. Beaufort Sea is not a main feeding or calving area for any other cetacean species. Ringed seals breed and pup in the Beaufort Sea; however, this does not occur during the summer or early fall. Further information on the biology and local distribution of these species can be found in SAE's application (see **ADDRESSES**) and the NMFS Marine Mammal Stock Assessment Reports, which are available online at: *http://www.nmfs.noaa.gov/pr/species/.*

Potential Effects of the Specified Activity on Marine Mammals

This section includes a summary and discussion of the ways that the types of stressors associated with the specified activity (e.g., seismic airgun and pinger operation, vessel movement) have been observed to or are thought to impact marine mammals. This section may include a discussion of known effects that do not rise to the level of an MMPA take (for example, with acoustics, we may include a discussion of studies that showed animals not reacting at all to sound or exhibiting barely measurable avoidance). The discussion may also include reactions that we consider to rise to the level of a take and those that we do not consider to rise to the level of a take. This section is intended as a background of potential effects and does not consider either the specific manner in which this activity will be carried out or the mitigation that will be implemented or how either of those will shape the anticipated impacts from this specific activity. The ''Estimated Take by Incidental Harassment'' section later in this document will include a quantitative analysis of the number of individuals that are expected to be taken by this activity. The ''Negligible Impact Analysis'' section will include the analysis of how this specific activity will impact marine mammals and will consider the content of this section, the ''Estimated Take by Incidental Harassment'' section, the ''Mitigation'' section, and the ''Anticipated Effects on Marine Mammal Habitat'' section to draw conclusions regarding the likely impacts of this activity on the reproductive success or survivorship of individuals and from that on the affected marine mammal populations or stocks.

Background on Sound

Sound is a physical phenomenon consisting of minute vibrations that travel through a medium, such as air or water, and is generally characterized by several variables. Frequency describes the sound's pitch and is measured in hertz (Hz) or kilohertz (kHz), while sound level describes the sound's intensity and is measured in decibels (dB). Sound level increases or decreases exponentially with each dB of change. The logarithmic nature of the scale means that each 10-dB increase is a 10-fold increase in acoustic power (and a 20-dB increase is then a 100-fold increase in power). A 10-fold increase in acoustic power does not mean that the sound is perceived as being 10 times louder, however. Sound levels are compared to a reference sound pressure (micro-Pascal) to identify the medium. For air and water, these reference pressures are ''re: 20 μPa'' and ''re: 1 μPa,'' respectively. Root mean square (RMS) is the quadratic mean sound pressure over the duration of an impulse. RMS is calculated by squaring all of the sound amplitudes, averaging the squares, and then taking the square root of the average (Urick, 1975). RMS accounts for both positive and negative values; squaring the pressures makes all values positive so that they may be accounted for in the summation of pressure levels. This measurement is often used in the context of discussing behavioral effects, in part, because behavioral effects, which often result from auditory cues, may be better expressed through averaged units rather than by peak pressures.

Acoustic Impacts

When considering the influence of various kinds of sound on the marine environment, it is necessary to understand that different kinds of marine life are sensitive to different frequencies of sound. Based on available behavioral data, audiograms have been derived using auditory evoked potentials, anatomical modeling, and other data, Southall *et al.* (2007) designate ''functional hearing groups'' for marine mammals and estimate the lower and upper frequencies of functional hearing of the groups. The functional groups and the associated frequencies are indicated below (though animals are less sensitive to sounds at the outer edge of their functional range and most sensitive to sounds of frequencies within a smaller range somewhere in the middle of their functional hearing range):

- Low frequency cetaceans (13 species of mysticetes): Functional hearing is estimated to occur between approximately 7 Hz and 30 kHz;
- Mid-frequency cetaceans (32 species of dolphins, six species of larger toothed whales, and 19 species of beaked and bottlenose whales): Functional hearing is estimated to occur between approximately 150 Hz and 160 kHz;
- High frequency cetaceans (eight species of true porpoises, six species of river dolphins, Kogia, the franciscana, and four species of cephalorhynchids): Functional hearing is estimated to occur between approximately 200 Hz and 180 kHz;
- Phocid pinnipeds in Water: Functional hearing is estimated to occur between approximately 75 Hz and 100 kHz; and
- Otariid pinnipeds in Water: Functional hearing is estimated to occur between approximately 100 Hz and 40 kHz.

As mentioned previously in this document, nine marine mammal species (five cetaceans and four phocid pinnipeds) may occur in the proposed seismic survey area. Of the five cetacean species likely to occur in the proposed project area and for which take is requested, two are classified as low-frequency cetaceans (i.e., bowhead and gray whales), two are classified as mid-frequency cetaceans (i.e., beluga and killer whales), and one is classified as a high-frequency cetacean (i.e., harbor porpoise) (Southall *et al.,* 2007). A species functional hearing group is a consideration when we analyze the effects of exposure to sound on marine mammals.

1. Tolerance

Numerous studies have shown that underwater sounds from industry activities are often readily detectable by marine mammals in the water at distances of many kilometers. Numerous studies have also shown that marine mammals at distances more than a few kilometers away often show no apparent response to industry activities of various types (Miller *et al.,* 2005; Bain and Williams, 2006). This is often true even in cases when the sounds must be readily audible to the animals based on measured received levels and the

hearing sensitivity of that mammal group. Although various baleen whales, toothed whales, and (less frequently) pinnipeds have been shown to react behaviorally to underwater sound such as airgun pulses or vessels under some conditions, at other times mammals of all three types have shown no overt reactions (e.g., Malme *et al.,* 1986; Richardson *et al.,* 1995). Weir (2008) observed marine mammal responses to seismic pulses from a 24 airgun array firing a total volume of either 5,085 in^3 or 3,147 in^3 in Angolan waters between August 2004 and May 2005. Weir recorded a total of 207 sightings of humpback whales (n = 66), sperm whales (n = 124), and Atlantic spotted dolphins (n = 17) and reported that there were no significant differences in encounter rates (sightings/hr) for humpback and sperm whales according to the airgun array's operational status (i.e., active versus silent). The airgun arrays used in the Weir (2008) study were much larger than the array proposed for use during this seismic survey (total discharge volumes of 620 to 1,240 in^3). In general, pinnipeds and small odontocetes seem to be more tolerant of exposure to some types of underwater sound than are baleen whales. Richardson *et al.* (1995) found that vessel noise does not seem to strongly affect pinnipeds that are already in the water. Richardson *et al.* (1995) went on to explain that seals on haul-outs sometimes respond strongly to the presence of vessels and at other times appear to show considerable tolerance of vessels.

2. Masking

Masking is the obscuring of sounds of interest by other sounds, often at similar frequencies. Marine mammals use acoustic signals for a variety of purposes, which differ among species, but include communication between individuals, navigation, foraging, reproduction, avoiding predators, and learning about their environment (Erbe and Farmer, 2000). Masking, or auditory interference, generally occurs when sounds in the environment are louder than, and of a similar frequency as, auditory signals an animal is trying to receive. Masking is a phenomenon that affects animals that are trying to receive acoustic information about their environment, including sounds from other members of their species, predators, prey, and sounds that allow them to orient in their environment. Masking these acoustic signals can disturb the behavior of individual animals, groups of animals, or entire populations.

Masking occurs when anthropogenic sounds and signals (that the animal utilizes) overlap at both spectral and temporal scales. For the airgun sound generated from the proposed seismic survey, sound will consist of low frequency (under 500 Hz) pulses with extremely short durations (less than one second). Lower frequency man-made sounds are more likely to affect detection of communication calls and other potentially important natural sounds such as surf and prey noise. There is little concern regarding masking near the sound source due to the brief duration of these pulses and relatively longer silence between airgun shots (approximately 5–6 seconds). However, at long distances (over tens of kilometers away), due to multipath propagation and reverberation, the durations of airgun pulses can be ''stretched'' to seconds with long decays (Madsen *et al.,* 2006), although the intensity of the sound is greatly reduced.

This could affect communication signals used by low frequency mysticetes when they occur near the noise band and thus reduce the communication space of animals (e.g., Clark *et al.,* 2009) and cause increased stress levels (e.g., Foote *et al.,* 2004; Holt *et al.,* 2009). Marine mammals are thought to be able to compensate for masking by adjusting their acoustic behavior by shifting call frequencies, and/or increasing call volume and vocalization rates. For example, blue whales are found to increase call rates when exposed to seismic survey noise in the St. Lawrence Estuary (Di Iorio and Clark, 2010). The North Atlantic right whales exposed to high shipping noise increase call frequency (Parks *et al.,* 2007), while some humpback whales respond to low-frequency active sonar playbacks by increasing song length (Miller *el al.,* 2000). Bowhead whale calls are frequently detected in the presence of seismic pulses, although the number of calls detected may sometimes be reduced (Richardson *et al.,* 1986), possibly because animals moved away from the sound source or ceased calling (Blackwell *et al.,* 2013). Additionally, beluga whales have been known to change their vocalizations in the presence of high background noise possibly to avoid masking calls (Lesage *et al.,* 1999; Scheifele *et al.,* 2005). Although some degree of masking is inevitable when high levels of manmade broadband sounds are introduced into the sea, marine mammals have evolved systems and behavior that function to reduce the impacts of masking. Structured signals, such as the echolocation click sequences of small toothed whales, may be readily detected even in the presence of strong background noise because their frequency content and temporal features usually differ strongly from those of the background noise (Au and Moore, 1990). The components of background noise that are similar in frequency to the sound signal in question primarily determine the degree of masking of that signal.

Redundancy and context can also facilitate detection of weak signals. These phenomena may help marine mammals detect weak sounds in the presence of natural or manmade noise. Most masking studies in marine mammals present the test signal and the masking noise from the same direction. The sound localization abilities of marine mammals suggest that, if signal and noise come from different directions, masking would not be as severe as the usual types of masking studies might suggest (Richardson *et al.,* 1995). The dominant background noise may be highly directional if it comes from a particular anthropogenic source such as a ship or industrial site. Directional hearing may significantly reduce the masking effects of these sounds by improving the effective signal-to-noise ratio. In the cases of higher frequency hearing by the bottlenose dolphin, beluga whale, and killer whale, empirical evidence confirms that masking depends strongly on the relative directions of arrival of sound signals and the masking noise (Dubrovskiy, 1990; Bain and Dahlheim, 1994). Toothed whales, and probably other marine mammals as well, have additional capabilities besides directional hearing that can facilitate detection of sounds in the presence of background noise. There is evidence that some toothed whales can shift the dominant frequencies of their echolocation signals from a frequency range with a lot of ambient noise toward frequencies with less noise (Moore and Pawloski, 1990; Thomas and Turl, 1990; Romanenko and Kitain, 1992; Lesage *et al.,* 1999). A few marine mammal species are known to increase the source levels or alter the frequency of their calls in the presence of elevated sound levels (Dahlheim, 1987; Lesage *et al.,* 1999; Foote *et al.,* 2004; Parks *et al.,* 2007, 2009; Di Iorio and Clark, 2009; Holt *et al.,* 2009).

These data demonstrating adaptations for reduced masking pertain mainly to the very high frequency echolocation signals of toothed whales. There is less information about the existence of corresponding mechanisms at moderate or low frequencies or in other types of

marine mammals. For example, Zaitseva *et al.* (1980) found that, for the bottlenose dolphin, the angular separation between a sound source and a masking noise source had little effect on the degree of masking when the sound frequency was 18 kHz, in contrast to the pronounced effect at higher frequencies. Directional hearing has been demonstrated at frequencies as low as 0.5–2 kHz in several marine mammals, including killer whales (Richardson *et al.,* 1995). This ability may be useful in reducing masking at these frequencies. In summary, high levels of sound generated by anthropogenic activities may act to mask the detection of weaker biologically important sounds by some marine mammals. This masking may be more prominent for lower frequencies. For higher frequencies, such as that used in echolocation by toothed whales, several mechanisms are available that may allow them to reduce the effects of such masking.

3. Behavioral Disturbance

Marine mammals may behaviorally react when exposed to anthropogenic sound. These behavioral reactions are often shown as: Changing durations of surfacing and dives, number of blows per surfacing, or moving direction and/or speed; reduced/increased vocal activities; changing/cessation of certain behavioral activities (such as socializing or feeding); visible startle response or aggressive behavior (such as tail/fluke slapping or jaw clapping); avoidance of areas where sound sources are located; and/or flight responses (e.g., pinnipeds flushing into water from haulouts or rookeries).

The biological significance of many of these behavioral disturbances is difficult to predict, especially if the detected disturbances appear minor. However, the consequences of behavioral modification have the potential to be biologically significant if the change affects growth, survival, or reproduction. Examples of significant behavioral modifications include:

- Drastic change in diving/surfacing patterns (such as those thought to be causing beaked whale stranding due to exposure to military mid-frequency tactical sonar);
- Habitat abandonment due to loss of desirable acoustic environment; and
- Cessation of feeding or social interaction.

The onset of behavioral disturbance from anthropogenic noise depends on both external factors (characteristics of noise sources and their paths) and the receiving animals (hearing, motivation, experience, demography, current activity, reproductive state) and is also difficult to predict (Gordon *et al.,* 2004; Southall *et al.,* 2007; Ellison *et al.,* 2011).

Mysticetes: Baleen whales generally tend to avoid operating airguns, but avoidance radii are quite variable. Whales are often reported to show no overt reactions to pulses from large arrays of airguns at distances beyond a few kilometers, even though the airgun pulses remain well above ambient noise levels out to much greater distances (Miller *et al.,* 2005). However, baleen whales exposed to strong noise pulses often react by deviating from their normal migration route (Richardson *et al.,* 1999). Migrating gray and bowhead whales were observed avoiding the sound source by displacing their migration route to varying degrees but within the natural boundaries of the migration corridors (Schick and Urban, 2000; Richardson *et al.,* 1999). Baleen whale responses to pulsed sound however may depend on the type of activity in which the whales are engaged. Some evidence suggests that feeding bowhead whales may be more tolerant of underwater sound than migrating bowheads (Miller *et al.,* 2005; Lyons *et al.,* 2009; Christie *et al.,* 2010).

Results of studies of gray, bowhead, and humpback whales have determined that received levels of pulses in the 160–170 dB re 1 μPa rms range seem to cause obvious avoidance behavior in a substantial fraction of the animals exposed. In many areas, seismic pulses from large arrays of airguns diminish to those levels at distances ranging from 2.8–9 mi (4.5–14.5 km) from the source. For the much smaller airgun array used during BP's proposed survey (total discharge volume of 640 in^3), distances to received levels in the 160 dB re 1 μPa rms range are estimated to be 0.5–3 mi (0.8–5 km). Baleen whales within those distances may show avoidance or other strong disturbance reactions to the airgun array. Subtle behavioral changes sometimes become evident at somewhat lower received levels, and recent studies have shown that some species of baleen whales, notably bowhead and humpback whales, at times show strong avoidance at received levels lower than 160–170 dB re 1 μPa rms. Bowhead whales migrating west across the Alaskan Beaufort Sea in autumn, in particular, are unusually responsive, with avoidance occurring out to distances of 12.4–18.6 mi (20–30 km) from a medium-sized airgun source (Miller *et al.,* 1999; Richardson *et al.,* 1999). However, more recent research on bowhead whales (Miller *et al.,* 2005) corroborates earlier evidence that, during the summer feeding season, bowheads are not as sensitive to seismic sources. In summer, bowheads typically begin to show avoidance reactions at a received level of about 160–170 dB re 1 μPa rms (Richardson *et al.,* 1986; Ljungblad *et al.,* 1988; Miller *et al.,* 2005).

Malme *et al.* (1986) studied the responses of feeding eastern gray whales to pulses from a single 100 in^3 airgun off St. Lawrence Island in the northern Bering Sea. They estimated, based on small sample sizes, that 50% of feeding gray whales ceased feeding at an average received pressure level of 173 dB re 1 μPa on an (approximate) rms basis, and that 10% of feeding whales interrupted feeding at received levels of 163 dB. Those findings were generally consistent with the results of experiments conducted on larger numbers of gray whales that were migrating along the California coast and on observations of the distribution of feeding Western Pacific gray whales off Sakhalin Island, Russia, during a seismic survey (Yazvenko *et al.,* 2007). Data on short-term reactions (or lack of reactions) of cetaceans to impulsive noises do not necessarily provide information about long-term effects. While it is not certain whether impulsive noises affect reproductive rate or distribution and habitat use in subsequent days or years, certain species have continued to use areas ensonified by airguns and have continued to increase in number despite successive years of anthropogenic activity in the area. Gray whales continued to migrate annually along the west coast of North America despite intermittent seismic exploration and much ship traffic in that area for decades (Appendix A in Malme *et al.,* 1984). Bowhead whales continued to travel to the eastern Beaufort Sea each summer despite seismic exploration in their summer and autumn range for many years (Richardson *et al.,* 1987). Populations of both gray whales and bowhead whales grew substantially during this time. In any event, the proposed survey will occur in summer (July through late August) when most bowhead whales are commonly feeding in the Mackenzie River Delta, Canada.

Patenaude *et al.* (2002) reported fewer behavioral responses to aircraft overflights by bowhead compared to beluga whales. Behaviors classified as reactions consisted of short surfacings, immediate dives or turns, changes in behavior state, vigorous swimming, and breaching. Most bowhead reaction resulted from exposure to helicopter activity and little response to fixed-wing aircraft was observed. Most reactions occurred when the helicopter was at

altitudes ≤492 ft (150 m) and lateral distances ≤820 ft (250 m; Nowacek *et al.,* 2007).

During their study, Patenaude *et al.* (2002) observed one bowhead whale cow-calf pair during four passes totaling 2.8 hours of the helicopter and two pairs during Twin Otter overflights. All of the helicopter passes were at altitudes of 49–98 ft (15–30 m). The mother dove both times she was at the surface, and the calf dove once out of the four times it was at the surface. For the cow-calf pair sightings during Twin Otter overflights, the authors did not note any behaviors specific to those pairs. Rather, the reactions of the cow-calf pairs were lumped with the reactions of other groups that did not consist of calves.

Richardson *et al.* (1995) and Moore and Clarke (2002) reviewed a few studies that observed responses of gray whales to aircraft. Cow-calf pairs were quite sensitive to a turboprop survey flown at 1,000 ft (305 m) altitude on the Alaskan summering grounds. In that survey, adults were seen swimming over the calf, or the calf swam under the adult (Ljungblad *et al.,* 1983, cited in Richardson *et al.,* 1995 and Moore and Clarke, 2002). However, when the same aircraft circled for more than 10 minutes at 1,050 ft (320 m) altitude over a group of mating gray whales, no reactions were observed (Ljungblad *et al.,* 1987, cited in Moore and Clarke, 2002). Malme *et al.* (1984, cited in Richardson *et al.,* 1995 and Moore and Clarke, 2002) conducted playback experiments on migrating gray whales. They exposed the animals to underwater noise recorded from a Bell 212 helicopter (estimated altitude=328 ft [100 m]), at an average of three simulated passes per minute. The authors observed that whales changed their swimming course and sometimes slowed down in response to the playback sound but proceeded to migrate past the transducer. Migrating gray whales did not react overtly to a Bell 212 helicopter at greater than 1,394 ft (425 m) altitude, occasionally reacted when the helicopter was at 1,000–1,198 ft (305–365 m), and usually reacted when it was below 825 ft (250 m; Southwest Research Associates, 1988, cited in Richardson *et al.,* 1995 and Moore and Clarke, 2002). Reactions noted in that study included abrupt turns or dives or both. Greene *et al.* (1992, cited in Richardson *et al.,* 1995) observed that migrating gray whales rarely exhibited noticeable reactions to a straight-line overflight by a Twin Otter at 197 ft (60 m) altitude.

Odontocetes: Few systematic data are available describing reactions of toothed whales to noise pulses. However, systematic work on sperm whales is underway, and there is an increasing amount of information about responses of various odontocetes to seismic surveys based on monitoring studies (e.g., Stone, 2003). Miller *et al.* (2009) conducted at-sea experiments where reactions of sperm whales were monitored through the use of controlled sound exposure experiments from large airgun arrays consisting of 20-guns and 31-guns. Of 8 sperm whales observed, none changed their behavior when exposed to either a ramp-up at 4–8 mi (7–13 km) or full array exposures at 0.6–8 mi (1–13 km).

