

## FEDERAL COMMUNICATIONS COMMISSION

### 47 CFR Part 15

[ET Docket No. 98–153; FCC 02–48]

### Ultra-Wideband Transmission Systems

**AGENCY:** Federal Communications Commission.

**ACTION:** Final rule.

**SUMMARY:** This document revises the Commission's rules to permit the marketing and operation of certain types of new products incorporating ultra-wideband (UWB) technology. UWB devices operate by employing very narrow or short duration pulses that result in very large or wideband transmission bandwidths. UWB technology holds great promise for a vast array of new applications that we believe will provide significant benefits for public safety, businesses and consumers. With appropriate technical standards, UWB devices can operate using spectrum occupied by existing radio services without causing interference, thereby permitting scarce spectrum resources to be used more efficiently.

**DATES:** Effective July 15, 2002.

**FOR FURTHER INFORMATION CONTACT:** John A. Reed, Office of Engineering and Technology, (202) 418–2455.

**SUPPLEMENTARY INFORMATION:** This is a summary of the Commission's *First Report and Order* in ET Docket No. 98–153, adopted February 14, 2002, and released April 22, 2002. The complete text of this *First Report and Order* is available for inspection and copying during normal business hours in the FCC Reference Center (Room CY–A257), 445 12th Street, SW, Washington, DC, and also may be purchased from the Commission's copy contractor, Qualex International, (202) 863–2893, 445 12th Street, SW, Room CY–B402, Washington, DC 20554.

### Summary of the First Report and Order

1. In the *First Report and Order* ("Order"), the Commission amends part 15 of the rules to permit the marketing and operation of products incorporating ultra-wideband (UWB) technology. This *Order* includes standards designed to ensure that existing and planned radio services, particularly safety services, are adequately protected. We are proceeding cautiously in authorizing UWB technology, based in large measure on standards that the National Telecommunications and Information Administration (NTIA) found to be necessary to protect against interference

to vital federal government operations. We are concerned, however, that the standards we are adopting may be overprotective and could unnecessarily constrain the development of UWB technology. Accordingly, within the next six to twelve months we intend to review the standards for UWB devices and issue a further rule making to explore more flexible technical standards and to address the operation of additional type of UWB operations and technology.

2. This has been an unusually controversial proceeding involving a variety of UWB advocates and opponents. These parties have been unable to agree on the emission levels necessary to protect Government-operated, safety-of-life and commercial radio systems from harmful interference. It is our belief that the standards contained in this *Order* are extremely conservative. These standards may change in the future as we continue to collect data regarding UWB operations. The analyses and technical standards contained in this *Order* are unique to this proceeding and will not be considered as a basis for determining or revising standards for other radio frequency devices, including other part 15 devices.

3. To ensure that UWB devices do not cause harmful interference, this *Order* establishes different technical standards and operating restrictions for three types of UWB devices based on their potential to cause interference. These three types of UWB devices are: (1) Imaging systems including Ground Penetrating Radars (GPRs) and wall, through-wall, surveillance, and medical imaging devices, (2) vehicular radar systems, and (3) communications and measurement systems. Generally, we are adopting unwanted emission limits for UWB devices that are significantly more stringent than those imposed on other part 15 devices; limiting outdoor use of UWB devices to imaging systems, vehicular radar systems and portable devices; and, limiting the frequency band within which certain UWB products will be permitted to operate. The operation of UWB devices is not permitted onboard aircraft, ships or satellites nor may UWB devices be used for the operation of toys. The frequency band of operation is based on the –10 dB bandwidth of the UWB emission. This combination of technical standards and operational restrictions will ensure that UWB devices coexist with the authorized radio services without the risk of harmful interference while we gain experience with this new technology. Specifically, the *Order* takes the following actions:

- **Imaging Systems:** Provides for the operation of GPRs and other imaging devices under part 15 of the Commission's rules subject to certain frequency and power limitations. All imaging systems are subject to coordination with NTIA through the FCC. Coordination of routine UWB operations shall not take longer than 15 business days from the receipt of the coordination request by NTIA.

Operation in emergency situations involving the safety of life or property may occur without coordination provided a notification similar to that contained in 47 CFR 2.405(a)–(e) is followed by the operator. The manufacturers of the UWB devices will be required to inform the users of the coordination requirements. The operators of imaging devices must be eligible for licensing under part 90 of our rules, except that medical imaging devices may be operated by a licensed health care practitioner. Imaging systems include:

- **Ground Penetrating Radar Systems:** GPRs must be operated below 960 MHz or in the frequency band 3.1–10.6 GHz. GPRs operate only when in contact with, or within one meter of, the ground for the purpose of detecting or obtaining the images of buried objects. The energy from the GPR is intentionally directed down into the ground for this purpose. Operation is restricted to law enforcement, fire and emergency rescue organizations, to scientific research institutions, to commercial mining companies, and to construction companies.

- **Wall Imaging Systems:** Wall imaging systems must be operated below 960 MHz or in the frequency band 3.1–10.6 GHz. Wall-imaging systems are designed to detect the location of objects contained within a "wall," such as a concrete structure, the side of a bridge, or the wall of a mine. Operation is restricted to law enforcement, fire and emergency rescue organizations, to scientific research institutions, to commercial mining companies, and to construction companies.

- **Through-wall Imaging Systems:** These systems must be operated below 960 MHz or in the frequency band 1.99–10.6 GHz. Through-wall imaging systems detect the location or movement of persons or objects that are located on the other side of a structure such as a wall. Operation is limited to law enforcement, fire and emergency rescue organizations.

- **Surveillance Systems:** Although technically these devices are not imaging systems, for regulatory purposes they will be treated in the

same way as through-wall imaging systems used by police, fire and rescue organizations and will be permitted to operate in the frequency band 1.99–10.6 GHz. Surveillance systems operate as “security fences” by establishing a stationary RF perimeter field and detecting the intrusion of persons or objects in that field. Operation is limited to law enforcement, fire and emergency rescue organizations, to public utilities and to industrial entities.

- **Medical Systems:** These devices must be operated in the frequency band 3.1–10.6 GHz. A medical imaging system may be used for a variety of health applications to “see” inside the body of a person or animal. Operation must be at the direction of, or under the supervision of, a licensed health care practitioner.

- **Vehicular Radar Systems:** These are radar devices employing directional antennas and mounted on terrestrial transportation vehicles, and they must operate in the frequency band 22–29 GHz. The center frequency of the emission and the frequency at which the highest radiated emission occurs must be greater than 24.075 GHz. These devices are able to detect the location and movement of objects near a vehicle, enabling features such as near collision avoidance, improved airbag activation, and suspension systems that better respond to road conditions. Directional antennas or other methods must be used to attenuate the emissions above the horizontal plane in the 23.6–24.0 GHz band to protect passive space borne sensors.

