

**DEPARTMENT OF THE INTERIOR****Fish and Wildlife Service****50 CFR Part 17**

[Docket No. FWS-R5-ES-2021-0032;  
FF09E21000 FXES1111090FEDR 234]

RIN 1018-BF87

**Endangered and Threatened Wildlife  
and Plants; Designation of Critical  
Habitat for Rufa Red Knot**

**AGENCY:** Fish and Wildlife Service,  
Interior.

**ACTION:** Proposed rule; revisions and  
reopening of comment period.

**SUMMARY:** We, the U.S. Fish and Wildlife Service (Service), announce the reopening of the comment period on our July 15, 2021, proposed rule (hereinafter the “2021 proposed rule”) to designate critical habitat for the rufa red knot (*Calidris canutus rufa*) under the Endangered Species Act of 1973, as amended (Act). In this document, we present revisions to the critical habitat designation we proposed for the species in the 2021 proposed rule. As a result of the critical habitat revisions, we now propose to designate a total of approximately 683,405 acres (276,564 hectares) as critical habitat for the rufa red knot across 127 units (18 of which are further subdivided into 46 subunits) in Massachusetts, New York, New Jersey, Delaware, Virginia, North Carolina, South Carolina, Georgia, Florida, Alabama, Mississippi, Louisiana, and Texas. This amounts to an overall increase of 32,615 acres (13,199 hectares) in our proposed critical habitat designation for the species. This revision includes seven new units in Massachusetts, New York, Virginia, North Carolina, South Carolina, and Georgia; revised units in Massachusetts, New Jersey, South Carolina, Georgia, and Texas; and corrections to reported acreages/hectares for four other units and the total acreage in the 2021 proposed rule. We are reopening the comment period to allow all interested parties the opportunity to comment on the 2021 proposed rule, as well as the revisions described in this document. Comments previously submitted need not be resubmitted, as they will be fully considered in preparation of the final rule. If the determination is finalized, the final rule will include responses to the comments previously received from the 2021 proposed rule and any comments received as part of this document’s reopening of comments.

**DATES:** The comment period for the 2021 proposed rule is reopened. So that we can fully consider your comments in our final determination, submit them on or before May 30, 2023. Comments submitted electronically using the Federal eRulemaking Portal (see **ADDRESSES**, below) must be received by 11:59 p.m. Eastern Time on the closing date.

**ADDRESSES:**

*Document availability:* You may obtain copies of the 2021 proposed rule and associated documents on the internet at <https://www.regulations.gov> under Docket No. FWS-R5-ES-2021-0032.

*Written comments:* You may submit written comments by one of the following methods:

(1) *Electronically:* Go to the Federal eRulemaking Portal: <https://www.regulations.gov>. In the Search box, enter the docket number or RIN for this rulemaking (presented above in the document headings). For best results, do not copy and paste either number; instead, type the docket number or RIN into the Search box using hyphens. Then, click on the Search button. On the resulting page, in the panel on the left side of the screen, under the Document Type heading, check the Proposed Rule box to locate this document. You may submit a comment by clicking on “Comment.”

(2) *By hard copy:* Submit by U.S. mail to: Public Comments Processing, Attn: FWS-R5-ES-2021-0032, U.S. Fish and Wildlife Service, MS: PRB/3W, 5275 Leesburg Pike, Falls Church, VA 22041-3803.

We request that you send comments only by the methods described above. We will post all comments on <https://www.regulations.gov>. This generally means that we will post any personal information you provide us (see Public Comments, below, for more information).

**FOR FURTHER INFORMATION CONTACT:** Eric Schrading, Field Supervisor, U.S. Fish and Wildlife Service, New Jersey Ecological Services Field Office, 4 East Jimmie Leeds Road, Suite 4, Galloway, NJ 08205; telephone 609-382-5272. Individuals in the United States who are deaf, deafblind, hard of hearing, or have a speech disability may dial 711 (TTY, TDD, or TeleBraille) to access telecommunications relay services. Individuals outside the United States should use the relay services offered within their country to make international calls to the point-of-contact in the United States.

**SUPPLEMENTARY INFORMATION:**

**Public Comments**

We will accept written comments, information, and additional data during this reopened comment period on our July 15, 2021, proposed rule to designate critical habitat for the rufa red knot (86 FR 37410) (hereinafter the “2021 proposed rule”), the revisions to the proposed critical habitat designation that are described in this document, and our revised draft economic assessment (DEA) of the proposed critical habitat designation. We will consider information and recommendations from all interested parties. We are interested in comments concerning:

(1) The reasons why we should or should not designate habitat as “critical habitat” under section 4 of the Act (16 U.S.C. 1531 *et seq.*), including information to inform the following factors that the regulations identify as reasons why designation of critical habitat may be not prudent:

(a) 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;

(b) The present or threatened destruction, modification, or curtailment of a species’ habitat or range is not a threat to the species, or threats to the species’ habitat stem solely from causes that cannot be addressed through management actions resulting from consultations under section 7(a)(2) of the Act;

(c) Areas within the jurisdiction of the United States provide no more than negligible conservation value, if any, for a species occurring primarily outside the jurisdiction of the United States; or

(d) No areas meet the definition of critical habitat.

(2) Specific information on:

(a) The amount and distribution of rufa red knot habitat;

(b) What areas, that were occupied at the time of listing (specifically referring to January 12, 2015, which is the effective date for the December 11, 2014, final listing rule (79 FR 73705)) and that contain the physical or biological features essential to the conservation of the species, should be included in the designation and why;

(c) Special management considerations or protection that may be needed in critical habitat areas we are proposing, including managing for the potential effects of climate change; and

(d) What areas not occupied at the time of listing are essential for the conservation of the species. We particularly seek comments regarding:

(i) Whether occupied areas are adequate for the conservation of the species; and

(ii) Specific information regarding whether or not unoccupied areas would, with reasonable certainty, contribute to the conservation of the species and contain at least one physical or biological feature essential to the conservation of the species.

(3) Information on land ownership and land use designations and current or planned activities in the subject areas and their possible impacts on the proposed critical habitat.

(4) Information on the projected and reasonably likely impacts of climate change on the rufa red knot's proposed critical habitat.

(5) Any probable economic, national security, or other relevant impacts of designating any area that may be included in the final designation, and the benefits of including or excluding specific areas.

(6) Information on the extent to which the description of probable economic impacts in the draft economic analysis is a reasonable estimate of the likely economic impacts.

(7) Whether any specific areas we are proposing for critical habitat designation should be considered for exclusion under section 4(b)(2) of the Act, and whether the benefits of potentially excluding any specific area outweigh the benefits of including that area under section 4(b)(2) of the Act, in particular those based on a conservation program or plan, and why. These may include Federal, Tribal, State, county, local, or private lands with permitted conservation plans covering the species in the area such as habitat conservation plans, safe harbor agreements, or conservation easements, or non-permitted conservation agreements and partnerships that would be encouraged by designation of, or exclusion from, critical habitat. Detailed information regarding these plans, agreements, easements, and partnerships is also requested, including:

(a) The location and size of lands covered by the plan, agreement, easement, or partnership;

(b) The duration of the plan, agreement, easement, or partnership;

(c) Who holds or manages the land;

(d) What management activities are conducted;

(e) What land uses are allowable; and

(f) If management activities are beneficial to the rufa red knot and its habitat.

(8) Ongoing or proposed conservation efforts that could result in direct or indirect ecological benefits to the associated habitat for the rufa red knot; as such, those efforts would lend to the recovery of the species and therefore areas covered may be considered for

exclusion from the final critical habitat designation.

(9) Whether we could improve our data or modify our approach to designating critical habitat in any way to provide for greater public participation and understanding, or to better accommodate public concerns and comments or to better effectuate the purposes of the Act.

If you submitted comments or information on the 2021 proposed rule or DEA during the comment period that was open from July 15, 2021, to September 13, 2021, please do not resubmit them. Any such comments are already part of the public record of this rulemaking proceeding, and we will fully consider them in the preparation of our final determination. Once the determination is finalized, the final rule will take into consideration all written comments and any additional information we receive during both comment periods. The final decision may differ from this revised proposed rule, based on our review of all information we receive during this rulemaking proceeding.

You may submit your comments and materials by one of the methods listed in **ADDRESSES**. We request that you send comments only by the methods described in **ADDRESSES**.

If you submit a comment via <https://www.regulations.gov>, your entire comment—including any personal identifying information—will be posted on the website. We will post all hardcopy comments on <https://www.regulations.gov> as well. If you submit a hardcopy comment that includes personal identifying information, you may request at the top of your document that we withhold this information from public review. However, we cannot guarantee that we will be able to do so.

Comments and materials we receive, as well as supporting documentation we used in preparing the proposed rule and DEA, will be available for public inspection on <https://www.regulations.gov> at Docket No. FWS-R5-ES-2021-0032, or by appointment, during normal business hours, at the U.S. Fish and Wildlife Service, New Jersey Ecological Services Field Office (see **FOR FURTHER INFORMATION CONTACT**). You may obtain copies of the proposed rule and the DEA on the internet at <https://www.regulations.gov> at Docket No. FWS-R5-ES-2021-0032, or by mail from the New Jersey Ecological Services Field Office.

## Background

It is our intent to discuss in this document only those topics directly relevant to these revisions of the proposed designation of critical habitat. For more information on the species, its habitat, and previous Federal actions concerning the rufa red knot, refer to the 2021 proposed rule. Proposed critical habitat for the rufa red knot consists of the area described in the 2021 proposed rule, as modified by the revisions explained in this document; both together constitute the revised proposed designation of critical habitat.

On July 15, 2021, we published the 2021 proposed rule to designate critical habitat for the federally threatened rufa red knot in 120 units (18 of which are further subdivided into 46 subunits) encompassing approximately 649,066 ac (262,667 ha) in Massachusetts, New York, New Jersey, Delaware, Virginia, North Carolina, South Carolina, Georgia, Florida, Alabama, Mississippi, Louisiana, and Texas. In addition, we announced the availability of a DEA of the proposed critical habitat designation. We accepted comments on the proposed rule and DEA for 60 days, ending September 13, 2021. We also received a congressional request for additional time to review and comment on the proposed rule. Based on information we received during the public comment period and our reanalysis of the best available information, we propose to revise the critical habitat designation and are, therefore, reopening the comment period to allow the public additional time to submit comments on both the 2021 proposed rule as well as the revisions described in this document.

## New Information and Revisions to Proposed Critical Habitat

During the public comment period, we received 92 comment letters, 59 of which contained substantive comments on the proposed critical habitat designation. We became aware of some new information during this time period, including some information based on comments received (*i.e.*, site-specific survey or observation data from multiple sources, and flock count data across the range of the species from *bandedbirds.org*). This new information and comments received during the open comment period prompted us to reevaluate the best available information across the range of the species. In some areas, this resulted in the addition or revision of unit boundaries per the methodology used to designate critical habitat (see <https://www.regulations.gov>, Docket No. FWS-



R5-ES-2021-0032, Supplementary Document FWS-R5-ES-2021-0032-0004). This information has resulted in changes to six units described in the 2021 proposed rule's critical habitat designation, and the addition of seven units based on areas that we found to meet the definition of critical habitat. No new areas are being proposed beyond the coastal States and counties already included in the 2021 proposed rule's critical habitat designation. The revised and new units are described in this document.

In this document, we propose certain revisions to the critical habitat designation we proposed for the rufa red knot in the 2021 proposed rule. Because of these revisions, the numbering for some of the critical habitat units has changed from the 2021 proposed rule, although the names and descriptions remain the same for these units/subunits (with the exception of one unit in Georgia (GA-7) with a name change). All revisions to unit numbers are described below and listed in table 1.

Specifically, there are no changes within the States of Alabama, Louisiana, and Mississippi. We corrected acreages, hectares, or both for Unit DE-4 in Delaware, VA-14 in Virginia, GA-9 in Georgia, and FL-1 in Florida that were incorrectly reported in the 2021 proposed rule; no other changes were made to these or other units in Delaware, Virginia, and Florida. We propose the following unit revisions or unit additions in the States of Massachusetts, New York, New Jersey, Virginia, North Carolina, South Carolina, Georgia, and Texas; all revisions or additions are areas occupied by the rufa red knot at the time of listing. Our regulations at 50 CFR 424.02 define the geographical area occupied by the species as an area that may generally be delineated around species' occurrences, as determined by the Secretary (*i.e.*, range). Such areas may include those areas used throughout all or part of the species' life cycle, even if not used on a regular basis (*e.g.*, migratory corridors, seasonal habitats, and habitats used periodically, but not solely, by vagrant individuals). Revisions are summarized here and full descriptions and acreage changes follow in the "Revised Proposed Critical Habitat Designation" section, below:

(1) *Massachusetts*: We are revising unit numbers because we are adding one unit based on our review of comments received during the previous open comment period. Specifically, this addition is based on our reanalysis and consideration of observation data (Harrington *et al.* 2010, entire; Faherty 2021a, pers. comm.; Faherty 2021b,

pers. comm.), and consideration of flock count observations between 2010 and 2019 from [bandedbirds.org](https://bandedbirds.org) (BandedBirds 2021, entire). The new Unit MA-1 (Nauset Marsh) occurs in the towns of Orleans and Eastham in Barnstable County, to include the area of Salt Bay Pond, Nauset Bay, Nauset Spit, and Coast Guard Beach. We are also revising Unit MA-2 (Pleasant Bay; formerly Unit MA-1) based on our review of the same [bandedbirds.org](https://bandedbirds.org) flock count observations. This revised unit begins at the northeastern end of Little Pleasant Bay and continues south along Nauset Beach South and North Beach to North Beach Island, terminating at the natural channel between North Beach Island and South Beach Island (Chatham).

(2) *New York*: We are revising unit numbers because we are adding one unit based on our reanalysis of information in our files (*i.e.*, past surveys by Virginia Tech conducted on Fire Island for the Service between 2016 and 2018). In other words, during our reevaluation of the best available information, we determined an error when applying the methodology and this unit should have been included previously. The new Unit NY-2 (Old Inlet) occurs in Suffolk County, surrounded by the waters of Bellport Bay and the Atlantic Ocean. Also, we corrected the county name on the map for NY-1 to Suffolk County.

(3) *New Jersey*: We are revising the boundary of Unit NJ-1 to reflect the development and growth of a new island east of Little Beach Island. Little Beach Island is within the Edwin B. Forsythe National Wildlife Refuge (NWR). The new island, located approximately 1,250 feet (ft) (381 meters (m)) offshore of Little Beach, is State-owned land. Prior to emerging as a full island in 2020, a smaller exposed shoal was present in this area in 2017, and was known to support rufa red knots during fall migration by 2019. Based on the high quality of this habitat, the high level of use by rufa red knots, and its protection from disturbance, we made a minor adjustment to the boundary of this unit to include the entire island at its current size and configuration. Due to the highly dynamic and shifting nature of this new island, the expanded boundary also includes areas of open waters surrounding the island in which shoaling was indicated in recent years. These minor adjustments to the boundary of this unit were made by referencing recent base maps that show the current extent of the island.

(4) *Virginia*: We are revising some unit numbers because we are adding two units based on rufa red knot

occupancy and habitat use information received by The Nature Conservancy (TNC) and also recommended by the State of Virginia (Virginia Department of Wildlife Resources 2021, p. 1; TNC 2021, p. 2; Wilke 2021, pers. comm.). The new Unit VA-12 (Ship Shoal Island) occurs in Northampton County, including both Ship Shoal Island and the area known as Godwin Island. The new unit VA-15 (Fisherman Island) occurs in Northampton County at the mouth of the Chesapeake Bay and just south of the tip of the Eastern Shore peninsula, surrounded by the waters of the Chesapeake Bay and Atlantic Ocean. As noted above, we also corrected the acreage/hectares that were incorrectly reported for Unit VA-14 (Smith Island; formerly VA-13) in the 2021 proposed rule.

(5) *North Carolina*: We are revising some unit numbers because we are adding one unit based on rufa red knot occupancy and habitat use information received from Audubon North Carolina (Audubon North Carolina 2021, p. 2; Addison 2021, pers. comm.). The new Unit NC-6 (Lea-Hutaff Island) occurs in Pender and New Hanover Counties, stretching from the west side of New Topsail Inlet channel west across the Rich Inlet channel to the northeast end of Figure Eight Island.

(6) *South Carolina*: We are revising some unit numbers because we are adding one unit based on our review of comments received from the South Carolina Department of Natural Resources (SCDNR) (SCDNR 2021, p. 3). The new Unit SC-22 (Bay Point Beach) occurs east of Hilton Head Island on the eastern side of Port Royal Sound in Beaufort County. We are also revising and renaming Unit SC-21 (Fripp Island, Pritchards Island, and Little Capers Island Beaches) and revising Unit SC-25 (Turtle Island and Tompkins Island Beaches; formerly Unit SC-24, Turtle Island Beach) based on our review of comments received from the SCDNR (SCDNR 2021, p. 3). Units SC-21 and SC-25 include both a change to the unit name and the unit boundary. The revised Unit SC-21 begins at the Fripp Inlet shoreline of Fripp Island, continues along the Atlantic coast shoreline of Fripp Island, and now extends along the Atlantic coast shoreline of Pritchards Island and Little Capers Island. The revised Unit SC-25 begins at the Calibogue Sound shoreline of Turtle Island and now includes all of Tompkins Island in Calibogue Sound east of Turtle Island, although the adjusted boundary actually resulted in an overall decrease of 27 ac (11 ha) in unit size compared to the 2021 proposed rule.

(7) *Georgia*: We are revising unit numbers because we are adding one unit and revising two units based on our review of comments received from the Georgia Department of Natural Resources (GADNR) (GADNR 2021, p. 2; Smith 2021, pers. comm.). The new Unit GA-1 (Cockspur Island and Daymark Island Beaches) occurs in the Savannah River adjacent to Tybee Island in Chatham County. Units GA-5 and GA-10 include both a change to the unit name and the unit boundary; we also renamed Unit GA-7 to St. Catherine's Island Beach and St. Catherine's Island Bar (formerly St. Catherine's Island Beach). The revised Unit GA-5 (Little Ogeechee River Shoreline and Raccoon Key; formerly Raccoon Key) now begins at the Green Island shoreline of the Little Ogeechee River, continues east along the shorelines of Little Wassaw Island and Pine Island to the Odingsell River entrance behind Wassaw Island. The revised Unit GA-10 (Queens Island, Wolf Island, Egg Island, Little Egg Island, and Little Egg Bar; formerly Wolf Island, Egg Island, Little Egg Island, and Little Egg Island Bar) now begins at the Black River shoreline of Queens Island and extends south along the Wolf Island shoreline, which includes Wolf Island Bar, to the eastern and southern shorelines of Little Egg Island Bar Natural Area southwest to Egg Island in the Altamaha Sound. As noted above, we also corrected the acreage/hectares that were incorrectly reported for Unit GA-9 (Sapelo Island Beach; formerly GA-8), and changed the name for Unit GA-7 to "St. Catherine's Island Beach and St. Catherine's Island Bar" (formerly GA-6, St. Catherine's Island Beach) in the 2021 proposed rule.

(8) *Texas*: We are revising two proposed units of critical habitat—Units TX-1 (Rollover Pass to Bolivar Flats) and TX-11 (South Bay/Boca Chica)—based on our reanalysis of the best available information, including comments received during the open comment period. In our review of the flock count observation data from *bandedbirds.org* provided during the open comment period, we identified an error in the proposed boundary of Unit TX-1, which occurs in Galveston County. Based on eBird data and our assessment of habitat features, as described in the 2021 proposed rule, unit description, Unit TX-1 should include additional sand flats habitat on the bayside of Rollover Pass. Additionally, due to an oversight, we are proposing including additional adjacent habitat to the proposed Unit TX-11, which occurs in Cameron County. This unit should be extended to

the east of South Bay to include important habitat features that should have been included previously; although the boundary should change to incorporate adjacent habitat features, the detailed unit description will not change.

Finally, when we conducted a reanalysis of the best available information, we determined two incorrect total State acreages for rufa red knot proposed critical habitat that affected the calculation for the overall/total acreage of the proposed critical habitat designation. In short, the total acreages calculated for the States of North Carolina and Florida were incorrectly summed, resulting in the overall proposed critical habitat acreage reported as 649,066 ac (262,668 ha). With the corrected summed values for these two States, the total acreage for the 2021 proposed rule should have been 650,791 ac (263,366 ha). When considering this corrected total acreage and the revisions, additions, and corrections described herein, the revised proposed critical habitat designation total is 683,405 ac (276,564 ha), resulting in an overall increase in proposed critical habitat of 32,615 ac (13,199 ha).

All of the additional unit acreage in the above-described revised and new units were occupied at the time of listing and are currently occupied, contain one or more of the physical or biological features to support life-history functions essential to the conservation of the rufa red knot, and may require special management considerations or protection from threats as described in the 2021 proposed rule. For clarity, we also propose to add short textual descriptions of each proposed unit in the regulatory text of the critical habitat designation.

The Draft Economic Analysis (DEA) for the proposed critical habitat designation, entitled: *Draft Screening Analysis of the Likely Economic Impacts of the Proposed Rule to Designate Critical habitat for the Rufa Red Knot* (IEc 2021a) has been revised to include additional information for the counties containing the new units (MA-2, NY-2, VA-12, VA-15, NC-6, SC-22, and GA-1) and revised units (Units NJ-1, SC-21, SC-25, GA-5, GA-10, TX-1, and TX-11) (IEc 2021b). Based on consultation history for the rufa red knot and with consideration of the areas added in this revised proposed rule, the number of future consultations, including technical assistances, is likely to be approximately 250 per year on average. The additional administrative cost of addressing adverse modification in

these consultations is likely to be less than \$550,000 per year. This represents a 15 percent increase in cost relative to the April 2021 version of the DEA, which also likely overstates rather than understates the impacts (IEc 2021b, p. 17).

#### *Physical or Biological Features Essential to the Conservation of the Species*

For a full description of the physical or biological features essential to the conservation of the rufa red knot, refer to the 2021 proposed rule. No changes were made to the physical or biological features, which include:

- (1) Beaches and tidal flats used for foraging;
- (2) Upper beach areas used for roosting, preening, resting, or sheltering;
- (3) Ephemeral and/or dynamic coastal features used for foraging or roosting;
- (4) Ocean vegetation deposits or surf-cast wrack used for foraging and roosting;
- (5) Intertidal peat banks used for foraging and roosting;
- (6) Features landward of the beach that support foraging or roosting; and,
- (7) Artificial habitat mimicking natural conditions or maintaining the physical or biological features 1 to 6 (above).

#### *Revised Proposed Critical Habitat Designation*

In total, we now propose to designate approximately 683,405 ac (276,564 ha) in 127 units (18 of which are further subdivided into 46 subunits) as critical habitat for rufa red knot in Massachusetts, New York, New Jersey, Delaware, Virginia, North Carolina, South Carolina, Georgia, Florida, Alabama, Mississippi, Louisiana, and Texas. The proposed critical habitat areas described below constitute our best assessment, at this time, of areas that meet the definition of critical habitat, and all units were occupied at the time of listing and are considered currently occupied by the species. Table 1, below, shows the proposed unit or subunit names, land ownership, and approximate acreage. Where appropriate, table 1 also notes the previous number for units for which the numbering has changed.

As noted in the 2021 proposed rule, the land ownership values in many (but not all) proposed critical habitat units also include a category called "uncategorized lands." For the purposes of this analysis and proposed critical habitat designation, this category refers to open water. Although open water is not rufa red knot habitat *per se*, it is an integral part of the habitat mosaic that these birds require. Rufa red knots use

the edges of certain coastal ponds, marsh blowouts, salt pannes, and sand or mud flats that may be classified by some States as open water if they are submerged during high tides.

Additionally, open waters at inlets are regularly reshaped by natural coastal processes that create and maintain dynamic and ephemeral rufa red knot habitat features, such as shoals and spits.

The areas we propose as critical habitat for the rufa red knot are organized by State, north to south; thus, some units were renumbered when new units were included in between other units that were presented in the 2021 proposed rule's critical habitat designation. This document presents brief descriptions of the revised and new units, including the reasons why they meet the definition of critical habitat for the rufa red knot. Also, many of the proposed units presented in the

2021 proposed rule (including some of the revised and new units presented in this document) overlap in part or whole with existing critical habitat designated for one or more other federally threatened species (*i.e.*, the piping plover (*Charadrius melodus*), the loggerhead sea turtle (*Caretta caretta*), the Gulf sturgeon (*Acipenser oxyrinchus desotoi*), and the West Indian manatee (*Trichechus manatus*)), and one federally endangered species (*i.e.*, the aboriginal prickly-apple (*Harrisia aboriginum*)). Table 2, below, shows the acreage of overlap between the rufa red knot proposed critical habitat designation and the existing critical habitat designated for these other federally listed species, including notation of changes based on this revised proposed rule.

Additional considerations for the previously proposed units and the

revised or new units presented in this document include:

(1) Most of the units contain highly dynamic barrier beaches and intertidal seashore areas that are covered at high tide and uncovered at low tide. This area has the potential to vary year-to-year. In other words, the precise location of the physical or biological features may shift daily as a result of tides, but also may shift over time somewhat because of the intrinsically dynamic nature of shorelines and due to sea level rise. In general, the physical or biological features we describe are the intertidal areas and sandy beaches up to the vegetated or developed areas that do not contain the physical or biological features.

(2) The availability of different habitats based on the tide cycle may also cause rufa red knots to vary foraging or roosting locations throughout a day and/or forage at night.