Seismic operators and marine mammal observers sometimes see dolphins and other small toothed whales near operating airgun arrays, but, in general, there seems to be a tendency for most delphinids to show some limited avoidance of seismic vessels operating large airgun systems. However, some dolphins seem to be attracted to the seismic vessel and floats, and some ride the bow wave of the seismic vessel even when large arrays of airguns are firing. Nonetheless, there have been indications that small toothed whales sometimes move away or maintain a somewhat greater distance from the vessel when a large array of airguns is operating than when it is silent (e.g., 1998; Stone, 2003). The beluga may be a species that (at least in certain geographic areas) shows long-distance avoidance of seismic vessels. Aerial surveys during seismic operations in the southeastern Beaufort Sea recorded much lower sighting rates of beluga whales within 10–20 km (6.2–12.4 mi) of an active seismic vessel. These results were consistent with the low number of beluga sightings reported by observers aboard the seismic vessel, suggesting that some belugas might have been avoiding the seismic operations at distances of 10–20 km (6.2–12.4 mi) (Miller *et al.,* 2005).

Captive bottlenose dolphins and (of more relevance in this project) beluga whales exhibit changes in behavior when exposed to strong pulsed sounds similar in duration to those typically used in seismic surveys (Finneran *et al.,* 2002, 2005). However, the animals tolerated high received levels of sound (pk–pk level >200 dB re 1 μPa) before exhibiting aversive behaviors.

Observers stationed on seismic vessels operating off the United Kingdom from 1997–2000 have provided data on the occurrence and behavior of various toothed whales exposed to seismic pulses (Stone, 2003; Gordon *et al.,* 2004). Killer whales were found to be significantly farther from large airgun arrays during periods of shooting compared with periods of no shooting. The displacement of the median distance from the array was approximately 0.5 km (0.3 mi) or more. Killer whales also appear to be more tolerant of seismic shooting in deeper water.

Reactions of toothed whales to large arrays of airguns are variable and, at least for delphinids, seem to be confined to a smaller radius than has been observed for mysticetes. However, based on the limited existing evidence, belugas should not be grouped with delphinids in the ''less responsive'' category.

Patenaude *et al.* (2002) reported that beluga whales appeared to be more responsive to aircraft overflights than bowhead whales. Changes were observed in diving and respiration behavior, and some whales veered away when a helicopter passed at ≤820 ft (250 m) lateral distance at altitudes up to 492 ft (150 m). However, some belugas showed no reaction to the helicopter. Belugas appeared to show less response to fixed-wing aircraft than to helicopter overflights.

Pinnipeds: Pinnipeds are not likely to show a strong avoidance reaction to the airgun sources proposed for use. Visual monitoring from seismic vessels has shown only slight (if any) avoidance of airguns by pinnipeds and only slight (if any) changes in behavior. Monitoring work in the Alaskan Beaufort Sea during 1996–2001 provided considerable information regarding the behavior of Arctic ice seals exposed to seismic pulses (Harris *et al.,* 2001; Moulton and Lawson, 2002). These seismic projects usually involved arrays of 6 to 16 airguns with total volumes of 560 to 1,500 in^3. The combined results suggest that some seals avoid the immediate area around seismic vessels. In most survey years, ringed seal sightings tended to be farther away from the seismic vessel when the airguns were operating than when they were not (Moulton and Lawson, 2002). However, these avoidance movements were relatively small, on the order of 100 m (328 ft) to a few hundreds of meters, and many seals remained within 100–200 m (328–656 ft) of the trackline as the operating airgun array passed by. Seal sighting rates at the water surface were lower during airgun array operations than during no-airgun periods in each survey year except 1997. Similarly, seals are often very tolerant of pulsed sounds from seal-scaring devices (Richardson *et al.,* 1995). However, initial telemetry work suggests that avoidance and other behavioral reactions by two other species of seals to small airgun sources may at times be stronger than evident to

date from visual studies of pinniped reactions to airguns (Thompson *et al.,* 1998). Even if reactions of the species occurring in the present study area are as strong as those evident in the telemetry study, reactions are expected to be confined to relatively small distances and durations, with no long-term effects on pinniped individuals or populations.

Blackwell *et al.* (2004) observed 12 ringed seals during low-altitude overflights of a Bell 212 helicopter at Northstar in June and July 2000 (9 observations took place concurrent with pipe-driving activities). One seal showed no reaction to the aircraft while the remaining 11 (92%) reacted, either by looking at the helicopter (n=10) or by departing from their basking site (n=1). Blackwell *et al.* (2004) concluded that none of the reactions to helicopters were strong or long lasting, and that seals near Northstar in June and July 2000 probably had habituated to industrial sounds and visible activities that had occurred often during the preceding winter and spring. There have been few systematic studies of pinniped reactions to aircraft overflights, and most of the available data concern pinnipeds hauled out on land or ice rather than pinnipeds in the water (Richardson *et al.,* 1995; Born *et al.,* 1999).

4. Threshold Shift (Noise-Induced Loss of Hearing)

When animals exhibit reduced hearing sensitivity (i.e., sounds must be louder for an animal to detect them) following exposure to an intense sound or sound for long duration, it is referred to as a noise-induced threshold shift (TS). An animal can experience temporary threshold shift (TTS) or permanent threshold shift (PTS). TTS can last from minutes or hours to days (i.e., there is complete recovery), can occur in specific frequency ranges (i.e., an animal might only have a temporary loss of hearing sensitivity between the frequencies of 1 and 10 kHz), and can be of varying amounts (for example, an animal's hearing sensitivity might be reduced initially by only 6 dB or reduced by 30 dB). PTS is permanent, but some recovery is possible. PTS can also occur in a specific frequency range and amount as mentioned above for TTS.

The following physiological mechanisms are thought to play a role in inducing auditory TS: Effects to sensory hair cells in the inner ear that reduce their sensitivity, modification of the chemical environment within the sensory cells, residual muscular activity in the middle ear, displacement of certain inner ear membranes, increased blood flow, and post-stimulatory reduction in both efferent and sensory neural output (Southall *et al.,* 2007). The amplitude, duration, frequency, temporal pattern, and energy distribution of sound exposure all can affect the amount of associated TS and the frequency range in which it occurs. As amplitude and duration of sound exposure increase, so, generally, does the amount of TS, along with the recovery time. For intermittent sounds, less TS could occur than compared to a continuous exposure with the same energy (some recovery could occur between intermittent exposures depending on the duty cycle between sounds) (Ward, 1997). For example, one short but loud (higher SPL) sound exposure may induce the same impairment as one longer but softer sound, which in turn may cause more impairment than a series of several intermittent softer sounds with the same total energy (Ward, 1997). Additionally, though TTS is temporary, prolonged exposure to sounds strong enough to elicit TTS, or shorter-term exposure to sound levels well above the TTS threshold, can cause PTS, at least in terrestrial mammals. Although in the case of the proposed seismic survey, animals are not expected to be exposed to sound levels high for a long enough period to result in PTS.

PTS is considered auditory injury (Southall *et al.,* 2007). Irreparable damage to the inner or outer cochlear hair cells may cause PTS; however, other mechanisms are also involved, such as exceeding the elastic limits of certain tissues and membranes in the middle and inner ears and resultant changes in the chemical composition of the inner ear fluids (Southall *et al.,* 2007).

Although the published body of scientific literature contains numerous theoretical studies and discussion papers on hearing impairments that can occur with exposure to a loud sound, only a few studies provide empirical information on the levels at which noise-induced loss in hearing sensitivity occurs in nonhuman animals. For marine mammals, published data are limited to the captive bottlenose dolphin, beluga, harbor porpoise, and Yangtze finless porpoise (Finneran *et al.,* 2000, 2002, 2003, 2005, 2007; Finneran and Schlundt, 2010; Lucke *et al.,* 2009; Mooney *et al.,* 2009; Popov *et al.,* 2011a, 2011b; Kastelein *et al.,* 2012a; Schlundt *et al.,* 2006; Nachtigall *et al.,* 2003, 2004). For pinnipeds in water, data are limited to measurements of TTS in harbor seals, an elephant seal, and California sea lions (Kastak *et al.,* 2005; Kastelein *et al.,* 2012b).

Marine mammal hearing plays a critical role in communication with conspecifics, and interpretation of environmental cues for purposes such as predator avoidance and prey capture. Depending on the degree (elevation of threshold in dB), duration (i.e., recovery time), and frequency range of TTS, and the context in which it is experienced, TTS can have effects on marine mammals ranging from discountable to serious (similar to those discussed in auditory masking, below). For example, a marine mammal may be able to readily compensate for a brief, relatively small amount of TTS in a non-critical frequency range that occurs during a time where ambient noise is lower and there are not as many competing sounds present. Alternatively, a larger amount and longer duration of TTS sustained during time when communication is critical for successful mother/calf interactions could have more serious impacts. Also, depending on the degree and frequency range, the effects of PTS on an animal could range in severity, although it is considered generally more serious because it is a permanent condition. Of note, reduced hearing sensitivity as a simple function of aging has been observed in marine mammals, as well as humans and other taxa (Southall *et al.,* 2007), so we can infer that strategies exist for coping with this condition to some degree, though likely not without cost.

Marine mammals are unlikely to be exposed to received levels of seismic pulses strong enough to cause more than slight TTS, and, given the higher level of sound necessary to cause PTS, it is even less likely that PTS could occur as a result of the proposed seismic survey.

5. Non-Auditory Physical Effects

Non-auditory physical effects might occur in marine mammals exposed to strong underwater sound. Possible types of non-auditory physiological effects or injuries that theoretically might occur in mammals close to a strong sound source include stress, neurological effects, bubble formation, and other types of organ or tissue damage. Some marine mammal species (i.e., beaked whales) may be especially susceptible to injury and/or stranding when exposed to strong pulsed sounds.

Classic stress responses begin when an animal's central nervous system perceives a potential threat to its homeostasis. That perception triggers stress responses regardless of whether a stimulus actually threatens the animal; the mere perception of a threat is sufficient to trigger a stress response (Moberg, 2000; Sapolsky *et al.,* 2005; Seyle, 1950). Once an animal's central

nervous system perceives a threat, it mounts a biological response or defense that consists of a combination of the four general biological defense responses: behavioral responses; autonomic nervous system responses; neuroendocrine responses; or immune responses.

In the case of many stressors, an animal's first and most economical (in terms of biotic costs) response is behavioral avoidance of the potential stressor or avoidance of continued exposure to a stressor. An animal's second line of defense to stressors involves the sympathetic part of the autonomic nervous system and the classical ''fight or flight'' response, which includes the cardiovascular system, the gastrointestinal system, the exocrine glands, and the adrenal medulla to produce changes in heart rate, blood pressure, and gastrointestinal activity that humans commonly associate with ''stress.'' These responses have a relatively short duration and may or may not have significant long-term effects on an animal's welfare.

An animal's third line of defense to stressors involves its neuroendocrine or sympathetic nervous systems; the system that has received the most study has been the hypothalmus-pituitary-adrenal system (also known as the HPA axis in mammals or the hypothalamus-pituitary-interrenal axis in fish and some reptiles). Unlike stress responses associated with the autonomic nervous system, virtually all neuroendocrine functions that are affected by stress—including immune competence, reproduction, metabolism, and behavior—are regulated by pituitary hormones. Stress-induced changes in the secretion of pituitary hormones have been implicated in failed reproduction (Moberg, 1987), altered metabolism (Elasser *et al.,* 2000), reduced immune competence (Blecha, 2000), and behavioral disturbance. Increases in the circulation of glucocorticosteroids (cortisol, corticosterone, and aldosterone in marine mammals; see Romano *et al.,* 2004) have been equated with stress for many years.

The primary distinction between stress (which is adaptive and does not normally place an animal at risk) and distress is the biotic cost of the response. During a stress response, an animal uses glycogen stores that can be quickly replenished once the stress is alleviated. In such circumstances, the cost of the stress response would not pose a risk to the animal's welfare. However, when an animal does not have sufficient energy reserves to satisfy the energetic costs of a stress response, energy resources must be diverted from other biotic functions, which impair those functions that experience the diversion. For example, when mounting a stress response diverts energy away from growth in young animals, those animals may experience stunted growth. When mounting a stress response diverts energy from a fetus, an animal's reproductive success and fitness will suffer. In these cases, the animals will have entered a pre-pathological or pathological state which is called ''distress'' (sensu Seyle, 1950) or ''allostatic loading'' (sensu McEwen and Wingfield, 2003). This pathological state will last until the animal replenishes its biotic reserves sufficient to restore normal function. Note that these examples involved a long-term (days or weeks) stress response exposure to stimuli.

Relationships between these physiological mechanisms, animal behavior, and the costs of stress responses have also been documented fairly well through controlled experiment; because this physiology exists in every vertebrate that has been studied, it is not surprising that stress responses and their costs have been documented in both laboratory and free-living animals (for examples see, Holberton *et al.,* 1996; Hood *et al.,* 1998; Jessop *et al.,* 2003; Krausman *et al.,* 2004; Lankford *et al.,* 2005; Reneerkens *et al.,* 2002; Thompson and Hamer, 2000). Although no information has been collected on the physiological responses of marine mammals to anthropogenic sound exposure, studies of other marine animals and terrestrial animals would lead us to expect some marine mammals to experience physiological stress responses and, perhaps, physiological responses that would be classified as ''distress'' upon exposure to anthropogenic sounds.

For example, Jansen (1998) reported on the relationship between acoustic exposures and physiological responses that are indicative of stress responses in humans (e.g., elevated respiration and increased heart rates). Jones (1998) reported on reductions in human performance when faced with acute, repetitive exposures to acoustic disturbance. Trimper *et al.* (1998) reported on the physiological stress responses of osprey to low-level aircraft noise while Krausman *et al.* (2004) reported on the auditory and physiology stress responses of endangered Sonoran pronghorn to military overflights. Smith *et al.* (2004a, 2004b) identified noise-induced physiological transient stress responses in hearing-specialist fish (i.e., goldfish) that accompanied short- and long-term hearing losses. Welch and Welch (1970) reported physiological and behavioral stress responses that accompanied damage to the inner ears of fish and several mammals.

Hearing is one of the primary senses marine mammals use to gather information about their environment and communicate with conspecifics. Although empirical information on the relationship between sensory impairment (TTS, PTS, and acoustic masking) on marine mammals remains limited, we assume that reducing a marine mammal's ability to gather information about its environment and communicate with other members of its species would induce stress, based on data that terrestrial animals exhibit those responses under similar conditions (NRC, 2003) and because marine mammals use hearing as their primary sensory mechanism. Therefore, we assume that acoustic exposures sufficient to trigger onset PTS or TTS would be accompanied by physiological stress responses. More importantly, marine mammals might experience stress responses at received levels lower than those necessary to trigger onset TTS. Based on empirical studies of the time required to recover from stress responses (Moberg, 2000), NMFS also assumes that stress responses could persist beyond the time interval required for animals to recover from TTS and might result in pathological and pre-pathological states that would be as significant as behavioral responses to TTS.

Resonance effects (Gentry, 2002) and direct noise-induced bubble formations (Crum *et al.,* 2005) are implausible in the case of exposure to an impulsive broadband source like an airgun array. If seismic surveys disrupt diving patterns of deep-diving species, this might result in bubble formation and a form of the bends, as speculated to occur in beaked whales exposed to sonar. However, there is no specific evidence of this upon exposure to airgun pulses. Additionally, no beaked whale species occur in the proposed project area.

In general, very little is known about the potential for strong, anthropogenic underwater sounds to cause non-auditory physical effects in marine mammals. Such effects, if they occur at all, would presumably be limited to short distances and to activities that extend over a prolonged period. The available data do not allow identification of a specific exposure level above which non-auditory effects can be expected (Southall *et al.,* 2007) or any meaningful quantitative predictions of the numbers (if any) of marine mammals that might be affected in those ways. There is no definitive

evidence that any of these effects occur even for marine mammals in close proximity to large arrays of airguns, which are not proposed for use during this program. In addition, marine mammals that show behavioral avoidance of industry activities, including bowheads, belugas, and some pinnipeds, are especially unlikely to incur non-auditory impairment or other physical effects.

6. Stranding and Mortality

Marine mammals close to underwater detonations of high explosive can be killed or severely injured, and the auditory organs are especially susceptible to injury (Ketten *et al.,* 1993; Ketten, 1995). Airgun pulses are less energetic and their peak amplitudes have slower rise times. To date, there is no evidence that serious injury, death, or stranding by marine mammals can occur from exposure to airgun pulses, even in the case of large airgun arrays. Additionally, SAE's project will use small and medium sized airgun arrays in shallow water. NMFS does not expect any marine mammals will incur serious injury or mortality in the shallow waters off Beaufort Sea or strand as a result of the proposed seismic survey.

7. Potential Effects From Pingers on Marine Mammals

Active acoustic sources other than the airguns have been proposed for SAE's 2014 seismic survey in Beaufort Sea, Alaska. In general, the potential effects of this equipment on marine mammals are similar to those from the airguns, except the magnitude of the impacts is expected to be much less due to the lower intensity of the source.

Vessel Impacts

Vessel activity and noise associated with vessel activity will temporarily increase in the action area during SAE's seismic survey as a result of the operation of about 8 vessels. To minimize the effects of vessels and noise associated with vessel activity, SAE will alter speed if a marine mammal gets too close to a vessel. In addition, source vessels will be operating at slow speed (4–5 knots) when conducting surveys. Marine mammal monitoring observers will alert vessel captains as animals are detected to ensure safe and effective measures are applied to avoid coming into direct contact with marine mammals. Therefore, NMFS neither anticipates nor authorizes takes of marine mammals from ship strikes.

McCauley *et al.* (1996) reported several cases of humpback whales responding to vessels in Hervey Bay, Australia. Results indicated clear avoidance at received levels between 118 to 124 dB in three cases for which response and received levels were observed/measured.

Palka and Hammond (2001) analyzed line transect census data in which the orientation and distance off transect line were reported for large numbers of minke whales. The authors developed a method to account for effects of animal movement in response to sighting platforms. Minor changes in locomotion speed, direction, and/or diving profile were reported at ranges from 1,847 to 2,352 ft (563 to 717 m) at received levels of 110 to 120 dB.

Odontocetes, such as beluga whales, killer whales, and harbor porpoises, often show tolerance to vessel activity; however, they may react at long distances if they are confined by ice, shallow water, or were previously harassed by vessels (Richardson *et al.,* 1995). Beluga whale response to vessel noise varies greatly from tolerance to extreme sensitivity depending on the activity of the whale and previous experience with vessels (Richardson *et al.,* 1995). Reactions to vessels depends on whale activities and experience, habitat, boat type, and boat behavior (Richardson *et al.,* 1995) and may include behavioral responses, such as altered headings or avoidance (Blane and Jaakson, 1994; Erbe and Farmer, 2000); fast swimming; changes in vocalizations (Lesage *et al.,* 1999; Scheifele *et al.,* 2005); and changes in dive, surfacing, and respiration patterns.

There are few data published on pinniped responses to vessel activity, and most of the information is anecdotal (Richardson *et al.,* 1995). Generally, sea lions in water show tolerance to close and frequently approaching vessels and sometimes show interest in fishing vessels. They are less tolerant when hauled out on land; however, they rarely react unless the vessel approaches within 100–200 m (330–660 ft; reviewed in Richardson *et al.,* 1995).

The addition of the vessels and noise due to vessel operations associated with the seismic survey is not expected to have effects that could cause significant or long-term consequences for individual marine mammals or their populations.

Anticipated Effects on Marine Mammal Habitat

The primary potential impacts to marine mammal habitat and other marine species are associated with elevated sound levels produced by airguns and other active acoustic sources. However, other potential impacts to the surrounding habitat from physical disturbance are also possible. This section describes the potential impacts to marine mammal habitat from the specified activity. Because the marine mammals in the area feed on fish and/or invertebrates there is also information on the species typically preyed upon by the marine mammals in the area.

Common Marine Mammal Prey in the Project Area

All of the marine mammal species that may occur in the proposed project area prey on either marine fish or invertebrates. The ringed seal feeds on fish and a variety of benthic species, including crabs and shrimp. Bearded seals feed mainly on benthic organisms, primarily crabs, shrimp, and clams. Spotted seals feed on pelagic and demersal fish, as well as shrimp and cephalopods. They are known to feed on a variety of fish including herring, capelin, sand lance, Arctic cod, saffron cod, and sculpins. Ribbon seals feed primarily on pelagic fish and invertebrates, such as shrimp, crabs, squid, octopus, cod, sculpin, pollack, and capelin. Juveniles feed mostly on krill and shrimp.

Bowhead whales feed in the eastern Beaufort Sea during summer and early autumn but continue feeding to varying degrees while on their migration through the central and western Beaufort Sea in the late summer and fall (Richardson and Thomson [eds.], 2002). When feeding in relatively shallow areas, bowheads feed throughout the water column. However, feeding is concentrated at depths where zooplankton is concentrated (Wursig *et al.,* 1984, 1989; Richardson [ed.], 1987; Griffiths *et al.,* 2002). Lowry and Sheffield (2002) found that copepods and euphausiids were the most common prey found in stomach samples from bowhead whales harvested in the Kaktovik area from 1979 to 2000. Areas to the east of Barter Island (which is approximately 120 mi east of BP's proposed seismic area) appear to be used regularly for feeding as bowhead whales migrate slowly westward across the Beaufort Sea (Thomson and Richardson, 1987; Richardson and Thomson [eds.], 2002).