- **Communications and Measurement Systems:** This category consists of a wide variety of other UWB devices, such as high-speed home and business networking devices as well as storage tank measurement devices under part 15 of the Commission’s rules subject to certain frequency and power limitations. The devices must operate in the frequency band 3.1–10.6 GHz. The equipment must be designed to ensure that operation can only occur indoors or it must consist of hand held devices that may be employed for such activities as peer-to-peer operation. The term “hand held” refers to portable devices, such as a lap top computer or a PDA, that are primarily hand held while being operated and that do not employ a fixed infrastructure.

4. The attached regulations contain the specifications for the various operating parameters and technical standards being applied to UWB devices. In general, we have adopted the emission limits requested by NTIA. These limits consist of quasi-peak limits below 960 MHz, RMS average limits

above 960 MHz, peak emission limits, and limits on the amount of energy conducted onto the AC power line. Specific measurement procedures also have been established to demonstrate compliance with these limits. For example, there are provisions to permit UWB devices to be tested with the use of anechoic shielding in place of a ground plane provided a suitable adjustment is made to the measured results. There also are provisions for testing ground penetrating radars and wall imaging systems with the antennas pointed at a 20 inch thick bed of dry sand. In addition, provisions have been made to permit peak emission levels to be measured using a resolution bandwidth ranging from 1 MHz to 50 MHz with the peak limit adjusted to a peak EIRP limit, in dBm, of 20 log (RBW/50) where RBW is the resolution bandwidth of the measuring instrument in megahertz. The average limits are based on measurements employing a 1 MHz resolution bandwidth, an RMS detector, and a one millisecond or less averaging time. In addition, special narrowband limits are applied to emissions falling within the 1164–1240 MHz and 1559–1610 MHz bands employed for the Global Positioning System.

5. There were a few other provisions addressed or implemented in this *Order*:

- **Existing Part 15 Operation.** We specified that transmitters operating under the provisions of 47 CFR 15.217–15.255 must contain their 20 dB bandwidth within the specified band of operation. This includes the effects of frequency sweeping, frequency hopping and other modulation techniques that may be employed as well as the frequency stability of the transmitter over variations in temperature and supply voltage.

- **Existing Waivers.** We extended the waivers issued to U.S. Radar, Time Domain, Zircon, and Kohler. Originally, these waivers were scheduled to expire upon effective date of this *Order*. Kohler requested a one year extension citing the time necessary to redesign its product, to test the redesigned product, and to modify its tooling. We sympathize with these concerns and believe that these problems also would affect other companies operating under a waiver. Accordingly, we extended all of the waivers until one year from the effective date of this *Order*.

- **U.S. Government Operation of UWB Devices.** When the part 15 regulations were amended in 1989, the Commission opened several frequency bands for unlicensed operation even though those bands were allocated for exclusive operation by the U.S. Government. The

Commission took this action following an informal agreement with NTIA that similarly permitted it to operate equipment in exclusive non-government bands under the same part 15 standards. We will continue this policy, permitting the U.S. Government to operate in non-government frequency bands and in shared frequency bands under the part 15 standards. Accordingly, as a condition of their use of these bands U.S. Government specifications for UWB devices operated by the U.S. Government agencies in non-government or in shared frequency bands must conform to the standards and operating conditions that are being adopted in this *Order*. The operation in non-government band of UWB devices that are not in compliance with the technical and administrative provisions contained in this *Order* is not permitted without the concurrence of the FCC. We believe that this will result in a greater number of UWB devices operating under the same parameters, facilitating our studies to readdress the appropriateness of the UWB standards within the next six to twelve months.

- **Exemption of Unlicensed PCS Transmitters from the Restricted Bands.** Under the current rules, unlicensed PCS transmitters operating in the 1910–1930 MHz and the 2390–2400 MHz bands under Subpart D of part 15 are not subject to the restricted band provisions in 47 CFR 15.205.

However, this provision is not readily apparent due to the lack of a reference to Subpart C of part 15 in the cross-reference statement contained in 47 CFR 15.309. We are taking the opportunity provided by this *Report and Order* to clarify this current provision through an amendment to 47 CFR 15.205. As this amendment to the rules only clarifies an existing regulation, prior notice and comment are unnecessary.

#### Measurement Procedures

6. The Commission adopted the following general guidance for compliance measurements of UWB devices. The procedures herein are based on the Commissions current understanding of UWB technology. Modifications may be necessary as measurement experience is gained. Except as otherwise described herein, measurements shall be made in accordance with the procedures specified in § 15.31(a)(6).

(1) Ground penetrating radars (GPRs) and wall imaging systems shall be tested under conditions that are representative of actual operating conditions. UWB devices intended for these types of application shall be compliance tested with the transducer at an operationally

representative height above a twenty-inch thick bed of dry sand. The use of this medium, particularly for larger GPRs (e.g., those that are towed behind vehicles), will likely preclude the use of a turntable in the measurement procedure. For these cases, directionality gradients shall be analyzed and measurements shall be performed at a sufficient number of radials around the equipment under test to determine the radial at which the field strength values of the radiated emissions are maximized.

(2) Field strength measurements of through-wall imaging systems may be made with a ½" thick gypsum or drywall board placed between the UWB device antenna and the measurement system antenna.

(3) RMS average field strength measurements, required for all frequencies above 960 MHz, shall be made using techniques to obtain true RMS average. This can be accomplished by using a spectrum analyzer that incorporates a RMS detector. The resolution bandwidth of the analyzer shall be set to 1 MHz, the RMS detector selected, and a video integration time of 1 ms or less is to be used. If the transmitter employs pulse gating, in which the transmitter is quiescent for intervals that are long compared to the nominal pulse repetition interval, all measurements shall be made while the pulse train is gated on. Alternatively, a true RMS level can be measured using a spectrum analyzer that does not incorporate a RMS detector. This approach requires a multiple step technique beginning with a peak detection scan of the UWB spectrum with a RBW of 1 MHz and a VBW of no less than 1 MHz. The resulting trace is to be used to identify the frequency and bandwidth of the five highest peaks in the spectrum. The analyzer is then to be placed in a "zero span" mode, with a RBW of 1 MHz, a video bandwidth equal to or greater than 1 MHz, and a detector selected that does not distort or smooth the instantaneous signal levels (e.g., a "sample" detector). With these settings, a minimum of ten independent instantaneous points, representing the highest amplitude readings, are to be obtained during the time that a pulse is present, in each 1 MHz frequency bin across the bandwidth of each of the five highest peaks identified in the previous step. Note that when the PRF of the device under test is less than the measurement bandwidth of 1 MHz, a significant number of samples may be required to ensure that a minimum of 10 samples with the pulse present are obtained. The data obtained from these measurements must then be post-

processed to determine true RMS average power levels. The post-processing of the data can be performed manually or with the aid of appropriate software.