TABLE 1—REVISED PROPOSED CRITICAL HABITAT UNITS FOR THE RUFA RED KNOT

Critical habitat unit or subunit name (State)	Land ownership by type	Approx. acres	Approx. hectares	Proposed changes	Previous unit numbering
Massachusetts					
MA–1 Nauset Marsh .....	Federal .....	1,340	543	New Unit .....	New Unit.
	State .....	0	0		
	Private/Other .....	136	55		
	Uncategorized .....	744	301		
	Total .....	2,219	899		
MA–2 Pleasant Bay .....	Federal .....	126	51	No Change .....	Formerly MA–1.
	State .....	0	0		
	Private/Other .....	2,005	812		
	Uncategorized .....	2,827	1,144		
	Total .....	4,959	2,007		
MA–3 Monomoy and South Beach Is- lands.	Federal .....	4,047	1,638	No Change .....	Formerly MA–2.
	State .....	0	0		
	Private/Other .....	1,045	423		
	Uncategorized .....	0	0		
	Total .....	5,093	2,061		
New York					
NY–1 Moriches Inlet .....	Federal .....	78	32	No Change .....	No Change.
	State .....	63	25		
	Private/Other .....	163	66		
	Uncategorized .....	697	282		
	Total .....	1,001	405		
NY–2 Old Inlet .....	Federal .....	1,481	599	New Unit .....	New Unit.
	State .....	232	94		
	Private/Other .....	67	27		
	Uncategorized .....	0	0		
	Total .....	1,781	721		
NY–3 Jones Inlet .....	Federal .....	0	0	No Change .....	Formerly NY–2.
	State .....	710	287		
	Private/Other .....	1,111	450		

TABLE 1—REVISED PROPOSED CRITICAL HABITAT UNITS FOR THE RUFA RED KNOT—Continued

Critical habitat unit or subunit name (State)	Land ownership by type	Approx. acres	Approx. hectares	Proposed changes	Previous unit numbering
	Uncategorized .....	0	0		
	Total .....	1,821	737		
NY-4 Jamaica Bay .....	Federal .....	5,458	2,209	No Change .....	Formerly NY-3.
	State .....	0	0		
	Private/Other .....	0	0		
	Uncategorized .....	0	0		
	Total .....	5,458	2,209		
<b>New Jersey</b>					
NJ-1 Brigantine and Little Egg Inlets	Federal .....	1,560	632	No Change .....	No Change.
	State .....	3,187	1,291	No Change.	
	Private/Other .....	10	4	No Change.	
	Uncategorized .....	5,194	2,101	+233 ac (95 ha).	
	Total .....	9,952	4,027	+233 ac (95 ha).	
NJ-2 Seven Mile Beach .....	Federal .....	0	0	No Change .....	No Change.
	State .....	0	0		
	Private/Other .....	536	217		
	Uncategorized .....	0	0		
	Total .....	536	217		
NJ-3 Hereford Inlet .....	Federal .....	0	0	No Change .....	No Change.
	State .....	175	71		
	Private/Other .....	735	297		
	Uncategorized .....	721	292		
	Total .....	1,631	660		
NJ-4 Two Mile Beach .....	Federal .....	128	52	No Change .....	No Change.
	State .....	0	0		
	Private/Other .....	0	0		
	Uncategorized .....	0	0		
	Total .....	128	52		
NJ-5 Cape May Bayshore .....	Federal .....	133	54	No Change .....	No Change.
	State .....	44	18		
	Private/Other .....	167	67		
	Uncategorized .....	858	347		
	Total .....	1,202	487		
NJ-6 Dennis Creek .....	Federal .....	0	0	No Change .....	No Change.
	State .....	279	113		
	Private/Other .....	0	0		
	Uncategorized .....	0	0		
	Total .....	279	113		
NJ-7 Heislerville .....	Federal .....	0	0	No Change .....	No Change.
	State .....	524	211		
	Private/Other .....	459	186		
	Uncategorized .....	127	52		
	Total .....	1,110	449		
NJ-8 Egg Island .....	Federal .....	0	0	No Change .....	No Change.
	State .....	1,908	773		
	Private/Other .....	32	13		
	Uncategorized .....	14	5		
	Total .....	1,955	791		
NJ-9 Newport Neck .....	Federal .....	0	0	No Change .....	No Change.
	State .....	202	82		
	Private/Other .....	176	71		

TABLE 1—REVISED PROPOSED CRITICAL HABITAT UNITS FOR THE RUFA RED KNOT—Continued

Critical habitat unit or subunit name (State)	Land ownership by type	Approx. acres	Approx. hectares	Proposed changes	Previous unit numbering
	Uncategorized .....	93	38		
	Total .....	472	191		
<b>Delaware</b>					
DE-1A St. Jones North .....	Federal .....	0	0	No Change .....	No Change.
	State .....	37	15		
	Private/Other .....	3	1		
	Uncategorized .....	3	1		
	Total .....	43	18		
DE-1B St. Jones South .....	Federal .....	0	0	No Change .....	No Change.
	State .....	1	0.5		
	Private/Other .....	2	0.6		
	Uncategorized .....	0	0		
	Total .....	3	1		
DE-2A North Brokonbridge Gut .....	Federal .....	0	0	No Change .....	No Change.
	State .....	2	1		
	Private/Other .....	91	37		
	Uncategorized .....	0	0		
	Total .....	93	37		
DE-2B South Brokonbridge Gut .....	Federal .....	0	0	No Change .....	No Change.
	State .....	0	0		
	Private/Other .....	70	29		
	Uncategorized .....	0	0		
	Total .....	70	29		
DE-3A Main Harbor .....	Federal .....	0	0	No Change .....	No Change.
	State .....	32	13		
	Private/Other .....	0	0		
	Uncategorized .....	29	12		
	Total .....	61	25		
DE-3B Rawley Island Roost .....	Federal .....	0	0	No Change .....	No Change.
	State .....	1,139	461		
	Private/Other .....	153	62		
	Uncategorized .....	6	2		
	Total .....	1,298	525		
DE-3C Slaughter Beach .....	Federal .....	1	0.25	No Change .....	No Change.
	State .....	59	24		
	Private/Other .....	2	1		
	Uncategorized .....	528	213		
	Total .....	590	239		
DE-4 Prime Hook .....	Federal .....	482	195	+2 ac (0 ha); correction .....	No Change.
	State .....	0	0	No Change.	
	Private/Other .....	6	2	No Change.	
	Uncategorized .....	14	6	– 49 ac (19 ha); correction.	
	Total .....	503	203	– 46 ac (19 ha); correction.	
<b>Virginia</b>					
VA-1 Assateague Island .....	Federal .....	2,817	1,140	No Change .....	No Change.
	State .....	0	0		
	Private/Other .....	0	0		
	Uncategorized .....	0	0		
	Total .....	2,817	1,140		
VA-2A Wallops Island North .....	Federal .....	540	218	No Change .....	No Change.
	State .....	0	0		

TABLE 1—REVISED PROPOSED CRITICAL HABITAT UNITS FOR THE RUFA RED KNOT—Continued

Critical habitat unit or subunit name (State)	Land ownership by type	Approx. acres	Approx. hectares	Proposed changes	Previous unit numbering
	Private/Other .....	0	0		
	Uncategorized .....	0	0		
	Total .....	540	218		
VA-2B Wallops Island South .....	Federal .....	31	13	No Change .....	No Change.
	State .....	0	0		
	Private/Other .....	0	0		
	Uncategorized .....	0	0		
	Total .....	31	13		
VA-3 Assawoman Island .....	Federal .....	633	256	No Change .....	No Change.
	State .....	0	0		
	Private/Other .....	0	0		
	Uncategorized .....	0	0		
	Total .....	633	256		
VA-4 Metompkin Island .....	Federal .....	64	26	No Change .....	No Change.
	State .....	56	22		
	Private/Other .....	1,239	502		
	Uncategorized .....	110	44		
	Total .....	1,468	594		
VA-5 Cedar Island .....	Federal .....	203	82	No Change .....	No Change.
	State .....	77	31		
	Private/Other .....	920	372		
	Uncategorized .....	1,074	434		
	Total .....	2,274	920		
VA-6 Parramore Island .....	Federal .....	0	0	No Change .....	No Change.
	State .....	0	0		
	Private/Other .....	5,631	2,280		
	Uncategorized .....	1,171	473		
	Total .....	6,802	2,753		
VA-7 Chimney Pole Marsh .....	Federal .....	0	0	No Change .....	No Change.
	State .....	1,224	496		
	Private/Other .....	285	116		
	Uncategorized .....	495	200		
	Total .....	2,004	811		
VA-8 Hog Island .....	Federal .....	0	0	No Change .....	No Change.
	State .....	16	7		
	Private/Other .....	2,966	1,201		
	Uncategorized .....	253	101		
	Total .....	3,235	1,309		
VA-9 Cobb Island .....	Federal .....	0	0	No Change .....	No Change.
	State .....	16	7		
	Private/Other .....	1,778	720		
	Uncategorized .....	547	221		
	Total .....	2,342	948		
VA-10 Little Cobb Island .....	Federal .....	0	0	No Change .....	No Change.
	State .....	0	0		
	Private/Other .....	82	33		
	Uncategorized .....	0	0		
	Total .....	82	33		
VA-11 Wreck Island .....	Federal .....	0	0	No Change .....	No Change.
	State .....	1,270	514		
	Private/Other .....	0	0		
	Uncategorized .....	0	0		

TABLE 1—REVISED PROPOSED CRITICAL HABITAT UNITS FOR THE RUFA RED KNOT—Continued

Critical habitat unit or subunit name (State)	Land ownership by type	Approx. acres	Approx. hectares	Proposed changes	Previous unit numbering
	Total .....	1,270	514		
VA–12 Ship Shoal Island .....	Federal ..... State ..... Private/Other ..... Uncategorized .....	0 426 1,941 60	0 172 785 24	New Unit .....	New Unit.
	Total .....	2,426	982		
VA–13 Myrtle Island .....	Federal ..... State ..... Private/Other ..... Uncategorized .....	0 0 1,028 388	0 0 417 156	No Change .....	Formerly VA–12.
	Total .....	1,416	573		
VA–14 Smith Island .....	Federal .....  State ..... Private/Other ..... Uncategorized .....	0  0 3,258 0	0  0 1,319 0	No Change to Unit But Cor- rected Acreage.	Formerly VA–13.
	Total .....	3,258	1,319		
VA–15 Fisherman Island .....	Federal ..... State ..... Private/Other ..... Uncategorized .....	2,413 0 0 0	977 0 0 0	New Unit .....	New Unit.
	Total .....	2,413	977		
North Carolina					
NC–1A Hatteras Island and Shoals ...	Federal ..... State ..... Private/Other ..... Uncategorized .....	4,940 0 0 814	1,999 0 0 329	No Change .....	No Change.
	Total .....	5,754	2,329		
NC–1B Ocracoke Island .....	Federal ..... State ..... Private/Other ..... Uncategorized .....	1,427 3,612 0 575	577 1,462 0 233	No Change .....	No Change.
	Total .....	5,613	2,271		
NC–2A North Core Banks .....	Federal ..... State ..... Private/Other ..... Uncategorized .....	6,534 0 0 1,654	2,644 0 0 669	No Change .....	No Change.
	Total .....	8,187	3,313		
NC–2B South Core Banks .....	Federal ..... State ..... Private/Other ..... Uncategorized .....	3,094 0 0 0	1,252 0 0 0	No Change .....	No Change.
	Total .....	3,094	1,252		
NC–3 Shackleford Island .....	Federal ..... State ..... Private/Other ..... Uncategorized .....	4,972 0 0 0	2,012 0 0 0	No Change .....	No Change.
	Total .....	4,972	2,012		
NC–4 Emerald Isle–Atlantic Beach ...	Federal ..... State ..... Private/Other ..... Uncategorized .....	0 1,908 122 0	0 772 50 0	No Change .....	No Change.



TABLE 1—REVISED PROPOSED CRITICAL HABITAT UNITS FOR THE RUFA RED KNOT—Continued

Critical habitat unit or subunit name (State)	Land ownership by type	Approx. acres	Approx. hectares	Proposed changes	Previous unit numbering
	Total .....	2,030	822		
NC-5 New Topsail Inlet-Topsail Beach.	Federal .....	0	0	No Change .....	No Change.
	State .....	0	0		
	Private/Other .....	1,612	652		
	Uncategorized .....	0	0		
	Total .....	1,612	652		
NC-6 Lea-Hutaff Island .....	Federal .....	0	0	New Unit .....	New Unit.
	State .....	72	29		
	Private/Other .....	427	173		
	Uncategorized .....	586	237		
	Total .....	1,085	439		
NC-7 Cape Fear-Fort Fisher .....	Federal .....	0	0	No Change .....	Formerly NC-6.
	State .....	1,713	693		
	Private/Other .....	274	111		
	Uncategorized .....	0	0		
	Total .....	1,986	804		
NC-8 Ocean Isle Beach .....	Federal .....	0	0	No Change .....	Formerly NC-7.
	State .....	182	73		
	Private/Other .....	116	47		
	Uncategorized .....	0	0		
	Total .....	298	120		
NC-9 Sunset Beach-Bird Island .....	Federal .....	0	0	No Change .....	Formerly NC-8.
	State .....	345	139		
	Private/Other .....	39	16		
	Uncategorized .....	0	0		
	Total .....	384	155		
South Carolina					
SC-1 Garden City Beach .....	Federal .....	0	0	No Change .....	No Change.
	State .....	267	108		
	Private/Other .....	349	141		
	Uncategorized .....	0	0		
	Total .....	616	249		
SC-2 Huntington Beach State Park-Litchfield Beach.	Federal .....	0	0	No Change .....	No Change.
	State .....	80	32		
	Private/Other .....	1,554	629		
	Uncategorized .....	0	0		
	Total .....	1,634	661		
SC-3 Sand and South Island Beaches.	Federal .....	0	0	No Change .....	No Change.
	State .....	7,843	3,174		
	Private/Other .....	129	52		
	Uncategorized .....	283	115		
	Total .....	8,256	3,341		
SC-4 Murphy Island Beach .....	Federal .....	0	0	No Change .....	No Change.
	State .....	8,312	3,364		
	Private/Other .....	0	0		
	Uncategorized .....	0	0		
	Total .....	8,312	3,364		
SC-5 North Cape Island Beach .....	Federal .....	775	313	No Change .....	No Change.
	State .....	495	200		

TABLE 1—REVISED PROPOSED CRITICAL HABITAT UNITS FOR THE RUFA RED KNOT—Continued

Critical habitat unit or subunit name (State)	Land ownership by type	Approx. acres	Approx. hectares	Proposed changes	Previous unit numbering
	Private/Other .....	0	0		
	Uncategorized .....	0	0		
	Total .....	1,270	514		
SC-6 South Cape and Lighthouse Is- land Beaches.	Federal .....	1,552	628	No Change .....	No Change.
	State .....	485	196		
	Private/Other .....	0	0		
	Uncategorized .....	0	0		
	Total .....	2,037	824		
SC-7 Raccoon Key Complex and White Banks Beaches.	Federal .....	5,324	2,154	No Change .....	No Change.
	State .....	0	0		
	Private/Other .....	0	0		
	Uncategorized .....	0	0		
	Total .....	5,324	2,154		
SC-8 Marsh Island .....	Federal .....	415	168	No Change .....	No Change.
	State .....	0	0		
	Private/Other .....	0	0		
	Uncategorized .....	0	0		
	Total .....	415	168		
SC-9 Bulls Island Beach .....	Federal .....	5,200	2,104	No Change .....	No Change.
	State .....	941	381		
	Private/Other .....	0	0		
	Uncategorized .....	0	0		
	Total .....	6,141	2,485		
SC-10 Capers Island Beach .....	Federal .....	0	0	No Change .....	No Change.
	State .....	2,534	1,026		
	Private/Other .....	0	0		
	Uncategorized .....	0	0		
	Total .....	2,534	1,026		
SC-11 Dewees Island Beach .....	Federal .....	0	0	No Change .....	No Change.
	State .....	265	107		
	Private/Other .....	1,547	626		
	Uncategorized .....	0	0		
	Total .....	1,812	733		
SC-12 Isle of Palms Beach .....	Federal .....	0	0	No Change .....	No Change.
	State .....	754	305		
	Private/Other .....	3,363	1,361		
	Uncategorized .....	0	0		
	Total .....	4,117	1,666		
SC-13 Sullivan's Island Beach .....	Federal .....	83	34	No Change .....	No Change.
	State .....	694	281		
	Private/Other .....	1,005	407		
	Uncategorized .....	0	0		
	Total .....	1,782	721		
SC-14 Folly Beach .....	Federal .....	0	0	No Change .....	No Change.
	State .....	0	0		
	Private/Other .....	1,989	805		
	Uncategorized .....	0	0		
	Total .....	1,989	805		
SC-15 Bird Key Stono .....	Federal .....	0	0	No Change .....	No Change.
	State .....	294	119		

TABLE 1—REVISED PROPOSED CRITICAL HABITAT UNITS FOR THE RUFA RED KNOT—Continued

Critical habitat unit or subunit name (State)	Land ownership by type	Approx. acres	Approx. hectares	Proposed changes	Previous unit numbering
	Private/Other .....	0	0		
	Uncategorized .....	0	0		
	Total .....	294	119		
SC–16 Kiawah and Seabrook Island Beaches.	Federal .....	0	0	No Change .....	No Change.
	State .....	1,399	566		
	Private/Other .....	9,850	3,986		
	Uncategorized .....	0	0		
	Total .....	11,250	4,553		
SC–17 Deveau Bank .....	Federal .....	0	0	No Change .....	No Change.
	State .....	1,328	538		
	Private/Other .....	0	0		
	Uncategorized .....	0	0		
	Total .....	1,328	538		
SC–18 Edisto Island Beaches .....	Federal .....	0	0	No Change .....	No Change.
	State .....	650	263		
	Private/Other .....	1,093	442		
	Uncategorized .....	0	0		
	Total .....	1,743	705		
SC–19 Pine and Otter Island Beach- es.	Federal .....	0	0	No Change .....	No Change.
	State .....	6,296	2,548		
	Private/Other .....	6	2		
	Uncategorized .....	0	0		
	Total .....	6,302	2,550		
SC–20 Harbor and Hunting Island Beaches.	Federal .....	0	0	No Change .....	No Change.
	State .....	3,246	1,313		
	Private/Other .....	820	331		
	Uncategorized .....	0	0		
	Total .....	4,066	1,645		
SC–21 Fripp, Pritchards, and Little Capers Islands' Beaches.	Federal .....	0	0	No Change .....	No Change.
	State .....	4,055	1,641	+3,750 ac (1,517 ha).	
	Private/Other .....	6,123	2,478	+5,694 ac (2,304 ha).	
	Uncategorized .....	0	0	No Change.	
	Total .....	10,178	4,119	+9,444 ac (3,822 ha).	
SC–22 Bay Point Island Beach .....	Federal .....	0	0	New Unit .....	New Unit.
	State .....	553	224		
	Private/Other .....	1,145	464		
	Uncategorized .....	0	0		
	Total .....	1,698	687		
SC–23 Hilton Head Island Beach .....	Federal .....	0	0	No Change .....	Formerly SC–22.
	State .....	1,015	411		
	Private/Other .....	667	270		
	Uncategorized .....	0	0		
	Total .....	1,682	681		
SC–24 Daufuskie Island Beach .....	Federal .....	0	0	No Change .....	Formerly SC–23.
	State .....	0	0		
	Private/Other .....	6,370	2,578		
	Uncategorized .....	0	0		
	Total .....	6,370	2,578		

TABLE 1—REVISED PROPOSED CRITICAL HABITAT UNITS FOR THE RUFA RED KNOT—Continued

Critical habitat unit or subunit name (State)	Land ownership by type	Approx. acres	Approx. hectares	Proposed changes	Previous unit numbering
SC–25 Turtle Island and Tomkins Island Beaches.	Federal .....	0	0	No Change .....	Formerly SC–24..
	State .....	1,771	717	– 27 ac (11 ha).	
	Private/Other .....	0	0	No Change.	
	Uncategorized .....	0	0	No Change.	
	Total .....	1,771	717	– 27 ac (11 ha).	
SC–26 Jones Island Beach .....	Federal .....	785	318	No Change .....	Formerly SC–25.
	State .....	2,240	907		
	Private/Other .....	0	0		
	Uncategorized .....	0	0		
	Total .....	3,025	1,225		
<b>Georgia</b>					
GA–1 Cockspur Island and Daymark Island Beaches.	Federal .....	708	287	New Unit .....	New Unit.
	State .....	94	38		
	Private/Other .....	0	0		
	Uncategorized .....	0	0		
	Total .....	802	325		
GA–2 Tybee Island Beach .....	Federal .....	0	0	No Change .....	Formerly GA–1.
	State .....	6	2		
	Private/Other .....	1,721	697		
	Uncategorized .....	319	129		
	Total .....	2,046	828		
GA–3 Little Tybee Island Complex ....	Federal .....	0	0	No Change .....	Formerly GA–2.
	State .....	0	0		
	Private/Other .....	8,265	3,345		
	Uncategorized .....	0	0		
	Total .....	8,265	3,345		
GA–4 Wassaw Island Beach .....	Federal .....	3,001	1,215	No Change .....	Formerly GA–3.
	State .....	0	0		
	Private/Other .....	274	111		
	Uncategorized .....	1,020	412		
	Total .....	4,296	1,738		
GA–5 Little Ogeechee River Shoreline and Raccoon Key.	Federal .....	3,136	1,267	+3,136 ac (1,267 ha) .....	Formerly GA–4.
	State .....	1,435	581	– 164 ac (66 ha).	
	Private/Other .....	0	0	No Change.	
	Uncategorized .....	0	0	No Change.	
	Total .....	4,571	1,850	+2,972 ac (1,203 ha).	
GA–6 Ossabaw Island Beach .....	Federal .....	0	0	No Change to Unit But Corrected Hectares.	Formerly GA–5.
	State .....	28,621	11,582		
	Private/Other .....	0	0		
	Uncategorized .....	3,736	1,512		
	Total .....	32,357	13,095		
GA–7 St. Catherine's Island Beach and St. Catherine's Island Bar.	Federal .....	0	0	No Change to Unit But Corrected Hectares.	Formerly GA–6.
	State .....	2,106	853		
	Private/Other .....	11,810	4,779		
	Uncategorized .....	2,046	828		
	Total .....	15,962	6,460		
GA–8 Blackbeard Island Beach .....	Federal .....	4,954	2,006	No Change .....	Formerly GA–7.
	State .....	80	32		

TABLE 1—REVISED PROPOSED CRITICAL HABITAT UNITS FOR THE RUFA RED KNOT—Continued

Critical habitat unit or subunit name (State)	Land ownership by type	Approx. acres	Approx. hectares	Proposed changes	Previous unit numbering
	Private/Other .....	0	0		
	Uncategorized .....	1,287	519		
	Total .....	6,321	2,557		
GA–9 Sapelo Island Beach .....	Federal .....	0	0	Total Hectares Corrected ...	Formerly GA–8.
	State .....	2,481	1,004		
	Private/Other .....	0	0		
	Uncategorized .....	0	0		
	Total .....	2,481	1,004		
GA–10 Queens Island, Wolf Island, Egg Island, Little Egg Island, and Little Egg Island Bar.	Federal .....	5,527	2,237	+2,552 ac (1,033 ha) .....	Formerly GA–9.
	State .....	261	106	+21 ac (9 ha).	
	Private/Other .....	1,865	755	+1,865 ac (755 ha).	
	Uncategorized .....	4,248	1,719	+2,155 ac (872 ha).	
	Total .....	11,901	4,816	+6,593 ac (2,668 ha).	
GA–11 Little St. Simon's Island Beach.	Federal .....	0	0	No Change .....	Formerly GA–10.
	State .....	113	46		
	Private/Other .....	7,462	3,022		
	Uncategorized .....	1,479	596		
	Total .....	9,053	3,664		
GA–12 Sea and St. Simon's Island Beaches.	Federal .....	0	0	No Change .....	Formerly GA–11.
	State .....	4	2		
	Private/Other .....	3,448	1,395		
	Uncategorized .....	581	235		
	Total .....	4,033	1,631		
GA–13 Jekyll Island Beach .....	Federal .....	0	0	No Change .....	Formerly GA–12.
	State .....	5,944	2,406		
	Private/Other .....	0	0		
	Uncategorized .....	343	139		
	Total .....	6,287	2,545		
GA–14 Little Cumberland and Cumberland Island Beaches.	Federal .....	23,367	9,456	No Change to Unit But Corrected Hectares.	Formerly GA–13.
	State .....	1,685	682		
	Private/Other .....	0	0		
	Uncategorized .....	3,085	1,248		
	Total .....	28,137	11,387		
<b>Florida</b>					
FL–1 Nassau Sound–Fort George Sound–Fort George Inlet Complex.	Federal .....	996	404	No Change to Unit But Corrected Hectares.	No Change.
	State .....	522	211		
	Private/Other .....	27	11		
	Uncategorized .....	2,779	1,125		
	Total .....	4,324	1,750		
FL–2 Ponce Inlet Complex .....	Federal .....	16,660	6,742	No Change .....	No Change.
	State .....	3,005	1,216		
	Private/Other .....	0	0		
	Uncategorized .....	18	7		
	Total .....	19,683	7,965		
FL–3 Merritt Island National Wildlife Refuge Impoundments.	Federal .....	6,947	2,811	No Change .....	No Change.
	State .....	0	0		

TABLE 1—REVISED PROPOSED CRITICAL HABITAT UNITS FOR THE RUFA RED KNOT—Continued

Critical habitat unit or subunit name (State)	Land ownership by type	Approx. acres	Approx. hectares	Proposed changes	Previous unit numbering
	Private/Other .....	0	0		
	Uncategorized .....	0	0		
	Total .....	6,947	2,811		
FL-4A Cape Romano Complex .....	Federal .....	13,138	5,317	No Change to Unit But Cor- rected Hectares.	No Change.
	State .....	12,605	5,101		
	Private/Other .....	0	0		
	Uncategorized .....	470	190		
	Total .....	26,213	10,608		
FL-4B Marco Island .....	Federal .....	0	0	No Change .....	No Change.
	State .....	408	165		
	Private/Other .....	8	3		
	Uncategorized .....	0	0		
	Total .....	416	168		
FL-5 Marco Bay Complex .....	Federal .....	0	0	No Change .....	No Change.
	State .....	3,531	1,429		
	Private/Other .....	58	24		
	Uncategorized .....	0	0		
	Total .....	3,589	1,453		
FL-6A Cocohatchee Inlet Complex ...	Federal .....	0	0	No Change .....	No Change.
	State .....	9	4		
	Private/Other .....	0	0		
	Uncategorized .....	0	0		
	Total .....	9	4		
FL-6B Barefoot Beach .....	Federal .....	0	0	No Change .....	No Change.
	State .....	18	7		
	Private/Other .....	21	9		
	Uncategorized .....	0	0		
	Total .....	39	16		
FL-7A Lovers Key .....	Federal .....	0	0	No Change .....	No Change.
	State .....	4	1		
	Private/Other .....	0	0		
	Uncategorized .....	0	0		
	Total .....	4	1		
FL-7B Estero Island .....	Federal .....	0	0	No Change .....	No Change.
	State .....	171	69		
	Private/Other .....	0	0		
	Uncategorized .....	0	0		
	Total .....	171	69		
FL-8 Bunche Beach .....	Federal .....	23	9	No Change .....	No Change.
	State .....	264	107		
	Private/Other .....	47	19		
	Uncategorized .....	0	0		
	Total .....	334	135		
FL-9A J.N. "Ding" Darling National Wildlife Refuge.	Federal .....	3,451	1,397	No Change .....	No Change.
	State .....	0	0		
	Private/Other .....	0	0		
	Uncategorized .....	0	0		
	Total .....	3,451	1,397		
FL-9B Sanibel Island .....	Federal .....	307	124	No Change .....	No Change.
	State .....	0	0		

TABLE 1—REVISED PROPOSED CRITICAL HABITAT UNITS FOR THE RUFA RED KNOT—Continued

Critical habitat unit or subunit name (State)	Land ownership by type	Approx. acres	Approx. hectares	Proposed changes	Previous unit numbering
	Private/Other .....	0	0		
	Uncategorized .....	0	0		
	Total .....	307	124		
FL-10A Don Pedro .....	Federal .....	0	0	No Change .....	No Change.
	State .....	147	60		
	Private/Other .....	0	0		
	Uncategorized .....	0	0		
	Total .....	147	60		
FL-10B Stump Pass Beach State Park.	Federal .....	0	0	No Change .....	No Change.
	State .....	11	4		
	Private/Other .....	0	0		
	Uncategorized .....	0	0		
	Total .....	11	4		
FL-11 Siesta Key .....	Federal .....	0	0	No Change .....	No Change.
	State .....	53	21		
	Private/Other .....	0	0		
	Uncategorized .....	0	0		
	Total .....	53	21		
FL-12A Lido Key .....	Federal .....	0	0	No Change .....	No Change.
	State .....	81	33		
	Private/Other .....	0	0		
	Uncategorized .....	0	0		
	Total .....	81	33		
FL-12B Longboat Key .....	Federal .....	0	0	No Change .....	No Change.
	State .....	369	149		
	Private/Other .....	0	0		
	Uncategorized .....	0	0		
	Total .....	369	149		
FL-13 North Anna Maria Island .....	Federal .....	56	23	No Change .....	No Change.
	State .....	889	360		
	Private/Other .....	0	0		
	Uncategorized .....	0	0		
	Total .....	945	383		
FL-14 Egmont Key .....	Federal .....	15	6	No Change .....	No Change.
	State .....	0	0		
	Private/Other .....	0	0		
	Uncategorized .....	0	0		
	Total .....	15	6		
FL-15A Fort De Soto County Park ....	Federal .....	0	0	No Change .....	No Change.
	State .....	0	0		
	Private/Other .....	427	173		
	Uncategorized .....	0	0		
	Total .....	427	173		
FL-15B Shell Key Preserve .....	Federal .....	0	0	No Change .....	No Change.
	State .....	322	130		
	Private/Other .....	0	0		
	Uncategorized .....	0	0		
	Total .....	322	130		
FL-15C Saint Petersburg Beach .....	Federal .....	0	0	No Change .....	No Change.
	State .....	107	43		
	Private/Other .....	0	0		



TABLE 1—REVISED PROPOSED CRITICAL HABITAT UNITS FOR THE RUFA RED KNOT—Continued

Critical habitat unit or subunit name (State)	Land ownership by type	Approx. acres	Approx. hectares	Proposed changes	Previous unit numbering
	Uncategorized .....	0	0		
	Total .....	107	43		
FL-16 Indian Shores—Redington Beach.	Federal .....	0	0	No Change .....	No Change.
	State .....	196	79		
	Private/Other .....	0	0		
	Uncategorized .....	0	0		
	Total .....	196	79		
FL-17 Belleair Beach .....	Federal .....	0	0	No Change .....	No Change.
	State .....	123	50		
	Private/Other .....	0	0		
	Uncategorized .....	0	0		
	Total .....	123	50		
FL-18A Caladesi Island .....	Federal .....	0	0	No Change .....	No Change.
	State .....	259	105		
	Private/Other .....	0	0		
	Uncategorized .....	0	0		
	Total .....	259	105		
FL-18B Honeymoon Island .....	Federal .....	0	0	No Change .....	No Change.
	State .....	294	119		
	Private/Other .....	0	0		
	Uncategorized .....	0	0		
	Total .....	294	119		
FL-18C Three Rooker Bar .....	Federal .....	0	0	No Change .....	No Change.
	State .....	335	136		
	Private/Other .....	0	0		
	Uncategorized .....	0	0		
	Total .....	335	136		
FL-19 Anclote Key .....	Federal .....	0	0	No Change .....	No Change.
	State .....	1,547	626		
	Private/Other .....	0	0		
	Uncategorized .....	0	0		
	Total .....	1,547	626		
FL-20 Cedar Keys Complex .....	Federal .....	2,498	1,011	No Change to Unit But Cor- rected Hectares.	No Change.
	State .....	7,792	3,153		
	Private/Other .....	5,928	2,399		
	Uncategorized .....	19,407	7,854		
	Total .....	35,626	14,417		
FL-21 St. Marks National Wildlife Refuge.	Federal .....	2,074	839	No Change .....	No Change.
	State .....	0	0		
	Private/Other .....	0	0		
	Uncategorized .....	0	0		
	Total .....	2,074	839		
FL-22A Mashles Sands .....	Federal .....	0	0	No Change .....	No Change.
	State .....	262	106		
	Private/Other .....	0	0		
	Uncategorized .....	0	0		
	Total .....	262	106		
FL-22B Bald Point State Park .....	Federal .....	0	0	No Change .....	No Change.
	State .....	439	178		