Recent articles and reports have noted bowhead whales feeding in several areas of the U.S. Beaufort Sea. The Barrow area is commonly used as a feeding area during spring and fall, with a higher proportion of photographed individuals displaying evidence of feeding in fall rather than spring (Mocklin, 2009). A bowhead whale feeding ''hotspot'' (Okkonen *et al.,* 2011) commonly forms on the western Beaufort Sea shelf off

Point Barrow in late summer and fall. Favorable conditions concentrate euphausiids and copepods, and bowhead whales congregate to exploit the dense prey (Ashjian *et al.,* 2010, Moore *et al.,* 2010; Okkonen *et al.,* 2011). Surveys have also noted bowhead whales feeding in the Camden Bay area during the fall (Koski and Miller, 2009; Quakenbush *et al.,* 2010).

The 2006–2008 BWASP Final Report (Clarke *et al.,* 2011a) and the 2009 BWASP Final Report (Clarke *et al.,* 2011b) note sightings of feeding bowhead whales in the Beaufort Sea during the fall season. During that 4 year period, the largest groups of feeding whales were sighted between Smith Bay and Point Barrow (hundreds of miles to the west of Prudhoe Bay), and none were sighted feeding in Camden Bay (Clarke *et al.,* 2011a,b). Clarke and Ferguson (undated) examined the raw BWASP data from the years 2000–2009. They noted that feeding behavior was noted more often in September than October and that while bowheads were observed feeding throughout the study area (which includes the entire U.S. Beaufort Sea), sightings were less frequent in the central Alaskan Beaufort than they were east of Kaktovik and west of Smith Bay. Additionally, Clarke and Ferguson (undated) and Clarke *et al.* (2011b) refer to information from Ashjian *et al.* (2010), which describes the importance of wind-driven currents that produce favorable feeding conditions for bowhead whales in the area between Smith Bay and Point Barrow. Increased winds in that area may be increasing the incidence of upwelling, which in turn may be the reason for increased sightings of feeding bowheads in the area. Clarke and Ferguson (undated) also note that the incidence of feeding bowheads in the eastern Alaskan Beaufort Sea has decreased since the early 1980s.

Beluga whales feed on a variety of fish, shrimp, squid and octopus (Burns and Seaman, 1985). Very few beluga whales occur nearshore; their main migration route is much further offshore. Like several of the other species in the area, harbor porpoise feed on demersal and benthic species, mainly schooling fish and cephalopods. Depending on the type of killer whale (transient or resident), they feed on fish and/or marine mammals. However, harbor porpoises and killer whales are not commonly found in Prudhoe Bay.

Gray whales are primarily bottom feeders, and benthic amphipods and isopods form the majority of their summer diet, at least in the main summering areas west of Alaska (Oliver *et al.,* 1983; Oliver and Slattery, 1985). Farther south, gray whales have also been observed feeding around kelp beds, presumably on mysid crustaceans, and on pelagic prey such as small schooling fish and crab larvae (Hatler and Darling, 1974). However, the central Beaufort Sea is not known to be a primary feeding ground for gray whales.

Two kinds of fish inhabit marine waters in the study area: (1) True marine fish that spend all of their lives in salt water, and (2) anadromous species that reproduce in fresh water and spend parts of their life cycles in salt water.

Most arctic marine fish species are small, benthic forms that do not feed high in the water column. The majority of these species are circumpolar and are found in habitats ranging from deep offshore water to water as shallow as 16.4–33 ft (5–10 m; Fechhelm *et al.,* 1995). The most important pelagic species, and the only abundant pelagic species, is the Arctic cod. The Arctic cod is a major vector for the transfer of energy from lower to higher trophic levels (Bradstreet *et al.,* 1986). In summer, Arctic cod can form very large schools in both nearshore and offshore waters (Craig *et al.,* 1982; Bradstreet *et al.,* 1986). Locations and areas frequented by large schools of Arctic cod cannot be predicted but can be almost anywhere. The Arctic cod is a major food source for beluga whales, ringed seals, and numerous species of seabirds (Frost and Lowry, 1984; Bradstreet *et al.,* 1986).

Anadromous Dolly Varden char and some species of whitefish winter in rivers and lakes, migrate to the sea in spring and summer, and return to fresh water in autumn. Anadromous fish form the basis of subsistence, commercial, and small regional sport fisheries. Dolly Varden char migrate to the sea from May through mid-June (Johnson, 1980) and spend about 1.5–2.5 months there (Craig, 1989). They return to rivers beginning in late July or early August with the peak return migration occurring between mid-August and early September (Johnson, 1980). At sea, most anadromous corregonids (whitefish) remain in nearshore waters within several kilometers of shore (Craig, 1984, 1989). They are often termed ''amphidromous'' fish in that they make repeated annual migrations into marine waters to feed, returning each fall to overwinter in fresh water.

Benthic organisms are defined as bottom dwelling creatures. Infaunal organisms are benthic organisms that live within the substrate and are often sedentary or sessile (bivalves, polychaetes). Epibenthic organisms live on or near the bottom surface sediments and are mobile (amphipods, isopods, mysids, and some polychaetes). Epifauna, which live attached to hard substrates, are rare in the Beaufort Sea because hard substrates are scarce there. A small community of epifauna, the Boulder Patch, occurs in Stefansson Sound.

Many of the nearshore benthic marine invertebrates of the Arctic are circumpolar and are found over a wide range of water depths (Carey *et al.,* 1975). Species identified include polychaetes (*Spio filicornis, Chaetozone setosa, Eteone longa*), bivalves (*Cryrtodaria kurriana, Nucula tenuis, Liocyma fluctuosa*), an isopod (*Saduria entomon*), and amphipods (*Pontoporeia femorata, P. affinis*).

Nearshore benthic fauna have been studied in Beaufort Sea lagoons and near the mouth of the Colville River (Kinney *et al.,* 1971, 1972; Crane and Cooney, 1975). The waters of Simpson Lagoon, Harrison Bay, and the nearshore region support a number of infaunal species including crustaceans, mollusks, and polychaetes. In areas influenced by river discharge, seasonal changes in salinity can greatly influence the distribution and abundance of benthic organisms. Large fluctuations in salinity and temperature that occur over a very short time period, or on a seasonal basis, allow only very adaptable, opportunistic species to survive (Alexander *et al.,* 1974). Since shorefast ice is present for many months, the distribution and abundance of most species depends on annual (or more frequent) recolonization from deeper offshore waters (Woodward Clyde Consultants, 1995). Due to ice scouring, particularly in water depths of less than 8 ft (2.4 m), infaunal communities tend to be patchily distributed. Diversity increases with water depth until the shear zone is reached at 49–82 ft (15–25 m; Carey, 1978). Biodiversity then declines due to ice gouging between the landfast ice and the polar pack ice (Woodward Clyde Consultants, 1995).

Potential Impacts From Sound Generation

With regard to fish as a prey source for odontocetes and seals, fish are known to hear and react to sounds and to use sound to communicate (Tavolga *et al.,* 1981) and possibly avoid predators (Wilson and Dill, 2002). Experiments have shown that fish can sense both the strength and direction of sound (Hawkins, 1981). Primary factors determining whether a fish can sense a sound signal, and potentially react to it, are the frequency of the signal and the strength of the signal in relation to the natural background noise level.

Fishes produce sounds that are associated with behaviors that include territoriality, mate search, courtship, and aggression. It has also been speculated that sound production may provide the means for long distance communication and communication under poor underwater visibility conditions (Zelick *et al.,* 1999), although the fact that fish communicate at low-frequency sound levels where the masking effects of ambient noise are naturally highest suggests that very long distance communication would rarely be possible. Fishes have evolved a diversity of sound generating organs and acoustic signals of various temporal and spectral contents. Fish sounds vary in structure, depending on the mechanism used to produce them (Hawkins, 1993). Generally, fish sounds are predominantly composed of low frequencies (less than 3 kHz).

Since objects in the water scatter sound, fish are able to detect these objects through monitoring the ambient noise. Therefore, fish are probably able to detect prey, predators, conspecifics, and physical features by listening to environmental sounds (Hawkins, 1981). There are two sensory systems that enable fish to monitor the vibration-based information of their surroundings. The two sensory systems, the inner ear and the lateral line, constitute the acoustico-lateralis system.

Although the hearing sensitivities of very few fish species have been studied to date, it is becoming obvious that the intra- and inter-specific variability is considerable (Coombs, 1981). Nedwell *et al.* (2004) compiled and published available fish audiogram information. A noninvasive electrophysiological recording method known as auditory brainstem response is now commonly used in the production of fish audiograms (Yan, 2004). Generally, most fish have their best hearing in the low-frequency range (i.e., less than 1 kHz). Even though some fish are able to detect sounds in the ultrasonic frequency range, the thresholds at these higher frequencies tend to be considerably higher than those at the lower end of the auditory frequency range.

Literature relating to the impacts of sound on marine fish species can be divided into the following categories: (1) Pathological effects; (2) physiological effects; and (3) behavioral effects. Pathological effects include lethal and sub-lethal physical damage to fish; physiological effects include primary and secondary stress responses; and behavioral effects include changes in exhibited behaviors of fish. Behavioral changes might be a direct reaction to a detected sound or a result of the anthropogenic sound masking natural sounds that the fish normally detect and to which they respond. The three types of effects are often interrelated in complex ways. For example, some physiological and behavioral effects could potentially lead to the ultimate pathological effect of mortality. Hastings and Popper (2005) reviewed what is known about the effects of sound on fishes and identified studies needed to address areas of uncertainty relative to measurement of sound and the responses of fishes. Popper *et al.* (2003/2004) also published a paper that reviews the effects of anthropogenic sound on the behavior and physiology of fishes.

Potential effects of exposure to sound on marine fish include TTS, physical damage to the ear region, physiological stress responses, and behavioral responses such as startle response, alarm response, avoidance, and perhaps lack of response due to masking of acoustic cues. Most of these effects appear to be either temporary or intermittent and therefore probably do not significantly impact the fish at a population level. The studies that resulted in physical damage to the fish ears used noise exposure levels and durations that were far more extreme than would be encountered under conditions similar to those expected during BP's proposed survey.

The level of sound at which a fish will react or alter its behavior is usually well above the detection level. Fish have been found to react to sounds when the sound level increased to about 20 dB above the detection level of 120 dB (Ona, 1988); however, the response threshold can depend on the time of year and the fish's physiological condition (Engas *et al.,* 1993). In general, fish react more strongly to pulses of sound rather than a continuous signal (Blaxter *et al.,* 1981), such as the type of sound that will be produced by the drillship, and a quicker alarm response is elicited when the sound signal intensity rises rapidly compared to sound rising more slowly to the same level.

Investigations of fish behavior in relation to vessel noise (Olsen *et al.,* 1983; Ona, 1988; Ona and Godo, 1990) have shown that fish react when the sound from the engines and propeller exceeds a certain level. Avoidance reactions have been observed in fish such as cod and herring when vessels approached close enough that received sound levels are 110 dB to 130 dB (Nakken, 1992; Olsen, 1979; Ona and Godo, 1990; Ona and Toresen, 1988). However, other researchers have found that fish such as polar cod, herring, and capeline are often attracted to vessels (apparently by the noise) and swim toward the vessel (Rostad *et al.,* 2006). Typical sound source levels of vessel noise in the audible range for fish are 150 dB to 170 dB (Richardson *et al.,* 1995a). In calm weather, ambient noise levels in audible parts of the spectrum lie between 60 dB to 100 dB.

Short, sharp sounds can cause overt or subtle changes in fish behavior. Chapman and Hawkins (1969) tested the reactions of whiting (hake) in the field to an airgun. When the airgun was fired, the fish dove from 82 to 180 ft (25 to 55 m) depth and formed a compact layer. The whiting dove when received sound levels were higher than 178 dB re 1 μPa (Pearson *et al.,* 1992).

Pearson *et al.* (1992) conducted a controlled experiment to determine effects of strong noise pulses on several species of rockfish off the California coast. They used an airgun with a source level of 223 dB re 1 μPa. They noted:

- Startle responses at received levels of 200–205 dB re 1 μPa and above for two sensitive species, but not for two other species exposed to levels up to 207 dB;
- Alarm responses at 177–180 dB for the two sensitive species, and at 186 to 199 dB for other species;
- An overall threshold for the above behavioral response at about 180 dB;
- An extrapolated threshold of about 161 dB for subtle changes in the behavior of rockfish; and
- A return to pre-exposure behaviors within the 20–60 minute exposure period.

In summary, fish often react to sounds, especially strong and/or intermittent sounds of low frequency. Sound pulses at received levels of 160 dB re 1 μPa may cause subtle changes in behavior. Pulses at levels of 180 dB may cause noticeable changes in behavior (Chapman and Hawkins, 1969; Pearson *et al.,* 1992; Skalski *et al.,* 1992). It also appears that fish often habituate to repeated strong sounds rather rapidly, on time scales of minutes to an hour. However, the habituation does not endure, and resumption of the strong sound source may again elicit disturbance responses from the same fish.

Some of the fish species found in the Arctic are prey sources for odontocetes and pinnipeds. A reaction by fish to sounds produced by BP's proposed survey would only be relevant to marine mammals if it caused concentrations of fish to vacate the area. Pressure changes of sufficient magnitude to cause that type of reaction would probably occur only very close to the sound source, if

any would occur at all. Impacts on fish behavior are predicted to be inconsequential. Thus, feeding odontocetes and pinnipeds would not be adversely affected by this minimal loss or scattering, if any, of reduced prey abundance.

Some mysticetes, including bowhead whales, feed on concentrations of zooplankton. Some feeding bowhead whales may occur in the Alaskan Beaufort Sea in July and August, but feeding bowheads are more likely to occur in the area after the cessation of airgun operations. Reactions of zooplankton to sound are, for the most part, not known. Their ability to move significant distances is limited or nil, depending on the type of zooplankton. Behavior of zooplankters is not expected to be affected by the survey. These animals have exoskeletons and no air bladders. Many crustaceans can make sounds, and some crustacea and other invertebrates have some type of sound receptor. A reaction by zooplankton to sounds produced by the seismic survey would only be relevant to whales if it caused concentrations of zooplankton to scatter. Pressure changes of sufficient magnitude to cause that type of reaction would probably occur only very close to the sound source, if any would occur at all. Impacts on zooplankton behavior are predicted to be inconsequential. Thus, feeding mysticetes would not be adversely affected by this minimal loss or scattering, if any, of reduced zooplankton abundance.

Based on the preceding discussion, the proposed activity is not expected to have any habitat-related effects that could cause significant or long-term consequences for individual marine mammals or their populations.

Proposed Mitigation

In order to issue an incidental take authorization (ITA) under section 101(a)(5)(D) of the MMPA, NMFS must set forth the permissible methods of taking pursuant to such activity, and other means of effecting the least practicable impact on such species or stock and its habitat, paying particular attention to rookeries, mating grounds, and areas of similar significance, and on the availability of such species or stock for taking for certain subsistence uses (where relevant).

For the proposed SAE open-water 3D OBN seismic surveys in the Beaufort Sea, NMFS worked with SAE to propose the following mitigation measures to minimize the potential impacts to marine mammals in the project vicinity as a result of SAE's survey activities. The primary purpose of these mitigation measures is to detect marine mammals within, or about to enter, designated exclusion zones and to initiate immediate shutdown or power down of the airgun(s).

(1) Establishing Exclusion and Disturbance Zones

Under current NMFS guidelines, the ''exclusion zone'' for marine mammal exposure to impulse sources is customarily defined as the area within which received sound levels are ≥180 dB (rms) re 1 μPa for cetaceans and ≥190 dB (rms) re 1 μPa for pinnipeds. These safety criteria are based on an assumption that SPL received at levels lower than these will not injure these animals or impair their hearing abilities, but at higher levels might have some such effects. Disturbance or behavioral effects to marine mammals from underwater sound may occur after exposure to sound at distances greater than the exclusion zones (Richardson *et al.* 1995). Currently, NMFS uses 160 dB (rms) re 1 μPa as the threshold for Level B behavioral harassment from impulse noise.

As discussed above, the acoustic propagation of the proposed 440-in^3, 880-in^3, and 1,760-in^3 airgun arrays were predicted using JASCO's model provided in Aerts *et al.* (2008), corrected with the measured or manufacturer's source levels. The resulting isopleths modeled for the 190, 180, and 160 dB (rms) re 1 μPa exclusion zones and zones of influence are listed in Table 2.

These safety distances will be implemented at the commencement of 2014 airgun operations to establish marine mammal exclusion zones used for mitigation. SAE will conduct sound source measurements of the airgun array at the beginning of survey operations in 2014 to verify the size of the various marine mammal exclusion zones. The acoustic data will be analyzed in the field as quickly as reasonably practicable and used to verify and adjust, as necessary, the marine mammal exclusion zone distances. The mitigation measures to be implemented at the 190 and 180 dB (rms) sound levels will include power downs and shut downs as described below.

(2) Vessel Related Mitigation Measures

These mitigation measures apply to all vessels that are part of SAE's Beaufort Sea seismic survey activities, including supporting vessels.

- Avoid concentrations or groups of whales. Operators of vessels should, at all times, conduct their activities at the maximum distance possible from such concentrations or groups of whales.
- If any vessel approaches within 1.6 km (1 mi) of observed bowhead whales, except when providing emergency assistance to whalers or in other emergency situations, the vessel operator will take reasonable precautions to avoid potential interaction with the bowhead whales by taking one or more of the following actions, as appropriate:
  - Reducing vessel speed to less than 5 knots within 300 yards (900 feet or 274 m) of the whale(s);
  - Steering around the whale(s) if possible;
  - Operating the vessel(s) in such a way as to avoid separating members of a group of whales from other members of the group;
  - Operating the vessel(s) to avoid causing a whale to make multiple changes in direction; and
  - Checking the waters immediately adjacent to the vessel(s) to ensure that no whales will be injured when the propellers are engaged.
- Reduce vessel speed, not to exceed 5 knots, when weather conditions require, such as when visibility drops, to avoid the likelihood of injury to whales.

(3) Mitigation Measures for Airgun Operations

The primary requirements for airgun mitigation during the seismic surveys are to monitor marine mammals near the airgun array during all daylight airgun operations and during any nighttime start-up of the airguns and, if any marine mammals are observed, to adjust airgun operations, as necessary, according to the mitigation measures described below. During the seismic surveys, PSOs will monitor the pre-established exclusion zones for the presence of marine mammals. When marine mammals are observed within, or about to enter, designated safety zones, PSOs have the authority to call for immediate power down (or shutdown) of airgun operations, as required by the situation. A summary of the procedures associated with each mitigation measure is provided below.

Ramp Up Procedure

A ramp up of an airgun array provides a gradual increase in sound levels, and involves a step-wise increase in the number and total volume of airguns firing until the full volume is achieved. The purpose of a ramp up (or ''soft start'') is to ''warn'' cetaceans and pinnipeds in the vicinity of the airguns and to provide time for them to leave the area and thus avoid any potential injury or impairment of their hearing abilities.

During the proposed open-water survey program, the seismic operator

will ramp up the airgun arrays slowly. Full ramp ups (i.e., from a cold start after a shutdown, when no airguns have been firing) will begin by firing a single airgun in the array (i.e., the mitigation airgun). A full ramp up, after a shutdown, will not begin until there has been a minimum of 30 minutes of observation of the safety zone by PSOs to assure that no marine mammals are present. The entire exclusion zone must be visible during the 30-minute lead-in to a full ramp up. If the entire exclusion zone is not visible, then ramp up from a cold start cannot begin. If a marine mammal is sighted within the safety zone during the 30-minute watch prior to ramp up, ramp up will be delayed until the marine mammal is sighted outside of the exclusion zone or the animal is not sighted for at least 15 minutes, for small odontocetes (harbor porpoise) and pinnipeds, or 30 minutes, for baleen whales and large odontocetes (including beluga and killer whales and narwhal).

Use of a Small-Volume Airgun During Turns and Transits

Throughout the seismic survey, during turning movements and short transits, SAE will employ the use of the smallest-volume airgun (i.e., ''mitigation airgun'') to deter marine mammals from being within the immediate area of the seismic operations. The mitigation airgun would be operated at approximately one shot per minute and would not be operated for longer than three hours in duration (turns may last two to three hours for the proposed project).