(4) On any frequency or frequencies below or equal to 960 MHz, the field strength shall be measured with equipment employing a CISPR quasi-peak detector function and related measurement bandwidths, unless otherwise specified.

(5) In the frequency bands 1164–1240 MHz and 1559–1610 MHz, average radiated field strength measurements shall be made with a resolution bandwidth of no less than 1 kHz, using techniques as described previously for determining true RMS average power levels.

(6) Peak radiated emission measurements shall be made using a spectrum analyzer with a 3 MHz resolution bandwidth and no less than a 3 MHz video bandwidth. The analyzer should be used in a maximum-hold trace mode. The peak power level expressed in a 3 MHz bandwidth and the frequency at which this level was measured shall be reported in the application for certification. A different resolution bandwidth between 1 MHz and 50 MHz may be employed with appropriate changes to the standard. If a resolution bandwidth greater than 3 MHz is employed, a detailed description of the test procedure, calibration of the test setup, and the instrumentation employed in the testing must be submitted to the Commission. It is recommended that measurements using a resolution bandwidth greater than 3 MHz be coordinated with the Commission's laboratory staff in advance of the submission for certification.

(7) Field strength measurements may be performed without the use of a ground plane; however, a factor of 4.7 dB must be added to the measurement results thus obtained.

(8) To the extent practicable, the device under test should be measured at the distance specified in the appropriate rule section. However, in order to obtain an adequate signal-to-noise ratio in the measurement system, radiated measurements may have to be made at distances less than specified. In these cases, measurements may be performed at a distance other than what is specified, provided: measurements are not made in the near field of the measurement or device under test antenna, except where it can be shown that near field measurements are appropriate due to the characteristics of the device; and, it can be demonstrated that the signal levels necessitated a

measurement at the distance employed in order to be accurately detected by the measurement equipment.

(9) To the maximum extent possible, field strength measurements should be performed with the equipment under test positioned as it is intended to be used in actual operating conditions.

(10) Radiated field strength measurements must be made using the antenna to be employed with the UWB device under test. The measurement antenna must be sufficiently broad band to cover the frequency range of the measurements, and the use of multiple measurement antennas may be required. All measurement antennas used must be accurately calibrated and must demonstrate low phase dispersion over the frequency range of measurement. The orientation of the measurement antenna shall be varied to determine the polarization that maximizes the measured field strength.

(11) The spectrum to be investigated should include at least the fundamental emission and the secondary lobe regardless of the center frequency. In order to accomplish this, the frequency spectrum shall be investigated from the lowest frequency generated within the device, without going below 9 kHz, up to the frequency range shown in § 15.33(a) of the FCC rules or up to an upper frequency defined by adding three divided by the pulse width in seconds to the center frequency in Hz, whichever is greater. The frequency range in § 15.33(a) is based on the center frequency unless a higher frequency, e.g., a carrier frequency, is generated within the device. There is no requirement to measure emissions beyond 40 GHz provided the center frequency is less than 10 GHz; beyond 100 GHz if the center frequency is at or above 10 GHz and below 30 GHz; or beyond 200 GHz if the center frequency is at or above 30 GHz.

#### Final Regulatory Flexibility Certification

7. The Regulatory Flexibility Act of 1980, as amended (RFA)<sup>1</sup> requires that a regulatory flexibility analysis be prepared for rulemaking proceedings, unless the agency certifies that "the rule will not have a significant economic impact on a substantial number of small entities."<sup>2</sup> The RFA generally defines "small entity" as having the same meaning as the terms "small business,"

<sup>1</sup> The RFA, see 5 U.S.C. S 601 et. seq., has been amended by the Contract With America Advancement Act of 1996, Public Law 104–121, 110 Stat. 847 (1996) (CWAAA). Title II of the CWAAA is the Small Business Regulatory Enforcement Fairness Act of 1996 (SBREFA).

<sup>2</sup> 5 U.S.C. 605(b).

“small organization,” and “small governmental jurisdiction.”<sup>3</sup> In addition, the term “small business” has the same meaning as the term “small business concern” under the Small Business Act.<sup>4</sup> 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).<sup>5</sup>

8. In this *First Report and Order*, we are amending part 15 of our rules to permit the marketing and operation of new products incorporating ultra-wideband (“UWB”) technology. UWB devices operate by employing very narrow or short duration pulses that result in very large or wideband transmission bandwidths. UWB devices have the capability to provide for significant benefits for public safety, businesses and consumers. With appropriate technical standards, UWB devices can operate on spectrum occupied by existing radio services without causing interference, thereby permitting scarce spectrum resources to be used more efficiently.

9. We note that the Aircraft Owners and Pilots Association (AOPA) along with the National Business Aviation Association (NBAA) commented that the impact on small entities could not be estimated at this time. They added that their constituency substantially consists of small entities, comprising individuals and small businesses that are aircraft owners and operators. AOPA and NBAA expressed concern that there would be a severe and lengthy impact to aeronautical operations should the UWB standards prove to be inadequate to protect aeronautical communications, navigation and surveillance functions. However, as demonstrated in our analyses of the interference studies on GPS there should be no impact to aeronautical radio operations from UWB devices operating under the technical limits and operational requirements we are adopting. Therefore, we find that our action will have no negative impact on this industry and in fact will have a positive impact. Further, as noted in the text we currently are limiting the

expansion of UWB, out of an abundance of caution, until such time as we gain additional experience. Thus, we expect that our actions do not amount to a significant economic impact at this time. Accordingly, we certify that the rules being adopted in this *First Report and Order* will not have a significant economic impact on a substantial number of small entities.

10. We will send a copy of the *First Report and Order*, including a copy of this final certification, in a report to Congress pursuant to the Congressional Review Act.<sup>6</sup> In addition, the *First Report and Order* and this certification will be sent to the Chief Counsel for Advocacy of the Small Business Administration.<sup>7</sup>

#### Ordering Clauses

11. Authority for issuance of this *First Report and Order* is taken pursuant to Sections 4(i), 302, 303(e), 303(f), 303(r), 304 and 307 of the Communications Act of 1934, as amended, 47 U.S.C. Sections 154(i), 302, 303(e), 303(f), 303(r), 304 and 307. Part 15 of the Commission’s rules are amended and is effective July 15, 2002.