TABLE 1—REVISED PROPOSED CRITICAL HABITAT UNITS FOR THE RUFA RED KNOT—Continued

Critical habitat unit or subunit name (State)	Land ownership by type	Approx. acres	Approx. hectares	Proposed changes	Previous unit numbering
	Private/Other .....	6	2		
	Uncategorized .....	0	0		
	Total .....	445	180		
FL-22C Alligator Point .....	Federal .....	0	0	No Change .....	No Change.
	State .....	0	0		
	Private/Other .....	722	292		
	Uncategorized .....	0	0		
	Total .....	722	292		
FL-23A Turkey Point Shoal .....	Federal .....	0	0	No Change .....	No Change.
	State .....	531	215		
	Private/Other .....	0	0		
	Uncategorized .....	0	0		
	Total .....	531	215		
FL-23B Lanark Reef .....	Federal .....	0	0	No Change .....	No Change.
	State .....	805	326		
	Private/Other .....	61	25		
	Uncategorized .....	0	0		
	Total .....	865	350		
FL-23C East Dog Island .....	Federal .....	0	0	No Change .....	No Change.
	State .....	0	0		
	Private/Other .....	771	312		
	Uncategorized .....	0	0		
	Total .....	771	312		
FL-23D West Dog Island .....	Federal .....	0	0	No Change .....	No Change.
	State .....	0	0		
	Private/Other .....	751	304		
	Uncategorized .....	0	0		
	Total .....	751	304		
FL-23E McKissack Beach, Carrabelle	Federal .....	0	0	No Change .....	No Change.
	State .....	114	46		
	Private/Other .....	3	1		
	Uncategorized .....	0	0		
	Total .....	117	47		
FL-23F East St. George Island State Park.	Federal .....	0	0	No Change .....	No Change.
	State .....	978	396		
	Private/Other .....	0	0		
	Uncategorized .....	0	0		
	Total .....	978	396		
FL-23G St. George Island State Park and Bayshore Shoals.	Federal .....	0	0	No Change .....	No Change.
	State .....	162	65		
	Private/Other .....	0	0		
	Uncategorized .....	0	0		
	Total .....	162	65		
FL-24A Little St. George Island State Park—West.	Federal .....	0	0	No Change .....	No Change.
	State .....	953	386		
	Private/Other .....	0	0		
	Uncategorized .....	0	0		
	Total .....	953	386		

TABLE 1—REVISED PROPOSED CRITICAL HABITAT UNITS FOR THE RUFA RED KNOT—Continued

Critical habitat unit or subunit name (State)	Land ownership by type	Approx. acres	Approx. hectares	Proposed changes	Previous unit numbering
FL–24B St. Vincent National Wildlife Refuge.	Federal .....	742	300	No Change .....	No Change.
	State .....	0	0		
	Private/Other .....	0	0		
	Uncategorized .....	0	0		
	Total .....	742	300		
FL–24C Flagg Island Shoals .....	Federal .....	0	0	No Change .....	No Change.
	State .....	517	209		
	Private/Other .....	0	0		
	Uncategorized .....	0	0		
	Total .....	517	209		
FL–25A Cape San Blas to Indian Pass.	Federal .....	0	0	No Change .....	No Change.
	State .....	133	54		
	Private/Other .....	486	197		
	Uncategorized .....	0	0		
	Total .....	620	251		
FL–25B St. Joseph Bay–Eastern Shore.	Federal .....	0	0	No Change .....	No Change.
	State .....	761	308		
	Private/Other .....	66	27		
	Uncategorized .....	0	0		
	Total .....	827	335		
Alabama					
AL–1 Dauphin Island .....	Federal .....	484	196	No Change .....	No Change.
	State .....	848	343		
	Private/Other .....	3,834	1,552		
	Uncategorized .....	0	0		
	Total .....	5,167	2,091		
Mississippi					
MS–1 Ship Island .....	Federal .....	2,452	993	No Change .....	No Change.
	State .....	0	0		
	Private/Other .....	0	0		
	Uncategorized .....	0	0		
	Total .....	2,452	993		
MS–2 Cat Island .....	Federal .....	686	278	No Change .....	No Change.
	State .....	1,305	528		
	Private/Other .....	129	52		
	Uncategorized .....	0	0		
	Total .....	2,121	858		
Louisiana					
LA–1 Chandeleur Islands .....	Federal .....	7,632	3,088	No Change .....	No Change.
	State .....	0	0		
	Private/Other .....	0	0		
	Uncategorized .....	0	0		
	Total .....	7,632	3,088		
LA–2 Barataria Barrier Islands and Headlands.	Federal .....	0	0	No Change .....	No Change.
	State .....	126	51		
	Private/Other .....	7,669	3,104		
	Uncategorized .....	0	0		
	Total .....	7,795	3,155		

TABLE 1—REVISED PROPOSED CRITICAL HABITAT UNITS FOR THE RUFA RED KNOT—Continued

Critical habitat unit or subunit name (State)	Land ownership by type	Approx. acres	Approx. hectares	Proposed changes	Previous unit numbering
LA-3 Terrebonne Barrier Islands .....	Federal .....	0	0	No Change .....	No Change.
	State .....	2,900	1,173		
	Private/Other .....	2,172	879		
	Uncategorized .....	0	0		
	Total .....	5,072	2,052		
LA-4 Southwest Louisiana Beaches	Federal .....	0	0	No Change .....	No Change.
	State .....	1,497	606		
	Private/Other .....	4,633	1,875		
	Uncategorized .....	0	0		
	Total .....	6,130	2,481		
<b>Texas</b>					
TX-1 Rollover Pass to Bolivar Flats ..	Federal .....	0	0	No Change .....	No Change.
	State .....	482	195		
	Private/Other .....	996	403		
	Uncategorized .....	0	0		
	Total .....	1,478	598	+214 ac (87 ha).	
TX-2 West Galveston Island .....	Federal .....	0	0	No Change .....	No Change.
	State .....	307	124		
	Private/Other .....	282	114		
	Uncategorized .....	0	0		
	Total .....	590	239		
TX-3 Cedar Lake to Colorado River	Federal .....	0	0	No Change to Unit But Cor- rected Hectares.	No Change.
	State .....	1,075	435		
	Private/Other .....	128	52		
	Uncategorized .....	0	0		
	Total .....	1,204	487		
TX-4 Mustang Island .....	Federal .....	0	0	No Change .....	No Change.
	State .....	395	160		
	Private/Other .....	253	102		
	Uncategorized .....	0	0		
	Total .....	648	262		
TX-5 Mollie Beattie Coastal Habitat ..	Federal .....	0	0	No Change .....	No Change.
	State .....	505	205		
	Private/Other .....	218	88		
	Uncategorized .....	0	0		
	Total .....	723	293		
TX-6 North Padre Island .....	Federal .....	2,487	1,007	No Change .....	No Change.
	State .....	68	27		
	Private/Other .....	262	106		
	Uncategorized .....	0	0		
	Total .....	2,817	1,140		
TX-7 Upper Laguna Madre/Night- hawk Bay.	Federal .....	273	111	No Change .....	No Change.
	State .....	816	330		
	Private/Other .....	68	28		
	Uncategorized .....	0	0		
	Total .....	1,157	469		
TX-8 Dagger Hill—Yarborough Pass— Nine Mile Hole.	Federal .....	9,731	3,938	No Change to Unit But Cor- rected Hectares.	No Change.
	State .....	23,042	9,325		
	Private/Other .....	0	0		
	Uncategorized .....	0	0		

TABLE 1—REVISED PROPOSED CRITICAL HABITAT UNITS FOR THE RUFA RED KNOT—Continued

Critical habitat unit or subunit name (State)	Land ownership by type	Approx. acres	Approx. hectares	Proposed changes	Previous unit numbering
	Total .....	32,773	13,263		
TX-9 Pintail Lake—Padre Island—La Punta Larga.	Federal .....	25,881	10,474	No Change to Unit But Cor- rected Hectares.	No Change.
	State .....	34,165	13,826		
	Private/Other .....	34,125	13,810		
	Uncategorized .....	0	0		
	Total .....	94,171	38,110		
TX-10 Peyton's Bay—Arroyo Colo- rado—Three Islands—Gabrielson Is- land.	Federal .....	8,145	3,296	No Change .....	No Change.
	State .....	25,316	10,245		
	Private/Other .....	2,190	886		
	Uncategorized .....	0	0		
	Total .....	35,651	14,427		
TX-11 South Bay—Boca Chica .....	Federal .....	5,536	2,242	No Change .....	No Change.
	State .....	4,080	1,652		
	Private/Other .....	5,784	2,342		
	Uncategorized .....	0	0		
	Total .....	15,400	6,236	+157 ac (63 ha).	

\* Totals may not sum due to rounding. Rounding in some cases has been corrected/updated in this table.

TABLE 2—CO-OCCURRING CRITICAL HABITAT DESIGNATIONS THAT OVERLAP PROPOSED CRITICAL HABITAT FOR RUFA RED KNOT

State	Area of overlap with designated critical habitat in acres (ac)/hectares (ha) (# of proposed rufa red knot units or subunits overlapping)					Total overlap (combined) for each state in acres (ac)/ hectares (ha)
	Piping Plover	Loggerhead Sea Turtle	West Indian Manatee	Gulf Sturgeon	Aboriginal Prickly-apple	
North Carolina <sup>1</sup> .....	11,495 ac/4,652 ha (11).	3,438 ac/1,391 ha (4).	N/A .....	N/A .....	N/A .....	14,069 ac/5,693 ha.
South Carolina <sup>1</sup> .....	5,615 ac/2,272 ha (14).	6,007 ac/2,431 ha (14).	N/A .....	N/A .....	N/A .....	9,399 ac/3,804 ha.
Georgia <sup>1</sup> .....	15,877 ac/6,425 ha (12).	10,903 ac/4,412 ha (7).	N/A .....	N/A .....	N/A .....	21,698 ac/8,781 ha.
Florida .....	7,617 ac/3,082 ha (20).	7,114 ac/2,879 ha (17).	20,720 ac/8,385 ha (11).	8,970 ac/3,630 ha (11).	77 ac/31 ha (4) ...	37,801 ac/15,297 ha.
Alabama .....	2,381 ac/963 ha (1).	N/A .....	N/A .....	N/A .....	N/A .....	2,381 ac/963 ha.
Mississippi .....	4,538 ac/1,837 ha (2).	N/A .....	N/A .....	1,866 ac/755 ha (2).	N/A .....	4,488 ac/1,816 ha.
Louisiana .....	17,154 ac/6,942 ha (4).	N/A .....	N/A .....	N/A .....	N/A .....	17,154 ac/6,942 ha.
Texas <sup>1</sup> .....	154,097 ac/ 62,361 ha (11).	N/A .....	N/A .....	N/A .....	N/A .....	154,097 ac/ 62,361 ha.
Total <sup>2</sup> .....	218,774 ac/ 88,537 ha (74).	27,463 ac/11,114 ha (40).	20,720 ac/8,385 ha (11).	10,836 ac/4,385 ha (13).	77 ac/31 ha (4) ...	261,087 ac/ 105,659 ha.

<sup>1</sup> The amount of rufa red knot proposed critical habitat overlapping with piping plover designated critical habitat increased by 852 ac (345 ha) in North Carolina, 660 ac (267 ha) in South Carolina, 508 ac (205 ha) in Georgia, and 371 ac (150 ha) in Texas; this resulted in a total increase of 2,413 ac (976 ha) for piping plover compared to the July 15, 2021, proposed rule. The amount of rufa red knot proposed critical habitat overlapping with loggerhead sea turtle designated critical habitat was corrected for North Carolina, to include adding acreage for the new NC-6 unit, to 3,438 ac (1,391 ha); overlap also increased by 692 ac (280 ha) in South Carolina, resulting in a total increase of 608 ac (246 ha) for loggerhead compared to the July 15, 2021, proposed rule.

<sup>2</sup> Totals may not sum due to rounding.

The revised proposed critical habitat designation is defined by the map or maps, as modified by any accompanying regulatory text, presented at the end of this document under Proposed

Regulation Promulgation. The rule portion of this document depicts all the proposed critical habitat units, including those originally proposed July 15, 2021, and unchanged via this

document. Because we are adding proposed critical habitat units, the paragraph designations have changed, so we are setting forth the entire proposed rule in this document instead

of just the new and revised proposed critical habitat units.

We include more detailed information on the boundaries of the revised proposed critical habitat designation in the discussion of new and revised proposed individual units below. For units for which we are not proposing any changes from the July 15, 2021, proposed rule, please refer to information at <https://www.regulations.gov> under Docket No. FWS-R5-ES-2021-0032.

#### *Unit MA-1: Nauset Marsh*

Unit MA-1 consists of approximately 2,219 ac (899 ha) of highly dynamic barrier beaches and intertidal (*i.e.*, seashore that is covered at high tide and uncovered at low tide) areas in the towns of Orleans and Eastham in Barnstable County, Massachusetts. The unit includes exposed intertidal flats, shoals, mudflats, and intertidal salt marsh pannes in Salt Pond Bay and Nauset Bay, and ephemeral tidal pools, primary sand dunes, and beaches associated with Nauset Spit (Orleans and Eastham) and Coast Guard Beach (Eastham). The southern end of the unit begins at Nauset Spit north of Mill Pond where the peninsula is bordered by bay and oceanside waters, and heads east following the mainland shoreline past Woods Cove (but not including the cove) to the shoreline of Fort Hill (Eastham). The unit then follows the shoreline around Salt Pond Bay to the north end of Nauset Bay where the boundary continues east across Coast Guard Beach to mean low low water (MLLW; *i.e.*, the lowest of the low tides per day averaged over a 19-year period) on the ocean side. The eastern unit border continues south crossing the inlet between Coast Guard Beach and Nauset Spit (Eastham) following oceanside MLLW until the spit is no longer bordered by the bay and ocean, at which point the boundary heads west. Lands within this unit include approximately 1,340 ac (543 ha; 60 percent) in Federal ownership, 136 ac (55 ha; 6 percent) in private/other ownership, and 744 ac (301 ha; 34 percent) that are uncategorized. General land use within this unit is primarily recreational, including offshore and surf fishing, shellfish digging (both recreational and commercial), boating, over-sand vehicle use, sunbathing, swimming, and walking.

Unit MA-1 is occupied by the species and contains one or more of the physical or biological features essential to the conservation of the species. The unit contains a high concentration of rufa red knots during the fall migration period, serving as an important

southbound stopover site in the New England portion of the subspecies' range. Additionally, this location consistently supports large concentrations of migrating rufa red knots annually due to the large intertidal areas and beach habitat that provides multiple foraging and roosting habitat areas for the birds to build energy resources for migration.

Threats identified within Unit MA-1 include disturbance of foraging and roosting rufa red knots by humans and human activities including but not limited to, pets and domestic animals, off-road vehicles (ORVs), powered and unpowered boats, surf kites, and surf fishing, predation (especially by migrating raptors and owls), possible modification or loss of habitat (*i.e.*, dredging), and natural or human-caused disasters (*i.e.* hurricanes, oil spills). Special management considerations or protection measures to reduce or alleviate the threats may include managing access to rufa red knot foraging habitat and adjacent saltmarsh and upland roosting habitat during migration (through restrictions on timing, locations, and types of activities), and addressing the impacts of potential oil spills through protective spill response plans and training (see Special Management Considerations or Protection in the 2021 proposed rule). The National Park Service (NPS) lands within the unit (*i.e.*, Cape Cod National Seashore) are managed under a comprehensive shorebird management plan (NPS 2018, entire).

#### *Unit MA-2: Pleasant Bay*

Unit MA-2 consists of approximately 4,959 ac (2,007 ha) of highly dynamic barrier beaches and intertidal areas in the towns of Chatham and Orleans in Barnstable County, Massachusetts. The unit includes exposed intertidal flats, shoals, mudflats, and intertidal salt marsh pannes in Little Pleasant Bay and Pleasant Bay, and ephemeral tidal pools, primary sand dunes, and beaches associated with Nauset Beach South (Orleans), North Beach (Chatham), and North Beach Island (Chatham). The unit begins at the northeastern end of Little Pleasant Bay going east to the edge of the saltmarsh, continuing south on the interior of Nauset Beach South approximately 1.7 mi (2.7 km) then east to MLLW on the east side of Nauset Beach South, continuing south along Nauset Beach South and North Beach to North Beach Island at MLLW and terminating at the natural channel between North Beach Island and South Beach Island (Chatham). The western side of the unit runs offshore of the mainland, west of small islands in

Pleasant and Little Pleasant Bays (Little Sipson Island, Strong Island, and Tern Island) and east of Hog Island and Sampson Island, incorporating intertidal lands associated with the islands. Lands within this unit include approximately 126 ac (51 ha; 3 percent) in Federal ownership, 2,005 ac (812 ha; 40 percent) in private/other ownership, and 2,827 ac (1,144 ha; 57 percent) that are uncategorized. General land use within this unit is primarily recreational, including offshore and surf fishing, shellfish digging (both recreational and commercial), boating, over-sand vehicle use, sunbathing, swimming, and walking.

Unit MA-2 is occupied by the species and contains one or more of the physical or biological features essential to the conservation of the species. The unit contains a high concentration of rufa red knots during the spring and fall migration periods, serving as an important northbound and southbound stopover site in the New England portion of the subspecies' range. Additionally, this location consistently supports a few thousand migrating rufa red knots due to the large intertidal areas and beach habitat that provides multiple foraging and roosting habitat areas for the birds to build energy resources for migration.

Threats identified within Unit MA-2 include disturbance of foraging and roosting rufa red knots by humans and human activities including but not limited to, pets and domestic animals, ORVs, powered and unpowered boats, surf kites, and surf fishing, predation (especially by migrating raptors and owls), possible modification or loss of habitat (*e.g.*, dredging or mining of sand flats), and natural or human-caused disasters (*i.e.*, oil spills). Special management considerations or protection measures to reduce or alleviate the threats may include managing access to rufa red knot foraging habitat and adjacent saltmarsh and upland roosting habitat during migration (through restrictions on timing, locations, and types of activities), and addressing the impacts of potential oil spills through protective spill response plans and training (see Special Management Considerations or Protection in the 2021 proposed rule). The National Park Service (NPS) manages Cape Cod National Seashore under a comprehensive shorebird management plan (NPS 2018, entire) (Shorebird Plan). However, due to the small and isolated nature of NPS inholdings in this unit, these areas are not actively managed under the Shorebird Plan.

*Unit NY-2: Old Inlet*

Unit NY-2 (Old Inlet) consists of 1,781 ac (721 ha) of highly dynamic beach, sand flats, bay islands, back bay shoreline, intertidal areas, and surface water within the town of Brookhaven, Suffolk County, New York. The unit is irregularly shaped and bounded to the south by the Atlantic Ocean, to the west by the Fire Island National Seashore's Federal Otis G. Pike Wilderness Area, and to the east by the continuation of the Federal wilderness area. Its northern boundary lies approximately in the lower third of Bellport Bay. Additionally, portions of the northern and southern areas of the unit are not contiguous, as they are separated by a vegetated dune and washover areas. Lands within this unit include approximately 1,481 ac (599 ha; 83 percent) in Federal ownership; 232 ac (94 ha; 13 percent) in State ownership; and 67 ac (27 ha; 4 percent) in private/other ownership (including the town of Brookhaven). General land use within this unit is recreational activities (e.g., fishing, bird watching, boating, open space use). Coastal engineering structures are absent, but beach nourishment programs are implemented along the ocean beach to the east by the U.S. Army Corps of Engineers at Smith Point County Park (via coordination and agreements with the State of New York and Suffolk County).

Unit NY-2 is occupied by the species and contains one or more of the physical or biological features essential to the conservation of the species. This unit contains a high concentration of rufa red knots during the fall migration period, serving as an important southbound stopover site. The area has a relatively undeveloped character that provides protection from intensive human uses. Episodic storm events have also contributed to habitat creation, and, in turn, optimal rufa red knot habitat conditions. The bay islands and associated wetlands are managed for wildlife, which provides some limits to the amount of disturbance that rufa red knots or their habitat may experience from recreation and other human activities (e.g., commercial shell fishing, dredging, and shoreline dock/pier projects).

Threats identified within Unit NY-2 include: (1) Sea level rise; (2) coastal engineering activities (e.g., beach nourishment that could remove habitat, preclude the formation of habitat such as exposed shoals, and impact adjacent shoreline habitats by altering currents and sediment transport/deposition patterns); (3) predation in nonbreeding areas; and (4) human disturbance (e.g.,

recreational fishing and driving, and motorized boat traffic or aircraft that create noise disturbance). Special management considerations or protection measures to reduce or alleviate the threats may include reducing disturbance (e.g., humans, pets, vehicles, and watercraft), conducting predator control, and implementing conservation measures that help reduce modification or loss of habitat from soft beach stabilization efforts (e.g., time-of-year restrictions for beach nourishment and dredging activities, establishing temporary sanctuaries and management during certain times of year to address erosion) (see Special Management Considerations or Protection in the 2021 proposed rule).

The town of Brookhaven lands (both marine and estuarine habitats within this unit) are managed in cooperation with the New York State Wildlife Action Plan (New York State Department of Environmental Conservation 2015, entire). Additionally, the designated South Shore Estuary Reserve implements a Comprehensive Management Plan (South Shore Estuary Reserve Council 2001, entire), which encompasses Units NY-1, NY-2, and NY-3, and serves as a guidance document for municipalities and private/public sectors to conserve or protect habitats and waters within the Reserve. Unit NY-2 is within the boundaries of the Fire Island National Seashore's Federal Otis G. Pike Wilderness Area. The NPS prepared the "Fire Island National Seashore Wilderness Breach Management Plan/Environmental Impact Statement" to provide a thorough evaluation to determine the potential benefits and consequences of management strategies prior to making a decision on how to manage the wilderness breach (NPS 2017, entire).

*Unit NJ-1: Brigantine and Little Egg Inlets*

Unit NJ-1 consists of 9,952 ac (4,027 ha) of beach, dune, shoals, open water, and tidal marsh associated with two inlets (i.e., small arms of the ocean) in Ocean and Atlantic Counties, New Jersey, extending from the northern boundary of the Holgate Unit of Edwin B. Forsythe (Forsythe) NWR, west to the "Seven Islands" portion of Great Bay Boulevard Wildlife Management Area, and south nearly to 15th Street North in Brigantine City. To the north, the unit encompasses the Holgate Unit of the Forsythe NWR and includes several areas within the Great Bay Boulevard Wildlife Management Area, owned by the State of New Jersey (e.g., Seven

Islands and other islands on either side of Great Bay Boulevard south of Big Sheepshead Creek). The unit also includes portions of Little Beach Island within the Forsythe NWR, and portions of the North Brigantine Natural Area owned by the State of New Jersey. This unit includes extensive areas of shoals and sand or mud flats (such as the new island east of Little Beach Island that is within the Edwin B. Forsythe NWR), which are generally owned by the State. Lands within this unit include approximately 1,560 ac (632 ha; 16 percent) in Federal ownership, 3,187 ac (1,291 ha; 32 percent) in State ownership, 10 ac (4 ha; less than 1 percent) in private/other ownership, and 5,194 ac (2,101 ha; 52 percent) that are uncategorized. General land use within this unit is almost entirely undeveloped and managed for wildlife and other natural resource values, as well as recreation.

Unit NJ-1 is occupied by the species and contains one or more of the physical or biological features essential to the conservation of the species. This unit contains a high concentration of rufa red knots during the spring and fall migration periods, serving as an important northbound and southbound stopover site. This unit has an undeveloped character that provides protection from intensive human uses. The lack of hard structures and other coastal engineering practices in this unit allows optimal rufa red knot habitat conditions to be created and maintained by natural coastal processes, which is a condition that is rare in the mid-Atlantic. The Little Egg Inlet is the only unmodified inlet in New Jersey and one of only two unmodified inlets between Montauk, New York, and Chincoteague, Virginia, a shoreline distance of nearly 350 mi (563 km) (Rice 2016, pp. 24–25). Nearly all the lands in the unit are managed for wildlife, which limits disturbance of rufa red knots from recreation and other human activities.

Threats identified within Unit NJ-1 include: (1) Sea level rise that may accelerate faster than landforms can migrate through natural coastal processes; (2) coastal engineering activities (e.g., ongoing updrift beach nourishment; proposed enlargement of a terminal groin immediately adjacent to the unit's northern limit; ongoing and proposed dredging that could remove habitat (e.g., exposed shoals), preclude habitat formation, and/or impact adjacent shoreline habitats by altering sediment transport/deposition patterns); (3) aquaculture leases; (4) predation in nonbreeding areas; and (5) human disturbance (e.g., recreational fishing and driving in the fall, motorized boat



traffic and aircraft year round). Special management considerations or protection measures to reduce or alleviate the threats may include managing sources of disturbance (*e.g.*, humans, pets, vehicles, and watercraft), managing predator populations, and implementing conservation measures to abate habitat impacts from coastal engineering projects and from sea level rise (see Special Management Considerations or Protection in the July 15, 2021, proposed rule). Federal lands in this unit are managed under the Edwin B. Forsythe NWR Comprehensive Conservation Plan (Service 2004a, entire). State lands within the North Brigantine Natural Area are covered by a Beach Management Plan (Service and New Jersey Department of Environmental Protection 2019, entire).

#### *Unit VA-12: Ship Shoal Island*

This unit consists of a total of 2,426 ac (982 ha) in Northampton County, Virginia, including both Ship Shoal Island and the area known as Godwin Island. The north boundary is Red Drum Drain and New Inlet, the south boundary is Ship Shoal Inlet, the west boundary is South Bay, and the east boundary is the Atlantic Ocean. The boundary for the island and marsh complex extends outward past the MLLW line and includes the areas that are slightly inundated with less than 3 in (7.6 cm) of water. The unit is composed of 426 ac (172 ha; 18 percent) in State ownership, 1,941 ac (785 ha; 80 percent) in private/other ownership, and the remaining 60 ac (24 ha; 2 percent) is uncategorized. The island is composed of extensive mud flats, low marsh, sandy beaches, overwash areas, and tidal channels. General land use within this unit is scientific research (*e.g.*, surveys and monitoring for nesting shorebirds); this area is closed to visitor use at all times for scientific research and safety reasons (TNC 2017, p. 1).

Unit VA-12 is occupied by the species and contains one or more of the physical or biological features essential to the conservation of the species. This unit is essential to the conservation of the species because it is used by rufa red knots in conjunction with other proposed critical habitat units with large concentrations of rufa red knots observed during the spring migration season and provides high-quality habitat that is protected from disturbance. Additionally, rufa red knots are known to move from island to island daily within the barrier island chain; the whole chain of islands serves as important foraging and roosting habitat for the rufa red knot. Therefore, inclusion of unit VA-12 accurately

captures how rufa red knots are using the available habitat along Virginia's Eastern Shore.

The threats identified within Unit VA-12 include: (1) Natural (*e.g.*, hurricanes) or human-caused (*e.g.*, oil spills) disasters, and (2) erosional processes and accelerated loss of shoreline habitat in response to climate change and sea level rise. Special management considerations or protection measures to reduce or alleviate the threats may include managing scientific research activity access to rufa red knot foraging habitat and adjacent upland roosting habitat during migration, and establishing temporary sanctuaries and management during certain times of year to address erosion (see Special Management Considerations or Protection in the 2021 proposed rule). The island is owned and managed by TNC as part of the Virginia Coast Reserve, management of which is identified in a Conservation Action Plan that outlines priorities and strategies for conservation activities (Wilke 2020, pers. comm.).