During turns or brief transits (i.e., less than three hours) between seismic tracklines, one mitigation airgun will continue operating. The ramp up procedures described above will be followed when increasing the source levels from the one mitigation airgun to the full airgun array. However, keeping one airgun firing during turns and brief transits will allow SAE to resume seismic surveys using the full array without having to ramp up from a ''cold start,'' which requires a 30-minute observation period of the full exclusion zone and is prohibited during darkness or other periods of poor visibility. PSOs will be on duty whenever the airguns are firing during daylight and during the 30-minute periods prior to ramp-ups from a ''cold start.''

Power Down and Shut Down Procedures

A power down is the immediate reduction in the number of operating energy sources from all firing to some smaller number (e.g., a single mitigation airgun). A shut down is the immediate cessation of firing of all energy sources. The array will be immediately powered down whenever a marine mammal is sighted approaching close to or within the applicable exclusion zone of the full array, but is outside the applicable exclusion zone of the single mitigation airgun. If a marine mammal is sighted within or about to enter the applicable exclusion zone of the single mitigation airgun, the entire array will be shut down (i.e., no sources firing).

Poor Visibility Conditions

SAE plans to conduct 24-hour operations. PSOs will not be on duty during ongoing seismic operations during darkness, given the very limited effectiveness of visual observation at night (there will be no periods of darkness in the survey area until mid-August). The provisions associated with operations at night or in periods of poor visibility include the following:

- If during foggy conditions, heavy snow or rain, or darkness (which may be encountered starting in late August), the full 180 dB exclusion zone is not visible, the airguns cannot commence a ramp-up procedure from a full shut-down.
- If one or more airguns have been operational before nightfall or before the onset of poor visibility conditions, they can remain operational throughout the night or poor visibility conditions. In this case ramp-up procedures can be initiated, even though the exclusion zone may not be visible, on the assumption that marine mammals will be alerted by the sounds from the single airgun and have moved away.

(4) Mitigation Measures for Subsistence Activities

The following mitigation measures will be imposed in order to effect the least practicable adverse impact on the availability of marine mammal species for subsistence uses:

(i) Establishment and Operations of Communication and Call Centers (Com-Center) Program

- For the purposes of reducing or eliminating conflicts between subsistence whaling activities and SAE's survey program, SAE will participate with other operators in the Com-Center Program. Com-Centers will be operated to facilitate communication of information between SAE and subsistence whalers. The Com-Centers will be operated 24 hours/day during the 2014 fall subsistence bowhead whale hunt.
- All vessels shall report to the appropriate Com-Center at least once every six hours, commencing each day with a call at approximately 06:00 hours.
- The appropriate Com-Center shall be notified if there is any significant change in plans, such as an unannounced start-up of operations or significant deviations from announced course, and that Com-Center shall notify all whalers of such changes. The appropriate Com-Center also shall be called regarding any unsafe or unanticipated ice conditions.

(ii) SAE shall monitor the positions of all of its vessels and exercise due care in avoiding any areas where subsistence activity is active.

(iii) Routing barge and transit vessels:

- Vessels transiting in the Beaufort Sea east of Bullen Point to the Canadian border shall remain at least 5 miles offshore during transit along the coast, provided ice and sea conditions allow. During transit in the Chukchi Sea, vessels shall remain as far offshore as weather and ice conditions allow, and at all times at least 5 miles offshore.
- From August 31 to October 31, vessels in the Chukchi Sea or Beaufort Sea shall remain at least 20 miles offshore of the coast of Alaska from Icy Cape in the Chukchi Sea to Pitt Point on the east side of Smith Bay in the Beaufort Sea, unless ice conditions or an emergency that threatens the safety of the vessel or crew prevents compliance with this requirement. This condition shall not apply to vessels actively engaged in transit to or from a coastal community to conduct crew changes or logistical support operations.
- Vessels shall be operated at speeds necessary to ensure no physical contact with whales occurs, and to make any other potential conflicts with bowheads or whalers unlikely. Vessel speeds shall be less than 10 knots in the proximity of feeding whales or whale aggregations.
- If any vessel inadvertently approaches within 1.6 kilometers (1 mile) of observed bowhead whales, except when providing emergency assistance to whalers or in other emergency situations, the vessel operator will take reasonable precautions to avoid potential interaction with the bowhead whales by taking one or more of the following actions, as appropriate:
  - Reducing vessel speed to less than 5 knots within 900 feet of the whale(s);
  - steering around the whale(s) if possible;
  - operating the vessel(s) in such a way as to avoid separating members of a group of whales from other members of the group;
  - operating the vessel(s) to avoid causing a whale to make multiple changes in direction; and

○ checking the waters immediately adjacent to the vessel(s) to ensure that no whales will be injured when the propellers are engaged.

(iv) Limitation on Seismic Surveys in the Beaufort Sea

• Kaktovik: No seismic survey from the Canadian Border to the Canning River from August 25 to close of the fall bowhead whale hunt in Kaktovik and Nuiqsut. From August 10 to August 25, SAE will communicate and collaborate with the Alaska Eskimo Whaling Commission (AEWC) on any planned vessel movement in and around Kaktovik and Cross Island to avoid impacts to whale hunting.

• Nuiqsut:

○ Pt. Storkerson to Thetis Island: No seismic survey prior to July 25 inside the Barrier Islands. No seismic survey from August 25 to close of fall bowhead whale hunting outside the Barrier Island in Nuiqsut.

○ Canning River to Pt. Storkerson: No seismic survey from August 25 to the close of bowhead whale subsistence hunting in Nuiqsut.

• Barrow: No seismic survey from Pitt Point on the east side of Smith Bay to a location about half way between Barrow and Peard Bay from September 15 to the close of the fall bowhead whale hunt in Barrow.

(v) SAE shall complete operations in time to allow such vessels to complete transit through the Bering Strait to a point south of 59 degrees North latitude no later than November 15, 2014. Any vessel that encounters weather or ice that will prevent compliance with this date shall coordinate its transit through the Bering Strait to a point south of 59 degrees North latitude with the appropriate Com-Centers. SAE vessels shall, weather and ice permitting, transit east of St. Lawrence Island and no closer than 10 miles from the shore of St. Lawrence Island.

In addition, SAE is conducting the planned seismic surveys in a joint partnership agreement with the Kuukpik Corporation. As a joint venture partner with Kuukpik, SAE states that it will be working closely with Kuukpik and the communities on the North Slope to plan operations that will include measures that are environmentally suitable and that do not impact local subsistence use. SAE states that it will sign a Conflict Avoidance Agreement with the Alaskan native whaling communities that will include measures to ensure its seismic activities do not adversely affect subsistence whaling. SAE will schedule and attend meetings in the villages of Nuiqsut, Barrow, Kaktovik, and any other affected communities. A draft Plan of Cooperation is attached with SAE's IHA application.

Mitigation Conclusions

NMFS has carefully evaluated SAE's proposed mitigation measures and considered a range of other measures in the context of ensuring that NMFS prescribes the means of effecting the least practicable impact on the affected marine mammal species and stocks and their habitat. Our evaluation of potential measures included consideration of the following factors in relation to one another:

• The manner in which, and the degree to which, the successful implementation of the measures are expected to minimize adverse impacts to marine mammals;

• The proven or likely efficacy of the specific measure to minimize adverse impacts as planned; and

• The practicability of the measure for applicant implementation.

Any mitigation measure(s) prescribed by NMFS should be able to accomplish, have a reasonable likelihood of accomplishing (based on current science), or contribute to the accomplishment of one or more of the general goals listed below:

1. Avoidance or minimization of injury or death of marine mammals wherever possible (goals 2, 3, and 4 may contribute to this goal).

2. A reduction in the numbers of marine mammals (total number or number at biologically important time or location) exposed to received levels of seismic airguns, or other activities expected to result in the take of marine mammals (this goal may contribute to 1, above, or to reducing harassment takes only).

3. A reduction in the number of times (total number or number at biologically important time or location) individuals would be exposed to received levels of seismic airguns or other activities expected to result in the take of marine mammals (this goal may contribute to 1, above, or to reducing harassment takes only).

4. A reduction in the intensity of exposures (either total number or number at biologically important time or location) to received levels of seismic airguns or other activities expected to result in the take of marine mammals (this goal may contribute to 1, above, or to reducing the severity of harassment takes only).

5. Avoidance or minimization of adverse effects to marine mammal habitat, paying special attention to the food base, activities that block or limit passage to or from biologically important areas, permanent destruction of habitat, or temporary destruction/disturbance of habitat during a biologically important time.

6. For monitoring directly related to mitigation—an increase in the probability of detecting marine mammals, thus allowing for more effective implementation of the mitigation.

Based on our evaluation of the applicant's proposed measures, as well as other measures considered by NMFS, NMFS has preliminarily determined that the proposed mitigation measures provide the means of effecting the least practicable impact on marine mammals species or stocks and their habitat, paying particular attention to rookeries, mating grounds, and areas of similar significance. Proposed measures to ensure availability of such species or stock for taking for certain subsistence uses are discussed later in this document (see ''Impact on Availability of Affected Species or Stock for Taking for Subsistence Uses'' section).

Proposed Monitoring and Reporting

In order to issue an ITA for an activity, Section 101(a)(5)(D) of the MMPA states that NMFS must set forth, ''requirements pertaining to the monitoring and reporting of such taking.'' The MMPA implementing regulations at 50 CFR 216.104 (a)(13) indicate that requests for ITAs must include the suggested means of accomplishing the necessary monitoring and reporting that will result in increased knowledge of the species and of the level of taking or impacts on populations of marine mammals that are expected to be present in the proposed action area. SAE submitted a marine mammal monitoring plan as part of the IHA application. The plan may be modified or supplemented based on comments or new information received from the public during the public comment period or from the peer review panel (see the ''Monitoring Plan Peer Review'' section later in this document).

Monitoring measures prescribed by NMFS should accomplish one or more of the following general goals:

1. An increase in our understanding of the likely occurrence of marine mammal species in the vicinity of the action, i.e., presence, abundance, distribution, and/or density of species.

2. An increase in our understanding of the nature, scope, or context of the likely exposure of marine mammal species to any of the potential stressor(s) associated with the action (e.g. sound or visual stimuli), through better understanding of one or more of the following: The action itself and its

environment (e.g. sound source characterization, propagation, and ambient noise levels); the affected species (e.g. life history or dive pattern); the likely co-occurrence of marine mammal species with the action (in whole or part) associated with specific adverse effects; and/or the likely biological or behavioral context of exposure to the stressor for the marine mammal (e.g. age class of exposed animals or known pupping, calving or feeding areas).

3. An increase in our understanding of how individual marine mammals respond (behaviorally or physiologically) to the specific stressors associated with the action (in specific contexts, where possible, e.g., at what distance or received level).

4. An increase in our understanding of how anticipated individual responses, to individual stressors or anticipated combinations of stressors, may impact either: the long-term fitness and survival of an individual; or the population, species, or stock (e.g. through effects on annual rates of recruitment or survival).

5. An increase in our understanding of how the activity affects marine mammal habitat, such as through effects on prey sources or acoustic habitat (e.g., through characterization of longer-term contributions of multiple sound sources to rising ambient noise levels and assessment of the potential chronic effects on marine mammals).

6. An increase in understanding of the impacts of the activity on marine mammals in combination with the impacts of other anthropogenic activities or natural factors occurring in the region.

7. An increase in our understanding of the effectiveness of mitigation and monitoring measures.

8. An increase in the probability of detecting marine mammals (through improved technology or methodology), both specifically within the safety zone (thus allowing for more effective implementation of the mitigation) and in general, to better achieve the above goals.

Proposed Monitoring Measures

Monitoring will provide information on the numbers of marine mammals potentially affected by the exploration operations and facilitate real-time mitigation to prevent injury of marine mammals by industrial sounds or activities. These goals will be accomplished in the Beaufort Sea during 2014 by conducting vessel-based monitoring from both source vessels and the mitigation vessel and an acoustic monitoring program using a bottom-mounted hydrophone array to document marine mammal presence and distribution in the vicinity of the survey area.

Visual monitoring by Protected Species Observers (PSOs) during seismic survey operations, and periods when these surveys are not occurring, will provide information on the numbers of marine mammals potentially affected by these activities and facilitate real-time mitigation to prevent impacts to marine mammals by industrial sounds or operations. Vessel-based PSOs onboard the survey vessels and mitigation vessel will record the numbers and species of marine mammals observed in the area and any observable reaction of marine mammals to the survey activities in the Beaufort Sea.

Visual-Based Protected Species Observers (PSOs)

The visual-based marine mammal monitoring will be implemented by a team of experienced PSOs, including both biologists and Inupiat personnel. PSOs will be stationed aboard the survey vessels and mitigation vessel through the duration of the project. The vessel-based marine mammal monitoring will provide the basis for real-time mitigation measures as discussed in the Mitigation Measures section. In addition, monitoring results of the vessel-based monitoring program will include the estimation of the number of ''takes'' as stipulated in the IHA.

(1) Protected Species Observers

Vessel-based monitoring for marine mammals will be done by trained PSOs throughout the period of survey activities. The observers will monitor the occurrence of marine mammals near the survey vessel during all daylight periods during operation, and during most daylight periods when operations are not occurring. PSO duties will include watching for and identifying marine mammals; recording their numbers, distances, and reactions to the survey operations; and documenting ''take by harassment.''

A sufficient number of PSOs will be required onboard each survey vessel to meet the following criteria:

- 100% monitoring coverage during all periods of survey operations in daylight;
- maximum of 4 consecutive hours on watch per PSO; and
- maximum of 12 hours of watch time per day per PSO.

PSO teams will consist of Inupiat observers and experienced field biologists. Each vessel will have an experienced field crew leader to supervise the PSO team. The total number of PSOs may decrease later in the season as the duration of daylight decreases.

(2) Observer Qualifications and Training

Crew leaders and most PSOs will be individuals with experience as observers during recent seismic, site clearance and shallow hazards, and other monitoring projects in Alaska or other offshore areas in recent years. New or inexperienced PSOs will be paired with an experienced PSO or experienced field biologist so that the quality of marine mammal observations and data recording is kept consistent.

Biologist-observers will have previous marine mammal observation experience, and field crew leaders will be highly experienced with previous vessel-based marine mammal monitoring and mitigation projects. Resumes for those individuals will be provided to NMFS for review and acceptance of their qualifications. Inupiat observers will be experienced in the region and familiar with the marine mammals of the area. All observers will complete a NMFS-approved observer training course designed to familiarize individuals with monitoring and data collection procedures.

PSOs will complete a two or three-day training and refresher session on marine mammal monitoring, to be conducted shortly before the anticipated start of the 2014 open-water season. Any exceptions will have or receive equivalent experience or training. The training session(s) will be conducted by qualified marine mammalogists with extensive crew-leader experience during previous vessel-based seismic monitoring programs.

(3) Marine Mammal Observer Protocol

Two protected species observers (PSOs) will be stationed on each source vessel. An additional 2 or 3 PSOs will be stationed on the mitigation vessel, and they will work in concert with the PSOs stationed aboard the source vessels, to provide an early warning of the approach of any bowhead whale, beluga, or other marine mammal. The mitigation vessel plans to conduct zig-zag transects from 2 to 6 km ahead of the source vessel (based on water depth and weather conditions) to effectively monitor the 160 dB zone of influence and to also monitor the edge of the 180 dB isopleth.

The PSOs will watch for marine mammals at the seismic operation during all periods of source operations and for a minimum of 30 minutes prior to the planned start of airgun or pinger

operations after an extended shut down. SAE vessel crew and operations personnel will also watch for marine mammals (insofar as practical) to assist and alert the PSOs for the airgun(s) to be shut down if marine mammals are observed in or about to enter the exclusion zone.

The PSOs will watch for marine mammals from the best available vantage point on the survey vessels, typically the bridge. The PSOs will scan the area around the vessel systematically with reticle binoculars (e.g., 7×50 and $16–40 \times 80$) and with the naked eye. Laser range finders (Leica LRF 1200 laser rangefinder or equivalent) will be available to assist with distance estimation.

The observers aboard the survey and mitigation vessels will give particular attention to the areas within the marine mammal exclusion zones around the source vessels. These zones are the maximum distances within which received levels may exceed 180 dB (rms) re 1 μPa (rms) for cetaceans, or 190 dB (rms) re 1 μPa for pinnipeds.

When a marine mammal is seen approaching or within the exclusion zone applicable to that species, the seismic survey crew will be notified immediately so that mitigation measures called for in the applicable authorization(s) can be implemented.

Night-vision equipment (Generation 3 binocular image intensifiers or equivalent units) will be available for use if and when needed. Past experience with night-vision devices (NVDs) in the Beaufort Sea and elsewhere has indicated that NVDs are not nearly as effective as visual observation during daylight hours (e.g., Harris *et al.* 1997, 1998; Moulton and Lawson 2002).

(4) Field Data-Recording

The PSOs will record field observation data and information about marine mammal sightings that include:

- Species, group size, age/size/sex categories (if determinable);
- physical description of features that were observed or determined not to be present in the case of unknown or unidentified animals;
- behavior when first sighted and after initial sighting, heading (if consistent);
- bearing and distance from observer, apparent reaction to activities (e.g., none, avoidance, approach, paralleling, etc.), closest point of approach, and behavioral pace;
- time, location, speed, and activity of the source and mitigation vessels, sea state, ice cover, visibility, and sun glare; and
- positions of other vessel(s) in the vicinity.

Spotted Seal Haulout Monitoring

Given that information on seasonal use of haulout sites by spotted seals remains elusive, SAE is proposing a monitoring program in 2014 largely designed to identify where seals haulout in the action area and to determine whether some areas would need additional monitoring later in 2014 or whether additional mitigation measures would need to be imposed on SAE's future schedule and shot layout. The monitoring would include a biweekly boat-based survey, with the first survey on August 1 and the last survey two weeks after the seismic survey is completed for the year. The survey would begin at the village of Nuiqsut and would initially follow the far west channel of the Colville River, survey all the outer islands of the river delta, and then return to Nuiqsut following the farthest east river channel. The survey would traverse approximately 75 mi and take about a day to complete. All seals will be identified to species, and GPS location and whether the animals were hauled out or in the water will be noted. Collected data will be combined with available traditional knowledge and historical information to determine whether there are locations of consistent seal haulout use that might be affected by proposed seismic surveys. If sites of suspected high use are found, SAE should contact NMFS and the North Slope Borough Department of Wildlife to identify additional mitigation measures to minimize impacts to these sites.

Passive Acoustic Monitoring

(1) Sound Source Measurements

Prior to or at the beginning of the seismic survey, sound levels will be measured as a function of distance and direction from the proposed seismic source array (full array and reduced to a single mitigation airgun). Results of the acoustic characterization and SSV will be used to empirically refine the modeled distance estimates of the pre-season 190 dB, 180 dB, 170 dB, and 160 dB isopleths. The refined SSV exclusion zones will be used for the remainder of the seismic survey. Distance estimates for the 120 dB isopleth will also be modeled. The results of the SSV will be submitted to NMFS within five days after completing the measurements, followed by a report to be submitted within 14 days after completion of the measurements. A more detailed report will be provided to NMFS as part of the required 90-day report following completion of the acoustic program.

(2) Passive Acoustic Monitoring Using Bottom-Mounted Hydrophones

SAE proposes to conduct Passive Acoustical Monitoring (PAM) using specialized autonomous passive acoustical recorders. These recorders will be deployed on the seabed and will record continuously at 64 kHz sample rate and 24-bit samples. The recorders will be calibrated using piston phone calibrators immediately before and after each deployment. These calibrations are accurate to less than 0.5 dB absolute.

The recorders will be configured with a single channel using a sensitive hydrophone and will be configured with an appropriate duty cycle to record at 64 kHz for up to 80 days. The recorders will sit directly on the seabed and will be attached to a ground line with a small weight at its end. Each recorder will be retrieved by using a grapple to catch the ground line and recover the unit. This simple deployment configuration and retrieval procedure has proven to be very effective for deployments in the Beaufort Sea.

PAM Deployment

Four recorders will be deployed in an arrangement surrounding the survey area for the purposes of PAM. The data collected will be used for post-season analysis of marine mammal vocalization detections to help inform an assessment of potential disturbance effects. The PAM data will also provide information about the long-range propagation of the airgun noise.

Recorder Arrangement

The proposed arrangement of recorders would be to place one recorder to the east of the survey region, one to the west, and two in the offshore direction. The exact arrangement will be defined based on the specific survey line configuration and will encompass the boundaries of the survey area. The recorders will be positioned at ranges where the sound levels are expected to have decayed to levels at or below 120 dB re 1 μPa, to be determined following analysis of the SSV data.