12. The waivers issued on June 25, 1999, to Time Domain Corporation, to U.S. Radar Inc., and to Zircon Corp. and the waiver issued on August 6, 2001, to Kohler Co. to permit the manufacture and marketing of their UWB devices remain in effect until one year from July 15, 2002.

13. The Commission’s Consumer and Governmental Affairs Bureau, Reference Information Center, *Shall Send* a copy of this *Report and Order*, including the Final Regulatory Flexibility Certification, to the Chief Counsel for Advocacy of the Small Business Administration.

#### List of Subjects in 47 CFR Part 15

Communications equipment, Radio, Reporting and recordkeeping requirements, Security measures.

Federal Communications Commission.

**Marlene H. Dortch,**  
*Secretary.*

#### Rule Changes

For the reasons discussed in the preamble, the Federal Communications Commission amends part 15 of 47 CFR as follows:

### PART 15—RADIO FREQUENCY DEVICES

1. The authority citation for part 15 continues to read as follows:

<sup>6</sup> See 5 U.S.C. 801(a)(1)(A).

<sup>7</sup> See 5 U.S.C. 605(b).

**Authority:** 47 U.S.C. 154, 302, 303, 304, 307, 336, and 544A.

2. Section 15.35 is amended by revising paragraph (b) to read as follows:

#### § 15.35 Measurement detector functions and bandwidths.

\* \* \* \* \*

(b) Unless otherwise stated, on any frequency or frequencies above 1000 MHz the radiated limits shown are based upon the use of measurement instrumentation employing an average detector function. When average radiated emission measurements are specified in this part, including emission measurements below 1000 MHz, there also is a limit on the radio frequency emissions, as measured using instrumentation with a peak detector function, corresponding to 20 dB above the maximum permitted average limit for the frequency being investigated unless a different peak emission limit is otherwise specified in the rules, e.g., see §§ 15.255, 15.509 and 15.511. Unless otherwise specified, measurements above 1000 MHz shall be performed using a minimum resolution bandwidth of 1 MHz. Measurements of AC power line conducted emissions are performed using a CISPR quasi-peak detector, even for devices for which average radiated emission measurements are specified.

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3. Section 15.205 is amended by adding paragraph (d)(6) to read as follows:

#### § 15.205 Restricted bands of operation.

\* \* \* \* \*

(d) \* \* \*

(6) Transmitters operating under the provisions of subparts D or F of this part.

\* \* \* \* \*

4. Section 15.215 is amended by revising paragraph (c) and by removing paragraph (d) to read as follows:

#### § 15.215 Additional provisions to the general radiated emission limitations.

\* \* \* \* \*

(c) Intentional radiators operating under the alternative provisions to the general emission limits, as contained in §§ 15.217 through 15.255 and in subpart E of this part, must be designed to ensure that the 20 dB bandwidth of the emission is contained within the frequency band designated in the rule section under which the equipment is operated. The requirement to contain the 20 dB bandwidth of the emission within the specified frequency band includes the effects from frequency sweeping, frequency hopping and other modulation techniques that may be

<sup>3</sup> 5 U.S.C. 601(6).

<sup>4</sup> 5 U.S.C. 601(3) (incorporating by reference the definition of “small business concern” in Small Business Act, 15 U.S.C. S 632). Pursuant to 5 U.S.C. 601(3), the statutory definition of a small business applies “unless an agency, after consultation with the Office of Advocacy of the Small Business Administration and after opportunity for public comment, establishes one or more definitions of such term which are appropriate to the activities of the agency and publishes such definition(s) in the *Federal Register*.”

<sup>5</sup> Small Business Act, 15 U.S.C. S 632.

employed as well as the frequency stability of the transmitter over expected variations in temperature and supply voltage. If a frequency stability is not specified in the regulations, it is recommended that the fundamental emission be kept within at least the central 80% of the permitted band in order to minimize the possibility of out-of-band operation.

5. Part 15 is amended by adding a new subpart F to read as follows:

**Subpart F—Ultra-Wideband Operation**

Sec.

- 15.501 Scope.
- 15.503 Definitions.
- 15.505 Cross reference.
- 15.507 Marketing of UWB equipment.
- 15.509 Technical requirements for low frequency imaging systems.
- 15.511 Technical requirements for mid-frequency imaging systems.
- 15.513 Technical requirements for high frequency imaging systems.
- 15.515 Technical requirements for vehicular radar systems.
- 15.517 Technical requirements for indoor UWB systems.
- 15.519 Technical requirements for hand held UWB systems.
- 15.521 Technical requirements applicable to all UWB devices.
- 15.523 Measurement procedures.
- 15.525 Coordination requirements.

**§ 15.501 Scope.**

This subpart sets out the regulations for unlicensed ultra-wideband transmission systems.

**§ 15.503 Definitions.**

(a) *UWB bandwidth.* For the purpose of this subpart, the UWB bandwidth is the frequency band bounded by the points that are 10 dB below the highest radiated emission, as based on the complete transmission system including the antenna. The upper boundary is designated  $f_H$  and the lower boundary is designated  $f_L$ . The frequency at which the highest radiated emission occurs is designated  $f_M$ .

(b) *Center frequency.* The center frequency,  $f_C$ , equals  $(f_H + f_L)/2$ .

(c) *Fractional bandwidth.* The fractional bandwidth equals  $2(f_H - f_L)/(f_H + f_L)$ .

(d) *Ultra-wideband (UWB) transmitter.* An intentional radiator that, at any point in time, has a fractional bandwidth equal to or greater than 0.20 or has a UWB bandwidth equal to or greater than 500 MHz, regardless of the fractional bandwidth.

(e) *Imaging system.* A general category consisting of ground penetrating radar systems, medical imaging systems, wall imaging systems through-wall imaging systems and surveillance systems. As used in this subpart, imaging systems do

not include systems designed to detect the location of tags or systems used to transfer voice or data information.

(f) *Ground penetrating radar (GPR) system.* A field disturbance sensor that is designed to operate only when in contact with, or within one meter of, the ground for the purpose of detecting or obtaining the images of buried objects or determining the physical properties within the ground. The energy from the GPR is intentionally directed down into the ground for this purpose.

(g) *Medical imaging system.* A field disturbance sensor that is designed to detect the location or movement of objects within the body of a person or animal.

(h) *Wall imaging system.* A field disturbance sensor that is designed to detect the location of objects contained within a "wall" or to determine the physical properties within the "wall." The "wall" is a concrete structure, the side of a bridge, the wall of a mine or another physical structure that is dense enough and thick enough to absorb the majority of the signal transmitted by the imaging system. This category of equipment does not include products such as "stud locators" that are designed to locate objects behind gypsum, plaster or similar walls that are not capable of absorbing the transmitted signal.