#### *Unit VA-15: Fisherman Island*

This unit consists of a total of 2,413 ac (977 ha) in Northampton County, Virginia. The unit is an oval-shaped island located at the mouth of the Chesapeake Bay and is just south of the tip of the Eastern Shore peninsula. The island is surrounded by the waters of the Chesapeake Bay and Atlantic Ocean. It is bisected by U.S. Route 13 and the Chesapeake Bay Bridge-Tunnel complex. The interior boundary is along the dune line where the habitat changes from sandy beach with little vegetation to densely vegetated dunes or marshland, as well as densely vegetated forested or herbaceous vegetation landward of the beach and primary dune. The unit extends seaward past the MLLW line and includes areas that are slightly inundated with less than 3 in (7.6 cm) of water. The unit is federally owned by the Service's Eastern Shore of Virginia NWR. General land use within this unit includes low-impact recreational day use (*e.g.*, hiking, bird watching, photography) only provided through guided tours from September through February. In addition, scientific research (*e.g.*, survey and monitoring of natural resources, such as federally listed species) may occur year-round.

Unit VA-15 is occupied by the species and contains one or more of the physical or biological features essential to the conservation of the species. This unit is essential to the conservation of the species because it is used by rufa red knots in conjunction with other proposed critical habitat units with

large concentrations of rufa red knots observed during the spring migration season and provides high-quality habitat that is protected from disturbance. Additionally, rufa red knots are known to move from island-to-island daily within the barrier island chain; the whole chain of islands serves as important foraging and roosting habitat for the rufa red knot. Therefore, inclusion of unit VA-15 accurately captures how rufa red knots are using the available habitat along Virginia's Eastern Shore.

Threats identified within Unit VA-15 include: (1) Disturbance of foraging and roosting rufa red knots by trespass recreational beach use, (2) natural (*e.g.*, hurricanes) or human-caused (*e.g.*, oil spills) disasters, and (3) accelerated loss of shoreline habitat from erosional processes in response to sea level rise. Special management considerations or protection measures to reduce or alleviate the threats may include managing access to rufa red knot foraging habitat and adjacent upland roosting habitat during migration (through restrictions on timing, locations, and types of activities), and establishing temporary sanctuaries and management during certain times of year to address erosion (see Special Management Considerations or Protection in the 2021 proposed rule). Currently, Eastern Shore of Virginia and Fisherman Island NWRs address some of these threats in their Comprehensive Conservation Plan (Service 2004b, entire) and Habitat Management Plan (Service 2018, entire).

#### *Unit NC-6: Lea-Hutaff Island*

Unit NC-6 consists of approximately 1,085 ac (439 ha) of occupied habitat including all of Lea-Hutaff Island in Pender and New Hanover Counties consisting of shoreline habitat that stretches approximately 4.8 mi (7.7 km) from the west side of the New Topsail Inlet channel west across the Rich Inlet channel to the toe of the primary dune or dense vegetation line on the northeast end of Figure Eight Island. This unit includes from MLLW to the toe of the dunes or where densely vegetated habitat (not used by the rufa red knot) begins and where the physical or biological features no longer occur. This unit also includes the emergent sand shoals within the flood-tidal and ebb-tidal deltas associated with the west side of the New Topsail Inlet channel, and the emergent sand shoals within the flood-tidal and ebb-tidal deltas on the west side of Rich Inlet channel. Lands within this unit include approximately 72 ac (29 ha; 7 percent) in State ownership, and 427 ac (173 ha; 39

percent) in private/other ownership, and 586 ac (237 ha; 54 percent) that are uncategorized. State lands in this unit include parcels on the northeast end of Lea-Hutaff Island. General land use within this unit includes low-impact recreational day use (e.g., hiking, bird watching, photography and shell collecting). Additionally, scientific research (e.g., survey and monitoring of natural resources, such as federally listed species) may occur year-round.

Unit NC-6 is occupied by the species and contains one or more of the physical or biological features essential to the conservation of the species. This unit contains a high concentration of rufa red knots during the spring migration period, serving as an important northbound stopover site. Approximately 852 ac (345 ha) of this unit overlap with designated critical habitat for the federally threatened piping plover (66 FR 36038, July 10, 2001) and 238 ac (96 ha) overlap with the federally threatened loggerhead sea turtle (79 FR 39756, July 10, 2014).

Threats identified within Unit NC-6 include: (1) Depredation by native and nonnative predators; (2) modification or loss of habitat or both due to erosion and sea level rise; and (3) response to natural and human-caused disasters (i.e., hurricanes, oil spills). Special management considerations or protection measures to reduce or alleviate the threats may include managing access to rufa red knot foraging habitat and adjacent saltmarsh and upland roosting habitat during migration (through restrictions on timing, locations, and types of activities), conducting habitat management or restoration (e.g., living shorelines, raising marsh elevations, facilitated shoreline migration), managing predator populations, managing human activities that disturb foraging rufa red knots, and managing sediment sources both within the unit and adjacent Rich Inlet and New Topsail Inlet (see Special Management Considerations or Protection in the 2021 proposed rule). State lands within this unit are managed under the 2015 North Carolina Wildlife Action Plan (NCWRC 2015, entire).

#### *Unit SC-21: Fripp, Pritchards, and Little Capers Islands' Beaches*

Unit SC-21 consists of 10,178 ac (4,119 ha) of Fripp Island, Pritchards Island, and Little Capers Island, barrier islands off the coast in Beaufort County, South Carolina. The unit boundary begins on the shoreline of Fripp Island on the south side of Fripp Inlet and extends southwest along the Atlantic Ocean shorelines of Fripp Island,

Pritchards Island, and Little Capers Island to the eastern side of Trenchards Inlet where the boundary follows the southern shoreline of the Story River. The unit includes all emergent land from MLLW to the toe of the dunes or where densely vegetated habitat (not used by the red knot) begins (i.e., the highly dynamic shoreline and the sandy intertidal zone that are covered at high tide and uncovered at low tide). This dynamic habitat also includes the ephemeral emergent shoals (sand bars) within the flood-tidal and ebb-tidal deltas associated with Fripp, Skull, and Trenchards Inlets as well as the unnamed inlets along the Little Capers Island shoreline. Lands within this unit include approximately 4,055 ac (1,641 ha; 40 percent) in State ownership and 6,123 ac (2,478 ha; 60 percent) in private/other ownership. General land use within this unit includes residential development, tourism, and outdoor recreational use (e.g., beachgoing, birdwatching, boating, and fishing).

Unit SC-21 is occupied by the species and contains one or more of the physical or biological features essential to the conservation of the species. This unit contains a high concentration of rufa red knots during the spring migration period, serving as an important northbound stopover site. The majority of this unit, with the exception of Fripp Island, has remote boat-only access and an undeveloped character that provides protection from intensive human uses. Approximately 660 ac (267 ha) of this unit overlap with designated critical habitat for the federally threatened piping plover (66 FR 36038, July 10, 2001), and 97 ac (39 ha) of this unit overlap with designated critical habitat for the federally threatened loggerhead sea turtle (79 FR 39756, July 10, 2014).

Threats identified within Unit SC-21 include: (1) Disturbance of foraging and roosting red knots by humans and human activities (e.g., off-leash dogs, walking/running/biking through or too close to flocks of red knots, powered boats); (2) depredation by native and nonnative predators; (3) modification or loss of habitat or both due to uncontrolled recreational access, erosion, and sea level rise; and (4) disturbance associated with response to natural and human-caused disasters (e.g., hurricanes, oil spills). Special management considerations or protection measures to reduce or alleviate the threats may include minimizing disturbance to wintering and migrating red knots (e.g., managing recreational access to key rufa red knot foraging and roosting habitat during migration through restrictions on

timing, locations, and types of activities) and managing the collection of spawning horseshoe crabs for biomedical use (e.g., limiting location and timing of collection) (see Special Management Considerations or Protection in the 2021 proposed rule). Private/other lands within this unit are managed under the 1992 Comprehensive Beach Management Plan of Beaufort County (Beaufort County Planning Board 1992, entire) and the 2020 Fripp Island Beach Management Plan (Beaufort County 2020, entire).

#### *Unit SC-22: Bay Point Island Beach*

Unit SC-22 consists of 1,698 ac (687 ha) of Bay Point Island, a barrier island off the coast in Beaufort County, South Carolina. The unit boundary begins on the Trenchards Inlet shoreline at the entrance to Morse Island Creek and follows the Atlantic Ocean shoreline to the eastern shoreline of Port Royal Round to the western entrance to Morse Island Creek. The unit includes all emergent land from MLLW to the toe of the dunes or where densely vegetated habitat (not used by the rufa red knot) begins (i.e., the highly dynamic shoreline and the sandy intertidal zone that are covered at high tide and uncovered at low tide). This dynamic habitat also includes the ephemeral emergent shoals (sand bars) within the flood-tidal and ebb-tidal deltas associated with Morse Creek and Trenchards Inlet within the unit boundary. Lands within this unit include approximately 553 ac (224 ha; 33 percent) in State ownership and 1,145 ac (464 ha; 67 percent) in private/other ownership. General land use within this unit includes outdoor recreational use (e.g., beachgoing, boating, birdwatching, and fishing).

Unit SC-22 is occupied by the species and contains one or more of the physical or biological features essential to the conservation of the species. This unit contains a high concentration of rufa red knots during the spring migration period, serving as an important northbound stopover site, particularly when horseshoe crabs are spawning. This unit has remote boat-only access and an undeveloped character that provides protection from intensive human uses. Approximately 595 ac (241 ha) of this unit overlap with designated critical habitat for the federally threatened loggerhead sea turtle (79 FR 39756, July 10, 2014).

Threats identified within Unit SC-22 include: (1) Disturbance of foraging and roosting red knots by humans and human activities (e.g., off-leash dogs, walking too close to flocks of red knots,

powered boats); (2) depredation by native and nonnative predators; (3) modification or loss of habitat or both due to uncontrolled recreational access, erosion, and sea level rise; and (4) disturbance associated with response to natural and human-caused disasters (e.g., hurricanes, oil spills). Special management considerations or protection measures to reduce or alleviate the threats may include minimizing disturbance to wintering and migrating red knots (e.g., managing recreational access to key rufa red knot foraging and roosting habitat during migration through restrictions on timing, locations, and types of activities) (see Special Management Considerations or Protection in the July 15, 2021, proposed rule). Private/other lands within this unit are managed under the 1992 Comprehensive Beach Management Plan of Beaufort County (Beaufort County Planning Board 1992, entire).

*Unit SC-25: Turtle Island and Tompkins Island Beaches*

Unit SC-25 consists of 1,771 ac (717 ha) on Turtle Island (a sea island) and Tompkins Island (a human-made island) in Calibogue Sound in Jasper County, South Carolina. The unit boundary begins on the southern shoreline of the New River and extends southwest along the Calibogue Sound shoreline to the Wright River shoreline of Turtle Island. The unit boundary also includes the entire Calibogue Sound shoreline of Tompkins Island located east of Turtle Island. The unit includes all emergent land from MLLW to the toe of the dunes or where densely vegetated habitat (not used by the red knot) begins (i.e., the highly dynamic shoreline and the sandy intertidal zone that are covered at high tide and uncovered at low tide). This dynamic habitat also includes the ephemeral emergent shoals (sand bars) within the flood-tidal and ebb-tidal deltas associated with the unnamed inlet in the center of the Turtle Island shoreline. Lands within this unit are entirely in State ownership as SCDNR's Turtle Island Wildlife Management Area and a SCDNR seabird sanctuary. General land use within this unit includes wildlife management and outdoor recreational use (e.g., beachgoing, boating, birdwatching, and fishing).

Unit SC-25 is occupied by the species and contains one or more of the physical or biological features essential to the conservation of the species. This unit contains a high concentration of rufa red knots during the spring migration period, serving as an important northbound stopover site, particularly when horseshoe crabs are

spawning. This unit also has remote boat-only access and an undeveloped character that provides protection from intensive human uses.

Threats identified within Unit SC-25 include: (1) Disturbance of foraging and roosting red knots by humans and human activities (e.g., off-leash dogs, walking/running through or too close to flocks of red knots, powered boats); (2) depredation by native and nonnative predators; (3) modification or loss of habitat or both due to uncontrolled recreational access, erosion, and sea level rise; and (4) disturbance associated with response to natural and human-caused disasters (e.g., hurricanes, oil spills). Special management considerations or protection measures to reduce or alleviate the threats may include minimizing disturbance to wintering and migrating red knots (e.g., managing recreational access to key rufa red knot foraging and roosting habitat during migration through restrictions on timing, locations, and types of activities) and managing the collection of spawning horseshoe crabs for biomedical use (e.g., limiting location and timing of collection) (see Special Management Considerations or Protection in the 2021 proposed rule). State lands and waters within this unit are managed under the SCDNR's State Wildlife Action Plan (SCDNR 2015, entire).

*Unit GA-1: Cockspur Island and Daymark Island Beaches*

Unit GA-1 consists of 802 ac (325 ha) of Cockspur and Daymark Islands in the mouth of the Savannah River in Chatham County, Georgia. The unit boundary includes the entire Savannah River and South Channel of the Savannah River shorelines of Cockspur and Daymark Islands and includes all emergent land from MLLW to the toe of the dunes or where densely vegetated habitat (not used by the rufa red knot) begins (i.e., the highly dynamic shoreline and sandy intertidal zone that is covered at high tide and uncovered at low tide). Lands within this unit include approximately 708 ac (287 ha; 88 percent) in Federal ownership as part of the U.S. Coast Guard's Station Tybee and NPS's Fort Pulaski National Monument, and 94 ac (38 ha; 12 percent) in State ownership. General land use within this unit includes a U.S. Coast Guard installation, national monument visitation and recreational day uses (e.g., boating, fishing, birdwatching).

Unit GA-1 is occupied by the species and contains one or more of the physical or biological features essential to the conservation of the species. This

unit contains a high concentration of rufa red knots during the spring migration period, serving as an important northbound stopover site, particularly when horseshoe crabs are spawning.

Threats identified within Unit GA-1 include: (1) Disturbance of foraging and roosting red knots by humans and human activities (e.g., off-leash dogs, running/walking/biking through or too close to flocks of red knots, powered boats); (2) depredation by native and nonnative predators; (3) modification or loss of habitat or both due to uncontrolled recreational access, erosion, and sea level rise; and (4) disturbance associated with the response to natural and human-caused disasters (e.g., hurricanes, oil spills). Special management considerations or protection measures to reduce or alleviate the threats may include managing recreational access to key rufa red knot foraging and roosting habitat during migration (through restrictions on timing, locations, and types of activities) and limiting shoreline stabilization project construction windows (e.g., outside of rufa red knot migration windows) (see Special Management Considerations or Protection in the 2021 proposed rule). Federal lands are managed under the Fort Pulaski National Monument Final General Management Plan (NPS 2013, entire) and the U.S. Coast Guard's Environmental Planning Implementation Procedures (U.S. Coast Guard 2020, entire).

*Unit GA-5: Little Ogeechee River Shoreline and Raccoon Key*

Unit GA-5 consists of 4,571 ac (1,850 ha) of the Little Ogeechee River shoreline along Green Island, Little Wassaw Island, and Pine Island and all of Raccoon Key in Ossabaw Sound in Chatham County, Georgia. The unit boundary begins at the Green Island shoreline of the Little Ogeechee River and continues east along the shorelines of Little Wassaw Island and Pine Island to the Odingsell River entrance behind Wassaw Island. The boundary continues north along the Pine Island and Little Wassaw Island shoreline of the Odingsell River and follows the Little Wassaw Island shoreline along Adams Creek through marshlands south of Skidaway Island to Delegal Creek behind Green Island. The unit includes all emergent land from MLLW to where densely vegetated habitat (not used by the red knot) begins (i.e., the highly dynamic shoreline and the sandy intertidal zone that are covered at high tide and uncovered at low tide). This dynamic habitat also includes the

ephemeral emergent shoals (sand bars) within the Ossabaw entrance. Lands within this unit include approximately 3,136 ac (1,267 ha; 69 percent) in Federal ownership and 1,435 ac (581 ha; 31 percent) in State ownership. General land use within this unit includes wildlife management as part of the Service's Wassaw Island NWR and outdoor recreational use (e.g., beachgoing, boating, fishing, and birdwatching).

Unit GA-5 is occupied by the species and contains one or more of the physical or biological features essential to the conservation of the species. This unit contains a high concentration of rufa red knots during the spring migration period, serving as an important northbound stopover site, particularly when horseshoe crabs are spawning. This unit also has remote boat-only access and an undeveloped character that provides protection from intensive human uses.

Threats identified within Unit GA-5 include: (1) Disturbance of foraging and roosting red knots by humans and human activities (e.g., running/walking through or too close to flocks of red knots, powered boats); (2) depredation by native and nonnative predators; (3) modification or loss of habitat or both due to uncontrolled recreational access, erosion, and sea level rise; and (4) disturbance associated with the response to natural and human-caused disasters (e.g., hurricanes, oil spills). Special management considerations or protection measures to reduce or alleviate the threats may include minimizing disturbance to wintering and migrating red knots (e.g., managing access to red knot foraging and roosting habitat during migration, such as through restrictions on timing, locations, and types of activities) (see Special Management Considerations or Protection in the 2021 proposed rule). State lands within this unit are managed under the GDNr State Wildlife Action Plan (GDNr 2015, entire), and Federal lands are managed under the 2011 Savannah Coastal NWR Complex Comprehensive Conservation Plan (Service 2011, entire).

*Unit GA-10: Queens Island, Wolf Island, Egg Island, Little Egg Island, and Little Egg Island Bar*

Unit GA-10 consists of 11,901 ac (4,816 ha) of Queens Island, Wolf Island, Egg Island, Little Egg Island, and Little Egg Island Bar at the Altamaha Sound in McIntosh County, Georgia. The unit boundary begins at the Black River shoreline of Queens Island and extends south along the Wolf Island shoreline, which includes Wolf Island

Bar, to the eastern and southern shorelines of Little Egg Island Bar Natural Area southwest to Egg Island in the Altamaha Sound. The boundary continues northwest along the Altamaha River shoreline of Egg Island and north along the Little Mud River shoreline of Wolf Island and Rockdedundy River shoreline of Queens Island. The unit includes all emergent land from MLLW to the toe of the dunes or where densely vegetated habitat (not used by the red knot) begins (i.e., the highly dynamic shoreline and the sandy intertidal zone that are covered at high tide and uncovered at low tide). This dynamic habitat also includes the ephemeral emergent shoals (sand bars) within the flood-tidal and ebb-tidal deltas associated with the entrance to Altamaha Sound and Beacon Creek. Lands within this unit include approximately 5,527 ac (2,237 ha; 46 percent) in Federal ownership, 261 ac (106 ha; 2 percent) in State ownership, 1,865 ac (755 ha; 16 percent) in private/other ownership, and 4,248 ac (1,719 ha; 36 percent) that are uncategorized. General land use within this unit includes wildlife management and outdoor recreational use (e.g., beachgoing, boating, fishing, and birdwatching). Federal land use includes management of both Wolf and Egg Islands as part of Wolf Island NWR. Additionally, Wolf Island is a Class I designated wilderness area.

Unit GA-10 is occupied by the species and contains one or more of the physical or biological features essential to the conservation of the species. This unit contains a high concentration of rufa red knots during the spring and fall migration periods, serving as an important northbound and southbound stopover site, particularly when horseshoe crabs are spawning. Additionally, this unit contains a high concentration of rufa red knots during the winter period, providing important wintering habitat on the Southeastern U.S. portion of the subspecies' range for foraging and roosting during a time of the year when rufa red knots are seeking to build energy sources for migration. This location serves as one of five units in Georgia that supports high concentrations of rufa red knots throughout the entire nonbreeding season, and is also important due to its low-level development, remote boat-only access, and protection from intensive human uses. Approximately 1,401 ac (567 ha) of this unit overlap with designated critical habitat for the federally threatened piping plover (66 FR 36038, July 10, 2001).

Threats identified within Unit GA-10 include: (1) Disturbance of foraging and

roosting red knots by humans and human activities (e.g., walking/running through or too close to flocks of red knots, powered boats); (2) depredation by native and nonnative predators; (3) modification or loss of habitat or both due to erosion and sea level rise; and (4) disturbance associated with response to natural and human-caused disasters (e.g., hurricanes, oil spills). Special management considerations or protection measures to reduce or alleviate the threats may include minimizing disturbance to wintering and migrating red knots (e.g., managing recreational access to key rufa red knot foraging and roosting habitat during migration through restrictions on timing, locations, and types of activities) (see Special Management Considerations or Protection in the 2021 proposed rule). Federal lands in this unit are managed under the 2011 Savannah Coastal NWR Complex Comprehensive Conservation Plan (Service 2011, entire), and State lands are managed under the GDNr State Wildlife Action Plan (GDNr 2015, entire).

*Unit TX-1: Rollover Pass to Bolivar Flats*

Unit TX-1 consists of 1,478 ac (598 ha) in Galveston County, Texas. This unit begins bayside of Rollover Pass and extends southwest along the beach front ending at the north jetty on the Bolivar Peninsula. It includes 17 mi (27 km) of Gulf shoreline. The landward boundary is the line indicating the beginning of dense vegetation, and the gulf-side boundary is the MLLW, including emergent lands and intertidal area characterized as highly dynamic beach/seashore that is covered at high tide and uncovered at low tide. The bayside of Rollover Pass and west end of the unit includes lands known as wind tidal flats that are infrequently inundated. Specific habitat types within this unit include: estuarine (bayside) seagrass mud or sand flats that are subtidal, seagrass flats that are nearly flat areas with rooted vascular plants (seagrass) growing below the water surface in subtidal mud or sand substrate; estuarine (bayside) sandy shore (beach/sandbar) rarely exposed due to tidal fluctuation; estuarine (bayside) sandy shore (beach/sandbar) that is irregularly or regularly, depending upon the location, inundated by tides; and marine sandy coastline (beach) irregularly or regularly inundated by tides, depending upon the location (Federal Geographic Data Committee (FGDC) 2013, pp. 11–13, 37). Lands within this unit include approximately 482 ac (195 ha; 33 percent) in State ownership and 996 ac

(403 ha; 67 percent) in private/other ownership. General land use within this unit includes multiple human uses for recreation including both pedestrian and vehicle activity, and ongoing beach maintenance/nourishment activities. The west end of the unit is a well-known birding site (Bolivar Flats) that is protected by the Houston Audubon Society.

Unit TX-1 is occupied by the species and contains one of more of the physical or biological features essential to the conservation of the species. This unit contains a high concentration of rufa red knots during the winter period, providing an important wintering habitat location on the northern Gulf coast U.S. portion of the rufa red knot northern wintering range, especially for an area that also experiences a low level of disturbance during this time period. The intertidal zone and relatively undisturbed beach habitat provide multiple foraging and roosting habitat areas during the time of year when rufa red knots are seeking to build energy resources for migration. The west end portion of the unit overlaps with 1,015 ac (411 ha) of designated critical habitat for the federally threatened piping plover (66 FR 36038, July 10, 2001).

Threats identified within Unit TX-1 include: (1) Disturbance of foraging and roosting rufa red knots and their habitat modification as a result of humans, including recreational activities, domestic animals, and vehicle disturbance (*i.e.*, golf carts, cars, sport-utility vehicles (SUVs), motorcycles, etc.); (2) modification or loss of habitat due to residential and commercial development, beach maintenance and nourishment activities, and sea level rise; (3) predation (residential and migratory raptors); and (4) human-caused disasters and response to natural and human-caused disasters (*e.g.*, hurricanes, oil spills). Special management considerations or protection measures to reduce or alleviate the threats may include conducting public outreach and education, managing access to rufa red knot foraging habitat and adjacent roosting habitat during migration (through restrictions on timing, locations, and types of activities), managing sediment sources to offset erosion and sea level rise, and addressing the impacts of potential oil spills or gas drilling activities through facility placement, as well as spill response plans and training (see Special Management Considerations or Protection in the 2021 proposed rule). The Texas General Land Office State lands are managed under The Open Beaches Act, Texas Natural Resource

Code Chapter 61, and The Dune Protection Act, Texas Natural Resource Code Chapter 63. The Audubon lands are managed under the Bolivar Flats Bird Sanctuary Management Plan (Houston Audubon 2017, entire).

#### *Unit TX-11: South Bay-Boca Chica*

Unit TX-11 consists of 15,400 ac (6,236 ha) in Cameron County, Texas. The Boca Chica gulf shoreline portion of this unit begins south of the Brownsville Ship Channel and extends approximately 6.5 mi (10 km) to the south. Within the South Bay, the northern boundary is south of Brownsville Ship Channel dredge spoil placement areas, and the southern boundary is north of the Rio Grande River. The eastern boundary is the bayside of the Boca Chica Beach (Gulf of Mexico) up to where dense vegetation begins, and the western boundary is west of the Loma islands up to where dense vegetation begins along the wind tidal flats. The unit includes wind tidal flats and all seagrass beds that are infrequently inundated and/or exposed at low tides and the tidal flats within the area known as South Bay. Specific habitat types within this unit include: estuarine (bayside) seagrass mud or sand flats that are subtidal and are nearly flat areas with rooted vascular plants (seagrass) growing below the water surface in subtidal mud or sand substrate; estuarine (bayside) algal mud or sand flats regularly inundated by tides and are nearly flat areas with a layer of algae growing on a moist mud or sand substrate and are otherwise devoid of vegetation; estuarine (bayside) algal mud or sand flats irregularly inundated by tides; estuarine (bayside) sandy shore (beach/sandbar) rarely exposed due to tidal fluctuation; estuarine (bayside) sandy shore (beach/sandbar) irregularly or regularly inundated by tides, depending upon the location; estuarine (bayside) sandy shore (beach/sandbar), spoils irregularly inundated by tides; and marine sandy coastline (beach) irregularly or regularly inundated by tides, depending upon the location (FGDC 2013, pp. 11–13, 37). Lands within this unit include approximately 5,536 ac (2,242 ha; 36 percent) in Federal ownership, 4,080 ac (1,652 ha; 26 percent) in State ownership, and 5,784 ac (2,342 ha; 38 percent) in private/other ownership. General land use within this unit includes rocket and drone launches and associated Space X space exploration development, and multiple recreational/beachside activities by humans, to include both pedestrian and vehicle activities. This unit is also managed for

migratory bird use by the Lower Rio Grande Valley NWR.

Unit TX-11 is occupied by the species and contains one of more of the physical or biological features essential to the conservation of the species. This unit contains a high concentration of rufa red knots during the spring and fall migration periods, serving as an important northbound and southbound stopover site on the northern Gulf coast. Approximately 13,280 ac (5,374 ha) of this unit overlap designated critical habitat for the federally threatened piping plover (66 FR 36038, July 10, 2001).

Threats identified within Unit TX-11 include: (1) Disturbance of foraging and roosting rufa red knots and their habitat modification as a result of humans, including recreational activities, vehicle disturbance (*i.e.*, golf carts, cars, SUVs, motorcycles, etc.), fishing, waterfowl hunting, and boating; (2) disturbance and habitat modification/erosion resulting from wind energy development and sea level rise; (3) predation (residential and migratory raptors); (4) habitat modification resulting from space exploration development; and (5) human-caused disasters and response to natural and human-caused disasters (*e.g.*, hurricanes, oil spills). Special management considerations or protection measures to reduce or alleviate the threats may include conducting public outreach and education, managing access to rufa red knot foraging habitat and adjacent roosting habitat during migration (through restrictions on timing, locations, and types of activities), managing sediment sources to offset erosion and sea level rise, and addressing the impacts of potential oil spills or gas drilling activities through facility placement, as well as spill response plans and training (see Special Management Considerations or Protection in the 2021 proposed rule). Federal lands are managed in accordance with the 1999 (reprinted) Lower Rio Grande Valley NWR land protection plan (Service 1993, entire). The Texas General Land Office State lands are managed under The Open Beaches Act, Texas Natural Resource Code Chapter 61, and The Dune Protection Act, Texas Natural Resource Code Chapter 63.

#### **Required Determinations**

All required determinations included in the 2021 proposed rule, with the exception of the following, are unchanged and apply to this revised proposed rule.

*Regulatory Planning and Review*  
(Executive Orders 12866 and 13563)

Executive Order 12866 provides that the Office of Information and Regulatory Affairs (OIRA) in the Office of Management and Budget will review all significant rules. OIRA has determined that this revised proposed rule is significant.

Executive Order 13563 reaffirms the principles of Executive Order 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. Executive Order 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 revised proposed rule in a manner consistent with these requirements.

#### References Cited

A complete list of references cited in this document is available on the internet at <https://www.regulations.gov> and upon request from the New Jersey Ecological Services Field Office (see **FOR FURTHER INFORMATION CONTACT**).

#### Authors

The primary authors of this document are the staff members of the U.S. Fish and Wildlife Service Species Assessment Team and New Jersey Ecological Services Field Office.