Data Analysis

PAM recordings will be processed at the end of the season using marine mammal detection and classification software capable of detecting vocalizations from marine mammals. Particular attention will be given to the detection of bowhead whale vocalizations since this is a species of particular concern due to its importance for local subsistence hunting.

PAM recordings will also be used to detect and quantify airgun pulses from the survey as recorded on the PAM recorders, to provide information about the long-range propagation of the survey noise.

Monitoring Plan Peer Review

The MMPA requires that monitoring plans be independently peer reviewed ''where the proposed activity may affect the availability of a species or stock for taking for subsistence uses'' (16 U.S.C. 1371(a)(5)(D)(ii)(III)). Regarding this requirement, NMFS' implementing regulations state, ''Upon receipt of a complete monitoring plan, and at its discretion, [NMFS] will either submit the plan to members of a peer review panel for review or within 60 days of receipt of the proposed monitoring plan, schedule a workshop to review the plan'' (50 CFR 216.108(d)).

NMFS has established an independent peer review panel to review SAE's marine mammal monitoring plan. The panel met in March 2014 via video and tele-conferencing, and provided comments to NMFS in April. The full panel report can be viewed on the Internet at: *http://www.nmfs.noaa.gov/pr/permits/incidental.htm.*

NMFS provided the panel with SAE's IHA application and monitoring plan and asked the panel to answer the following questions:

1. Will the applicant's stated objectives effectively further the understanding of the impacts of their activities on marine mammals and otherwise accomplish the goals stated above? If not, how should the objectives be modified to better accomplish the goals above?

2. Can the applicant achieve the stated objectives based on the methods described in the plan?

3. Are there technical modifications to the proposed monitoring techniques and methodologies proposed by the applicant that should be considered to better accomplish their stated objectives?

4. Are there techniques not proposed by the applicant (i.e., additional monitoring techniques or methodologies) that should be considered for inclusion in the applicant's monitoring program to better accomplish their stated objectives?

5. What is the best way for an applicant to present their data and results (formatting, metrics, graphics, etc.) in the required reports that are to be submitted to NMFS (i.e., 90-day report and comprehensive report)?

The panel raised particular questions and concerns about three aspects of SAE's original proposed monitoring plan. First, SAE proposed having one PSO conducting marine mammal monitoring from the survey vessel during operations. Citing a 2013 90-day marine mammal monitoring report from TGS (Cate *et al.* 2014), the panel raised concerns that a single PSO would not be able to effectively monitor the entire safety zone. Second, SAE proposed conducting passive acoustic monitoring (PAM) as part of its monitoring program. The panel report stated that SAE's IHA application and its marine mammal monitoring and mitigation plan lacked sufficient detail on the PAM SAE proposed. Third, SAE proposed conducting a pinniped aerial monitoring survey. The panel report stated that SAE's IHA application and proposed plan also lacked sufficient detail on the pinniped aerial survey. The panel further stated that an aerial survey is not an effective way to study pinnipeds, with the possible exception of spotted seal use of land haulouts. In addition, the panel stated that it is nearly impossible to use aerial surveys to make inferences into ice seal density or abundance during the open-water season, when seals are likely to be in the water, because such surveys have extremely high availability bias that cannot be reliably estimated. Finally, the panel stated that the residents of Nuiqsut, located near the Colville River delta, had expressed considerable concerns about the frequency of aerial overflights in the area. The panel determined that the cultural impacts of excessive aerial surveys in this region largely outweighed the value of the ice seal data that could be collected using this methodology. Instead, the panel recommended SAE conduct surveys of the spotted seal coastal haulouts from an unmanned aerial vehicle (UAV), which are considerably quieter than manned aircraft.

Other recommendations from the panel included: (1) Requiring a minimum of two PSOs to be on watch throughout all daylight hours, regardless of whether airguns are firing; (2) documenting marine mammal occurrence, density, and behavior during times when airguns are not operating; (3) submitting summary reports with an initial summary or interpretation of the efficacy, measurements, and observations, rather than raw data, fully processed analyses that include a summary of timeline and spatial representation (e.g., a map, with latitude and longitude clearly shown), or a summary of operations and important observations; (4) providing a complete characterization of the acoustic footprint resulting from various activity states; (5) providing a summary of any and all mitigation measures (e.g., operational shutdowns if they occur) and an assessment of the efficacy of the monitoring methods; and (6) collaborating with other industrial operators in the area to integrate and synthesize monitoring results as much as possible (such as submitting ''sightings'' from their monitoring projects to an online data archive, such as OBIS–SEAMAP) and archiving and making the complete databases available upon request.

Based on the recommendations provided by the panel, NMFS worked with SAE and requested detailed information on the monitoring methodology and survey design. On April 25, 2014, SAE provided an updated IHA application, and on May 15, 2014, an updated Marine Mammal Monitoring and Mitigation Plan (4MP).

In the updated 4MP, SAE provided a detailed description of its plan for using a drift buoy equipped with acoustic sensors for sound source verification (SSV) and a detailed deployment plan for the bottom-mounted hydrophone array for passive acoustic monitoring (PAM) during the seismic survey. In response to the concerns raised by the panel about the pinniped aerial survey, SAE modified the survey protocol to replace the aerial survey with a vessel-based visual survey of spotted seal haulout instead.

NMFS provided the panel with the updated 4MP, for an additional voluntary review. Two of the panel members provided additional comments on SAE's updated 4MP. These panelists again raised concern that the use of a single onboard PSO for marine mammal monitoring would not be adequate to cover the safety zone monitoring. In addition, the panel members raised questions about the use of a drifting buoy for SSV and the marine mammal passive acoustic detection and classification, and requested NMFS to require SAE to consult with NMFS and North Slope Borough Department of Wildlife Management (NSB–DWM) on spotted seal haulout usage prior to issuance of the IHA.

As a result of the independent peer review, NMFS worked with SAE and proposed the following mitigation and monitoring measures based on the panel's recommendations:

(1) PSOs shall monitor and document marine mammal occurrence, density, and behavior for at least some periods when airguns are not operating;

(2) Summaries that represent an initial level of interpretation of the efficacy, measurements, and

observations, rather than raw data, fully processed analyses, or a summary of operations and important observations, shall be given in the final report;

(3) Summaries of all mitigation measures (e.g., operational shutdowns if they occur) and an assessment of the efficacy of the monitoring methods shall be provided in the final report;

(4) A complete characterization of the acoustic footprint resulting from various activity states shall be provided in the final report;

(5) Collaborating with other industrial operators in the area to integrate and synthesize monitoring results as much as possible (such as submitting ''sightings'' from their monitoring projects to an online data archive, such as OBIS–SEAMAP) and archiving and making the complete databases available upon request; and

(6) Spotted Seal Haulout Monitoring: SAE will conduct a biweekly boat survey of spotted seals, before, during, and after the seismic survey, to identify where seals haulout in the action area. The survey will begin at the village of Nuiqsut and follow the far west channel of the Colville River, survey all the outer islands of the river delta, and then return to Nuiqsut following the farthest east river channel. All seals will be identified to species, and GPS location and whether the animals were hauled out or in the water will be noted. Collected data will be combined with available traditional knowledge and historical information to determine whether there are locations of consistent seal haulout use that might be affected by the seismic survey. If sites of suspected high use are found, SAE shall contact NMFS and the NSB–DWM to identify additional mitigation measures to minimize impacts to these sites.

Regarding the panel's recommendation that NMFS require a minimum of two PSOs to be on watch throughout all daylight hours, regardless of whether airguns are firing, NMFS discussed the matter with SAE and SAE reported that its source vessel is small and cannot support extra PSOs, for safety reasons. To address the panel's concerns and to compensate for any potential monitoring inadequacy resulting from having only a single PSO on the source vessel, SAE revised its monitoring plan, so that it will also mobilize a mitigation vessel dedicated to marine mammal monitoring. There will be 2–3 PSOs onboard the mitigation vessel. At any given time, there will be 1–2 PSOs monitoring from the mitigation vessel, in addition to the PSO monitoring from the source vessel. The mitigation vessel will be positioned north and east of the source vessel, or essentially upstream of the bowhead and beluga migration route.

The panel's concern that monitoring by a single PSO was potentially inadequate was based largely on a 90-day monitoring report submitted by TGS (Cate *et al.* 2014), in which a sighting curve was provided showing that during dual-PSO effort from an observation height of 6.5 m, using unaided eye, Fujinon 7 x 50 reticle binoculars, or 25 x 150 Fujinon ''Big-eyes,'' the detection probability dropped by 50% within 150 m of the ship, meaning there could be whales within the exclusion zone that may not be detected. However, the sighting curve developed for that 90-day report was solely based on observations obtained on a 2D seismic survey by TGS in offshore water. SAE plans to survey in relatively calmer coastal shallow waters, and therefore, marine mammal detection rates should be higher for SAE's survey. In addition, the TGS sighting curve does not separate marine mammals by species, but rather combines all sightings from large bowhead whales to small pinnipeds and harbor porpoises. Therefore, NMFS does not believe the sighting curve provided by TGS provides an accurate assessment of species-specific marine mammal detection as a function of distance, particularly for large mysticetes.

As the ultimate goal of adequate monitoring is to provide robust protective measures to prevent marine mammals from being exposed to noise levels that could cause injury (Level A harassment), NMFS analyzed the effectiveness of the monitoring protocol proposed by SAE to make a determination whether the protocol provides adequate measures for protecting marine mammals. One factor that NMFS took into consideration is that the airgun array proposed to be used by SAE for its survey is much smaller than the one used by TGS. Therefore, the ensonified zones from the SAE seismic survey will be much smaller. In addition, marine mammals are known to avoid intense sound and most likely will move out of the area as the seismic vessel approaches. SAE also will have a separate mitigation vessel with additional PSOs to provide additional monitoring of the ensonified zones. Therefore, for this proposed seismic survey, NMFS considers the proposed vessel-based marine mammal monitoring to be adequate.

Reporting Measures

(1) Sound Source Verification Report

A report on the preliminary results of the sound source verification measurements, including the measured 190, 180, 170, and 160 dB (rms) radii of the airgun sources, would be submitted within 14 days after collection of those measurements at the start of the field season. This report will specify the distances of the exclusion zones that were adopted for the survey.

(2) Technical Report

If the IHA is issued, the results of SAE's 2014 vessel-based monitoring, including estimates of ''take'' by harassment, would be presented first in a ''90-day'' draft Technical Report, to be submitted to NMFS within 90 days after the end of the seismic survey, and then in a final Technical Report, which would address any comments NMFS had on the draft. The Technical Report will include:

(a) Summaries of monitoring effort (e.g., total hours, total distances, and marine mammal distribution through the study period, accounting for sea state and other factors affecting visibility and detectability of marine mammals);

(b) Analyses of the effects of various factors influencing detectability of marine mammals (e.g., sea state, number of observers, and fog/glare);

(c) Species composition, occurrence, and distribution of marine mammal sightings, including date, water depth, numbers, age/size/gender categories (if determinable), group sizes, and ice cover;

(d) Data analysis separated into periods when a seismic airgun array (or a single mitigation airgun) is operating and when it is not, to better assess impacts to marine mammals—the final and comprehensive report to NMFS should summarize and plot:

- Data for periods when a seismic array is active and when it is not; and
- The respective predicted received sound conditions over fairly large areas (tens of km) around operations;

(e) Sighting rates of marine mammals during periods with and without airgun activities (and other variables that could affect detectability), such as:

- Initial sighting distances versus airgun activity state;
- closest point of approach versus airgun activity state;
- observed behaviors and types of movements versus airgun activity state;
- numbers of sightings/individuals seen versus airgun activity state;
- distribution around the survey vessel versus airgun activity state; and
- estimates of take by harassment;

(f) Results from all hypothesis tests, including estimates of the associated statistical power, when practicable;

(g) Estimates of uncertainty in all take estimates, with uncertainty expressed

by the presentation of confidence limits, a minimum-maximum, posterior probability distribution, or another applicable method, with the exact approach to be selected based on the sampling method and data available;

(h) A clear comparison of authorized takes and the level of actual estimated takes; and

(i) The methodology used to estimate marine mammal takes and relative abundance from the towed PAM.

(3) Notification of Injured or Dead Marine Mammals

In the unanticipated event that the specified activity clearly causes the take of a marine mammal in a manner prohibited by the IHA (if issued), such as an injury (Level A harassment), serious injury, or mortality (e.g., ship-strike, gear interaction, and/or entanglement), SAE would immediately cease the specified activities and immediately report the incident to the Chief of the Permits and Conservation Division, Office of Protected Resources, NMFS, and the Alaska Regional Stranding Coordinators. The report would include the following information:

- Time, date, and location (latitude/longitude) of the incident;
- Name and type of vessel involved;
- Vessel's speed during and leading up to the incident;
- Description of the incident;
- Status of all sound source use in the 24 hours preceding the incident;
- Water depth;
- Environmental conditions (e.g., wind speed and direction, Beaufort sea state, cloud cover, and visibility);
- Description of all marine mammal observations in the 24 hours preceding the incident;
- Species identification or description of the animal(s) involved;
- Fate of the animal(s); and
- Photographs or video footage of the animal(s) (if equipment is available).

Activities would not resume until NMFS is able to review the circumstances of the prohibited take. NMFS would work with SAE to determine what is necessary to minimize the likelihood of further prohibited take and ensure MMPA compliance. SAE would not be able to resume their activities until notified by NMFS via letter, email, or telephone.

In the event that SAE discovers an injured or dead marine mammal, and the lead PSO determines that the cause of the injury or death is unknown and the death is relatively recent (i.e., in less than a moderate state of decomposition as described in the next paragraph), SAE would immediately report the incident to the Chief of the Permits and Conservation Division, Office of Protected Resources, NMFS, and the NMFS Alaska Stranding Hotline and/or by email to the Alaska Regional Stranding Coordinators. The report would include the same information identified in the paragraph above. Activities would be able to continue while NMFS reviews the circumstances of the incident. NMFS would work with SAE to determine whether modifications in the activities are appropriate.

In the event that SAE discovers an injured or dead marine mammal, and the lead PSO determines that the injury or death is not associated with or related to the activities authorized in the IHA (e.g., previously wounded animal, carcass with moderate to advanced decomposition, or scavenger damage), SAE would report the incident to the Chief of the Permits and Conservation Division, Office of Protected Resources, NMFS, and the NMFS Alaska Stranding Hotline and/or by email to the Alaska Regional Stranding Coordinators, within 24 hours of the discovery. SAE would provide photographs or video footage (if available) or other documentation of the stranded animal sighting to NMFS and the Marine Mammal Stranding Network. SAE can continue its operations under such a case.

Monitoring Results From Previously Authorized Activities

SAE requested an IHA for a 3D OBN seismic survey in the Beaufort Sea in 2013, but the IHA application was withdrawn before an IHA was issued. Therefore, there are no previous monitoring results from this project.

Estimated Take by Incidental Harassment

Except with respect to certain activities not pertinent here, the MMPA defines ''harassment'' as: Any act of pursuit, torment, or annoyance which (i) has the potential to injure a marine mammal or marine mammal stock in the wild [Level A harassment]; or (ii) has the potential to disturb a marine mammal or marine mammal stock in the wild by causing disruption of behavioral patterns, including, but not limited to, migration, breathing, nursing, breeding, feeding, or sheltering [Level B harassment].

Only take by Level B behavioral harassment of some species is anticipated as a result of SAE's proposed 3D OBN seismic survey. NMFS expects marine mammal takes could result from noise propagation from operation of seismic airguns. NMFS does not expect marine mammals would be taken by collision with seismic and support vessels, because the vessels will be moving at low speeds, and PSOs on the survey vessels and the mitigation vessel will be monitoring for marine mammals and will be able to alert the vessels to avoid any marine mammals in the area.

For impulse sounds, such as those produced by the airguns proposed to be used in SAE's 3D OBN seismic surveys, NMFS uses the 160 dB (rms) re 1 μPa isopleth to indicate the onset of Level B harassment. SAE provided calculations of the 160-dB isopleths expected to be produced by the proposed seismic surveys and then used those isopleths to estimate takes by harassment. NMFS used those calculations to make the necessary MMPA findings. SAE provided a full description of the methodology used to estimate takes by harassment in its IHA application, which is also provided in the following sections.

Acoustic Footprint

The areas ensonified by seismic airgun noise that could cause marine mammal takes under MMPA was determined by assuming that the entire survey area is ensonified (given that the distance to the 160 dB isopleth during seismic survey is greater than the distance between seismic source lines), and adding a buffer area around the survey box corresponding to the distance to the 160 dB isopleth. The estimated distance to the 160 dB isopleth is 3 kilometers (1.86 miles) (Table 1) based on a sound source of 236.55 dB re 1 μPa (rms) for the 1,760 in^3 seismic array and a spreading model of 18 LogR—0.0047R estimated for similar Beaufort nearshore waters (BP Liberty) by Aerts *et al.* (2008). Placing a 3-kilometer buffer around the 1,882-km^2 (727-mi^2) seismic source area expands the ensonification (or Zone of Influence [ZOI]) area to approximately 2,295 km^2 (886 mi^2), and represents the ZOI for pinnipeds. (The distance to the 160 dB isopleth when operating the 880 in^3 airgun array is 1.5 km (0.9 mi).)

TABLE 1—MODELED AIRGUN ARRAY SOURCE LEVELS AND EXCLUSION ZONE AND ZONES OF INFLUENCE RADII

Array size (in^3)	Source level (dB)	190 dB radius (m)	180 dB radius (m)	160 dB radius (m)
440	221.08	126	325	1,330
880	226.86	167	494	1,500
1,760	236.55	321	842	2,990

Within the 2,295 km^2 ensonified area, 19% (431 km^2) falls within the 0 to 1.5 m depth range, 14% (326 km^2) falls within the 1.5 to 5 m range, 39% (903 km^2) with the 5 to 15 m range, and 28% (635 km^2) within waters greater than 15 m deep (bowhead migration corridor). The distribution of these depth ranges is found in Figure 6–1 of the IHA application.

Marine Mammal Densities

Density estimates were derived for bowhead whales, beluga whales, ringed seals, spotted seals, and bearded seals as described below and shown in Table 2. There are no available Beaufort Sea density estimates for gray whales, or extralimital species such as killer whales, harbor porpoises, humpback whales, narwhals, and ribbon seals. Encountering these animals during the seismic program would be unexpected. The density derivations for the five species presented in Table 2 are provided in the discussions below.

TABLE 2—MARINE MAMMAL DENSITIES (#/km^2) IN THE BEAUFORT SEA

Species	Summer	Fall
Bowhead whale	0.0672	0.0910
Beluga whale	0.0327	0.0175
Ringed seal	0.3547	0.2510
Spotted seal	0.0177	0.0125
Bearded seal	0.0177	0.0125

Bowhead Whale: The summer density estimate for bowhead whales was derived from July and August aerial survey data collected in the Beaufort Sea during the Aerial Surveys of Arctic Marine Mammals (ASAMM) program in 2012 and 2013. During this period, 276 bowhead whales were record along 24,560 km of transect line, or 0.0112 whales per km of transect line. Applying an effective strip half-width (ESW) of 1.15 (Ferguson and Clarke 2013), results in an uncorrected density of 0.0049. Thomas *et al.*'s (2002) correction factors (g(0)) for availability (0.144) and observer (0.505) bias were applied producing an estimated density of 0.0672 whales per km^2. This is a much higher density than previous estimates (e.g., Brandon *et al.* 2011) due to relatively high numbers of whales recorded in the Beaufort Sea in August 2013. In 2013, 205 whales were recorded along 9,758 km of transect line (corrected density = 0.1251), with 78% of the sightings (160 whales) recorded in the easternmost blocks, Blocks 4, 5, 6, and 7. In contrast, 26 of the 71 whales (37%) recorded on-transect during summer 2012 were at or near Barrow Canyon (Block 12), or the western extreme of the Alaskan Beaufort Sea, while another 26 (37%) were recorded at the eastern extreme (Blocks 4, 5, 6, and 7). For both years combined, only 8 of the 276 (2.9%) recorded during the summer were found in Block 3 where the seismic survey is planned.

Fall density estimate was determined from September and October ASAMM data collected from 2006 to 2013. The Western Arctic stock of bowhead whale has grown considerably since the late 1970s; thus, data collected prior to 2006 probably does not well represent current whale densities. From 2006 to 2013, 1,286 bowhead whales were recorded along 84,400 km of transect line, or 0.1524 per km. Using an ESW of 1.15 results in an uncorrected density of 0.0066. Applying the availability and observer bias correction factors from Thomas *et al.* (2002) derives a corrected fall density estimate of 0.0910.