(i) *Through-wall imaging system.* A field disturbance sensor that is designed to detect the location or movement of persons or objects that are located on the other side of an opaque structure such as a wall or a ceiling. This category of equipment may include products such as "stud locators" that are designed to locate objects behind gypsum, plaster or similar walls that are not thick enough or dense enough to absorb the transmitted signal.

(j) *Surveillance system.* A field disturbance sensor used to establish a stationary RF perimeter field that is used for security purposes to detect the intrusion of persons or objects.

(k) *EIRP.* Equivalent isotropically radiated power, i.e., the product of the power supplied to the antenna and the antenna gain in a given direction relative to an isotropic antenna. The EIRP, in terms of dBm, can be converted to a field strength, in dBuV/m at 3 meters, by adding 95.2. As used in this subpart, EIRP refers to the highest signal strength measured in any direction and at any frequency from the UWB device, as tested in accordance with the procedures specified in § 15.31(a) and 15.523 of this chapter.

(l) *Law enforcement, fire and emergency rescue organizations.* As used in this subpart, this refers to those

parties eligible to obtain a license from the FCC under the eligibility requirements specified in § 90.20(a)(1) of this chapter.

(m) *Hand held.* As used in this subpart, a hand held device is a portable device, such as a lap top computer or a PDA, that is primarily hand held while being operated and that does not employ a fixed infrastructure.

**§ 15.505 Cross reference.**

(a) Except where specifically stated otherwise within this subpart, the provisions of subparts A and B and of §§ 15.201 through 15.204 and 15.207 of subpart C of this part apply to unlicensed UWB intentional radiators. The provisions of § 15.35(c) and 15.205 do not apply to devices operated under this subpart. The provisions of Footnote US 246 to the Table of Frequency Allocations contained in § 2.106 of this chapter does not apply to devices operated under this subpart.

(b) The requirements of this subpart apply only to the radio transmitter, i.e., the intentional radiator, contained in the UWB device. Other aspects of the operation of a UWB device may be subject to requirements contained elsewhere in this chapter. In particular, a UWB device that contains digital circuitry not directly associated with the operation of the transmitter also is subject to the requirements for unintentional radiators in subpart B of this part. Similarly, an associated receiver that operates (tunes) within the frequency range 30 MHz to 960 MHz is subject to the requirements in subpart B of this part.

**§ 15.507 Marketing of UWB equipment.**

In some cases, the operation of UWB devices is limited to specific parties, e.g., law enforcement, fire and rescue organizations operating under the auspices of a state or local government. The marketing of UWB devices must be directed solely to parties eligible to operate the equipment. The responsible party, as defined in § 2.909 of this chapter, is responsible for ensuring that the equipment is marketed only to eligible parties. Marketing of the equipment in any other manner may be considered grounds for revocation of the grant of certification issued for the equipment.

**§ 15.509 Technical requirements for low frequency imaging systems.**

(a) The UWB bandwidth of an imaging system operating under the provisions of this section must be below 960 MHz.

(b) Operation under the provisions of this section is limited to the following:

(1) GPRs and wall imaging systems operated by law enforcement, fire and emergency rescue organizations, by scientific research institutes, by commercial mining companies, or by construction companies.

(2) Through-wall imaging systems operated by law enforcement, fire or emergency rescue organizations.

(3) Parties operating this equipment must be eligible for licensing under the provisions of part 90 of this chapter.

(4) The operation of imaging systems under this section requires coordination, as detailed in § 15.525.

(c) An imaging system shall contain a manually operated switch that causes the transmitter to cease operation within 10 seconds of being released by the operator. In addition, it is permissible to operate an imaging system by remote control provided the imaging system ceases transmission within 10 seconds of the remote switch being released by the operator.

(d) The radiated emissions at or below 960 MHz from a device operating under the provisions of this section shall not exceed the emission levels in § 15.209. The radiated emissions above 960 MHz from a device operating under the provisions of this section shall not exceed the following average limits when measured using a resolution bandwidth of 1 MHz:

Frequency in MHz	EIRP in dBm
960–1610 .....	– 65.3
1610–1990 .....	– 53.3
Above 1990 .....	– 51.3

(e) In addition to the radiated emission limits specified in the table in paragraph (d) of this section, UWB transmitters operating under the provisions of this section shall not exceed the following average limits when measured using a resolution bandwidth of no less than 1 kHz:

Frequency in MHz	EIRP in dBm
1164–1240 .....	– 75.3
1559–1610 .....	– 75.3

(f) There is a limit on the peak level of the emissions contained within a 50 MHz bandwidth centered on the frequency at which the highest radiated emission occurs,  $f_M$ . That limit is 0 dBm EIRP. It is acceptable to employ a correspondingly different peak emission limit, following the procedures described in § 15.521.

(g) Imaging systems operating under the provisions of this section shall bear the following or similar statement, as adjusted for the specific provisions in

paragraph (b) of this section, in a conspicuous location on the device:

“Operation of this device is restricted to law enforcement, fire and rescue officials, scientific research institutes, commercial mining companies, and construction companies. Operation by any other party is a violation of 47 U.S.C. 301 and could subject the operator to serious legal penalties.”

**§ 15.511 Technical requirements for mid-frequency imaging systems.**

(a) The UWB bandwidth of an imaging system operating under the provisions of this section must be contained between 1990 MHz and 10,600 MHz.

(b) Operation under the provisions of this section is limited to the following:

(1) Through-wall imaging systems operated by law enforcement, fire or emergency rescue organizations.

(2) Fixed surveillance systems operated by law enforcement, fire or emergency rescue organizations or by manufacturers licensees, petroleum licensees or power licensees as defined in § 90.7 of this chapter.

(3) Parties operating under the provisions of this section must be eligible for licensing under the provisions of part 90 of this chapter.

(4) The operation of imaging systems under this section requires coordination, as detailed in § 15.525.

(c) A through-wall imaging system shall contain a manually operated switch that causes the transmitter to cease operation within 10 seconds of being released by the operator. In addition, it is permissible to operate an imaging system by remote control provided the imaging system ceases transmission within 10 seconds of the remote switch being released by the operator.