#### List of Subjects in 50 CFR Part 17

Endangered and threatened species, Exports, Imports, Reporting and recordkeeping requirements, Transportation.

#### Proposed Regulation Promulgation

Accordingly, we propose to further amend part 17, subchapter B of chapter I, title 50 of the Code of Federal Regulations, as proposed to be amended

at 86 FR 37410 (July 15, 2021) as set forth below:

### PART 17—ENDANGERED AND THREATENED WILDLIFE AND PLANTS

■ 1. The authority citation for part 17 continues to read as follows:

**Authority:** 16 U.S.C. 1361–1407; 1531–1544; and 4201–4245, unless otherwise noted.

■ 2. Amend § 17.95(b), the entry proposed at 86 FR 37410 for “Knot, rufa red (*Calidris canutus rufa*)”, by revising paragraphs (5) through (125) and adding paragraphs (126) through (132) to read as follows:

#### § 17.95 Critical habitat—fish and wildlife.

\* \* \* \* \*

##### (b) *Birds.*

\* \* \* \* \*

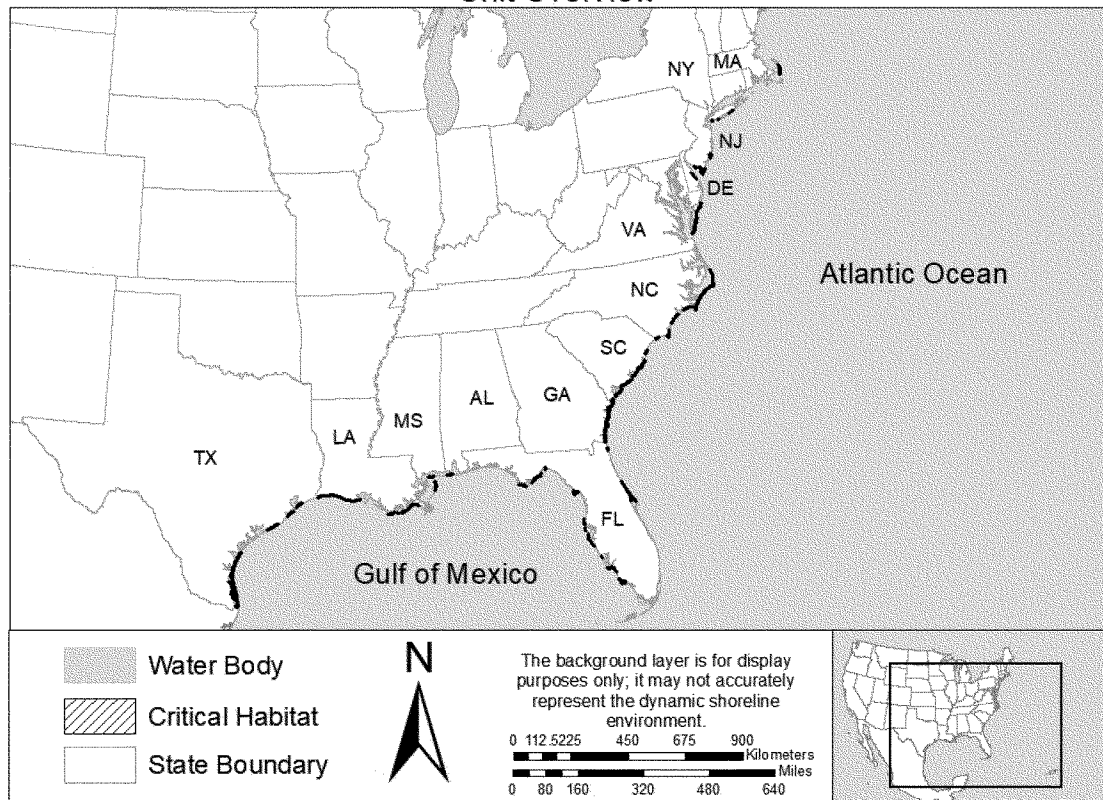
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Rufa Red Knot (*Calidris canutus rufa*)

(5) **Note:** Index map follows:

Figure 1 to Rufa Red Knot paragraph (5)

### Critical Habitat for Rufa Red Knot Unit Overview



(6) Unit MA–1: Nauset Marsh, Massachusetts.

(i) This unit consists of approximately 2,219 ac (899 ha) of occupied habitat in

Barnstable County consisting of exposed intertidal flats, shoals, mud flats, and



intertidal salt marsh pannes in Little Pleasant Bay and Pleasant Bay, and ephemeral tidal pools, primary sand dunes, and beaches associated with Nauset Beach South (Orleans), North Beach (Chatham), and North Beach

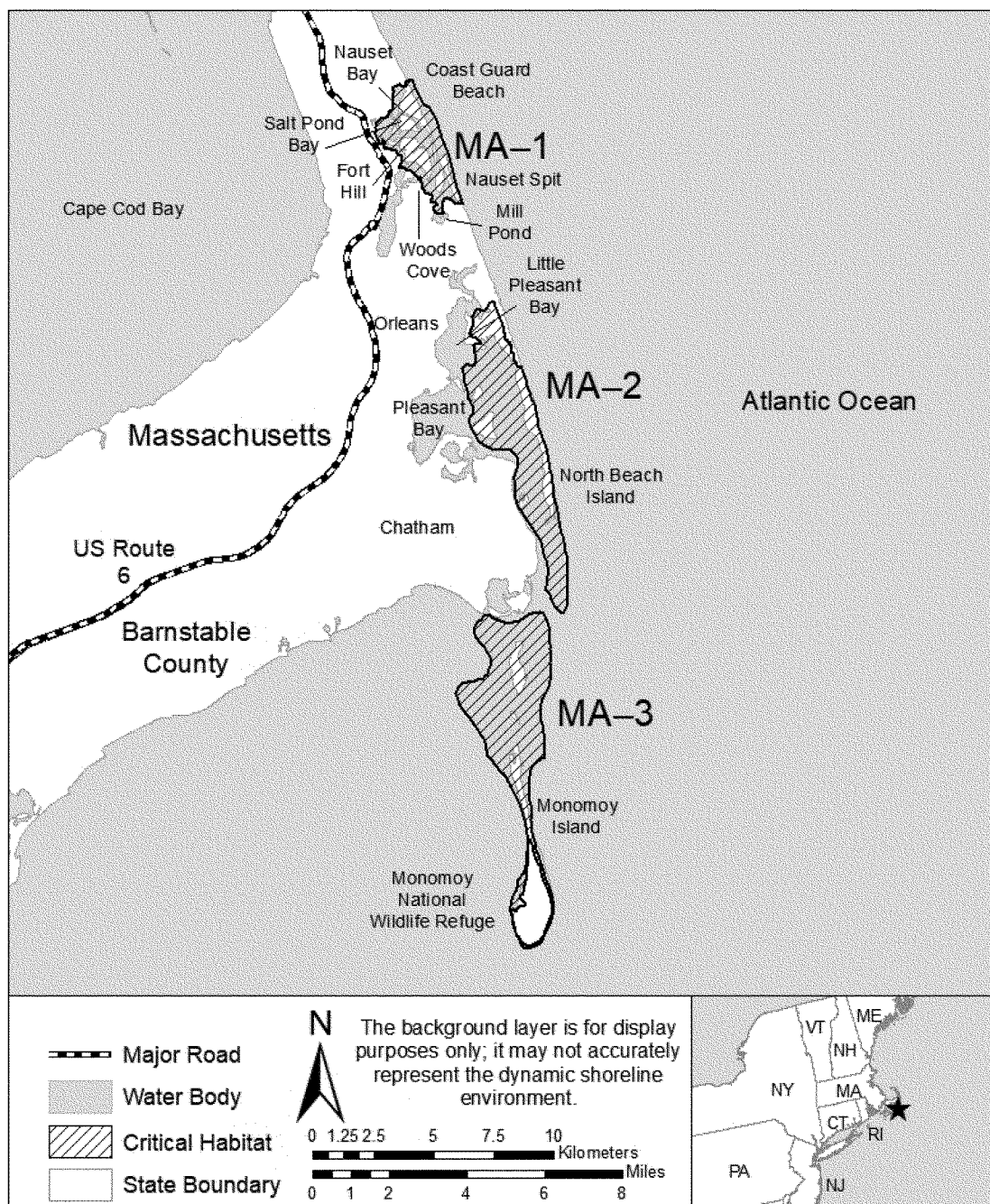
Island (Chatham). Lands within this unit include approximately 1,340 ac (543 ha) in Federal ownership (including Monomoy National Wildlife Refuge (NWR)), 136 ac (55 ha) in

private/other ownership, and 744 ac (301 ha) that are uncategorized.

(ii) Map of Unit MA-1 (Nauset Marsh) follows:

Figure 2 to Rufa Red Knot paragraph (6)(ii)

**Critical Habitat for Rufa Red Knot  
MA-1 Nauset Marsh, MA-2 Pleasant Bay, and MA-3 Monomoy  
and South Beach Islands; Barnstable County, Massachusetts**



(7) Unit MA-2: Pleasant Bay, Massachusetts.

(i) Unit MA-2 consists of approximately 4,959 ac (2,007 ha) of occupied habitat in Barnstable County

consisting of exposed intertidal sand and mud flats and shoals, ephemeral tidal pools, salt marsh, primary sand



dunes, and beaches associated with North and South Monomoy Islands, Monomoy Island, and the South Beach Island complex. Lands within this unit include approximately 126 ac (51 ha) in Federal ownership (including Cape Cod National Seashore), 2,005 ac (812) in private/other ownership, and 2,827 ac (1,144 ha) that are uncategorized.

(ii) Map of Unit MA-2 is presented at paragraph (6)(ii) of this entry.

(8) Unit MA-3: Monomoy and South Beach Islands, Massachusetts.

(i) Unit MA-3 consists of approximately 5,093 ac (2,061 ha) of occupied habitat in Barnstable County consisting of exposed intertidal sand

and mud flats and shoals, ephemeral tidal pools, salt marsh, primary sand dunes, and beaches associated with North and South Monomoy Islands, Monomoy Island, and the South Beach Island complex. Lands within this unit include approximately 4,047 ac (1,638 ha) in Federal ownership (including Monomoy NWR) and 1,045 ac (423) in private/other ownership.

(ii) Map of Unit MA-3 is presented at paragraph (6)(ii) of this entry.

(9) Unit NY-1: Moriches Inlet, New York.

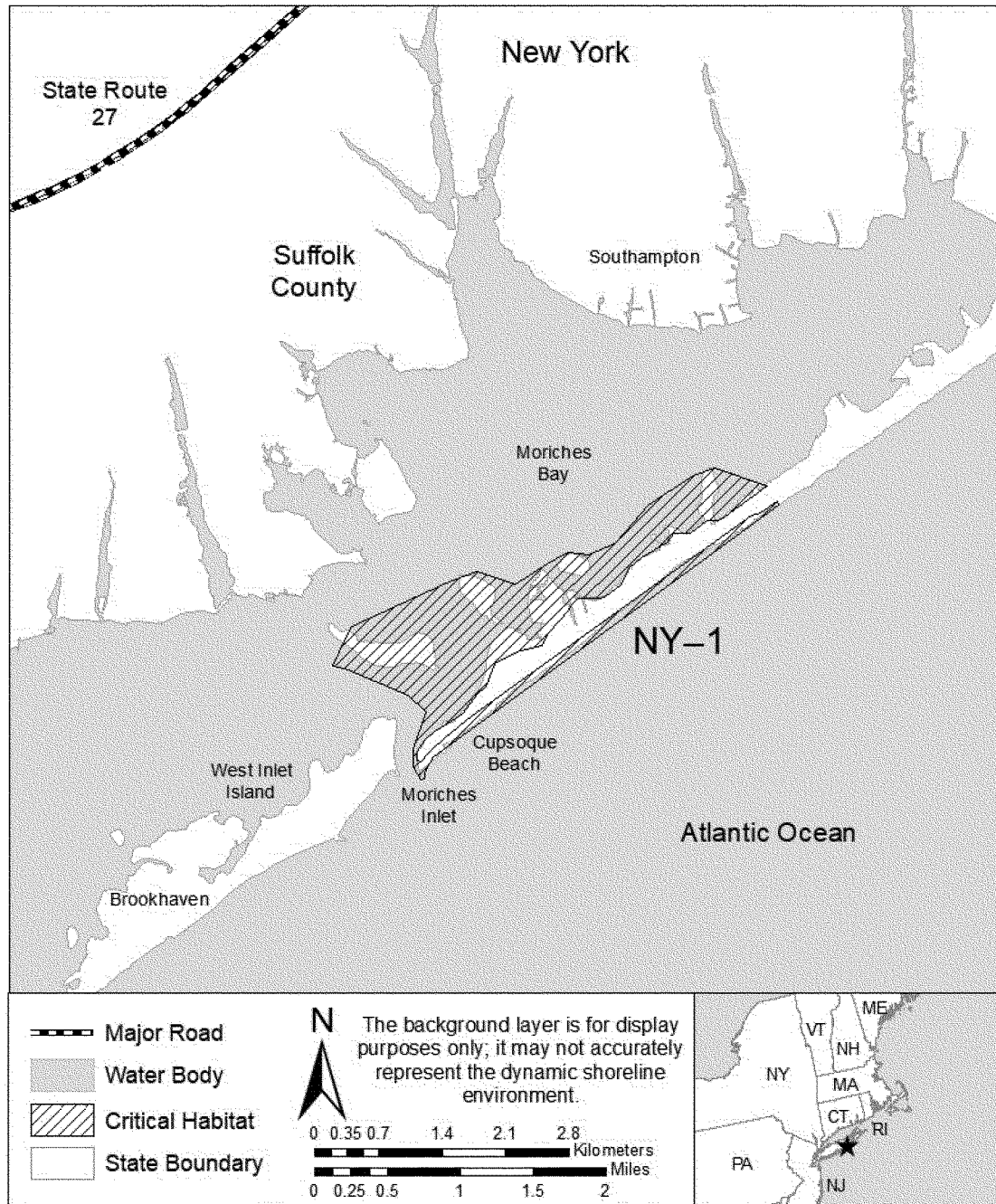
(i) Unit NY-1 consists of approximately 1,001 ac (405 ha) of occupied habitat in Suffolk County

consisting of highly dynamic beach, sand flats, bay islands, back bay shoreline, intertidal areas, and surface water within the towns of Brookhaven and Southampton. Lands within this unit include approximately 78 ac (32 ha) in Federal ownership, 63 ac (25 ha) in State ownership, 163 ac (66 ha) in private/other (including the towns of Brookhaven and Southampton) ownership, and 697 ac (282 ha) that are uncategorized. This area includes the South Shore Estuary Reserve.

(ii) Map of Unit NY-1 follows:

Figure 3 to Rufa Red Knot paragraph (9)(ii)

**Critical Habitat for Rufa Red Knot  
NY-1 Moriches Inlet; Suffolk County, New York**



(10) Unit NY-2: Old Inlet, New York.

(i) Unit NY-2 consists of approximately 1,781 ac (721 ha) of occupied habitat in Suffolk County consisting of highly dynamic beach, sand flats, bay islands, back bay shoreline, intertidal areas, and surface

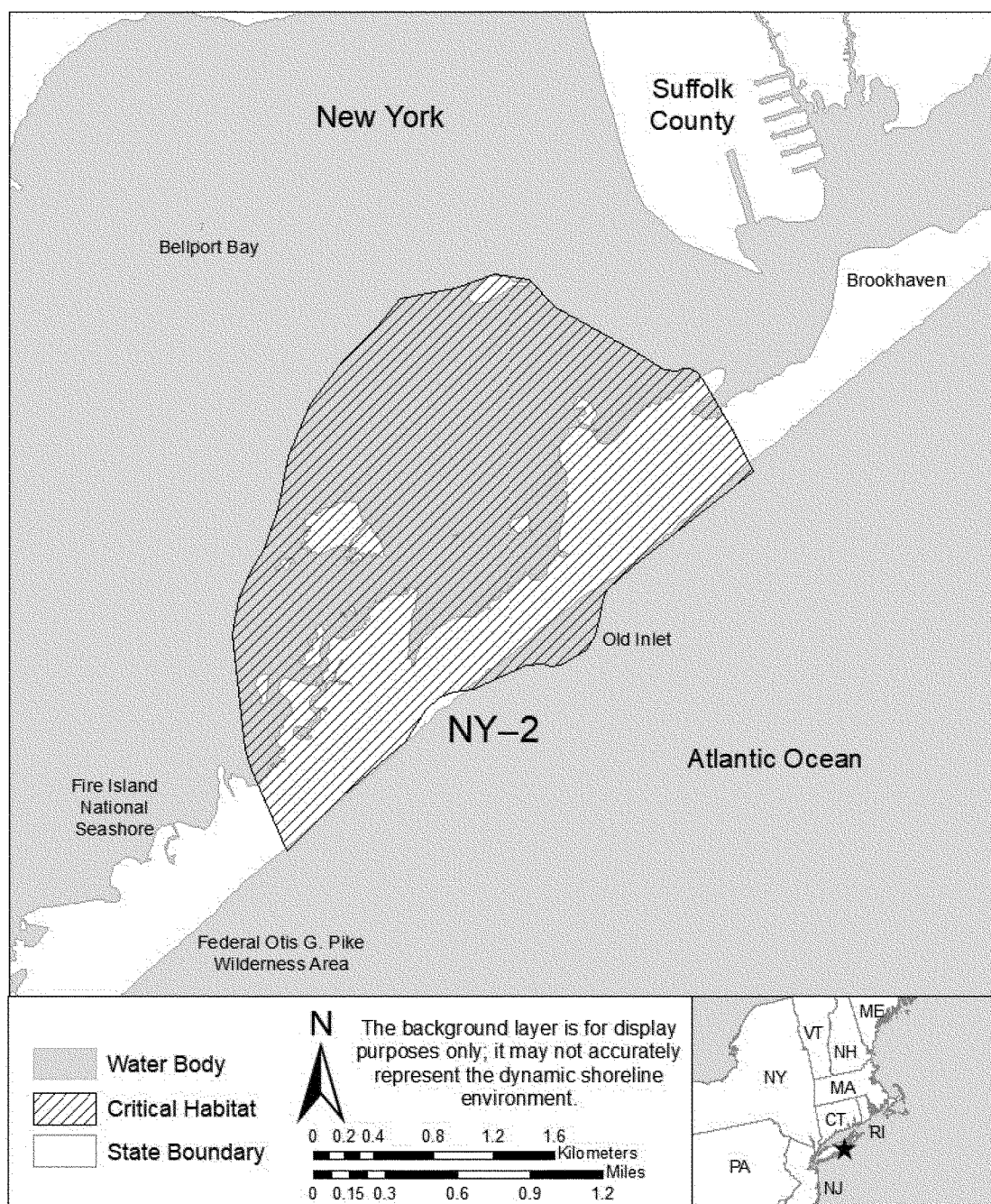
water within the town of Brookhaven. Lands within this unit include approximately 1,481 ac (599 ha) in Federal ownership, 232 ac (94 ha) in State ownership, and 67 ac (27 ha) in private/other ownership (including the town of Brookhaven). This unit falls

within the Fire Island National Seashore's Federal Otis G. Pike Wilderness Area.

(ii) Map of Unit NY-2 (Old Inlet) follows:

Figure 4 to Rufa Red Knot paragraph (10)(ii)

### Critical Habitat for Rufa Red Knot NY-2 Old Inlet; Suffolk County, New York



(11) Unit NY-3: Jones Inlet, New York.

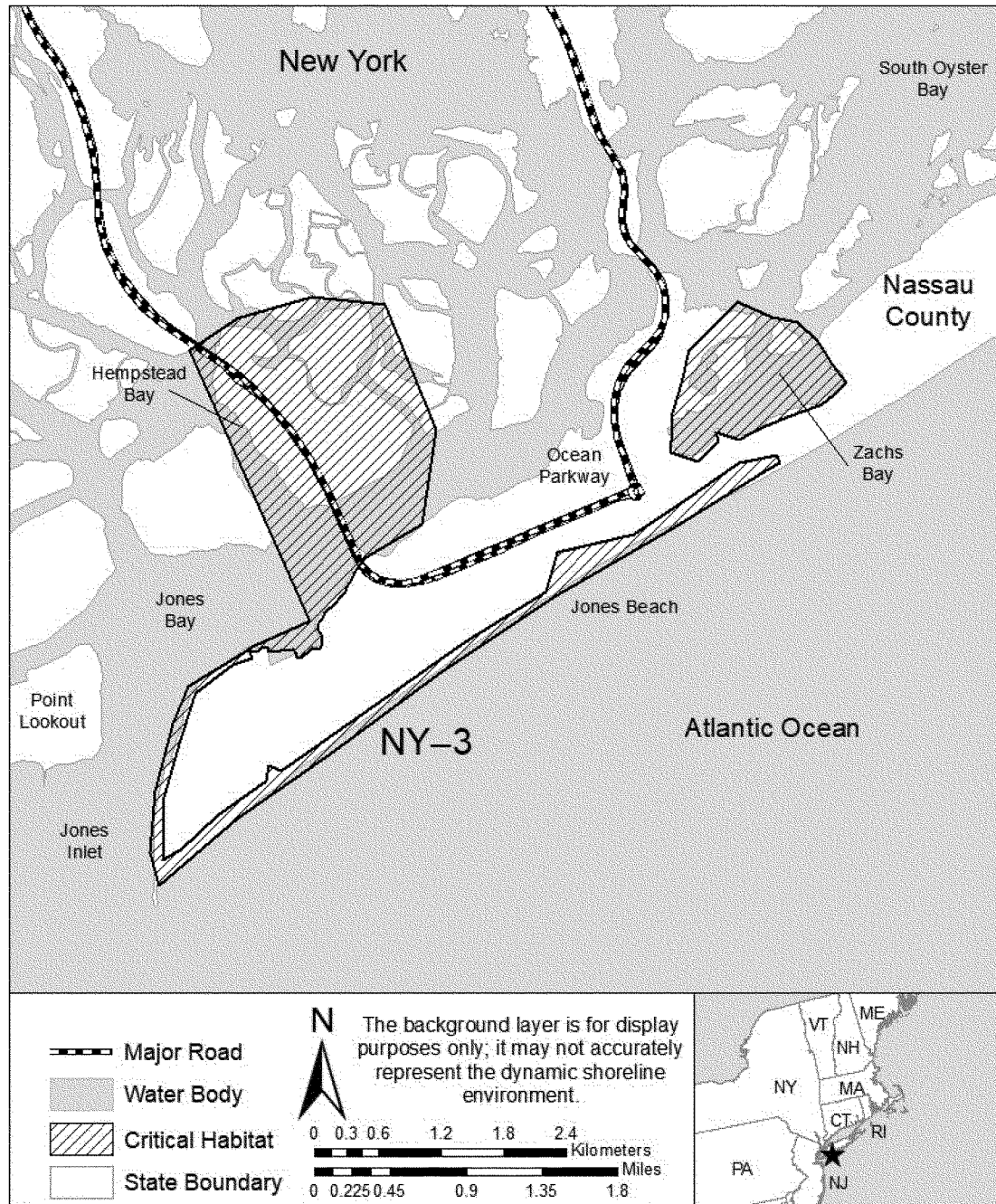
(i) Unit NY-3 consists of approximately 1,821 ac (737 ha) of occupied habitat in Nassau County consisting of ocean beach habitat, sand flats, bay islands, and small

embayments. It is irregularly shaped and is bounded to the south by the Atlantic Ocean, to the west by Point Lookout, to the north by a line running in Hempstead Bay, and to the east at the eastern extent of Zachs Bay. Lands within this unit include approximately

710 ac (287 ha) in State ownership and 1,111 ac (450 ha) that are under private/other ownership. This area includes the South Shore Estuary Reserve.

(ii) Map of Unit NY-3 follows: Figure 5 to Rufa Red Knot paragraph (11)(ii)

**Critical Habitat for Rufa Red Knot  
NY-3 Jones Inlet; Nassau County, New York**



(12) Unit NY-4: Jamaica Bay, New York.

(i) Unit NY-4 consists of approximately 5,458 ac (2,209 ha) of occupied habitat in Queens County

consisting of ocean beach habitat that is primarily within the National Park Service's Jamaica Bay Wildlife Refuge, Gateway National Recreation Area, and all under Federal ownership.

(ii) Map of Unit NY-4 follows:

Figure 6 to Rufa Red Knot paragraph (12)(ii)

This map shows the Gateway National Recreation Area (NY-4) and its surrounding environment. The map includes the following features:

- Major Road:** Indicated by a dashed line with a black border.
- Water Body:** Indicated by a light gray shaded area.
- Critical Habitat:** Indicated by a hatched pattern.
- State Boundary:** Indicated by a solid black line.

The map shows the Gateway National Recreation Area (NY-4) and its surrounding environment. The map includes the following features:

- Major Road:** Indicated by a dashed line with a black border.
- Water Body:** Indicated by a light gray shaded area.
- Critical Habitat:** Indicated by a hatched pattern.
- State Boundary:** Indicated by a solid black line.

The map shows the Gateway National Recreation Area (NY-4) and its surrounding environment. The map includes the following features:

- Major Road:** Indicated by a dashed line with a black border.
- Water Body:** Indicated by a light gray shaded area.
- Critical Habitat:** Indicated by a hatched pattern.
- State Boundary:** Indicated by a solid black line.

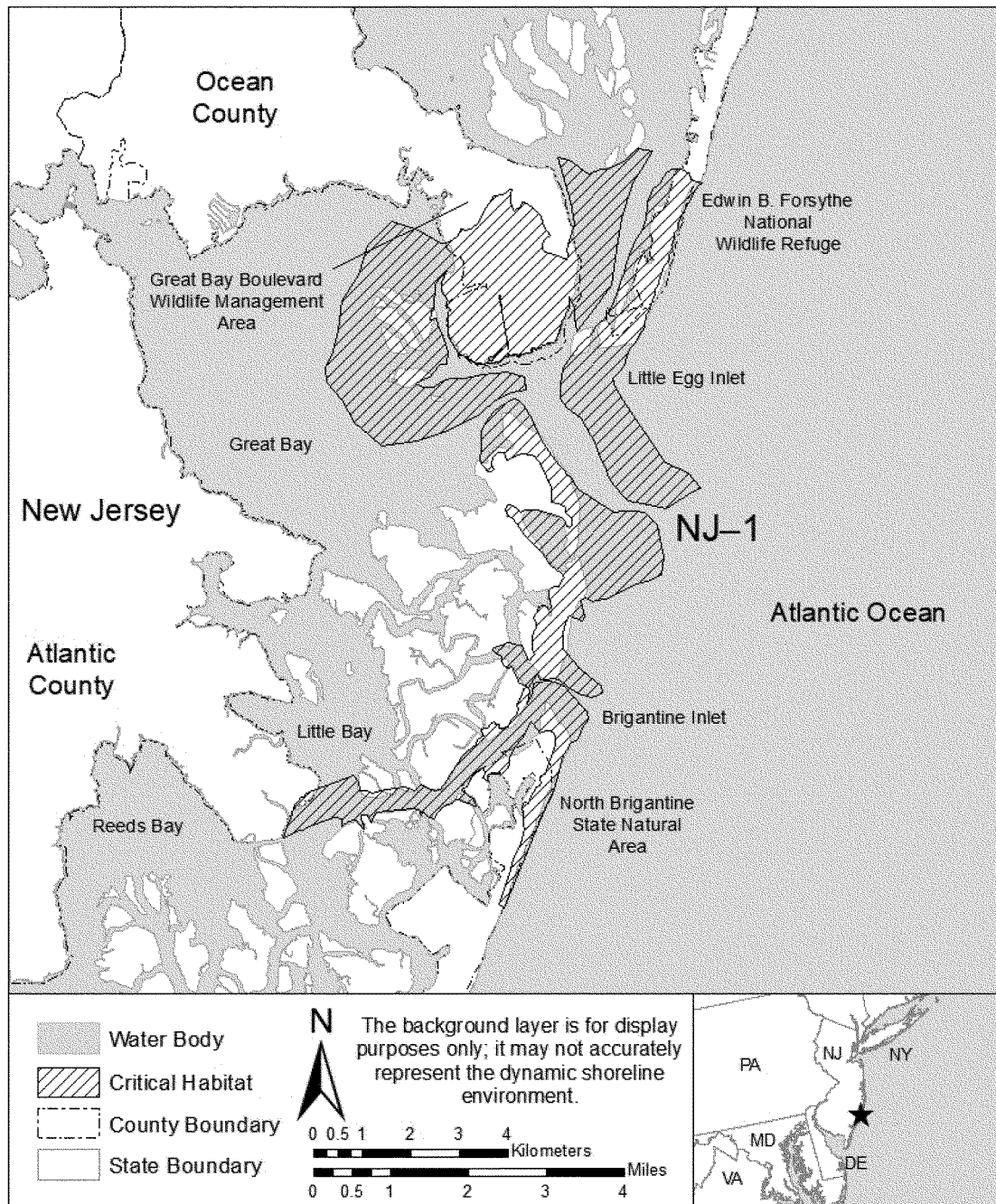
(i) Unit NJ-1 consists of approximately 9,952 ac (4,027 ha) of occupied habitat in Ocean and Atlantic Counties consisting of beach, dune, shoals, open water, and tidal marsh associated with two inlets extending from the northern boundary of the

(including the North Brigantine Natural Area), 10 ac (4 ha) in private/other ownership, and 5,194 ac (2,101 ha) that are uncategorized.