Beluga Whale: There is little information on summer use by beluga whales in the Beaufort Sea. Moore *et al.* (2000) reported that only 9 beluga whales were recorded in waters less than 50 m deep during 11,985 km of transect survey effort, or about 0.00057 whales per km. Assuming an ESW of 0.614 and a 2.62 (Lloyd and Frost 1995) correction factor for whales missed (availability and observer bias of adults) and a 1.18 (Brodie 1971) correction factor for dark juveniles, both correction factors used by NMFS for the annual Alaska Stock Assessment Reports, the derived corrected density would be 0.0014 whales per mi^2. The same data showed much higher beluga numbers in deeper waters.

During the summer aerial surveys conducted during the 2012 ASAMM program (Clarke *et al.* 2013), 5 beluga whales were observed along 1,431 km of transect in waters less than 20 m deep and between longitudes 140°W and 154°W (the area within which the seismic survey would fall). This equates to 0.0035 whales per km of trackline and an uncorrected density of 0.0028, assuming an ESW of 0.614. Applying correction factors for animals missed (2.62 for adults and 1.18 for juveniles) results in a corrected summer density estimate of 0.0088. Summer beluga data was also collected in 2013. This data, currently available in posted daily reports, does not parse the data by depth or longitude and, therefore, is not yet directly comparable to the 2012 data. Fourteen whales were observed along 340 km of survey in block 3 in 2013, which is the survey block in which the proposed seismic survey area falls. Adding the Block 3 data to the 2012 data results in 23 whales observed over 1,771 km of transect effort, or 0.0130 whales per km and 0.0107 per km^2. Applying the correction factors described above, the summer density estimate would increase to 0.0327. This density value is probably inflated due to the limited survey effort in 2013, but it represents a conservative estimate and is the value used in the take estimate.

Calculated fall beluga densities are approximately twice as high as summer

densities. Between 2006 and 2012, 2,210 beluga were recorded along 79,586 km of transect line flown during September and October, or 0.0278 beluga per km of transect. Assuming an ESW of 0.614 gives an uncorrected density of 0.0226, and a corrected density of 0.0699. However, unlike in summer, almost none of the fall migrating belugas were recorded in waters less than 20 meters deep. For years where depth data is available (2006, 2009–2012), only 11 of 1,605 (1%) recorded belugas were found in waters less than 20 m during the fall. To take into account this bias in distribution, but to remain conservative, the corrected density estimate is reduced to 25%, or 0.0175.

Ringed Seal: Surveys for ringed seals have been recently conducted in the Beaufort Sea by Kingsley (1986), Frost *et al.* (2002), Moulton and Lawson (2002), Green and Negri (2005), and Green *et al.* (2006, 2007). The shipboard monitoring surveys by Green and Negri (2005) and Green *et al.* (2006, 2007) were not systematically based, but are useful in estimating the general composition of pinnipeds in the Beaufort nearshore, including the Colville River Delta. Frost *et al.'s* aerial surveys were conducted during ice coverage and don't fully represent the summer and fall conditions under which the Beaufort surveys will occur. Moulton and Lawson (2002) conducted summer shipboard-based surveys for pinnipeds along the nearshore Beaufort Sea coast and developed seasonal average and maximum densities representative of SAE's Beaufort summer seismic project, while Kingsley (1986) conducted surveys along the ice margin representing fall conditions. Therefore, the Moulton and Lawson (2002) and Kingsley (1986) ringed seal densities were used as the estimated densities of ringed seals in the survey area.

Spotted Seal: Green and Negri (2005) and Green *et al.* (2006, 2007) recorded pinnipeds during barging activity between West Dock and Cape Simpson, and found high numbers of ringed seal in Harrison Bay, and peaks in spotted seal numbers off the Colville River Delta where a haulout site is located. Approximately 5% of all phocid sightings recorded by Green and Negri (2005) and Green *et al.* (2006, 2007) were spotted seals, which provide a suitable estimate of the proportion of ringed seals versus spotted seals in the Colville River Delta and Harrison Bay. Thus, the estimated densities of spotted seals in the seismic survey area were derived by multiplying the ringed seal densities from Moulton and Lawson (2002) and Kingsley (1986) by 0.05.

Bearded Seal: Bearded seals were also recorded in Harrison Bay and the Colville River Delta by Green and Negri (2005) and Green *et al.* (2006, 2007), but at lower proportions than spotted seals, when both were compared to ringed seals. However, estimating bearded seal densities based on the proportion of bearded seals observed during the barge-based surveys results in density estimates that appear unrealistically low given density estimates from other studies, and especially given that nearby Thetis Island is used as a base for annually hunting this seal (densities are seasonally high enough for focused hunting). To be conservative, the bearded seal density values used in this application are derived from Stirling *et al.'s* (1982) observations that the proportion of eastern Beaufort Sea bearded seals is 5% that of ringed seals, which is similar to the calculations done for spotted seals.

Exposure Calculations

The estimated potential harassment take of local marine mammals by SAE's Beaufort seismic survey project was determined by multiplying the animal densities in Table 2 by the area ensonified by seismic airgun noise greater than 160 dB re 1 μPa (rms) that constitutes habitat for each respective species. For pinnipeds, which occupy all water depths, this includes the entire seismic survey area, plus the additional 3-km (1.86-mi) buffer of noise exceeding 160 dB, or 2,295 km^2 (886 mi^2).

Although the vast majority of bowhead whales migrate through the Beaufort Sea in waters greater than 15 m (50 ft) deep (Miller *et al.* 2002), feeding and migrating bowheads have been found in waters as shallow as 5 m (16 ft) (Clarke *et al.* 2011). Thus, the seismic survey area potentially inhabitable by bowhead whales is all waters greater than 5 m deep. This area, including the 3-km buffer, is 1,538 km^2 (594 mi^2).

Beluga whales have been observed inside the barrier islands, where they would have to traverse water depths as low as 1.8 m, but these whales are unlikely to inhabit the shallowest water (<1.5 m deep) inside the barrier islands, where stranding risk can be high. For the proposed seismic survey, the area of beluga habitat potentially ensonified (>160 dB) by the seismic operations is the waters greater than 1.5 m (5 ft) deep, plus the 3-km buffer, or approximately 1,864 km^2 (720 mi^2). The resulting exposure calculations are found in Table 3.

TABLE 3—THE AVERAGE NUMBER OF ANIMALS POTENTIALLY EXPOSED TO RECEIVED SOUND LEVELS > 160 dB

Species	Summer	Fall	Total	Population	% Affected
Bowhead whale	103	140	243	12,631	1.9
Beluga whale (Beaufort Sea stock)	60	33	93	39,258	0.2
Beluga whale (E. Chukchi Sea stock)	60	33	93	3,710	2.5
Ringed seal	814	576	1,390	249,000	0.6
Spotted seal	41	29	70	101,568	0.1
Bearded seal	41	29	70	155,000	0.1

The estimated number of marine mammal exposures was based on the average density in the area of summer or fall habitat that could be ensonified by SAE's proposed activities. Given that the estimated densities are overestimates of the expected densities in Block 3 (based on ASAMM survey data), especially for bowhead and beluga whales, no adjustments were made to account for variability. Most of the summer sightings are well east or west of Block 3, and the great majority of the fall sightings are in deeper water than Block 3.

The take estimates do not account for mitigation measures that will be implemented. These mitigation measures include shutting down operations during the fall bowhead hunt (thereby avoiding any noise exposure during the peak of fall bowhead whale and beluga migration) and plans for conducting the seismic survey in August in waters greater than 15 m (50 ft) deep (thereby avoiding seismic survey within the bowhead whale migration corridor after the fall hunt). These measures, coupled with the ramp up procedures for airguns, should reduce the estimated take from seismic survey operations.

The estimated take as a percentage of the marine mammal stock is 2.5% or less in all cases (Table 3). The highest percent of population estimated to be taken is 2.5% for the East Chukchi Sea stock of beluga whale. However, that percentage assumes that all 93 beluga whales taken are from that population. Similarly, the 0.2% potential take percentage for the Beaufort Sea stock of beluga whale assumes that all 93 beluga whales are taken from the Beaufort Sea stock. Most likely, some beluga whales would be taken from each stock, meaning fewer than 93 beluga whales would be taken from either individual stock. Therefore, the take of beluga whales as a percentage of populations would likely be below 0.2 and 2.5% for the Beaufort Sea and East Chukchi Sea stocks, respectively. In addition, the estimated take for the East Chukchi Sea stock does not take into account mitigation measures, such as curtailing survey activities during the fall bowhead whale hunt, shutdowns within the harassment zone for cow/calf pairs, and possibly completing the survey of the more offshore waters in the summer. These actions would reduce the potential encounters with bowhead and beluga whales in the fall.

Analysis and Preliminary Determinations

Negligible Impact

Negligible impact is ''an impact resulting from the specified activity that cannot be reasonably expected to, and is not reasonably likely to, adversely affect the species or stock through effects on annual rates of recruitment or survival'' (50 CFR 216.103). A negligible impact finding is based on the lack of likely adverse effects on annual rates of recruitment or survival (i.e., population-level effects). An estimate of the number of Level B harassment takes, alone, is not enough information on which to base an impact determination. In addition to considering estimates of the number of marine mammals that might be ''taken'' through behavioral harassment, NMFS must consider other factors, such as the likely nature of any responses (their intensity, duration, etc.), the context of any responses (critical reproductive time or location, migration, etc.), as well as the number and nature of estimated Level A harassment takes, the number of estimated mortalities, effects on habitat, and the status of the species.

No injuries or mortalities are anticipated to occur as a result of SAE's proposed 3D OBS seismic survey, and none are proposed to be authorized. Additionally, animals in the area are not expected to incur hearing impairment (i.e., TTS or PTS) or non-auditory physiological effects. The takes that are anticipated and authorized are expected to be limited to short-term Level B behavioral harassment. While the airguns are expected to be operated for approximately 49 days within a 70-day period, the project timeframe will occur when cetacean species are typically not found in the project area or are found only in low numbers. While pinnipeds are likely to be found in the proposed project area more frequently, their distribution is dispersed enough that they likely will not be in the Level B harassment zone continuously. As mentioned previously in this document, pinnipeds appear to be more tolerant of anthropogenic sound than mysticetes.

Most of the bowhead whales encountered will likely show overt disturbance (avoidance) only if they receive airgun sounds with levels ≥ 160 dB re 1 μPa. Odontocete reactions to seismic airgun pulses are generally assumed to be limited to shorter distances from the airgun than are those of mysticetes, in part because odontocete low-frequency hearing is assumed to be less sensitive than that of mysticetes. However, at least when in the Canadian Beaufort Sea in summer, belugas appear to be fairly responsive to seismic energy, with few being sighted within 6–12 mi (10–20 km) of seismic vessels during aerial surveys (Miller *et al.* 2005). Belugas will likely occur in small numbers in the Beaufort Sea during the survey period and few will likely be affected by the survey activity.

As noted, elevated background noise level from the seismic airgun reverberant field could cause acoustic masking to marine mammals and reduce their communication space. However, even though the decay of the signal is extended, the fact that pulses are separated by approximately 8 to 10 seconds for each individual source vessel (or 4 to 5 seconds when taking into account the two separate source vessels stationed 300 to 335 m (990 to 1,100 ft) apart) means that overall received levels at distance are expected to be much lower, thus resulting in less acoustic masking.

Taking into account the mitigation measures that are planned, effects on marine mammals are generally expected to be restricted to avoidance of a limited area around SAE's proposed open-water activities and short-term changes in behavior, falling within the MMPA definition of ''Level B harassment.'' The many reported cases of apparent tolerance by cetaceans to seismic exploration, vessel traffic, and some other human activities show that co-existence is possible. Mitigation measures, such as controlled vessel speed, dedicated marine mammal observers, non-pursuit, ramp up procedures, and shut downs or power downs when marine mammals are seen within defined ranges, will further reduce short-term reactions and minimize any effects on hearing sensitivity. In all cases, the effects are expected to be short-term, with no lasting biological consequence.

Of the five marine mammal species likely to occur in the proposed marine survey area, bowhead whales and ringed and bearded seals are listed as endangered or threatened under the ESA. These species are also designated as ''depleted'' under the MMPA. Despite these designations, the Bering-Chukchi-Beaufort stock of bowheads has been increasing at a rate of 3.4 percent annually for nearly a decade (Allen and Angliss 2010). Additionally, during the 2001 census, 121 calves were counted, which was the highest yet recorded. The calf count provides corroborating evidence for a healthy and increasing population (Allen and Angliss 2010). There is no critical habitat designated in the U.S. Arctic for the bowhead whales. The Alaska stock of bearded seals, part of the Beringia distinct population segment (DPS), and the Arctic stock of ringed seals have recently been listed by NMFS as threatened under the ESA. The only other species that may occur in the project area that is listed as endangered or threatened under the ESA is the humpback whale, which is also listed as depleted under the MMPA, but the occurrence of humpback whales in the proposed marine survey area is considered very rare. None of the other species that may occur in the project area are listed as threatened or endangered under the ESA or designated as depleted under the MMPA.

Potential impacts to marine mammal habitat were discussed previously in this document (see the ''Anticipated Effects on Habitat'' section). Although some disturbance of food sources of marine mammals is possible, any impacts are anticipated to be minor enough as to not affect rates of recruitment or survival of marine mammals in the area. The marine survey activities would occur in a localized area, and given the vast area of the Arctic Ocean where feeding by marine mammals occurs, any missed feeding opportunities in the direct project area could be offset by feeding opportunities in other available feeding areas.

In addition, no important feeding or reproductive areas are known in the

vicinity of SAE's proposed seismic surveys at the time the proposed surveys are to take place. No critical habitat of ESA-listed marine mammal species occurs in the Beaufort Sea.

Based on the analysis contained herein of the likely effects of the specified activity on marine mammals and their habitat, and taking into consideration the implementation of the proposed monitoring and mitigation measures, NMFS preliminarily finds that the total marine mammal take from SAE's proposed 3D OBS seismic survey in the Beaufort Sea, Alaska, will have a negligible impact on the affected marine mammal species or stocks.

Small Numbers

The requested takes proposed to be authorized represent less than 2.5% of all populations or stocks potentially impacted (see Table 3 in this document). These take estimates represent the percentage of each species or stock that could be taken by Level B behavioral harassment if each animal is taken only once. The numbers of marine mammals estimated to be taken are small proportions of the total populations of the affected species or stocks. In addition, the mitigation and monitoring measures (described previously in this document) proposed for inclusion in the IHA (if issued) are expected to reduce even further any potential disturbance to marine mammals.

Based on the analysis contained herein of the likely effects of the specified activity on marine mammals and their habitat, and taking into consideration the implementation of the mitigation and monitoring measures, NMFS preliminarily finds that small numbers of marine mammals will be taken relative to the populations of the affected species or stocks.

Impact on Availability of Affected Species or Stock for Taking for Subsistence Uses

Relevant Subsistence Uses

The proposed seismic activities will occur within the marine subsistence area used by the village of Nuiqsut. Nuiqsut was established in 1973 at a traditional location on the Colville River providing equal access to upland (e.g., caribou, Dall sheep) and marine (e.g., whales, seals, and eiders) resources (Brown 1979). Although Nuiqsut is located 40 km (25 mi) inland, bowhead whales are still a major fall subsistence resource. Although bowhead whales have been harvested in the past all along the barrier islands, Cross Island is the site currently used as the fall whaling base, as it includes cabins and equipment for butchering whales. However, whalers must travel about 160 km (100 mi) to annually reach the Cross Island whaling camp, which is located in a direct line over 110 direct km (70 mi) from Nuiqsut. Whaling activity usually begins in late August with the arrival whales migrating from the Canadian Beaufort Sea, and may occur as late as early October, depending on ice conditions and quota fulfillment. Most whaling occurs relatively near (<16 km or <10 mi) the island, largely to prevent meat spoilage that can occur with a longer tow back to Cross Island. Since 1993, Cross Island hunters have harvested one to four whales annually, averaging three.

Cross Island is located 70 km (44 mi) east of the eastern boundary of the seismic survey box. (Point Barrow is over 180 km [110 mi] outside the potential survey box.) Seismic activities are unlikely to affect Barrow or Cross Island based whaling, especially if the seismic operations temporarily cease during the fall bowhead whale hunt.

Although Nuiqsut whalers may incidentally harvest beluga whales while hunting bowheads, these whales are rarely seen and are not actively pursued. Any harvest that would occur would most likely be in association with Cross Island.

The potential seismic survey area is also used by Nuiqsut villagers for hunting seals. All three seal species that are likely to be taken—ringed, spotted, and bearded—are hunted. Sealing begins in April and May when villagers hunt seals at breathing holes in Harrison Bay. In early June, hunting is concentrated at the mouth of the Colville River, where ice breakup flooding results in the ice thinning and seals becoming more visible.

Once the ice is clear of the Delta (late June), hunters will hunt in open boats along the ice edge from Harrison Bay to Thetis Island in a route called ''round the world.'' Thetis Island is important as it provides a weather refuge and a base for hunting bearded seals. During July and August, ringed and spotted seals are hunted in the lower 65 km (40 mi) of the Colville River proper.

In terms of pounds, approximately one-third of the village of Nuiqsut's annual subsistence harvest is marine mammals (fish and caribou dominate the rest), of which bowhead whales contribute by far the most (Fuller and George 1999). Seals contribute only 2 to 3% of annual subsistence harvest (Brower and Opie 1997, Brower and Hepa 1998, Fuller and George 1999). Fuller and George (1999) estimated that 46 seals were harvested in 1992. The more common ringed seals appear to dominate the harvest, although the larger and thicker-skinned bearded seals are probably preferred. Spotted seals occur in the Colville River Delta in small numbers, which is reflected in the harvest.

Available harvest records suggest that most seal harvest occurs in the months preceding the proposed August start of the seismic survey, when waning ice conditions provide the best opportunity to approach and kill hauled out seals. Much of the late summer seal harvest occurs in the Colville River as the seals follow fish runs upstream. Still, open-water seal hunting could occur coincident with the seismic surveys, especially bearded seal hunts based from Thetis Island. In general, however, given the relatively low contribution of seals to the Nuiqsut subsistence, and the greater opportunity to hunt seals earlier in the season, any potential impact by the seismic survey on seal hunting is likely remote.

Potential Impacts to Subsistence Uses

NMFS has defined ''unmitigable adverse impact'' in 50 CFR 216.103 as: ''An impact resulting from the specified activity: (1) That is likely to reduce the availability of the species to a level insufficient for a harvest to meet subsistence needs by: (i) Causing the marine mammals to abandon or avoid hunting areas; (ii) Directly displacing subsistence users; or (iii) Placing physical barriers between the marine mammals and the subsistence hunters; and (2) That cannot be sufficiently mitigated by other measures to increase the availability of marine mammals to allow subsistence needs to be met.

Noise and general activity during SAE's proposed 3D OBS seismic survey have the potential to impact marine mammals hunted by Native Alaskans. In the case of cetaceans, the most common reaction to anthropogenic sounds (as noted previously) is avoidance of the ensonified area. In the case of bowhead whales, this often means that the animals divert from their normal migratory path by several kilometers. Additionally, general vessel presence in the vicinity of traditional hunting areas could negatively impact a hunt. Native knowledge indicates that bowhead whales become increasingly ''skittish'' in the presence of seismic noise. Whales are more wary around the hunters and tend to expose a much smaller portion of their back when surfacing, which makes harvesting more difficult. Additionally, natives report that bowheads exhibit angry behaviors, such as tail-slapping, in the presence of seismic activity, which translate to

danger for nearby subsistence harvesters.

Responses of seals to seismic airguns are expected to be negligible. Bain and Williams (2006) studied the responses of harbor seals, California sea lions, and Steller sea lions to seismic airguns and found that seals at exposure levels above 170 dB re 1 μPa (peak-peak) often showed avoidance behavior, including generally staying at the surface and keeping their heads out of the water, but that the responses were not overt, and there were no detectable responses at low exposure levels.

Plan of Cooperation or Measures To Minimize Impacts to Subsistence Hunts

Regulations at 50 CFR 216.104(a)(12) require IHA applicants for activities that take place in Arctic waters to provide a Plan of Cooperation (POC) or information that identifies what measures have been taken and/or will be taken to minimize adverse effects on the availability of marine mammals for subsistence purposes.

SAE has prepared a draft POC, which was developed by identifying and evaluating any potential effects the proposed seismic survey might have on seasonal abundance that is relied upon for subsistence use. For the proposed project, SAE states that it is working closely with the North Slope Borough (NSB) and its partner Kuukpik Corporation, to identify subsistence communities and activities that may take place within or near the project area.

SAE adopted a three-stage process to develop its POC:

Stage 1: SAE attended the AEWC's mini-convention in December 2013, in Anchorage, and presented a description of the seismic survey program to the AEWC. Collaboration meetings were also held in March and April 2014 with Kuukpik Corporation leaders. Kuukpik Corporation is SAE's joint venture partner in the project and on the North Slope of Alaska.