(d) The radiated emissions at or below 960 MHz from a device operating under the provisions of this section shall not exceed the emission levels in § 15.209. The radiated emissions above 960 MHz from a device operating under the provisions of this section shall not exceed the following average limits when measured using a resolution bandwidth of 1 MHz:

Frequency in MHz	EIRP in dBm
960–1610 .....	– 53.3
1610–1990 .....	– 51.3
1990–10600 .....	– 41.3
Above 10600 .....	– 51.3

(e) In addition to the radiated emission limits specified in the table in paragraph (d) of this section, UWB transmitters operating under the provisions of this section shall not exceed the following average limits

when measured using a resolution bandwidth of no less than 1 kHz:

Frequency in MHz	EIRP in dBm
1164–1240 .....	– 63.3
1559–1610 .....	– 63.3

(f) There is a limit on the peak level of the emissions contained within a 50 MHz bandwidth centered on the frequency at which the highest radiated emission occurs,  $f_M$ . That limit is 0 dBm EIRP. It is acceptable to employ a different resolution bandwidth, and a correspondingly different peak emission limit, following the procedures described in § 15.521.

(g) Imaging systems operating under the provisions of this section shall bear the following or similar statement, as adjusted for the specific provisions in paragraph (b) of this section, in a conspicuous location on the device:

“Operation of this device is restricted to law enforcement, fire and rescue officials, public utilities, and industrial entities. Operation by any other party is a violation of 47 U.S.C. 301 and could subject the operator to serious legal penalties.”

**§ 15.513 Technical requirements for high frequency imaging systems.**

(a) The UWB bandwidth of an imaging system operating under the provisions of this section must be contained between 3100 MHz and 10,600 MHz.

(b) Operation under the provisions of this section is limited to the following:

(1) GPRs and wall imaging systems operated by law enforcement, fire or emergency rescue organizations, by scientific research institutes, by commercial mining companies, or by construction companies.

(2) Medical imaging systems used at the direction of, or under the supervision of, a licensed health care practitioner.

(3) Parties operating GPRs or wall imaging systems must be eligible for licensing under the provisions of part 90 of this chapter.

(4) The operation of imaging systems under this section requires coordination, as detailed in § 15.525.

(c) An imaging system shall contain a manually operated switch that causes the transmitter to cease operation within 10 seconds of being released by the operator. In addition, it is permissible to operate an imaging system by remote control provided the imaging system ceases transmission within 10 seconds of the remote switch being released by the operator.

(d) The radiated emissions at or below 960 MHz from a device operating under the provisions of this section shall not

exceed the emission levels in § 15.209. The radiated emissions above 960 MHz from a device operating under the provisions of this section shall not exceed the following average limits when measured using a resolution bandwidth of 1 MHz:

Frequency in MHz	EIRP in dBm
960–1610 .....	– 65.3
1610–1990 .....	– 53.3
1990–3100 .....	– 51.3
3100–10600 .....	– 41.3
Above 10600 .....	– 51.3

(e) In addition to the radiated emission limits specified in the table in paragraph (d) of this section, UWB transmitters operating under the provisions of this section shall not exceed the following average limits when measured using a resolution bandwidth of no less than 1 kHz:

Frequency in MHz	EIRP in dBm
1164–1240 .....	– 75.3
1559–1610 .....	– 75.3

(f) There is a limit on the peak level of the emissions contained within a 50 MHz bandwidth centered on the frequency at which the highest radiated emission occurs,  $f_M$ . That limit is 0 dBm EIRP. It is acceptable to employ a different resolution bandwidth, and a correspondingly different peak emission limit, following the procedures described in § 15.521.

(g) Imaging systems, other than medical imaging systems, operating under the provisions of this section shall bear the following or similar statement in a conspicuous location on the device:

“Operation of this device is restricted to law enforcement, fire and rescue officials, scientific research institutes, commercial mining companies, and construction companies. Operation by any other party is a violation of 47 U.S.C. 301 and could subject the operator to serious legal penalties.”

**§ 15.515 Technical requirements for vehicular radar systems.**

(a) Operation under the provisions of this section is limited to UWB field disturbance sensors mounted in terrestrial transportation vehicles. These devices shall operate only when the vehicle is operating, e.g., the engine is running. Operation shall occur only upon specific activation, such as upon starting the vehicle, changing gears, or engaging a turn signal.

(b) The UWB bandwidth of a vehicular radar system operating under the provisions of this section shall be contained between 22 GHz and 29 GHz. In addition, the center frequency,  $f_c$ ,

and the frequency at which the highest level emission occurs,  $f_M$ , must be greater than 24.075 GHz.

(c) Following proper installation, vehicular radar systems shall attenuate any emissions within the 23.6–24.0 GHz band that appear 38 degrees or greater above the horizontal plane by 25 dB below the limit specified in paragraph (d) of this section. For equipment authorized, manufactured or imported on or after January 1, 2005, this level of attenuation shall be 25 dB for any emissions within the 23.6–24.0 GHz band that appear 30 degrees or greater above the horizontal plane. For equipment authorized, manufactured or imported on or after January 1, 2010, this level of attenuation shall be 30 dB for any emissions within the 23.6–24.0 GHz band that appear 30 degrees or greater above the horizontal plane. For equipment authorized, manufactured or imported on or after January 1, 2014, this level of attenuation shall be 35 dB for any emissions within the 23.6–24.0 GHz band that appear 30 degrees or greater above the horizontal plane. This level of attenuation can be achieved through the antenna directivity, through a reduction in output power or any other means.

(d) The radiated emissions at or below 960 MHz from a device operating under the provisions of this section shall not exceed the emission levels in § 15.209. The radiated emissions above 960 MHz from a device operating under the provisions of this section shall not exceed the following average limits when measured using a resolution bandwidth of 1 MHz:

Frequency in MHz	EIRP in dBm
960–1610 .....	– 75.3
1610–22,000 .....	– 61.3
22,000–29,000 .....	– 41.3
29,000–31,000 .....	– 51.3
Above 31,000 .....	– 61.3

(e) In addition to the radiated emission limits specified in the table in paragraph (d) of this section, UWB transmitters operating under the provisions of this section shall not exceed the following average limits when measured using a resolution bandwidth of no less than 1 kHz:

Frequency in MHz	EIRP in dBm
1164–1240 .....	– 85.3
1559–1610 .....	– 85.3

(f) There is a limit on the peak level of the emissions contained within a 50 MHz bandwidth centered on the frequency at which the highest radiated emission occurs,  $f_M$ . That limit is 0 dBm

EIRP. It is acceptable to employ a different resolution bandwidth, and a correspondingly different peak emission limit, following the procedures described in § 15.521.

**§ 15.517 Technical requirements for indoor UWB systems.**

(a) Operation under the provisions of this section is limited to UWB transmitters employed solely for indoor operation.

(1) Indoor UWB devices, by the nature of their design, must be capable of operation only indoors. The necessity to operate with a fixed indoor infrastructure, e.g., a transmitter that must be connected to the AC power lines, may be considered sufficient to demonstrate this.

(2) The emissions from equipment operated under this section shall not be intentionally directed outside of the building in which the equipment is located, such as through a window or a doorway, to perform an outside function, such as the detection of persons about to enter a building.