Figure 7 to Rufa Red Knot paragraph  
(13)(ii)



**Critical Habitat for Rufa Red Knot  
NJ-1 Brigantine and Little Egg Inlets; Ocean and  
Atlantic Counties, New Jersey**



(14) Unit NJ-2: Seven Mile Beach, New Jersey.

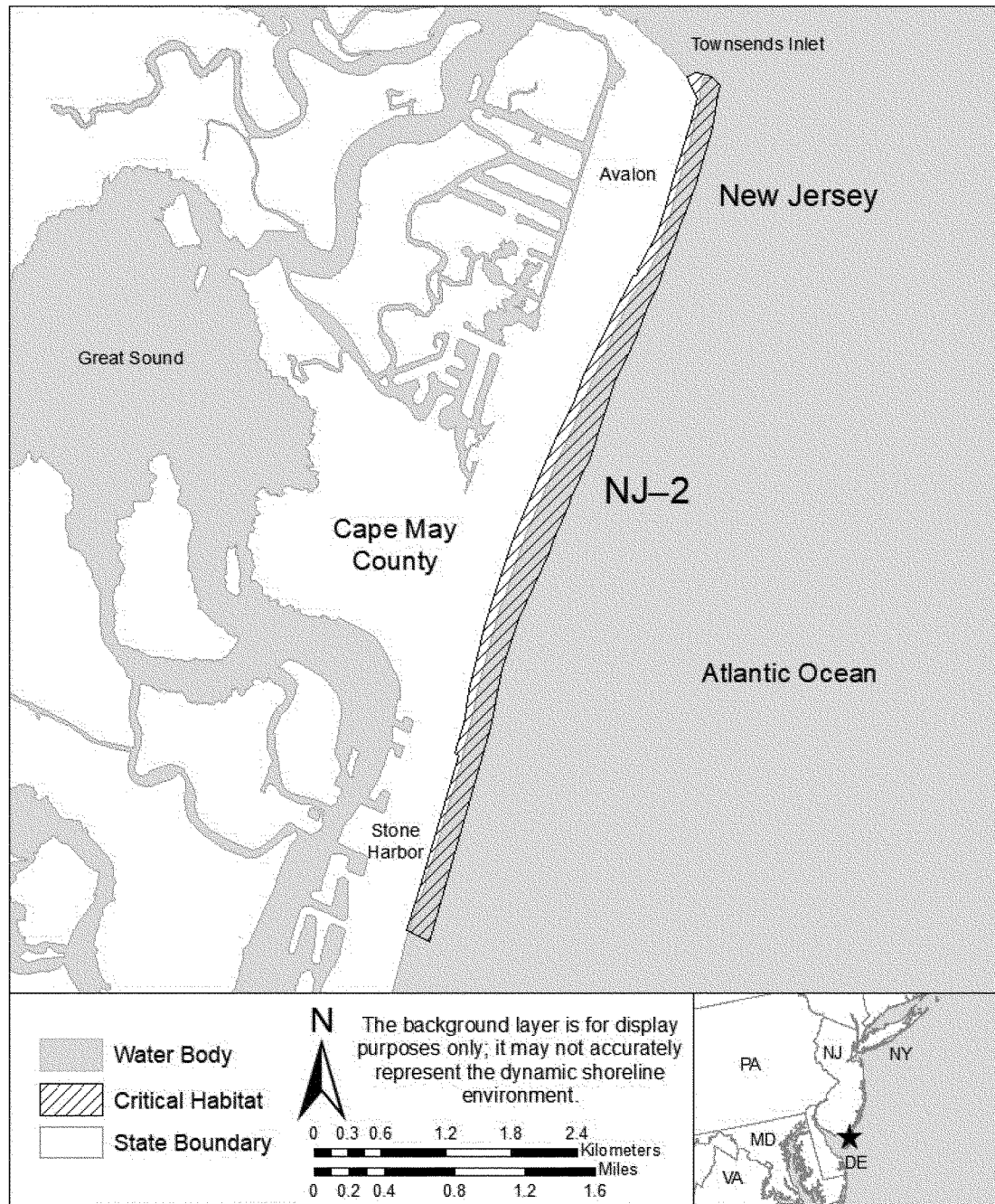
(i) Unit NJ-2 consists of approximately 536 ac (217 ha) of occupied habitat in Cape May County

consisting of sandy oceanfront beach in Avalon and Stone Harbor Boroughs, from the jetty at 8th Street in Avalon near Townsends Inlet and extending south to 102nd Street in Stone Harbor.

All lands within this unit are in private/other ownership.

(ii) Map of Unit NJ-2 follows: Figure 8 to Rufa Red Knot paragraph (14)(ii)

# **Critical Habitat for Rufa Red Knot** **NJ-2 Seven Mile Beach; Cape May County, New Jersey**



(15) Unit NJ-3: Hereford Inlet, New Jersey.

(i) Unit NJ-3 consists of approximately 1,631 ac (660 ha) of occupied habitat in Cape May County consisting of sandy oceanfront beaches, unstabilized barrier peninsula, undeveloped marsh islands, and several areas of tidal flats and shoals extending along the ocean from 111th Street in

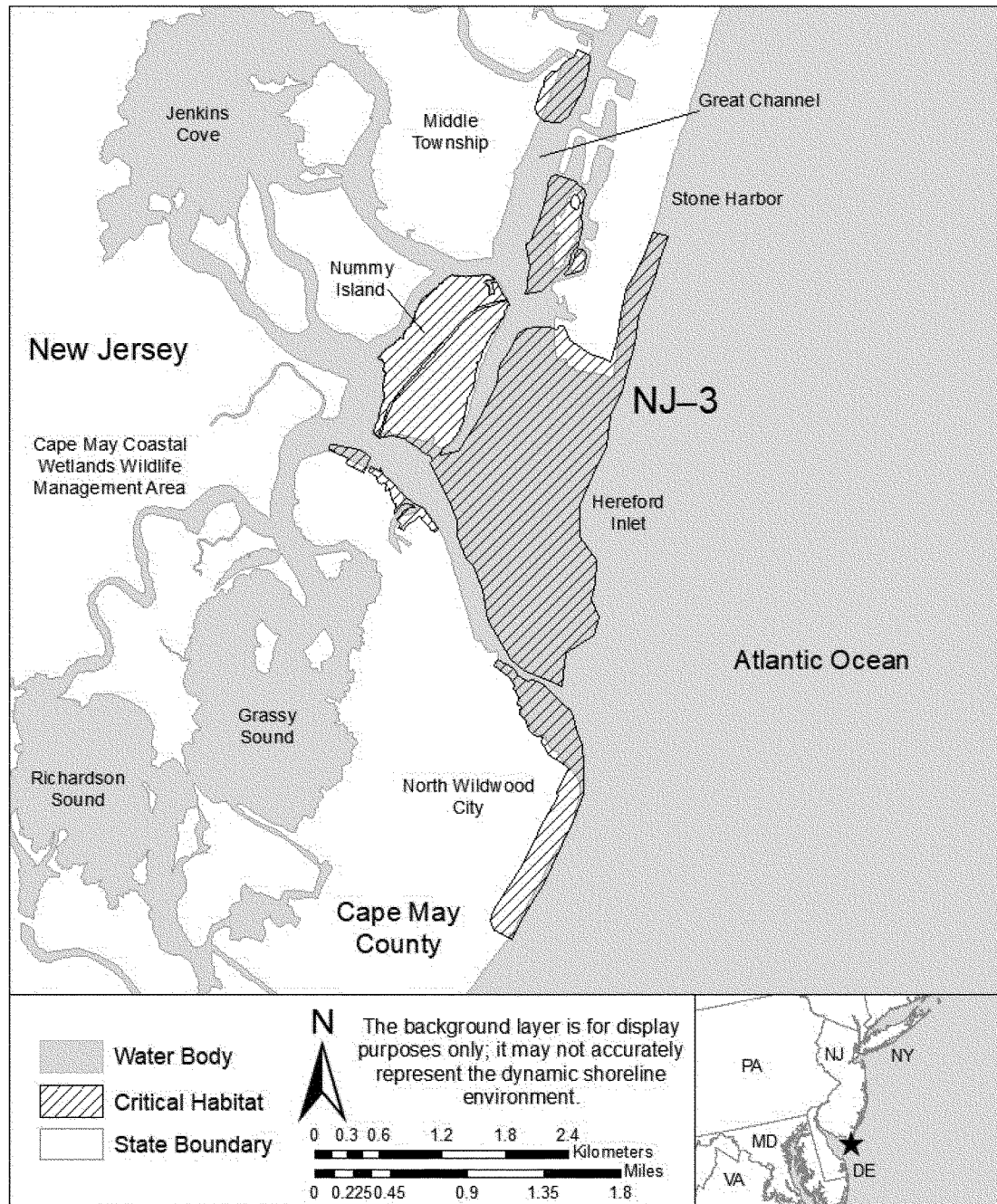
Stone Harbor Borough south to 22nd Avenue in North Wildwood City. The unit also includes areas behind the barrier island in Middle Township, Stone Harbor, and North Wildwood extending from Stone Harbor Boulevard south along Great Channel to Nummy Island and the southern shoreline of Grassy Sound Channel. Lands within

this unit include approximately 175 ac (71 ha) in State ownership (including the Cape May Coastal Wetlands Wildlife Management Area), 735 ac (297 ha) in private/other ownership, and 721 ac (292 ha) that are uncategorized.

(ii) Map of Unit NJ-3 follows:

Figure 9 to Rufa Red Knot paragraph (15)(ii)

### Critical Habitat for Rufa Red Knot NJ-3 Hereford Inlet; Cape May County, New Jersey



(16) Unit NJ-4: Two Mile Beach, New Jersey.

(i) Unit NJ-4 consists of approximately 128 ac (52 ha) of occupied habitat in Cape May County consisting of sandy oceanfront beach

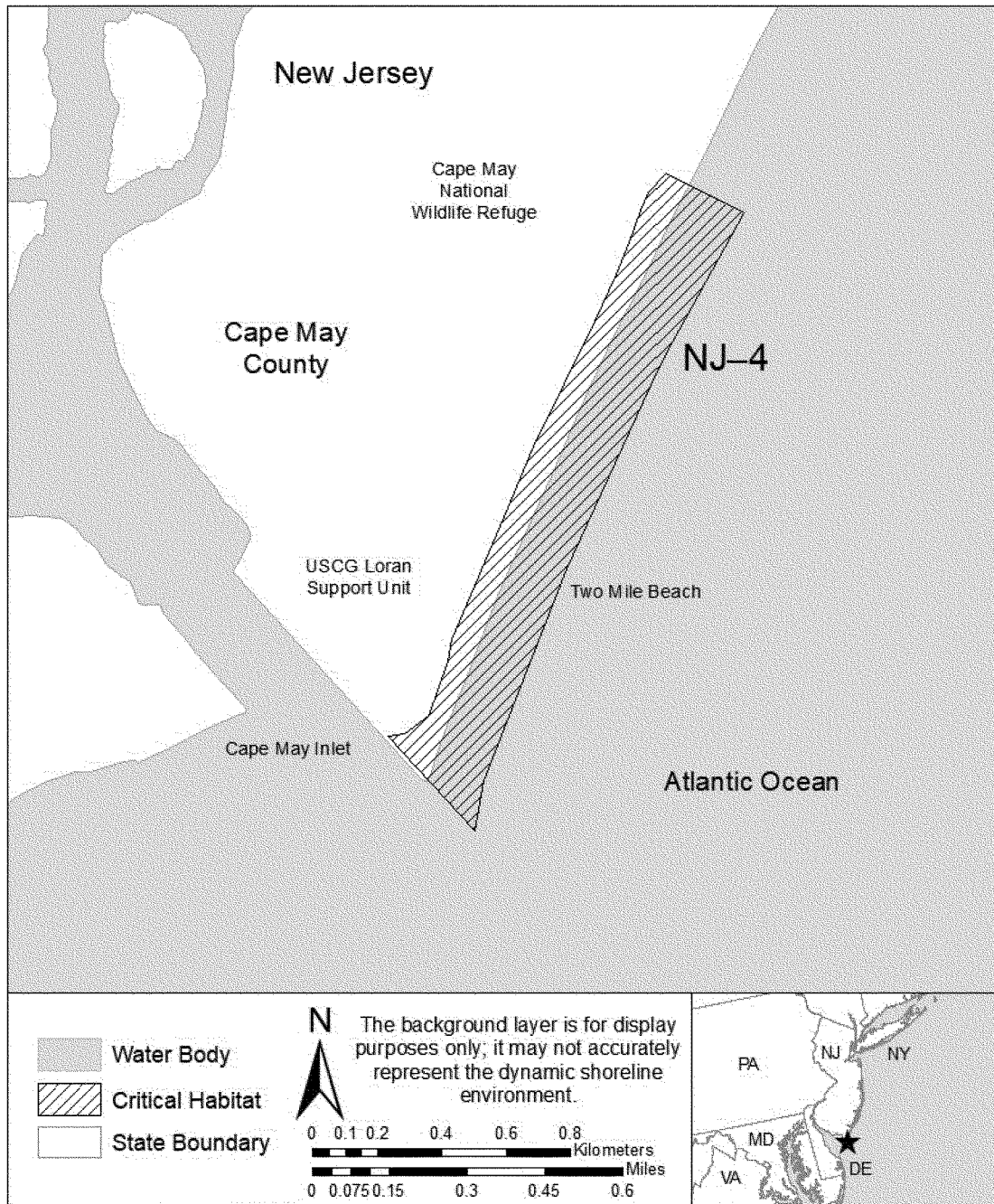
from the northeastern boundary of the Two Mile Beach Unit of Cape May NWR extending southwest to include all beach portions of the U.S. Coast Guard Loran Support Unit, ending at the eastern jetty of the Cape May Inlet.

Lands within this unit are all under Federal ownership (Cape May NWR and U.S. Coast Guard).

(ii) Map of Unit NJ-4 follows: Figure 10 to Rufa Red Knot paragraph (16)(ii)



**Critical Habitat for Rufa Red Knot**  
**NJ-4 Two Mile Beach; Cape May County, New Jersey**



(17) Unit NJ-5: Cape May Bayshore, New Jersey.

(i) Unit NJ-5 consists of approximately 1,202 ac (487 ha) of occupied habitat in Cape May County consisting of Delaware Bay beaches, flats, and shoals from approximately

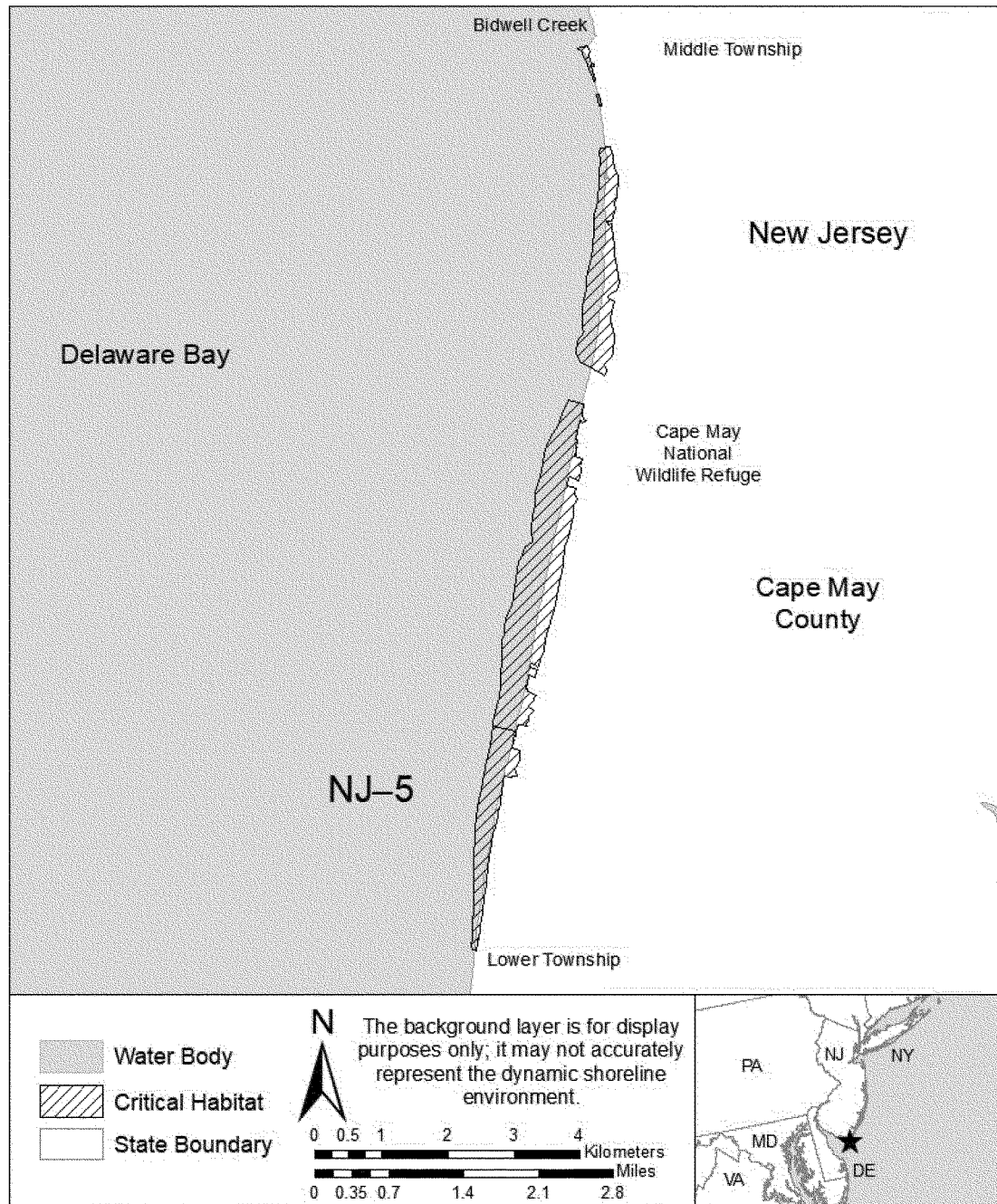
Cloverdale Avenue in Lower Township to the jetty on the south shore of the mouth of Bidwell Creek in Middle Township. Lands within this unit include approximately 133 ac (54 ha) in Federal ownership (Cape May NWR), 44

ac (18 ha) in State ownership, 167 ac (67 ha) in private/other ownership, and 858 ac (347 ha) that are uncategorized.

(ii) Map of Unit NJ-5 follows:

Figure 11 to Rufa Red Knot paragraph (17)(ii)

# **Critical Habitat for Rufa Red Knot** **NJ-5 Cape May Bayshore; Cape May County, New Jersey**



(18) Unit NJ-6: Dennis Creek, New Jersey.

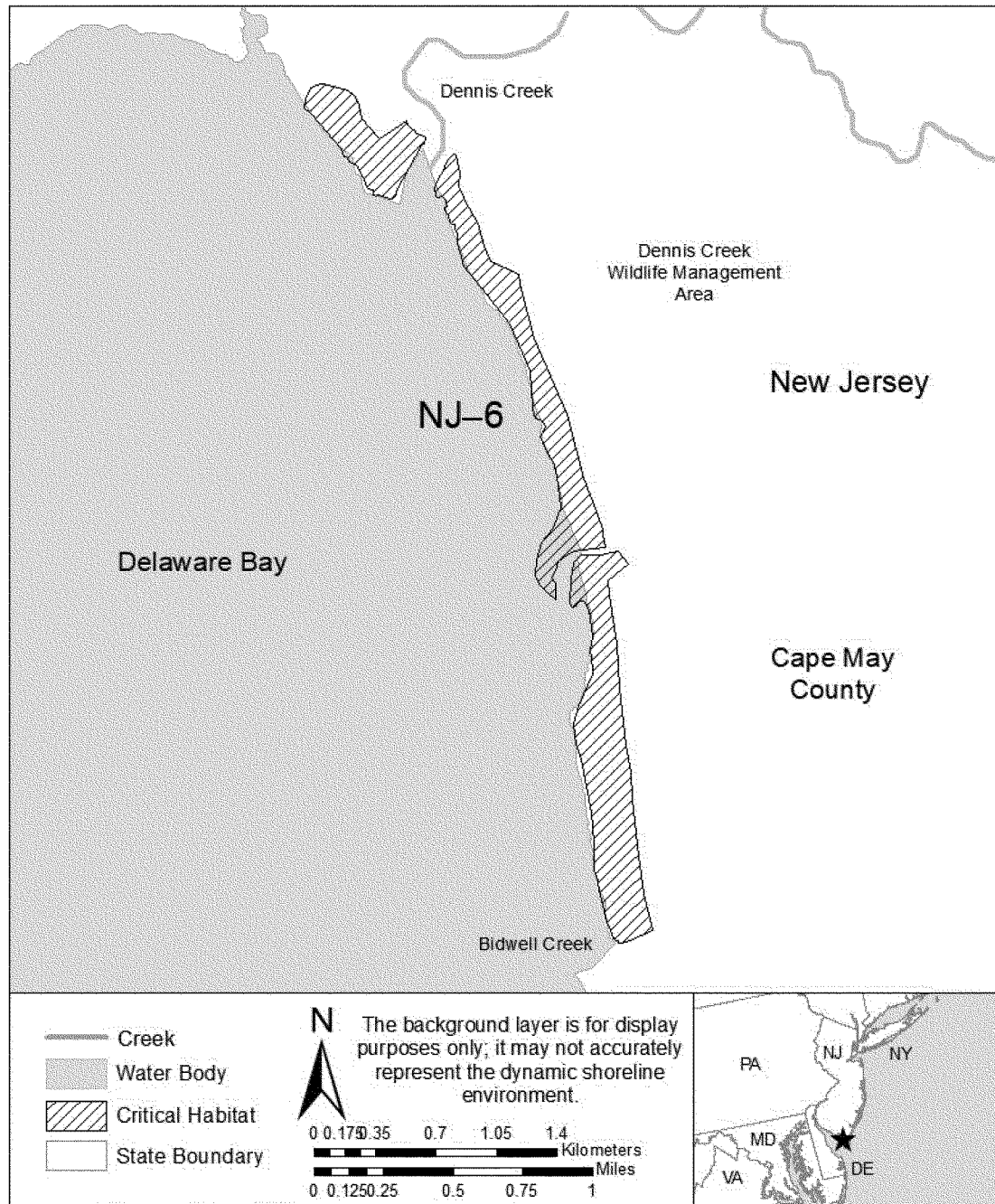
(i) Unit NJ-6 consists of approximately 279 ac (113 ha) of occupied habitat in Cape May County

consisting of Delaware Bay beaches, flats, and shoals from the northern shore of Bidwell Creek north to about 0.5 mi (0.8 km) north of Dennis Creek. Lands within this unit are all in State

ownership (Dennis Creek Wildlife Management Area).

(ii) Map of Unit NJ-6 follows: Figure 12 to Rufa Red Knot paragraph (18)(ii)

### Critical Habitat for Rufa Red Knot NJ-6 Dennis Creek; Cape May County, New Jersey



(19) Unit NJ-7: Heislerville, New Jersey.

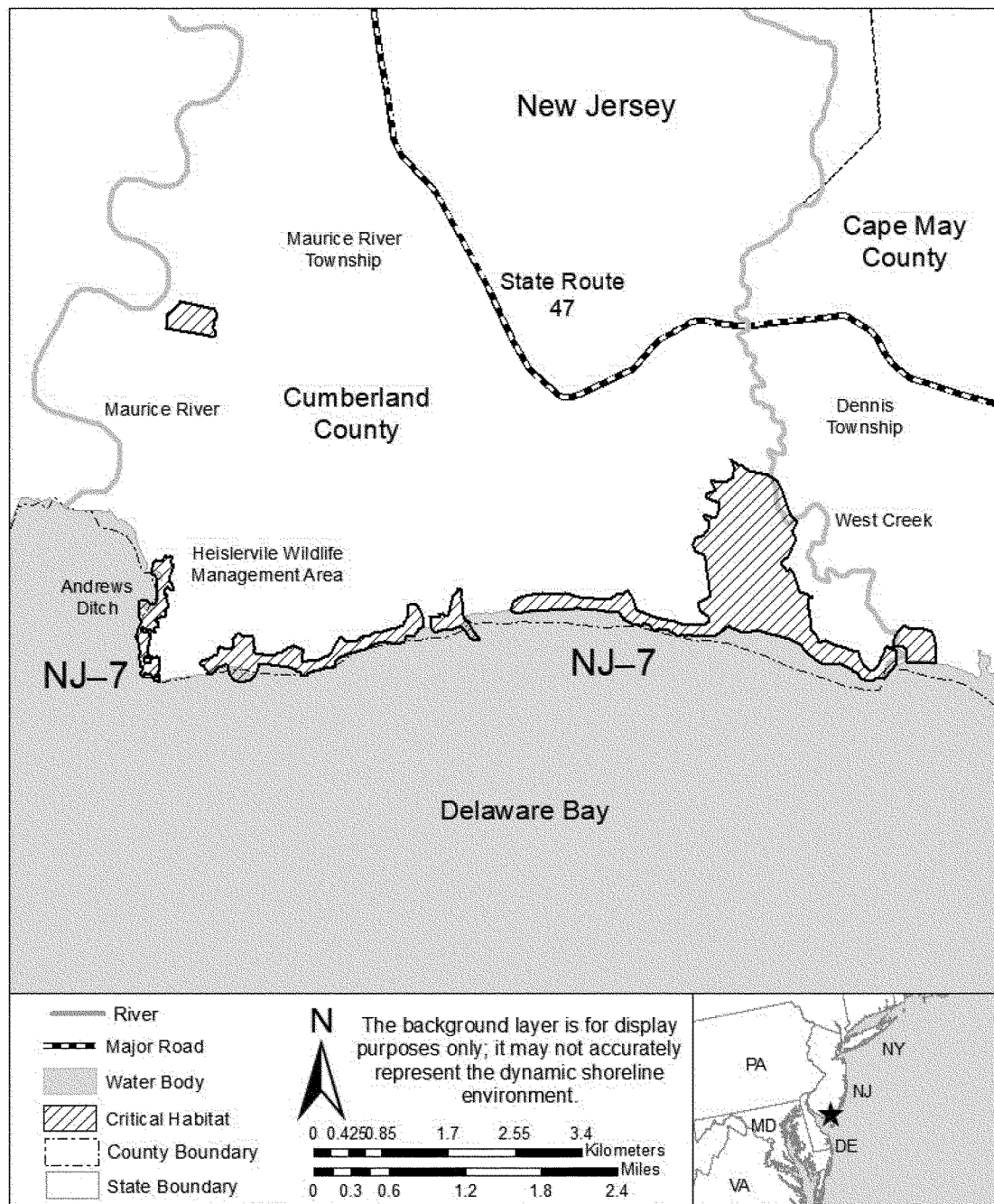
(i) Unit NJ-7 consists of approximately 1,110 ac (449 ha) of occupied habitat in Cape May and Cumberland Counties consisting of Delaware Bay beaches, flats, shoals, tidal marsh, and open waters from approximately 2,000 ft (0.6 km) east of

West Creek in Dennis Township, Cape May County, and extending west to the eastern end of Bay Avenue in Maurice River Township, Cumberland County. The developed area along Bay Avenue is excluded from the unit. West of Bay Avenue, Unit NJ-7 continues north to the mouth of Andrews Ditch in Maurice River Township. Lands within this unit

include approximately 524 ac (211 ha) in State ownership (including the Heislerville Wildlife Management Area), 459 ac (186 ha) in private/other ownership, and 127 ac (52 ha) that are uncategorized.

(ii) Map of Unit NJ-7 follows: Figure 13 to Rufa Red Knot paragraph (19)(ii)

**Critical Habitat for Rufa Red Knot**  
**NJ-7 Heislerville; Cape May and Cumberland Counties, New Jersey**



(20) Unit NJ-8: Egg Island, New Jersey.