In addition, SAE has been meeting and consulting with nearby communities, namely the NSB planning department and the Fish and Wildlife division. SAE also presented its proposed project and discussed planned activities during community meetings in the villages of Nuiqsut and Kaktovik. The meetings included discussions of SAE's project description, potential ways to resolve potential conflicts, and the proposed operational timeframe. These meetings help to identify any subsistence conflicts and allow SAE to understand community concerns, and requests for communication or mitigation. The following community and stakeholder meetings were conducted:

- December 13, 2013—AEWC
- February 27, 2014—Barrow (NSB)
- February, 10, 11, 12, 2014—AEWC
- January, 15 2014—Nuiqsut
- April 22, 2014—Nuqsut (seals)
- May 14, 2014—Kaktovik

Stage 2: SAE will document results of all meetings and incorporate them into the POC, as applicable, to mitigate concerns. SAE will also review permit stipulations and develop a permit matrix for the crews. SAE will develop appropriate means of communication and a contact list to communicate with appropriate stakeholders, and these will be incorporated into operations. The use of scientific and Inupiat PSOs/Communicators on board the vessels will ensure that appropriate precautions are taken to avoid harassment of marine mammals, including whales, seals, walruses or polar bears. SAE will coordinate the timing and location of operations with the Com-Centers in Deadhorse and Kaktovik to minimize impact to the subsistence activities or the Nuiqsut/Kaktovik bowhead whale hunt.

Stage 3: If a conflict between project activities and subsistence hunting does occur, SAE states that it will immediately contact the project manager and the Com-Center. If avoidance is not possible, the project manager will initiate communication with a representative from the impacted subsistence hunter group(s) to resolve the issue and to plan an alternative course of action.

In addition, SAE and its contractors will work with local villages and Kuukpik Cooperation to identify qualified individuals that are interested in working on its program and provide employment opportunities.

Finally, SAE has signed a Conflict Avoidance Agreement (CAA) with the Alaska whaling communities to further ensure that its proposed open-water seismic survey activities in the Beaufort Sea will not have unmitigable impacts to subsistence activities. NMFS has included appropriate measures identified in the CAA in the proposed IHA.

Unmitigable Adverse Impact Analysis and Preliminary Determination

SAE has adopted a spatial and temporal strategy for its 3D OBN seismic survey that should minimize impacts to subsistence hunters and ensure the sufficient availability of species for hunters to meet subsistence needs. SAE will temporarily cease seismic activities during the fall bowhead whale hunt, which will allow the hunt to occur without any adverse impact from SAE's activities. Although some seal hunting co-occurs temporally with SAE's proposed seismic survey, the locations do not overlap, so SAE's activities will not impact the hunting areas and will not directly displace sealers or place physical barriers between the sealers and the seals. In addition, SAE is conducting the seismic surveys in a joint partnership agreement with Kuukpik Corporation, which allows SAE to work closely with the native communities on the North Slope to plan operations that include measures that are environmentally suitable and that do not impact local subsistence use, and to adjust the operations, if necessary, to minimize any potential impacts that might arise. Based on the description of the specified activity, the measures described to minimize adverse effects on the availability of marine mammals for subsistence purposes, and the proposed mitigation and monitoring measures, NMFS has preliminarily determined that there will not be an unmitigable adverse impact on subsistence uses from SAE's proposed activities.

Endangered Species Act (ESA)

Within the project area, the bowhead whale is listed as endangered and the ringed and bearded seals are listed as threatened under the ESA. NMFS' Permits and Conservation Division has initiated consultation with staff in NMFS' Alaska Region Protected Resources Division under section 7 of the ESA on the issuance of an IHA to SAE under section 101(a)(5)(D) of the MMPA for this activity. Consultation will be concluded prior to a determination on the issuance of an IHA.

National Environmental Policy Act (NEPA)

NMFS is currently conducting an analysis, pursuant to NEPA, to determine whether this proposed IHA may have a significant effect on the human environment. This analysis will be completed prior to the issuance or denial of this proposed IHA.

Proposed Authorization

As a result of these preliminary determinations, NMFS proposes to issue an IHA to SAE for conducting a 3D OBN seismic survey in Beaufort Sea during the 2014 Arctic open-water season, provided the previously mentioned mitigation, monitoring, and reporting requirements are incorporated. The proposed IHA language is provided next.

This section contains a draft of the IHA itself. The wording contained in this section is proposed for inclusion in the IHA (if issued).

(1) This Authorization is valid from August 15, 2014, through October 15, 2014.

(2) This Authorization is valid only for activities associated with open-water 3D seismic surveys and related activities in the Beaufort Sea. The specific areas where SAE's surveys will be conducted are within the Beaufort Sea, Alaska, as shown in Figure 1–1 of SAE's IHA application.

(3)(a) The species authorized for incidental harassment takings, Level B harassment only, are: beluga whales (*Delphinapterus leucas*); bowhead whales (*Balaena mysticetus*); bearded seals (*Erignathus barbatus*); spotted seals (*Phoca largha*); and ringed seals (*P. hispida*).

(3)(b) The authorization for taking by harassment is limited to the following acoustic sources and from the following activities:

(i) 440-in^3, 880-in^3, and 1,760-in^3 airgun arrays and other acoustic sources for 3D open-water seismic surveys; and

(ii) Vessel activities related to open-water seismic surveys listed in (i).

(3)(c) The taking of any marine mammal in a manner prohibited under this Authorization must be reported within 24 hours of the taking to the Alaska Regional Administrator (907–586–7221) or his designee in Anchorage (907–271–3023), National Marine Fisheries Service (NMFS) and the Chief of the Permits and Conservation Division, Office of Protected Resources, NMFS, at (301) 427–8401, or his designee (301–427–8418).

(4) The holder of this Authorization must notify the Chief of the Permits and Conservation Division, Office of Protected Resources, at least 48 hours prior to the start of collecting seismic data (unless constrained by the date of issuance of this Authorization in which case notification shall be made as soon as possible).

(5) Prohibitions

(a) The taking, by incidental harassment only, is limited to the species listed under condition 3(a) above and by the numbers listed in Table 3. The taking by Level A harassment, injury or death of these species or the taking by harassment, injury or death of any other species of marine mammal is prohibited and may result in the modification, suspension, or revocation of this Authorization.

(b) The taking of any marine mammal is prohibited whenever the required source vessel protected species observers (PSOs), required by condition 7(a)(i), are not onboard in conformance with condition 7(a)(i) of this Authorization.

(6) Mitigation

(a) Establishing Exclusion and Disturbance Zones

(i) Establish and monitor with trained PSOs preliminary exclusion zones for cetaceans surrounding the airgun array on the source vessel where the received level would be 180 dB (rms) re 1 μPa. For purposes of the field verification test, described in condition 7(e)(i), these radii are estimated to be 325, 494, and 842 m from the seismic source for the 440-in^3, 880-in^3, and 1,760-in^3 airgun arrays, respectively.

(ii) Establish and monitor with trained PSOs preliminary exclusion zones for pinnipeds surrounding the airgun array on the source vessel where the received level would be 190 dB (rms) re 1 μPa. For purposes of the field verification test, described in condition 7(e)(i), these radii are estimated to be 126, 167, and 321 m from the seismic source for the 440-in^3, 880-in^3, and 1,760-in^3 airgun arrays, respectively.

(iii) Establish zones of influence (ZOIs) for cetaceans and pinnipeds surrounding the airgun array on the source vessel where the received level would be 160 dB (rms) re 1 μPa. For purposes of the field verification test described in condition 7(e)(i), these radii are estimated to be 1,330, 1,500, and 2,990 m from the seismic source for the 440-in^3, 880-in^3, and 1,760-in^3 airgun arrays, respectively.

(iv) Immediately upon completion of data analysis of the field verification measurements required under condition 7(e)(i) below, the new 160-dB, 180-dB, and 190-dB marine mammal ZOIs and exclusion zones shall be established based on the sound source verification.

(b) Vessel Movement Mitigation:

(i) Avoid concentrations or groups of whales by all vessels under the direction of SAE. Operators of support vessels should, at all times, conduct their activities at the maximum distance possible from such concentrations or groups of whales.

(ii) If any vessel approaches within 1.6 km (1 mi) of observed bowhead whales, except when providing emergency assistance to whalers or in other emergency situations, the vessel operator will take reasonable precautions to avoid potential interaction with the bowhead whales by taking one or more of the following actions, as appropriate:

(A) Reducing vessel speed to less than 5 knots within 300 yards (900 feet or 274 m) of the whale(s);

(B) Steering around the whale(s) if possible;

(C) Operating the vessel(s) in such a way as to avoid separating members of a group of whales from other members of the group;

(D) Operating the vessel(s) to avoid causing a whale to make multiple changes in direction; and

(E) Checking the waters immediately adjacent to the vessel(s) to ensure that no whales will be injured when the propellers are engaged.

(iii) When weather conditions require, such as when visibility drops, adjust vessel speed accordingly, but not to exceed 5 knots, to avoid the likelihood of injury to whales.

(c) Mitigation Measures for Airgun Operations

(i) Ramp-up:

(A) A ramp up, following a cold start, can be applied if the exclusion zone has been free of marine mammals for a consecutive 30-minute period. The entire exclusion zone must have been visible during these 30 minutes. If the entire exclusion zone is not visible, then ramp up from a cold start cannot begin.

(B) If a marine mammal(s) is sighted within the exclusion zone during the 30-minute watch prior to ramp up, ramp up will be delayed until the marine mammal(s) is sighted outside of the exclusion zone or the animal(s) is not sighted for at least 15 minutes for pinnipeds, or 30 minutes for cetaceans.

(C) If, for any reason, electrical power to the airgun array has been discontinued for a period of 10 minutes or more, ramp-up procedures shall be implemented. If the PSO watch has been suspended during that time, a 30-minute clearance of the exclusion zone is required prior to commencing ramp-up. Discontinuation of airgun activity for less than 10 minutes does not require a ramp-up.

(D) The seismic operator and PSOs shall maintain records of the times when ramp-ups start and when the airgun arrays reach full power.

(ii) Power-down/Shutdown:

(A) The airgun array shall be immediately powered down whenever a marine mammal is sighted approaching close to or within the applicable exclusion zone of the full array, but is outside the applicable exclusion zone of the single mitigation airgun.

(B) If a marine mammal is already within or is about to enter the exclusion zone when first detected, the airguns shall be powered down immediately.

(C) Following a power-down, firing of the full airgun array shall not resume until the marine mammal has cleared the exclusion zone. The animal will be considered to have cleared the exclusion zone if it is visually observed to have left the exclusion zone of the

full array, or has not been seen within the zone for 15 minutes for pinnipeds, or 30 minutes for cetaceans.

(D) If a marine mammal is sighted within or about to enter the 190 or 180 dB (rms) applicable exclusion zone of the single mitigation airgun, the airgun array shall be shutdown.

(E) Firing of the full airgun array or the mitigation gun shall not resume until the marine mammal has cleared the exclusion zone of the full array or mitigation gun, respectively. The animal will be considered to have cleared the exclusion zone as described above under ramp up procedures.

(iii) Poor Visibility Conditions:

(A) If during foggy conditions, heavy snow or rain, or darkness, the full 180 dB exclusion zone is not visible, the airguns cannot commence a ramp-up procedure from a full shut-down.

(B) If one or more airguns have been operational before nightfall or before the onset of poor visibility conditions, they can remain operational throughout the night or poor visibility conditions. In this case ramp-up procedures can be initiated, even though the exclusion zone may not be visible, on the assumption that marine mammals will be alerted by the sounds from the single airgun and have moved away.

(iv) Use of a Small-volume Airgun During Turns and Transits.

(A) Throughout the seismic survey, during turning movements and short transits, SAE will employ the use of the smallest-volume airgun (i.e., ''mitigation airgun'') to deter marine mammals from being within the immediate area of the seismic operations. The mitigation airgun would be operated at approximately one shot per minute and would not be operated for longer than three hours in duration (turns may last two to three hours for the proposed project).

(B) During turns or brief transits (i.e., less than three hours) between seismic tracklines, one mitigation airgun will continue operating. The ramp up procedures described above will be followed when increasing the source levels from the one mitigation airgun to the full airgun array. However, keeping one airgun firing during turns and brief transits allow SAE to resume seismic surveys using the full array without having to ramp up from a ''cold start,'' which requires a 30-minute observation period of the full exclusion zone and is prohibited during darkness or other periods of poor visibility. PSOs will be on duty whenever the airguns are firing during daylight and during the 30-minute periods prior to ramp-ups from a ''cold start.''

(d) Mitigation Measures for Subsistence Activities:

(i) For the purposes of reducing or eliminating conflicts between subsistence whaling activities and SAE's survey program, the holder of this Authorization will participate with other operators in the Communication and Call Centers (Com-Center) Program. Com-Centers will be operated to facilitate communication of information between SAE and subsistence whalers. The Com-Centers will be operated 24 hours/day during the 2014 fall subsistence bowhead whale hunt.

(ii) All vessels shall report to the appropriate Com-Center at least once every six hours, commencing each day with a call at approximately 06:00 hours.

(iii) The appropriate Com-Center shall be notified if there is any significant change in plans. The appropriate Com-Center also shall be called regarding any unsafe or unanticipated ice conditions.

(iv) Upon notification by a Com-Center operator of an at-sea emergency, the holder of this Authorization shall provide such assistance as necessary to prevent the loss of life, if conditions allow the holder of this Authorization to safely do so.

(v) SAE shall monitor the positions of all of its vessels and exercise due care in avoiding any areas where subsistence activity is active.

(vi) Routing barge and transit vessels:

(A) Vessels transiting in the Beaufort Sea east of Bullen Point to the Canadian border shall remain at least 5 miles offshore during transit along the coast, provided ice and sea conditions allow. During transit in the Chukchi Sea, vessels shall remain as far offshore as weather and ice conditions allow, and at all times at least 5 miles offshore.

(B) From August 31 to October 31, vessels in the Chukchi Sea or Beaufort Sea shall remain at least 20 miles offshore of the coast of Alaska from Icy Cape in the Chukchi Sea to Pitt Point on the east side of Smith Bay in the Beaufort Sea, unless ice conditions or an emergency that threatens the safety of the vessel or crew prevents compliance with this requirement. This condition shall not apply to vessels actively engaged in transit to or from a coastal community to conduct crew changes or logistical support operations.

(C) Vessels shall be operated at speeds necessary to ensure no physical contact with whales occurs, and to make any other potential conflicts with bowheads or whalers unlikely. Vessel speeds shall be less than 10 knots in the proximity of feeding whales or whale aggregations.

(D) If any vessel inadvertently approaches within 1.6 kilometers (1 mile) of observed bowhead whales, except when providing emergency assistance to whalers or in other emergency situations, the vessel operator will take reasonable precautions to avoid potential interaction with the bowhead whales by taking one or more of the following actions, as appropriate:

- reducing vessel speed to less than 5 knots within 900 feet of the whale(s);
- steering around the whale(s) if possible;
- operating the vessel(s) in such a way as to avoid separating members of a group of whales from other members of the group;
- operating the vessel(s) to avoid causing a whale to make multiple changes in direction; and
- checking the waters immediately adjacent to the vessel(s) to ensure that no whales will be injured when the propellers are engaged.

(vii) Limitation on seismic surveys in the Beaufort Sea.

(A) Kaktovik: No seismic survey from the Canadian Border to the Canning River from August 25 to close of the fall bowhead whale hunt in Kaktovik and Nuiqsut. From August 10 to August 25, SAE will communicate and collaborate with the Alaska Eskimo Whaling Commission (AEWC) on any planned vessel movement in and around Kaktovik and Cross Island to avoid impacts to whale hunting.

(B) Nuiqsut:

- Pt. Storkerson to Thetis Island: No seismic survey prior to July 25 inside the Barrier Islands. No seismic survey from August 25 to close of fall bowhead whale hunting outside the Barrier Island in Nuiqsut.
- Canning River to Pt. Storkerson: No seismic survey from August 25 to the close of bowhead whale subsistence hunting in Nuiqsut.

(C) Barrow: No seismic survey from Pitt Point on the east side of Smith Bay to a location about half way between Barrow and Peard Bay from September 15 to the close of the fall bowhead whale hunt in Barrow.

(viii) SAE shall complete operations in time to allow such vessels to complete transit through the Bering Strait to a point south of 59 degrees North latitude no later than November 15, 2014. Any vessel that encounters weather or ice that will prevent compliance with this date shall coordinate its transit through the Bering Strait to a point south of 59 degrees North latitude with the appropriate Com-Centers. SAE vessels shall, weather and ice permitting, transit east of St. Lawrence Island and no closer than 10

miles from the shore of St. Lawrence Island.

(7) Monitoring:

(a) Vessel-based Visual Monitoring:

(i) Vessel-based visual monitoring for marine mammals shall be conducted by NMFS-approved protected species observers (PSOs) throughout the period of survey activities.

(ii) PSOs shall be stationed aboard the seismic survey vessels and mitigation vessel through the duration of the surveys.

(iii) A sufficient number of PSOs shall be onboard the survey vessel to meet the following criteria:

(A) 100% monitoring coverage during all periods of survey operations in daylight;

(B) maximum of 4 consecutive hours on watch per PSO; and

(C) maximum of 12 hours of watch time per day per PSO.

(iv) The vessel-based marine mammal monitoring shall provide the basis for real-time mitigation measures as described in (6)(c) above.

(v) Results of the vessel-based marine mammal monitoring shall be used to calculate the estimation of the number of ''takes'' from the marine surveys and equipment recovery and maintenance program.

(b) Protected Species Observers and Training.

(i) PSO teams shall consist of Inupiat observers and NMFS-approved field biologists.

(ii) Experienced field crew leaders shall supervise the PSO teams in the field. New PSOs shall be paired with experienced observers to avoid situations where lack of experience impairs the quality of observations.

(iii) Crew leaders and most other biologists serving as observers in 2014 shall be individuals with experience as observers during recent seismic or shallow hazards monitoring projects in Alaska, the Canadian Beaufort, or other offshore areas in recent years.

(iv) Resumes for PSO candidates shall be provided to NMFS for review and acceptance of their qualifications. Inupiat observers shall be experienced in the region and familiar with the marine mammals of the area.

(v) All observers shall complete a NMFS-approved observer training course designed to familiarize individuals with monitoring and data collection procedures. The training course shall be completed before the anticipated start of the 2014 open-water season. The training session(s) shall be conducted by qualified marine mammalogists with extensive crew-leader experience during previous vessel-based monitoring programs.

(vi) Training for both Alaska native PSOs and biologist PSOs shall be conducted at the same time in the same room. There shall not be separate training courses for the different PSOs.

(vii) Crew members should not be used as primary PSOs because they have other duties and generally do not have the same level of expertise, experience, or training as PSOs, but they could be stationed on the fantail of the vessel to observe the near field, especially the area around the airgun array, and implement a power down or shutdown if a marine mammal enters the safety zone (or exclusion zone).

(viii) If crew members are to be used as PSOs, they shall go through some basic training consistent with the functions they will be asked to perform. The best approach would be for crew members and PSOs to go through the same training together.

(ix) PSOs shall be trained using visual aids (e.g., videos, photos), to help them identify the species that they are likely to encounter in the conditions under which the animals will likely be seen.

(x) SAE shall train its PSOs to follow a scanning schedule that consistently distributes scanning effort according to the purpose and need for observations. All PSOs should follow the same schedule to ensure consistency in their scanning efforts.

(xi) PSOs shall be trained in documenting the behaviors of marine mammals. PSOs should record the primary behavioral state (i.e., traveling, socializing, feeding, resting, approaching or moving away from vessels) and relative location of the observed marine mammals.

(c) Marine Mammal Observation Protocol

(i) PSOs shall watch for marine mammals from the best available vantage point on the survey vessels, typically the bridge.

(ii) Observations by the PSOs on marine mammal presence and activity shall begin a minimum of 30 minutes prior to the estimated time that the seismic source is to be turned on and/or ramped-up.

(iii) For comparison purposes, PSOs shall also document marine mammal occurrence, density, and behavior during at least some periods when airguns are not operating

(iv) PSOs shall scan systematically with the unaided eye and 7 x 50 reticle binoculars, supplemented with 20 x 60 image-stabilized binoculars or 25 x 150 binoculars, and night-vision equipment when needed.

(v) Personnel on the bridge shall assist the marine mammal observer(s) in watching for marine mammals.

(vi) PSOs aboard the marine survey vessel shall give particular attention to the areas within the marine mammal exclusion zones around the source vessel, as noted in (6)(a)(i) and (ii). They shall avoid the tendency to spend too much time evaluating animal behavior or entering data on forms, both of which detract from their primary purpose of monitoring the exclusion zone.