(3) The use of outdoor mounted antennas, e.g., antennas mounted on the outside of a building or on a telephone pole, or any other outdoors infrastructure is prohibited.

(4) Field disturbance sensors installed inside of metal or underground storage tanks are considered to operate indoors provided the emissions are directed towards the ground.

(5) A communications system shall transmit only when the intentional radiator is sending information to an associated receiver.

(b) The UWB bandwidth of a UWB system operating under the provisions of this section must be contained between 3100 MHz and 10,600 MHz.

(c) The radiated emissions at or below 960 MHz from a device operating under the provisions of this section shall not exceed the emission levels in § 15.209. The radiated emissions above 960 MHz from a device operating under the provisions of this section shall not exceed the following average limits when measured using a resolution bandwidth of 1 MHz:

Frequency in MHz	EIRP in dBm
960–1610 .....	– 75.3
1610–1990 .....	– 53.3
1990–3100 .....	– 51.3
3100–10600 .....	– 41.3
Above 10600 .....	– 51.3

(e) In addition to the radiated emission limits specified in the table in paragraph (d) of this section, UWB transmitters operating under the provisions of this section shall not

exceed the following average limits when measured using a resolution bandwidth of no less than 1 kHz:

Frequency in MHz	EIRP in dBm
1164–1240 .....	– 85.3
1559–1610 .....	– 85.3

(f) There is a limit on the peak level of the emissions contained within a 50 MHz bandwidth centered on the frequency at which the highest radiated emission occurs,  $f_M$ . That limit is 0 dBm EIRP. It is acceptable to employ a different resolution bandwidth, and a correspondingly different peak emission limit, following the procedures described in § 15.521.

(g) UWB systems operating under the provisions of this section shall bear the following or similar statement in a conspicuous location on the device or in the instruction manual supplied with the device:

“This equipment may only be operated indoors. Operation outdoors is in violation of 47 U.S.C. 301 and could subject the operator to serious legal penalties.”

**§ 15.519 Technical requirements for hand held UWB systems.**

(a) UWB devices operating under the provisions of this section must be hand held, i.e., they are relatively small devices that are primarily hand held while being operated and do not employ a fixed infrastructure.

(1) A UWB device operating under the provisions of this section shall transmit only when it is sending information to an associated receiver. The UWB intentional radiator shall cease transmission within 10 seconds unless it receives an acknowledgement from the associated receiver that its transmission is being received. An acknowledgment of reception must continue to be received by the UWB intentional radiator at least every 10 seconds or the UWB device must cease transmitting.

(2) The use of antennas mounted on outdoor structures, e.g., antennas mounted on the outside of a building or on a telephone pole, or any fixed outdoors infrastructure is prohibited. Antennas may be mounted only on the hand held UWB device.

(3) UWB devices operating under the provisions of this section may operate indoors or outdoors.

(b) The UWB bandwidth of a device operating under the provisions of this section must be contained between 3100 MHz and 10,600 MHz.

(c) The radiated emissions at or below 960 MHz from a device operating under the provisions of this section shall not

exceed the emission levels in § 15.209. The radiated emissions above 960 MHz from a device operating under the provisions of this section shall not exceed the following average limits when measured using a resolution bandwidth of 1 MHz:

Frequency in MHz	EIRP in dBm
960–1610 .....	– 75.3
1610–1900 .....	– 63.3
1900–3100 .....	– 61.3
3100–10600 .....	– 41.3
Above 10600 .....	– 61.3

(d) In addition to the radiated emission limits specified in the table in paragraph (c) of this section, UWB transmitters operating under the provisions of this section shall not exceed the following average limits when measured using a resolution bandwidth of no less than 1 kHz:

Frequency in MHz	EIRP in dBm
1164–1240 .....	– 85.3
1559–1610 .....	– 85.3

(e) There is a limit on the peak level of the emissions contained within a 50 MHz bandwidth centered on the frequency at which the highest radiated emission occurs,  $f_M$ . That limit is 0 dBm EIRP. It is acceptable to employ a different resolution bandwidth, and a correspondingly different peak emission limit, following the procedures described in § 15.521.

**§ 15.521 Technical requirements applicable to all UWB devices.**

(a) UWB devices may not be employed for the operation of toys. Operation onboard an aircraft, a ship or a satellite is prohibited.

(b) Manufacturers and users are reminded of the provisions of §§ 15.203 and 15.204.

(c) As noted in § 15.3(k) digital circuitry that is used only to enable the operation of a transmitter and that does not control additional functions or capabilities is not classified as a digital device. Instead, the emissions from that digital circuitry are subject to the same limits as those applicable to the transmitter. If it can be clearly demonstrated that an emission from a UWB transmitter is due solely to emissions from digital circuitry contained within the transmitter and that the emission is not intended to be radiated from the transmitter’s antenna, the limits shown in § 15.209 shall apply to that emission rather than the limits specified in this section.

(d) Within the tables in § 15.509, 15.511, 15.513, 15.515, 15.517, and

15.519, the tighter emission limit applies at the band edges. Radiated emission levels at and below 960 MHz are based on measurements employing a CISPR quasi-peak detector. Radiated emission levels above 960 MHz are based on RMS average measurements over a 1 MHz resolution bandwidth. The RMS average measurement is based on the use of a spectrum analyzer with a resolution bandwidth of 1 MHz, an RMS detector, and a 1 millisecond or less averaging time. If pulse gating is employed where the transmitter is quiescent for intervals that are long compared to the nominal pulse repetition interval, measurements shall be made with the pulse train gated on. Alternative measurement procedures may be considered by the Commission.

(e) The frequency at which the highest radiated emission occurs,  $f_M$ , must be contained within the UWB bandwidth.

(f) Imaging systems may be employed only for the type of information exchange described in their specific definitions contained in § 15.503. The detection of tags or the transfer of data or voice information is not permitted under the standards for imaging systems.

(g) When a peak measurement is required, it is acceptable to use a resolution bandwidth other than the 50 MHz specified in this subpart. This resolution bandwidth shall not be lower than 1 MHz or greater than 50 MHz, and the measurement shall be centered on the frequency at which the highest radiated emission occurs,  $f_M$ . If a resolution bandwidth other than 50 MHz is employed, the peak EIRP limit shall be  $20 \log(RBW/50)$  dBm where RBW is the resolution bandwidth in megahertz that is employed. This may be converted to a peak field strength level at 3 meters using  $E(\text{dBuV/m}) = P(\text{dBm EIRP}) + 95.2$ . If RBW is greater than 3 MHz, the application for certification filed with the Commission must contain a detailed description of the test procedure, calibration of the test setup, and the instrumentation employed in the testing.