(i) Unit NJ-8 consists of approximately 1,955 ac (791 ha) of occupied habitat in Cumberland County consisting of Delaware Bay beaches, flats, shoals, tidal marsh, and open

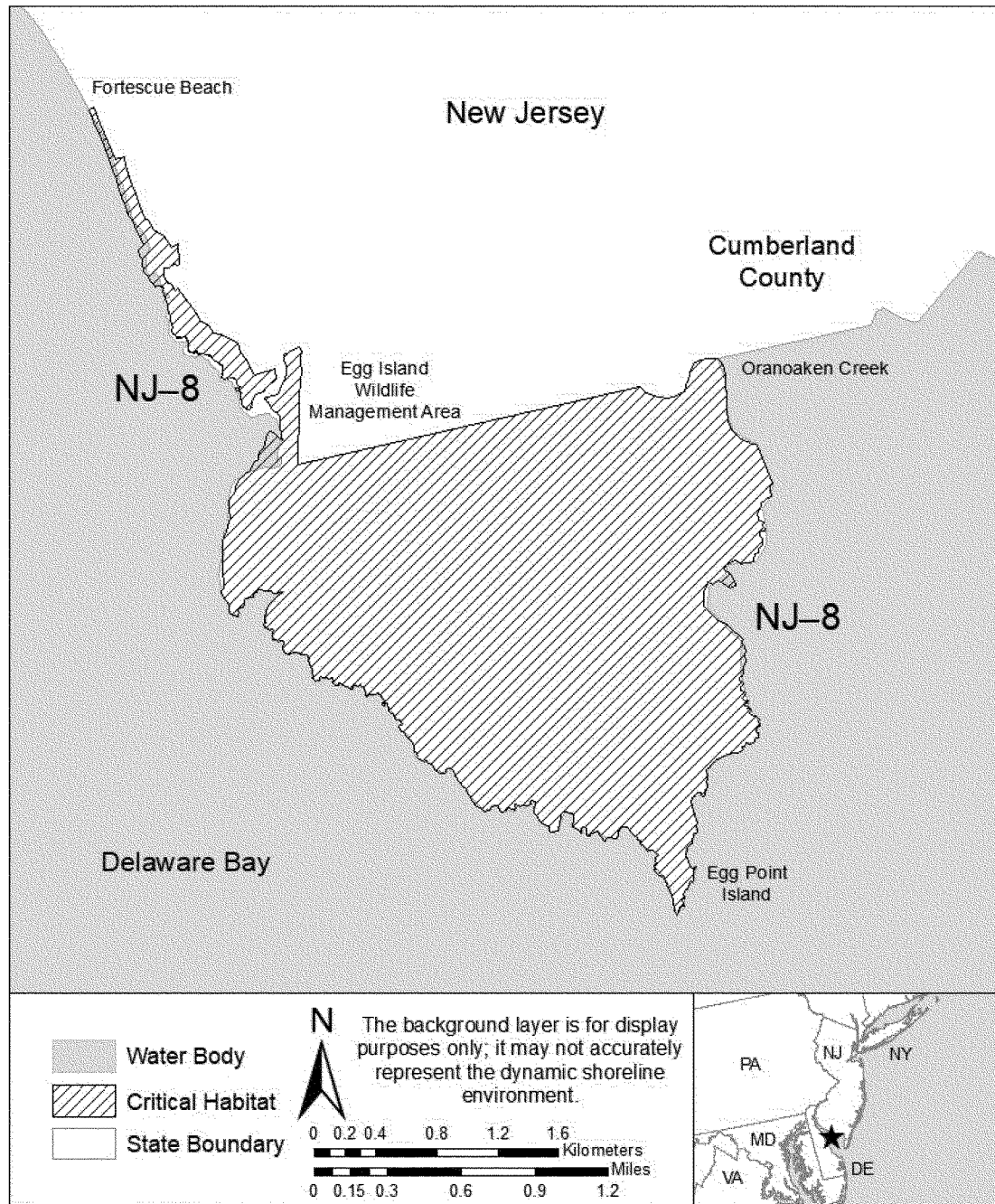
waters from the mouth of Oranoaken Creek extending south to Egg Island point, and then northwest to about 850 ft (259 m) past Budney Avenue in the community of Fortescue. Lands within this unit include approximately 1,908 ac

(773 ha) in State ownership, 32 ac (13 ha) in private/other ownership, and 14 ac (5 ha) that are uncategorized.

(ii) Map of Unit NJ-8 follows:

Figure 14 to Rufa Red Knot paragraph (20)(ii)

**Critical Habitat for Rufa Red Knot**  
**NJ-8 Egg Island; Cumberland County, New Jersey**



(21) Unit NJ-9: Newport Neck, New Jersey.

(i) Unit NJ-9 consists of approximately 472 ac (191 ha) of occupied habitat in Cumberland County consisting of Delaware Bay beaches, flats, shoals, and tidal marsh from the north bank of the mouth of Fortescue

Creek extending northwest to include both sides of the mouth of Nantuxent Creek. Beaches adjacent to the developed community of Gandys Beach are not included in this unit. Lands within this unit include approximately 202 ac (82 ha) in State ownership (including the Fortescue Wildlife

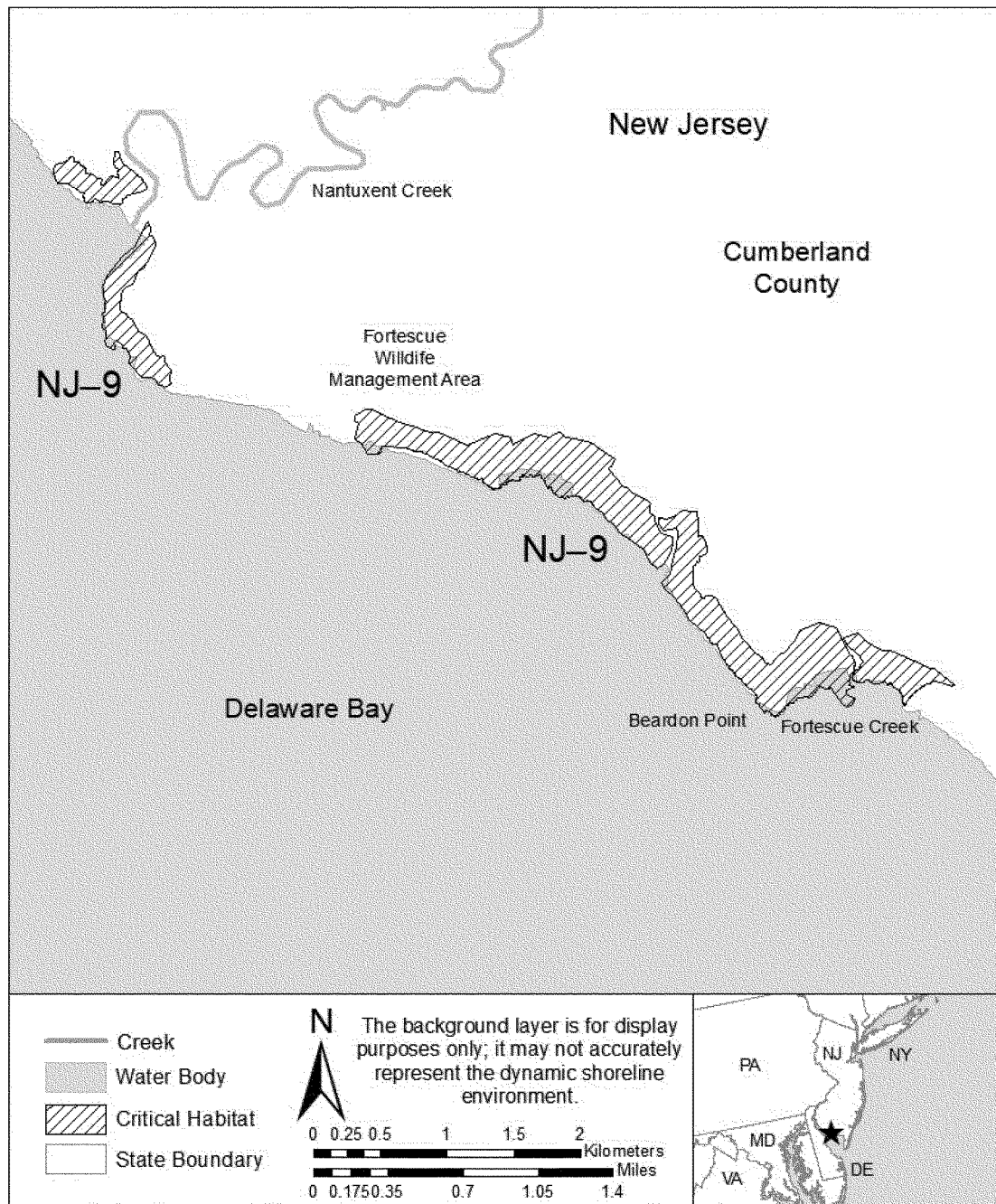
Management Area), 176 ac (71 ha) in private/other ownership, and 93 ac (38 ha) that are uncategorized.

(ii) Map of Unit NJ-9 follows:

Figure 15 to Rufa Red Knot paragraph (21)(ii)



**Critical Habitat for Rufa Red Knot**  
**NJ-9 Newport Neck; Cumberland County, New Jersey**



(22) Unit DE-1: St. Jones River, Delaware.

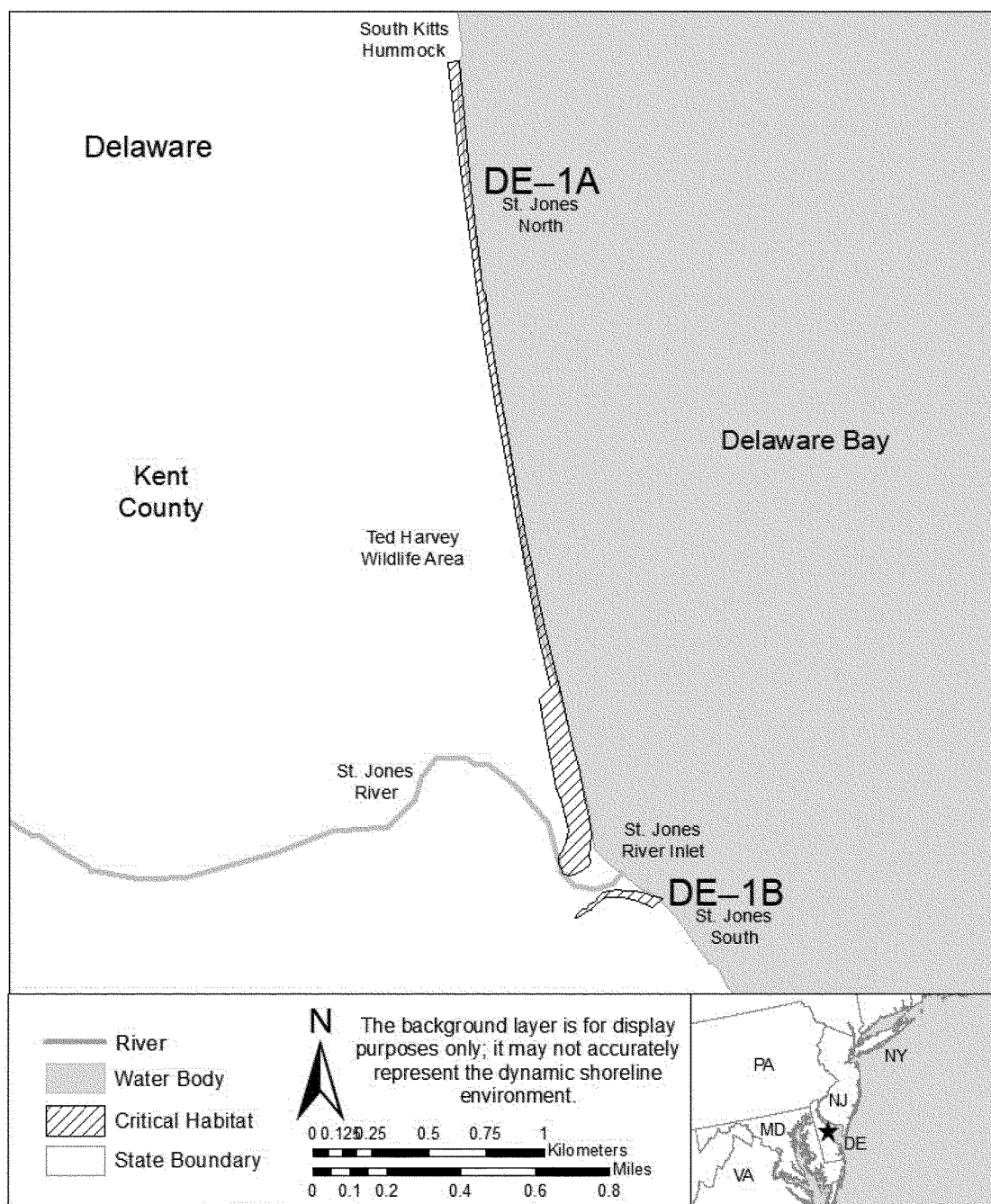
(i) Unit DE-1 consists of two subunits comprising 46 ac (19 ha) of occupied

habitat in the St. Jones River area in Kent County. This unit consists of lands owned by the State of Delaware and private landowners.

(ii) Map of Unit DE-1 follows:

Figure 16 to Rufa Red Knot paragraph (22)(ii)

# **Critical Habitat for Rufa Red Knot DE-1 St. Jones River; Kent County, Delaware**



(iii) Subunit DE-1A (St. Jones North) consists of approximately 43 ac (18 ha) of occupied habitat in Kent County consisting of beach shoreline at the north end from South Bay Drive in South Kitts Hummock where there is a jetty into Delaware Bay, and continues to the south where it meets the St. Jones River inlet. The eastern boundary is the mean low low-water line (MLLW) of the Delaware Bay, and the western boundary runs along the dune line

where the habitat changes from lightly vegetated, sandy beach to densely vegetated dunes or marsh. Lands within this subunit are approximately 37 ac (15 ha) in State ownership (including the Ted Harvey Wildlife Area), 3 ac (1 ha) of undeveloped beach privately owned by Delaware Wildlands, a conservation organization, and 3 ac (1 ha) that are uncategorized.

(iv) Map of Subunit DE-1A is presented at paragraph (22)(ii) of this entry.

(v) Subunit DE-1B (St. Jones South) consists of approximately 3 ac (1 ha) of occupied habitat in Kent County consisting of beach shoreline at the south side of the inlet to the St. Jones River. The eastern boundary is the MLLW of the Delaware Bay, and the western boundary is where the sandy beach turns to marshy habitat. Lands

within this subunit include approximately 1 ac (0.5 ha) in State ownership and approximately 2 ac (0.6 ha) in private/other ownership.

(vi) Map of Subunit DE-1B is presented at paragraph (22)(ii) of this entry.

(23) Unit DE-2: Brokonbridge Gut, Delaware.

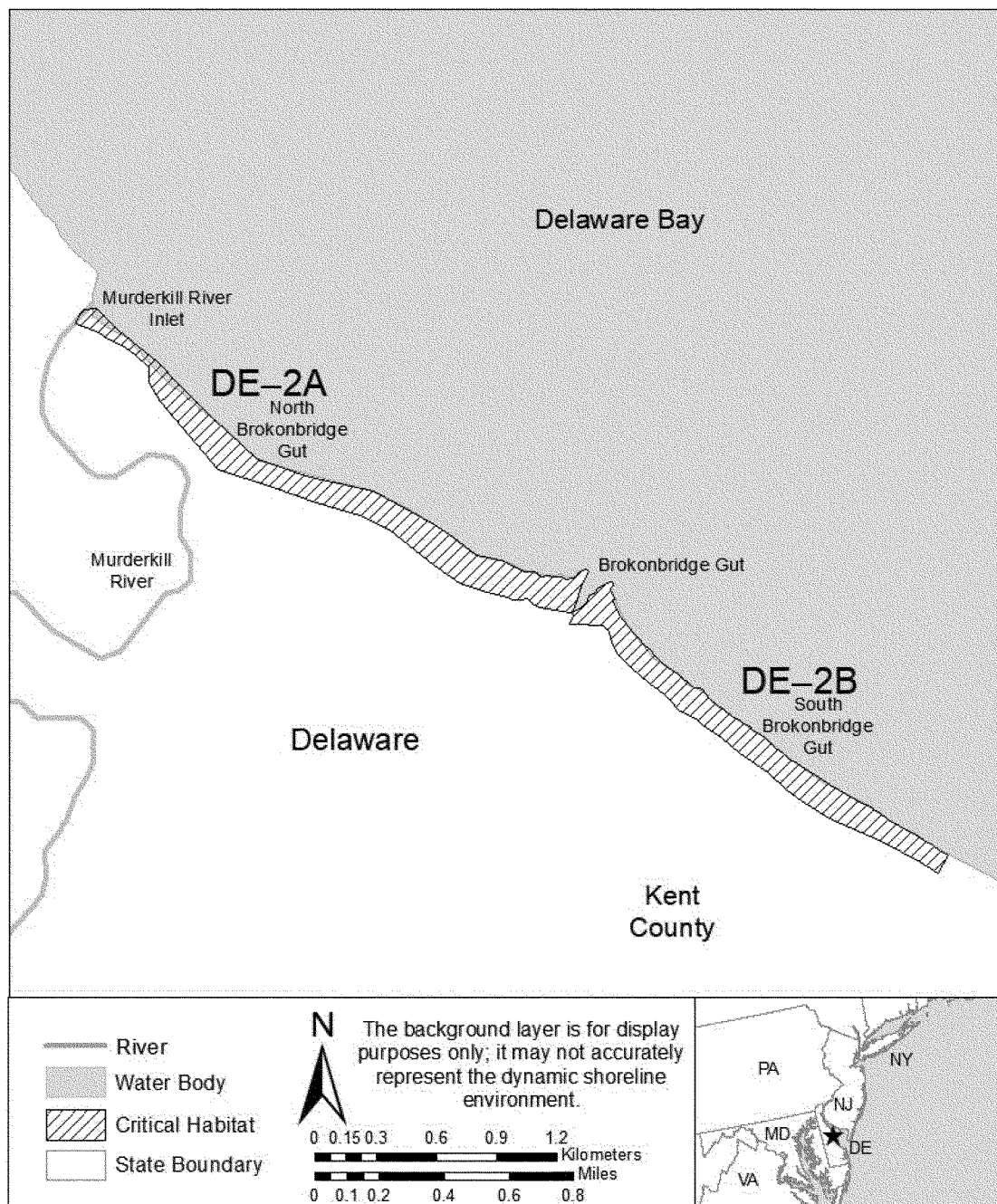
(i) Unit DE-2 consists of two subunits comprising 163 ac (66 ha) of occupied habitat in the area where Brokonbridge Gut enters the Delaware Bay in Kent County. This unit consists of lands

owned by the State of Delaware and private landowners.

(ii) Map of Unit DE-2 follows:

Figure 17 to Rufa Red Knot paragraph (23)(ii)

### Critical Habitat for Rufa Red Knot DE-2 Brokonbridge Gut, Kent County, Delaware



(iii) Subunit DE-2A (North Brokonbridge Gut) consists of approximately 93 ac (37 ha) of occupied

habitat in Kent County consisting of beach shoreline between the north side of the Brokonbridge Gut inlet to the

south side of the Murderkill River inlet. The eastern boundary is the MLLW of the Delaware Bay, and the western



boundary is where the sandy beach turns to marshy habitat. Lands within this subunit are primarily in private/other ownership (91 ac (37 ha)) with a small portion (2 ac (1 ha)) owned by the State.

(iv) Map of Subunit DE-2A is presented at paragraph (23)(ii) of this entry.

(v) Subunit DE-2B (South Brokonbridge Gut) consists of approximately 70 ac (29 ha) of occupied habitat in Kent County consisting of beach shoreline at the south side of the

inlet to Brokonbridge Gut. The eastern boundary is the MLLW of the Delaware Bay, and the western boundary is where the sandy beach turns to marshy habitat. Lands within this subunit are all in private/other ownership, primarily owned and protected by a private conservation organization (Delaware Wildlands; 52 ac (21 ha)), with the remaining approximately 18 ac (7 ha) as private, undeveloped land.

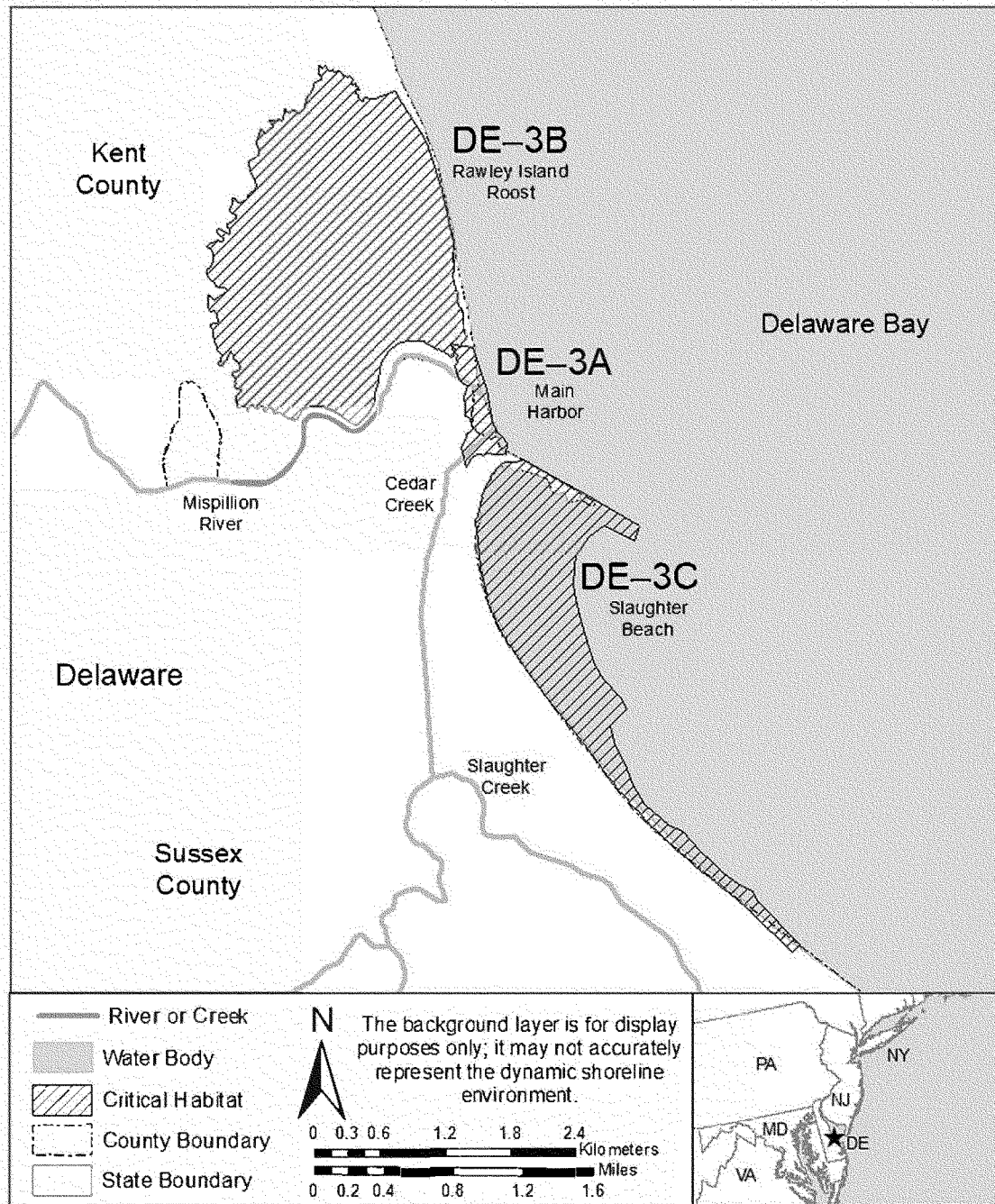
(vi) Map of Subunit DE-2B is presented at paragraph (23)(ii) of this entry.

(24) Unit DE-3: Mispillion Harbor, Delaware.

(i) Unit DE-3 consists of three subunits comprising 1,949 ac (789 ha) of occupied habitat in the Mispillion Harbor area where the Mispillion River and Cedar Creek enter the Delaware Bay in Kent and Sussex Counties. This unit consists of lands owned primarily by the State of Delaware, with minor ownership by Federal and private/other.

(ii) Map of Unit DE-3 follows: Figure 18 to Rufa Red Knot paragraph (24)(ii)

**Critical Habitat for Rufa Red Knot**  
**DE-3 Mispillion Harbor; Kent and Sussex Counties, Delaware**



(iii) Subunit DE-3A (Main Harbor) consists of approximately 61 ac (25 ha) of occupied habitat in Kent and Sussex Counties consisting of beach shoreline at the south side of the inlet to Brokonbridge Gut. The eastern boundary is the MLLW of the Delaware Bay, and the western boundary is where the sandy beach turns to marshy habitat. Lands within this subunit include approximately 32 ac (13 ha; 53 percent)

in State ownership and 29 ac (12 ha; 47 percent) that are uncategorized.

(iv) Map of Subunit DE-3A is presented at paragraph (24)(ii) of this entry.

(v) Subunit DE-3B (Rawley Island Roost) consists of approximately 1,298 ac (525 ha) of occupied habitat in Kent County consisting of beach shoreline and marsh on the north side of the Mispillion River, extending north to

Graco's Canal. The western boundary is Crooked Gut, and the eastern boundary is the MLLW of the Delaware Bay. Lands within this subunit include approximately 1,139 ac (461 ha) in State ownership (Milford Neck Wildlife Area), 153 ac (62 ha) in private/other ownership, and 6 ac (2 ha) that are uncategorized. Private lands are owned by a combination of a private conservation organization—The Nature

Conservancy (TNC; 148 ac (60 ha))—with a small area of private, undeveloped land that has a conservation easement.

(vi) Map of Subunit DE–3B is presented at paragraph (24)(ii) of this entry.

(vii) Subunit DE–3C (Slaughter Beach) consists of approximately 590 ac (239 ha) of occupied habitat in Sussex County consisting of beach shoreline, marsh, and harbor structures extending from the eastern tip of the dike that outlines the outer tip of the Mispillion Harbor, south along the sandy beach of Slaughter Beach to the southern end of Isaacs Shore Drive. The western boundary is where the lightly vegetated beach becomes marsh in the northern portions of this subunit, or where property parcels end in the southern

portion of this subunit. The eastern boundary is the MLLW of the Delaware Bay. Lands within this subunit include approximately 1 ac (0.25 ha) in Federal ownership, 59 ac (24 ha) in State ownership, 2 ac (1 ha) in private/other ownership, and 528 ac (213 ha) that are uncategorized.

(viii) Map of Subunit DE–3C is presented at paragraph (24)(ii) of this entry.

(25) Unit DE–4: Prime Hook, Delaware.