(vii) Monitoring shall consist of recording of the following information:

(A) The species, group size, age/size/sex categories (if determinable), the general behavioral activity, heading (if consistent), bearing and distance from seismic vessel, sighting cue, behavioral pace, and apparent reaction of all marine mammals seen near the seismic vessel and/or its airgun array (e.g., none, avoidance, approach, paralleling, etc);

(B) the time, location, heading, speed, and activity of the vessel (shooting or not), along with sea state, visibility, cloud cover and sun glare at (I) any time a marine mammal is sighted (including pinnipeds hauled out on barrier islands), (II) at the start and end of each watch, and (III) during a watch (whenever there is a change in one or more variable);

(C) the identification of all vessels that are visible within 5 km of the seismic vessel whenever a marine mammal is sighted and the time observed;

(D) any identifiable marine mammal behavioral response (sighting data should be collected in a manner that will not detract from the PSO's ability to detect marine mammals);

(E) any adjustments made to operating procedures; and

(F) visibility during observation periods so that total estimates of take can be corrected accordingly.

(vii) Distances to nearby marine mammals will be estimated with binoculars (7 x 50 binoculars) containing a reticle to measure the vertical angle of the line of sight to the animal relative to the horizon. Observers may use a laser rangefinder to test and improve their abilities for visually estimating distances to objects in the water.

(viii) PSOs shall understand the importance of classifying marine mammals as ''unknown'' or ''unidentified'' if they cannot identify the animals to species with confidence. In those cases, they shall note any information that might aid in the identification of the marine mammal sighted. For example, for an unidentified mysticete whale, the observers should record whether the animal had a dorsal fin.

(ix) Additional details about unidentified marine mammal sightings, such as ''blow only,'' mysticete with (or without) a dorsal fin, ''seal splash,'' etc., shall be recorded.

(x) When a marine mammal is seen approaching or within the exclusion zone applicable to that species, the marine survey crew shall be notified immediately so that mitigation measures described in (6) can be promptly implemented.

(xi) SAE shall use the best available technology to improve detection capability during periods of fog and other types of inclement weather. Such technology might include night-vision goggles or binoculars as well as other instruments that incorporate infrared technology.

(d) Field Data-Recording and Verification

(A) PSOs aboard the vessels shall maintain a digital log of seismic surveys, noting the date and time of all changes in seismic activity (ramp-up, power-down, changes in the active seismic source, shutdowns, etc.) and any corresponding changes in monitoring radii in a software spreadsheet.

(B) PSOs shall utilize a standardized format to record all marine mammal observations and mitigation actions (seismic source power-downs, shut-downs, and ramp-ups).

(C) Information collected during marine mammal observations shall include the following:

(I) Vessel speed, position, and activity
(II) Date, time, and location of each marine mammal sighting
(III) Number of marine mammals observed, and group size, sex, and age categories
(IV) Observer's name and contact information
(V) Weather, visibility, and ice conditions at the time of observation
(VI) Estimated distance of marine mammals at closest approach
(VII) Activity at the time of observation, including possible attractants present
(VIII) Animal behavior
(IX) Description of the encounter
(X) Duration of encounter
(XI) Mitigation action taken

(D) Data shall be recorded directly into handheld computers or as a back-up, transferred from hard-copy data sheets into an electronic database.

(E) A system for quality control and verification of data shall be facilitated by the pre-season training, supervision by the lead PSOs, and in-season data checks, and shall be built into the software.

(F) Computerized data validity checks shall also be conducted, and the data shall be managed in such a way that it is easily summarized during and after the field program and transferred into statistical, graphical, or other programs for further processing.

(e) Passive Acoustic Monitoring

(i) Sound Source Measurements: Using a hydrophone system, the holder of this Authorization is required to conduct sound source verification tests for seismic airgun array(s) and other marine survey equipment that are involved in the open-water seismic surveys.

(A) Sound source verification shall consist of distances where broadside and endfire directions at which broadband received levels reach 190, 180, 170, 160, and 120 dB (rms) re 1 μPa for the airgun array(s). The configurations of airgun arrays shall include at least the full array and the operation of a single source that will be used during power downs.

(B) The test results shall be reported to NMFS within 5 days of completing the test.

(ii) Passive Acoustic Monitoring (PAM)

(A) SAE shall conduct passive acoustic monitoring using fixed hydrophone(s) to (I) collect information on the occurrence and distribution of marine mammals (including beluga whale, bowhead whale, walrus and other species) that may be available to subsistence hunters near villages located on the Beaufort Sea coast and to document their relative abundance, habitat use, and migratory patterns; and (II) measure the ambient soundscape throughout the Beaufort Sea coast and to record received levels of sounds from industry and other activities.

(f) Spotted Seal Haulout Monitoring

(i) SAE shall conduct a biweekly boat-based survey of spotted seals before, during, and after the seismic survey, to identify where seals haulout in the action area.

(ii) The survey will begin at the village of Nuiqsut and follow the far west channel of the Colville River, survey all the outer islands of the river delta, and then return to Nuiqsut following the farthest east river channel.

(iii) All seals will be identified to species, and GPS location and whether the animals were hauled out or in the water will be noted. Collected data will be combined with available traditional knowledge and historical information to determine whether there are locations of consistent seal haulout use that might be affected by the seismic survey.

(iv) If sites of suspected high use are found, SAE shall contact NMFS and the North Slope Borough Department of Wildlife to identify additional mitigation measures to minimize impacts to these sites.

(g) SAE shall engage in consultation and coordination with other oil and gas companies and with federal, state, and borough agencies to ensure that they have the most up-to-date information and can take advantage of other monitoring efforts.

(8) Data Analysis and Presentation in Reports:

(a) Estimation of potential takes or exposures shall be improved for times with low visibility (such as during fog or darkness) through interpolation or possibly using a probability approach. Those data could be used to interpolate possible takes during periods of restricted visibility.

(b) SAE shall provide a database of the information collected, plus a number of summary analyses and graphics to help NMFS assess the potential impacts of SAE's survey. Specific summaries/analyses/graphics would include:

(i) Sound verification results including isopleths of sound pressure levels plotted geographically;

(ii) a table or other summary of survey activities (i.e., did the survey proceed as planned);

(iii) a table of sightings by time, location, species, and distance from the survey vessel;

(iv) a geographic depiction of sightings for each species by area and month;

(v) a table and/or graphic summarizing behaviors observed by species;

(vi) a table and/or graphic summarizing observed responses to the survey by species;

(vii) a table of mitigation measures (e.g., power downs, shut downs) taken by date, location, and species;

(viii) a graphic of sightings by distance for each species and location;

(ix) a table or graphic illustrating sightings during the survey versus sightings when the airguns were silent; and

(x) a summary of times when the survey was interrupted because of interactions with marine mammals.

(c) To help evaluate the effectiveness of PSOs and more effectively estimate take, if appropriate data are available, SAE shall perform analysis of sightability curves (detection functions) for distance-based analyses.

(d) SAE shall collaborate with other industrial operators in the area to integrate and synthesize monitoring results as much as possible (such as submitting ''sightings'' from their monitoring projects to an online data archive, such as OBIS–SEAMAP) and

archive and make the complete databases available upon request.

(9) Reporting:

(a) Sound Source Verification Report: A report on the preliminary results of the sound source verification measurements, including the measured 190, 180, 160, and 120 dB (rms) radii of the airgun sources and other acoustic survey equipment, shall be submitted within 14 days after collection of those measurements at the start of the field season. This report will specify the distances of the exclusion zones that were adopted for the survey.

(b) Throughout the survey program, PSOs shall prepare a report each day, or at such other interval as is necessary, summarizing the recent results of the monitoring program. The reports shall summarize the species and numbers of marine mammals sighted. These reports shall be provided to NMFS.

(c) Seismic Vessel Monitoring Program: A draft report will be submitted to the Director, Office of Protected Resources, NMFS, within 90 days after the end of SAE's 2014 open-water seismic surveys in the Beaufort Sea. The report will describe in detail:

(i) Summaries of monitoring effort (e.g., total hours, total distances, and marine mammal distribution through the study period, accounting for sea state and other factors affecting visibility and detectability of marine mammals);

(ii) summaries that represent an initial level of interpretation of the efficacy, measurements, and observations, rather than raw data, fully processed analyses, or summary of operations and important observations;

(iii) summaries of all mitigation measures (e.g., operational shutdowns if they occur) and an assessment of the efficacy of the monitoring methods;

(iv) analyses of the effects of various factors influencing detectability of marine mammals (e.g., sea state, number of observers, and fog/glare);

(v) species composition, occurrence, and distribution of marine mammal sightings, including date, water depth, numbers, age/size/gender categories (if determinable), group sizes, and ice cover;

(vi) Data analysis separated into periods when an airgun array (or a single airgun) is operating and when it is not, to better assess impacts to marine mammals—the final and comprehensive report to NMFS should summarize and plot: (A) Data for periods when a seismic array is active and when it is not; and (B) the respective predicted received sound conditions over fairly large areas (tens of km) around operations;

(vii) sighting rates of marine mammals during periods with and without airgun activities (and other variables that could affect detectability), such as: (A) Initial sighting distances versus airgun activity state; (B) closest point of approach versus airgun activity state; (C) observed behaviors and types of movements versus airgun activity state; (D) numbers of sightings/individuals seen versus airgun activity state; (E) distribution around the survey vessel versus airgun activity state; and (F) estimates of take by harassment;

(viii) reported results from all hypothesis tests, including estimates of the associated statistical power, when practicable;

(ix) estimates of uncertainty in all take estimates, with uncertainty expressed by the presentation of confidence limits, a minimum-maximum, posterior probability distribution, or another applicable method, with the exact approach to be selected based on the sampling method and data available;

(x) A clear comparison of authorized takes and the level of actual estimated takes; and

(xi) A complete characterization of the acoustic footprint resulting from various activity states.

(d) The draft report shall be subject to review and comment by NMFS. Any recommendations made by NMFS must be addressed in the final report prior to acceptance by NMFS. The draft report will be considered the final report for this activity under this Authorization if NMFS has not provided comments and recommendations within 90 days of receipt of the draft report.

(10)(a) In the unanticipated event that survey operations clearly cause the take of a marine mammal in a manner prohibited by this Authorization, such as an injury (Level A harassment), serious injury, or mortality (e.g., ship-strike, gear interaction, and/or entanglement), SAE shall immediately cease survey operations and immediately report the incident to the Supervisor of the Incidental Take Program, Permits and Conservation Division, Office of Protected Resources, NMFS, at 301–427–8401 and/or by email to *Jolie.Harrison@noaa.gov* and *Shane.Guan@noaa.gov* and the Alaska Regional Stranding Coordinators (*Aleria.Jensen@noaa.gov* and *Barbara.Mahoney@noaa.gov*). The report must include the following information:

(i) Time, date, and location (latitude/longitude) of the incident;

(ii) the name and type of vessel involved;

(iii) the vessel's speed during and leading up to the incident;

(iv) description of the incident;

(v) status of all sound source use in the 24 hours preceding the incident;

(vi) water depth;

(vii) environmental conditions (e.g., wind speed and direction, Beaufort sea state, cloud cover, and visibility);

(viii) description of marine mammal observations in the 24 hours preceding the incident;

(ix) species identification or description of the animal(s) involved;

(x) the fate of the animal(s); and

(xi) photographs or video footage of the animal (if equipment is available).

Activities shall not resume until NMFS is able to review the circumstances of the prohibited take. NMFS shall work with SAE to determine what is necessary to minimize the likelihood of further prohibited take and ensure MMPA compliance. SAE may not resume their activities until notified by NMFS via letter, email, or telephone.

(b) In the event that SAE discovers an injured or dead marine mammal, and the lead PSO determines that the cause of the injury or death is unknown and the death is relatively recent (i.e., in less than a moderate state of decomposition as described in the next paragraph), SAE will immediately report the incident to the Supervisor of the Incidental Take Program, Permits and Conservation Division, Office of Protected Resources, NMFS, at 301–427–8401, and/or by email to *Jolie.Harrison@noaa.gov* and *Shane.Guan@noaa.gov* and the NMFS Alaska Stranding Hotline (1–877–925–7773) and/or by email to the Alaska Regional Stranding Coordinators (*Aleria.Jensen@noaa.gov* and *Barabara.Mahoney@noaa.gov*). The report must include the same information identified in Condition 10(a) above. Activities may continue while NMFS reviews the circumstances of the incident. NMFS will work with SAE to determine whether modifications in the activities are appropriate.

(c) In the event that SAE discovers an injured or dead marine mammal, and the lead PSO determines that the injury or death is not associated with or related to the activities authorized in Condition 3 of this Authorization (e.g., previously wounded animal, carcass with moderate to advanced decomposition, or scavenger damage), SAE shall report the incident to the Supervisor of the Incidental Take Program, Permits and Conservation Division, Office of Protected Resources, NMFS, at 301–427–8401, and/or by email to *Jolie.Harrison@noaa.gov* and *Shane.Guan@noaa.gov* and the NMFS Alaska Stranding Hotline (1–877–925–

7773) and/or by email to the Alaska Regional Stranding Coordinators (*Aleria.Jensen@noaa.gov* and *Barbara.Mahoney@noaa.gov*), within 24 hours of the discovery. SAE shall provide photographs or video footage (if available) or other documentation of the stranded animal sighting to NMFS and the Marine Mammal Stranding Network. SAE can continue its operations under such a case.

(11) Activities related to the monitoring described in this Authorization do not require a separate scientific research permit issued under section 104 of the Marine Mammal Protection Act.

(12) The Plan of Cooperation outlining the steps that will be taken to cooperate and communicate with the native communities to ensure the availability of marine mammals for subsistence uses, must be implemented.

(13) This Authorization may be modified, suspended, or withdrawn if the holder fails to abide by the conditions prescribed herein or if the authorized taking is having more than a negligible impact on the species or stock of affected marine mammals, or if there is an unmitigable adverse impact on the availability of such species or stocks for subsistence uses.

(14) A copy of this Authorization and the Incidental Take Statement must be in the possession of each seismic vessel operator taking marine mammals under the authority of this Incidental Harassment Authorization.

(15) SAE is required to comply with the Terms and Conditions of the Incidental Take Statement corresponding to NMFS' Biological Opinion.

Request for Public Comments

NMFS requests comment on our analysis, the draft authorization, and any other aspect of the Notice of Proposed IHA for SAE's proposed 3D seismic survey in the Beaufort Sea. Please include with your comments any supporting data or literature citations to help inform our final decision on SAE's request for an MMPA authorization.

Dated: July 2, 2014.

Donna S. Wieting,

Director, Office of Protected Resources, National Marine Fisheries Service.

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FEDERAL REGISTER

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Part VI

The President

Executive Order 13671—Taking Additional Steps to Address the National Emergency With Respect to the Conflict in the Democratic Republic of the Congo

Federal Register
Vol. 79, No. 132
Thursday, July 10, 2014

Presidential Documents

Title 3—

The President

Executive Order 13671 of July 8, 2014

Taking Additional Steps to Address the National Emergency With Respect to the Conflict in the Democratic Republic of the Congo

By the authority vested in me as President by the Constitution and the laws of the United States of America, including the International Emergency Economic Powers Act (50 U.S.C. 1701 *et seq.*) (IEEPA), the National Emergencies Act (50 U.S.C. 1601 *et seq.*), section 5 of the United Nations Participation Act (22 U.S.C. 287c) (UNPA), and section 301 of title 3, United States Code,

I, BARACK OBAMA, President of the United States of America, in order to take additional steps to deal with the national emergency with respect to the situation in or in relation to the Democratic Republic of the Congo declared in Executive Order 13413 of October 27, 2006, in view of multiple United Nations Security Council Resolutions including, most recently, Resolution 2136 of January 30, 2014, and in light of the continuation of activities that threaten the peace, security, or stability of the Democratic Republic of the Congo and the surrounding region, including operations by armed groups, widespread violence and atrocities, human rights abuses, recruitment and use of child soldiers, attacks on peacekeepers, obstruction of humanitarian operations, and exploitation of natural resources to finance persons engaged in these activities, hereby order:

Section 1. Subsection (a) of section 1 of Executive Order 13413 is hereby amended to read as follows:

''(a) All property and interests in property that are in the United States, that hereafter come within the United States, or that are or hereafter come within the possession or control of any United States person (including any foreign branch) of the following persons are blocked and may not be transferred, paid, exported, withdrawn, or otherwise dealt in:

(i) the persons listed in the Annex to this order; and

(ii) any person determined by the Secretary of the Treasury, in consultation with the Secretary of State:

(A) to be a political or military leader of a foreign armed group operating in the Democratic Republic of the Congo that impedes the disarmament, demobilization, voluntary repatriation, resettlement, or reintegration of combatants;

(B) to be a political or military leader of a Congolese armed group that impedes the disarmament, demobilization, voluntary repatriation, resettlement, or reintegration of combatants;

(C) to be responsible for or complicit in, or to have engaged in, directly or indirectly, any of the following in or in relation to the Democratic Republic of the Congo:

(1) actions or policies that threaten the peace, security, or stability of the Democratic Republic of the Congo;

(2) actions or policies that undermine democratic processes or institutions in the Democratic Republic of the Congo;

(3) the targeting of women, children, or any civilians through the commission of acts of violence (including killing, maiming, torture, or rape or other sexual violence), abduction, forced displacement, or

attacks on schools, hospitals, religious sites, or locations where civilians are seeking refuge, or through conduct that would constitute a serious abuse or violation of human rights or a violation of international humanitarian law;

(4) the use or recruitment of children by armed groups or armed forces in the context of the conflict in the Democratic Republic of the Congo;

(5) the obstruction of the delivery or distribution of, or access to, humanitarian assistance;

(6) attacks against United Nations missions, international security presences, or other peacekeeping operations; or

(7) support to persons, including armed groups, involved in activities that threaten the peace, security, or stability of the Democratic Republic of the Congo or that undermine democratic processes or institutions in the Democratic Republic of the Congo, through the illicit trade in natural resources of the Democratic Republic of the Congo;

(D) except where intended for the authorized support of humanitarian activities or the authorized use by or support of peacekeeping, international, or government forces, to have directly or indirectly supplied, sold, or transferred to the Democratic Republic of the Congo, or been the recipient in the territory of the Democratic Republic of the Congo of, arms and related materiel, including military aircraft and equipment, or advice, training, or assistance, including financing and financial assistance, related to military activities;

(E) to be a leader of (i) an entity, including any armed group, that has, or whose members have, engaged in any of the activities described in subsections (a)(ii)(A) through (a)(ii)(D) of this section or (ii) an entity whose property and interests in property are blocked pursuant to this order;

(F) to have materially assisted, sponsored, or provided financial, material, logistical, or technological support for, or goods or services in support of (i) any of the activities described in subsections (a)(ii)(A) through (a)(ii)(D) of this section or (ii) any person whose property and interests in property are blocked pursuant to this order; or

(G) to be owned or controlled by, or to have acted or purported to act for or on behalf of, directly or indirectly, any person whose property and interests in property are blocked pursuant to this order.''

Sec. 2. New subsection (d) is hereby added to section 1 of Executive Order 13413 to read as follows:

''(d) The prohibitions in subsection (a) of this section apply except to the extent provided by statutes, or in regulations, orders, directives, or licenses that may be issued pursuant to this order, and notwithstanding any contract entered into or any license or permit granted prior to the effective date of this order.''

Sec. 3. Section 2 of Executive Order 13413 is hereby amended to read as follows:

''Sec. 2. (a) Any transaction that evades or avoids, has the purpose of evading or avoiding, causes a violation of, or attempts to violate any of the prohibitions set forth in this order is prohibited.

(b) Any conspiracy formed to violate any of the prohibitions set forth in this order is prohibited.''

Sec. 4. The Secretary of the Treasury, in consultation with the Secretary of State, is hereby authorized to take such actions, including the promulgation of rules and regulations, and to employ all powers granted to the President by IEEPA and the UNPA, as may be necessary to carry out the purposes of this order and Executive Order 13413, as amended by this order. The Secretary of the Treasury may redelegate any of these functions to other officers and agencies of the United States Government consistent with applicable law.

Sec. 5. All agencies of the United States Government are hereby directed to take all appropriate measures within their authority to carry out the provisions of this order and Executive Order 13413, as amended by this order.

Sec. 6. This order is not intended to, and does not, create any right or benefit, substantive or procedural, enforceable at law or in equity by any party against the United States, its departments, agencies, or entities, its officers, employees, or agents, or any other person.



THE WHITE HOUSE,
July 8, 2014.

[FR Doc. 2014–16360
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