(h) The highest frequency employed in § 15.33 to determine the frequency range over which radiated measurements are made shall be based on the center frequency,  $f_C$ , unless a higher frequency is generated within the UWB device. For measuring emission levels, the spectrum shall be investigated from the lowest frequency generated in the UWB transmitter, without going below 9 kHz, up to the frequency range shown in § 15.33(a) or up to  $f_C + 3/(\text{pulse width in seconds})$ , whichever is higher. There is no requirement to measure emissions



beyond 40 GHz provided  $f_c$  is less than 10 GHz; beyond 100 GHz if  $f_c$  is at or above 10 GHz and below 30 GHz; or beyond 200 GHz if  $f_c$  is at or above 30 GHz.

(i) The prohibition in § 2.201(f) and 15.5(d) of this chapter against Class B (damped wave) emissions does not apply to UWB devices operating under this subpart.

(j) Responsible parties are reminded of the other standards and requirements cross referenced in § 15.505, such as a limit on emissions conducted onto the AC power lines.

#### **§ 15.523 Measurement procedures.**

Measurements shall be made in accordance with the procedures specified by the Commission.

#### **§ 15.525 Coordination requirements.**

(a) UWB imaging systems require coordination through the FCC before the equipment may be used. The operator shall comply with any constraints on equipment usage resulting from this coordination.

(b) The users of UWB imaging devices shall supply detailed operational areas to the FCC Office of Engineering and Technology who shall coordinate this information with the Federal Government through the National Telecommunications and Information Administration. The information provided by the UWB operator shall include the name, address and other pertinent contact information of the user, the desired geographical area of operation, and the FCC ID number and other nomenclature of the UWB device. This material shall be submitted to the following address: Frequency Coordination Branch, Office of Engineering and Technology, Federal Communications Commission, 445 12th Street, SW, Washington, DC 20554, ATTN: UWB Coordination.

(c) The manufacturers, or their authorized sales agents, must inform purchasers and users of their systems of the requirement to undertake detailed coordination of operational areas with the FCC prior to the equipment being operated.

(d) Users of authorized, coordinated UWB systems may transfer them to other qualified users and to different locations upon coordination of change of ownership or location to the FCC and coordination with existing authorized operations.

(e) The NTIA/FCC coordination report shall include any needed constraints that apply to day-to-day operations. Such constraints could specify prohibited areas of operations or areas located near authorized radio stations

for which additional coordination is required before operation of the UWB equipment. If additional local coordination is required, a local coordination contact will be provided.

(f) The coordination of routine UWB operations shall not take longer than 15 business days from the receipt of the coordination request by NTIA. Special temporary operations may be handled with an expedited turn-around time when circumstances warrant. The operation of UWB systems in emergency situations involving the safety of life or property may occur without coordination provided a notification procedure, similar to that contained in § 2.405(a) through (e) of this chapter, is followed by the UWB equipment user.

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## **DEPARTMENT OF COMMERCE**

### **National Oceanic and Atmospheric Administration**

#### **50 CFR Part 679**

[Docket No. 011218304-1304-01; I.D. 121701A]

RIN 0648-AQ02

#### **Fisheries of the Exclusive Economic Zone Off Alaska; Steller Sea Lion Protection Measures for the Groundfish Fisheries Off Alaska; Final 2002 Harvest Specifications and Associated Management Measures for the Groundfish Fisheries Off Alaska**

**AGENCY:** National Marine Fisheries Service (NMFS), National Oceanic and Atmospheric Administration (NOAA), Commerce.

**ACTION:** Extension of emergency interim rule; request for comments.

**SUMMARY:** On January 8, 2002, NMFS published an emergency interim rule, effective through July 8, 2002, that implemented Steller sea lion protection measures to avoid the likelihood that the groundfish fisheries off Alaska will jeopardize the continued existence of the western distinct population segment of Steller sea lions, or adversely modify its critical habitat. The emergency interim rule also implemented 2002 harvest specifications for the groundfish fisheries off Alaska. This action extends the emergency interim rule through December 31, 2002. This emergency action is necessary to continue to implement Steller sea lion protection measures until completion of notice and comment rulemaking and to continue implementation of 2002 harvest

specifications for the remainder of the 2002 fishing year.

**DATES:** The expiration date of the emergency interim rule published January 8, 2002 (67 FR 956), and amended and corrected May 1, 2002 (67 FR 21600) is extended through December 31, 2002. Comments must be received by June 14, 2002.

**ADDRESSES:** Comments may be sent to Sue Salvesson, Assistant Regional Administrator, Sustainable Fisheries Division, Alaska Region, NMFS, P.O. Box 21668, Juneau, AK, 99802, Attn: Lori Gravel-Durall, or delivered to room 401 of the Federal Building, 709 West 9th Street, Juneau, AK. Comments will not be accepted if submitted via e-mail or Internet. Copies of the Supplemental Environmental Impact Statement on Steller Sea Lion Protection Measures in the Federal groundfish fisheries off Alaska (SEIS), including the 2001 biological opinion (BiOp), and the Environmental Assessment (EA) for the Total Allowable Catch for the Year 2002 Alaska Groundfish Fisheries may be obtained from the same address. The SEIS and EA are also available on the NMFS Alaska Region home page at <http://www.fakr.noaa.gov>.

**FOR FURTHER INFORMATION CONTACT:**

Melanie Brown, 907-586-7228 or [melanie.brown@noaa.gov](mailto:melanie.brown@noaa.gov).

**SUPPLEMENTARY INFORMATION:** Under Section 7 of the Endangered Species Act, NMFS issued a biological opinion (BiOp) dated October 19, 2001, on the pollock, Atka mackerel, and Pacific cod fisheries of the Bering Sea and Aleutian Islands management area (BSAI) and Gulf of Alaska (GOA) (see **ADDRESSES**). The BiOp concluded that the BSAI and GOA pollock, Atka mackerel, and Pacific cod fisheries, as prosecuted with the Steller sea lion protection measures, were not likely to jeopardize the continued existence of the western distinct population segment of Steller sea lions, nor adversely modify its critical habitat. The Steller sea lion protection measures accomplish three basic principles: (1) temporal dispersion of fishing effort, (2) spatial dispersion of fishing effort, and (3) groundfish fishing restrictions around Steller sea lion rookeries and haulouts.

NMFS published an emergency interim rule implementing the Steller sea lion protection measures and 2002 harvest specifications in the Federal Register on January 8, 2002 (67 FR 956), amended on May 1, 2002 (67 FR 21600), and this rule is effective through July 8, 2002.

At its April 2002 meeting, the North Pacific Fishery Management Council (Council) voted to recommend