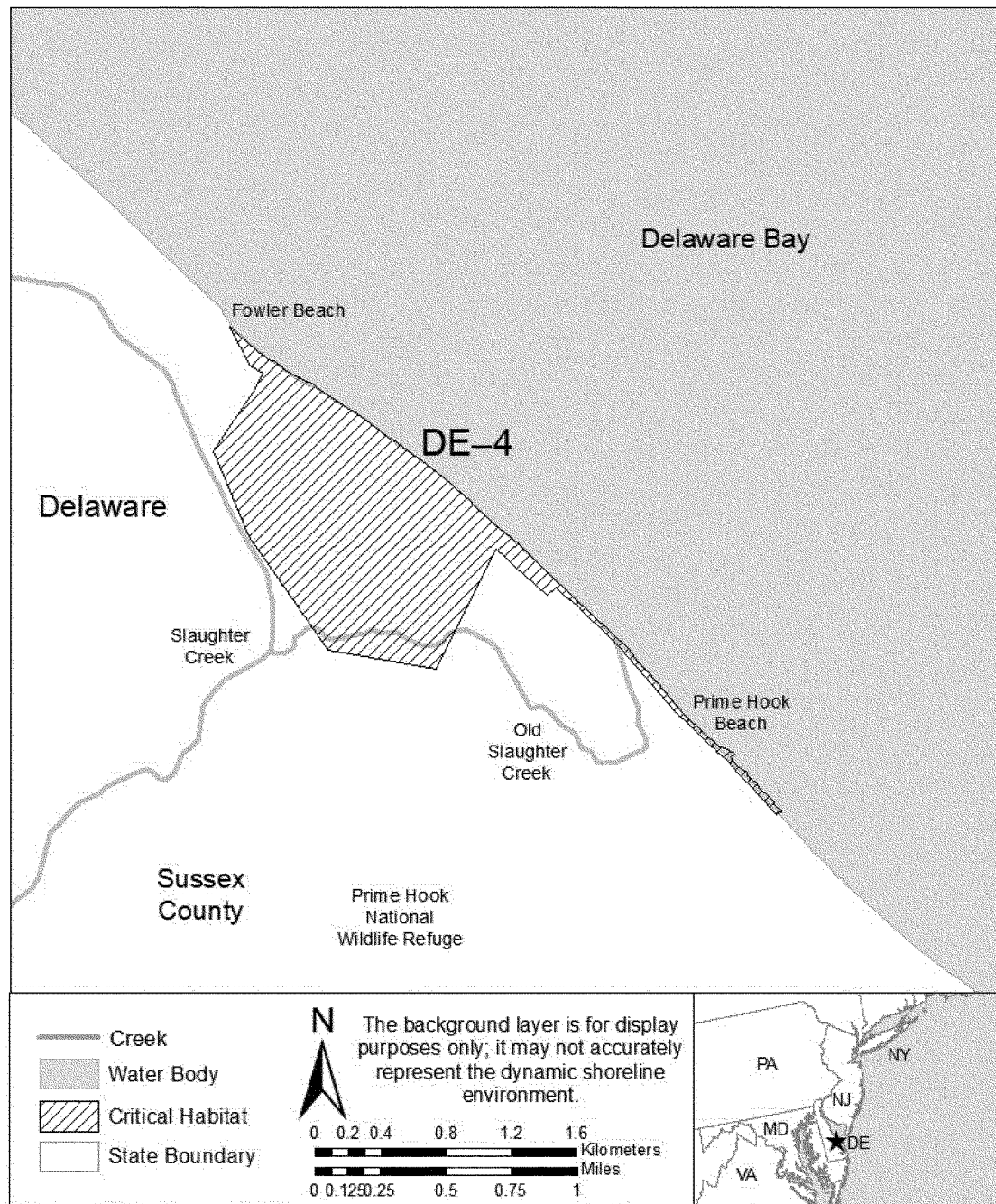
(i) Unit DE–4 consists of approximately 503 ac (203 ha) of occupied habitat in Sussex County consisting of beach shoreline and marsh from about 1 mi (1.6 km) north of Fowler Beach Road south to the end of South Bayshore Drive. The eastern boundary is the MLLW of the Delaware

Bay, and the western boundary in the northern portion of the unit runs along the dune line where the habitat changes from lightly vegetated sandy beach to densely vegetated dunes or marsh. The western boundary of the central portion of this unit includes marsh and shallow open water areas where birds can roost overnight and forage. The western edge of the southern portion of the unit is where property parcels end at the beach. Lands within this unit include approximately 482 ac (195 ha) in Federal ownership (Prime Hook NWR), 6 ac (2 ha) in private/other ownership, and 14 ac (6 ha) that are uncategorized.

(ii) Map of Unit DE–4 follows:

Figure 19 to Rufa Red Knot paragraph (25)(ii)

### Critical Habitat for Rufa Red Knot DE-4 Prime Hook; Sussex County, Delaware



(26) Unit VA-1: Assateague Island, Virginia.

(i) Unit VA-1 consists of approximately 2,817 ac (1,140 ha) of occupied habitat in Accomack County consisting of beach shoreline from the Virginia-Maryland State line south to the area known as "The Hook," a wide peninsula that curves northwest. The western boundary is along the dune line

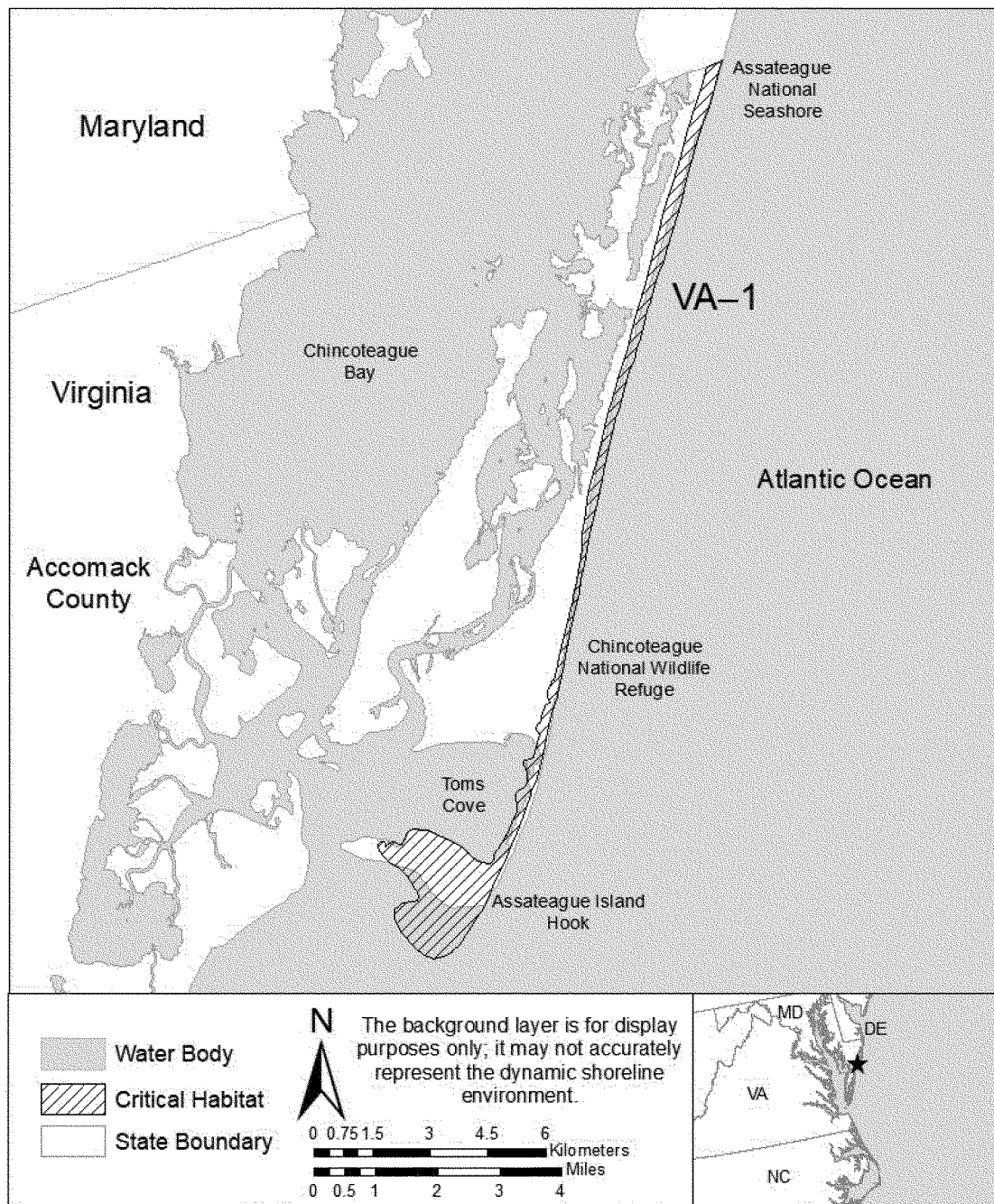
where the habitat changes from sandy beach with little vegetation to densely vegetated dunes or marshland, as well as densely vegetated forested or herbaceous vegetation landward of the beach and primary dune. The eastern boundary extends seaward past the MLLW line, including dynamic intertidal areas that are covered at high

tide and uncovered at low tide, as well as shoaling areas that are inundated with less than 3 in (7.6 cm) of water. All lands within this unit are federally owned (Assateague Island National Seashore and Chincoteague NWR).

(ii) Map of Unit VA-1 follows:

Figure 20 to Rufa Red Knot paragraph (26)(ii)

**Critical Habitat for Rufa Red Knot**  
**VA-1 Assateague Island; Accomack County, Virginia**



(27) Unit VA-2: Wallops Island, Virginia.

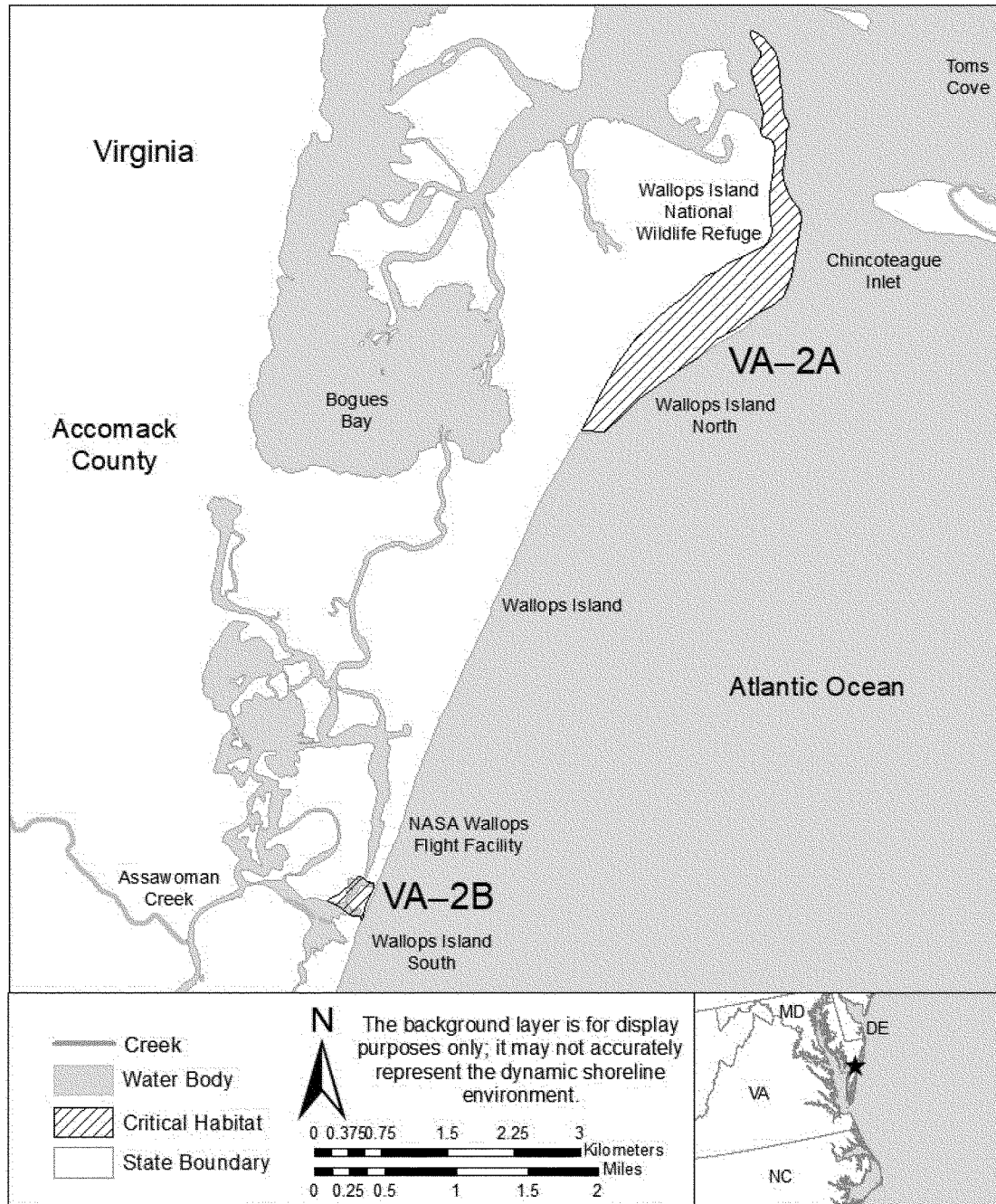
(i) Unit VA-2 comprises two subunits (totaling 571 ac (231 ha)) of occupied habitat owned and managed by the

National Aeronautics and Space Administration (NASA) as part of the Wallops Flight Facility located in Accomack County.

(ii) Map of Unit VA-2 follows:

Figure 21 to Rufa Red Knot paragraph (27)(ii)

# **Critical Habitat for Rufa Red Knot** **VA-2 Wallops Island; Accomack County, Virginia**



(iii) Subunit VA-2A (Wallops Island North) consists of approximately 540 ac (218 ha) of occupied habitat in Accomack County consisting of beach shoreline and dynamic intertidal areas. The north and east boundaries of the subunit are Chincoteague Inlet and seaward past the MLLW line and shoaling areas that are inundated with less than 3 in (7.6 cm) of water. The western boundary is along the marsh line where the habitat changes from

lightly vegetated sandy beach and exposed peat with little vegetation to densely vegetated marshland, peat banks, or densely vegetated forested or herbaceous vegetation landward of the beach and primary dune. The southern boundary tapers to a point ending at the northern end of the facility's sea wall structure; it extends past the MLLW line and includes the areas that are slightly inundated with less than 3 in (7.6 cm)

of water. All lands within this subunit are federally owned by NASA.

(iv) Map of Subunit VA-2A is presented at paragraph (27)(ii) of this entry.

(v) Subunit VA-2B (Wallops Island South) consists of approximately 31 ac (13 ha) of occupied habitat in Accomack County consisting of beach shoreline and dynamic intertidal areas. The northern boundary is the end of the road south of the old runway, the southern

boundary is Assawoman Creek, the western boundary is along the marsh line where the habitat changes from lightly vegetated sandy beach and exposed peat with little vegetation to densely vegetated marshland, peat banks, or densely forested or herbaceous vegetation landward of the beach and primary dune, and the eastern boundary extends seaward past the MLLW line including dynamic intertidal areas that are covered at high tide and uncovered at low tide, as well as shoaling areas that are inundated with less than 3 in (7.6

cm) of water. All lands within this subunit are federally owned by NASA.

(vi) Map of Subunit VA–2B is presented at paragraph (27)(ii) of this entry.

(28) Unit VA–3: Assawoman Island, Virginia.

(i) Unit VA–3 consists of approximately 633 ac (256 ha) of occupied habitat in Accomack County consisting of beach shoreline and dynamic intertidal areas. The unit is from Assawoman Creek in the north to Kegotank Creek and Gargathy Inlet in

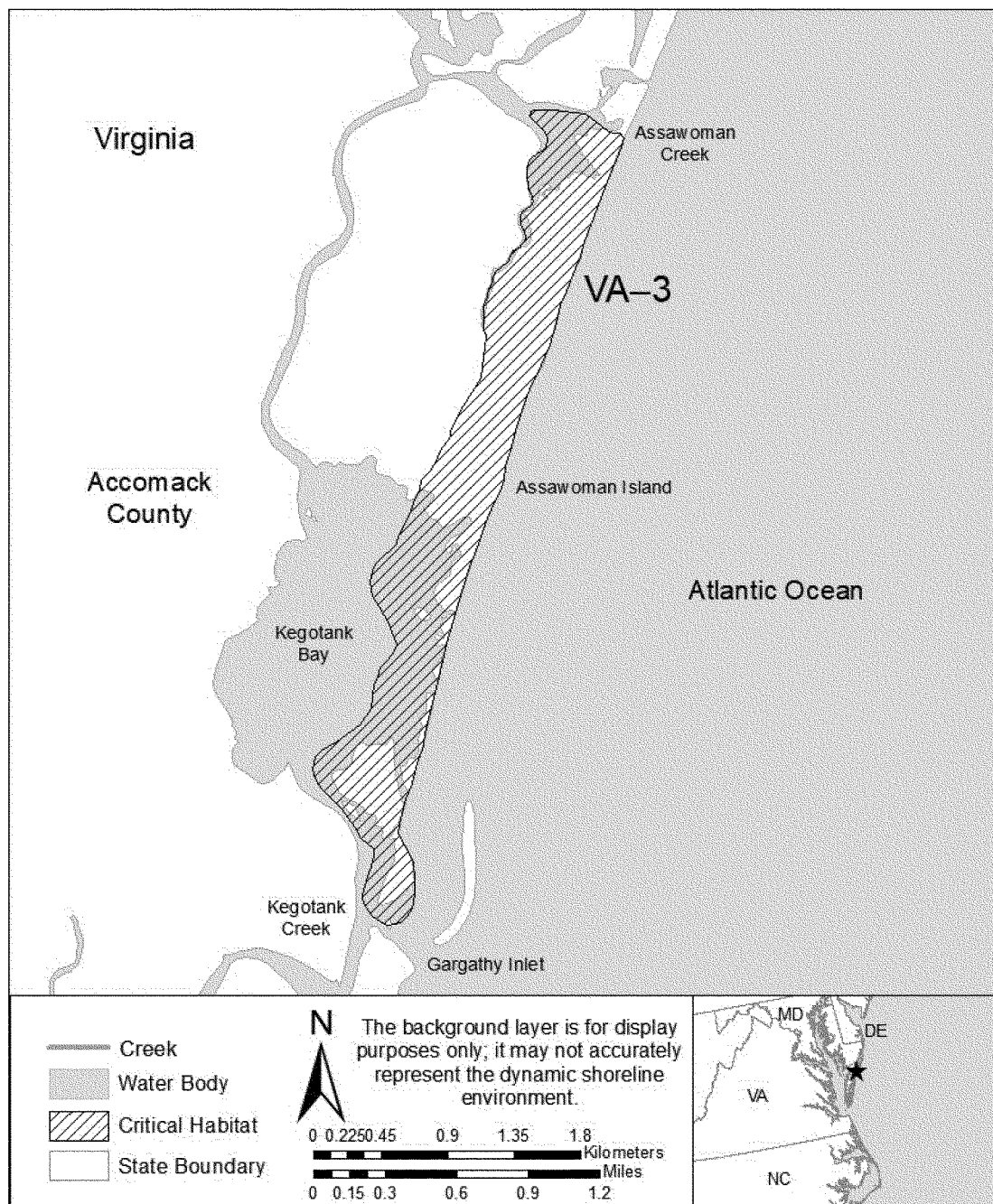
the south, extending east past the MLLW line including dynamic intertidal areas that are covered at high tide and uncovered at low tide, as well as shoaling areas that are inundated with less than 3 in (7.6 cm) of water). The western boundary is formed by Houseboat Creek, a section of Egg Marsh, and Kegotank Bay. All lands within this unit are federally owned by Chincoteague NWR.

(ii) Map of Unit VA–3 follows:

Figure 22 to Rufa Red Knot paragraph (28)(ii)



**Critical Habitat for Rufa Red Knot  
VA-3 Assawoman Island; Accomack County, Virginia**



(29) Unit VA-4: Metompkin Island, Virginia.

(i) Unit VA-4 consists of approximately 1,468 ac (594 ha) of occupied habitat in Accomack County consisting of beach shoreline and dynamic intertidal areas. The unit extends from Kegotank Creek and Gargathy Inlet south to the mouth of Folly Creek. The western boundary is formed by the Virginia Inside Passage of

the Intracoastal Waterway and Metompkin Bay and includes extensive areas of overwash and low marsh areas along the western boundary. The eastern boundary extends seaward past the MLLW line, including dynamic intertidal areas that are covered at high tide and uncovered at low tide, as well as shoaling areas that are inundated with less than 3 in (7.6 cm) of water. Lands within this unit include

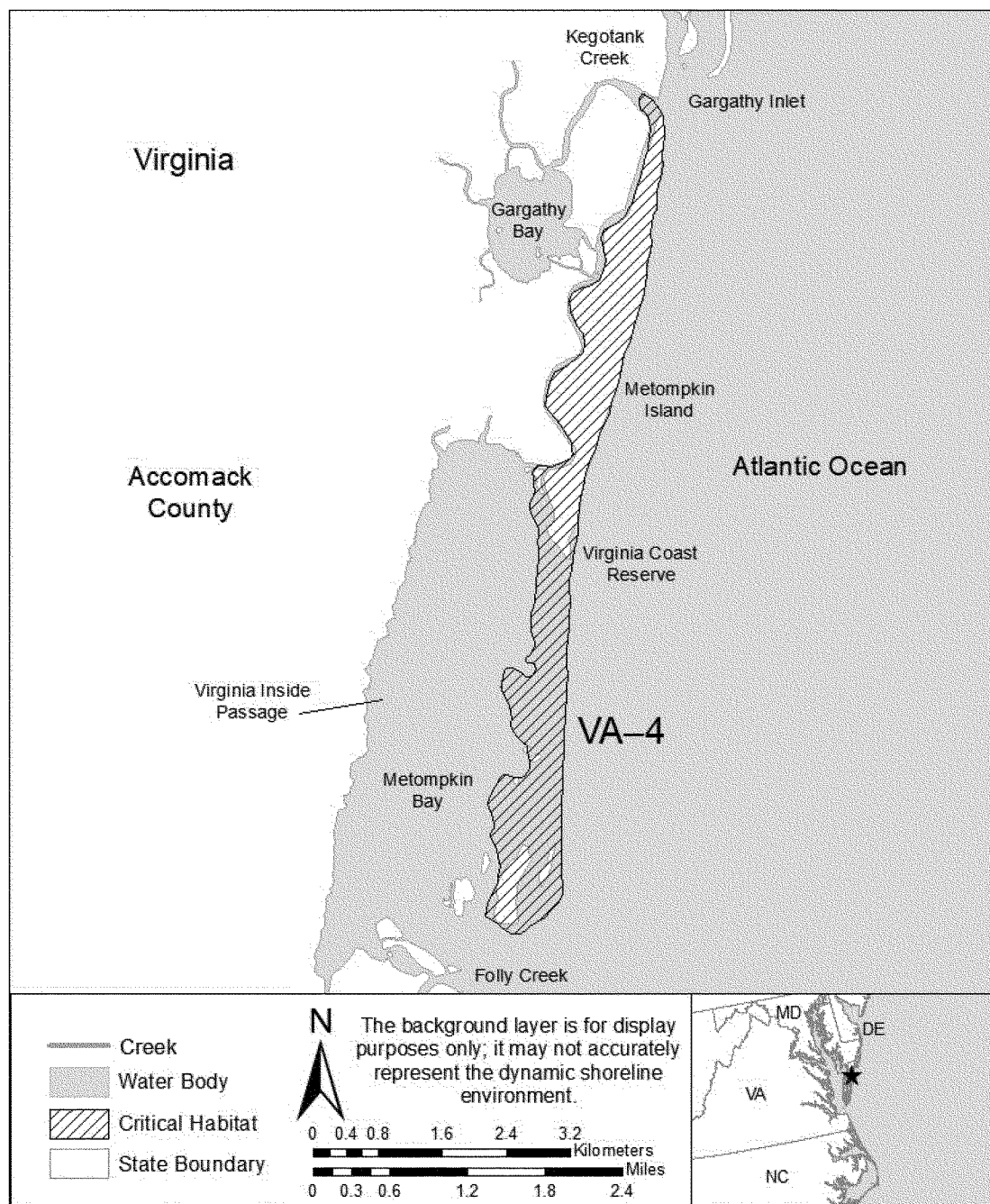
approximately 64 ac (26 ha) in Federal ownership (Chincoteague NWR), 56 ac (22 ha) in State ownership, and 1,239 ac (502 ha) in private/other ownership (TNC), and 110 ac (44 ha) that are uncategorized. This coastal area is part of the Virginia Coast Reserve.

(ii) Map of Unit VA-4 follows:

Figure 23 to Rufa Red Knot paragraph (29)(ii)



### Critical Habitat for Rufa Red Knot VA-4 Metompkin Island; Accomack County, Virginia



(30) Unit VA-5: Cedar Island, Virginia.

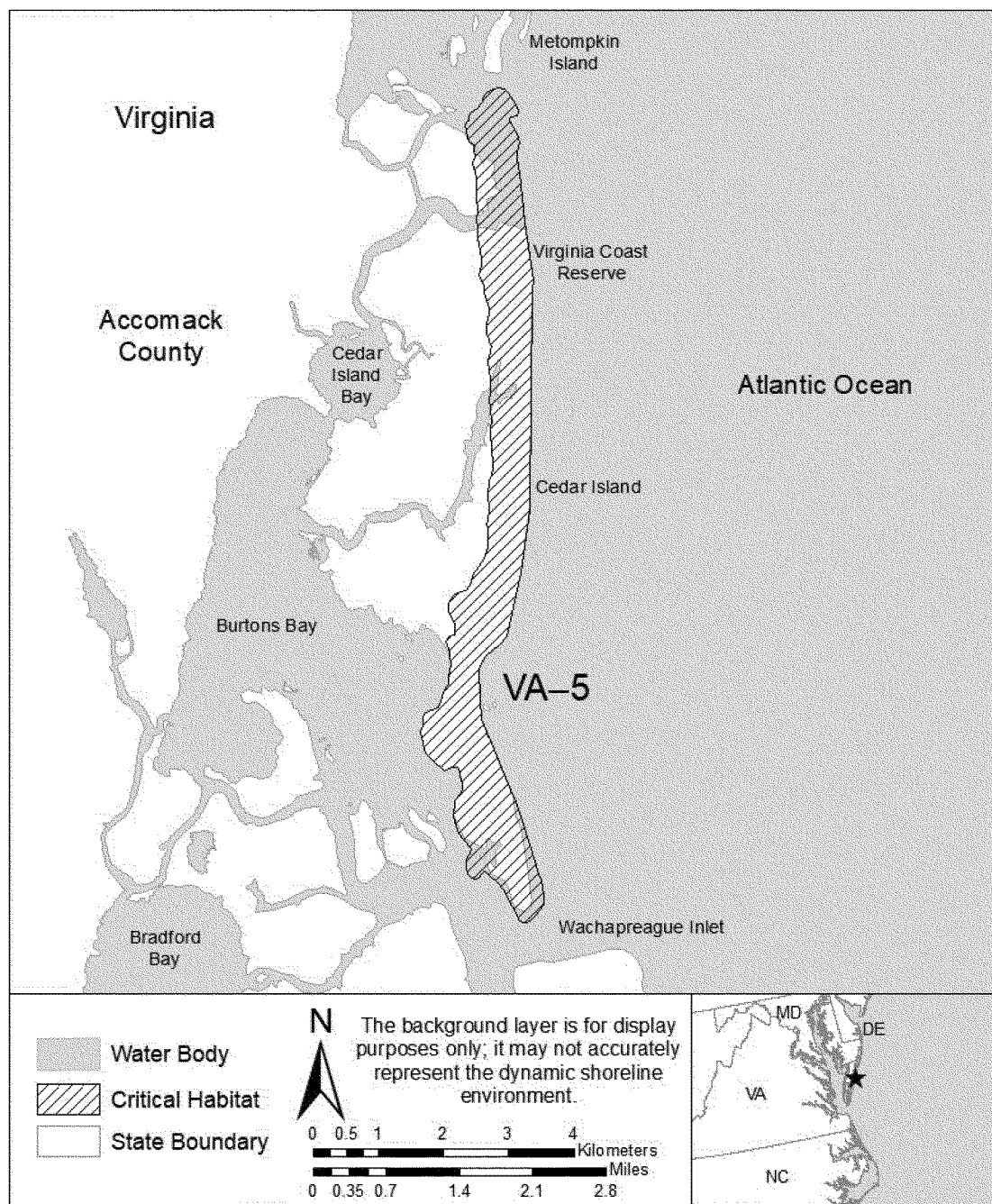
(i) Unit VA-5 consists of approximately 2,274 ac (920 ha) of occupied habitat in Accomack County consisting of beach shoreline and dynamic intertidal areas. The unit extends from an inlet between Cedar Island and the southern end of Metompkin Island south to Wachapreague Inlet. The western boundary is along the marsh line where

the habitat changes from lightly vegetated sandy beach and exposed peat with little vegetation to densely vegetated marshland, peat banks, or densely vegetated forested or herbaceous vegetation landward of the beach and primary dune, or open water including Burtons Bay. The eastern boundary extends seaward past the MLLW line, including dynamic intertidal areas that are covered at high tide and uncovered at low tide, as well

as shoaling areas that are inundated with less than 3 in (7.6 cm) of water. Lands within this unit include approximately 203 ac (82 ha) in Federal ownership, 77 ac (31 ha) in State ownership, 920 ac (372 ha) in private/other ownership, and 1,074 ac (434 ha) that are uncategorized. This coastal area is part of the Virginia Coast Reserve.

(ii) Map of Unit VA-5 follows: Figure 24 to Rufa Red Knot paragraph (30)(ii)

### Critical Habitat for Rufa Red Knot VA-5 Cedar Island; Accomack County, Virginia



(31) Unit VA-6: Parramore Island, Virginia.

(i) Unit VA-6 consists of approximately 6,802 ac (2,753 ha) of occupied habitat in Accomack County consisting of beach shoreline and dynamic intertidal areas. The unit extends from Wachapreague Inlet south to Quinby Inlet. The western boundary

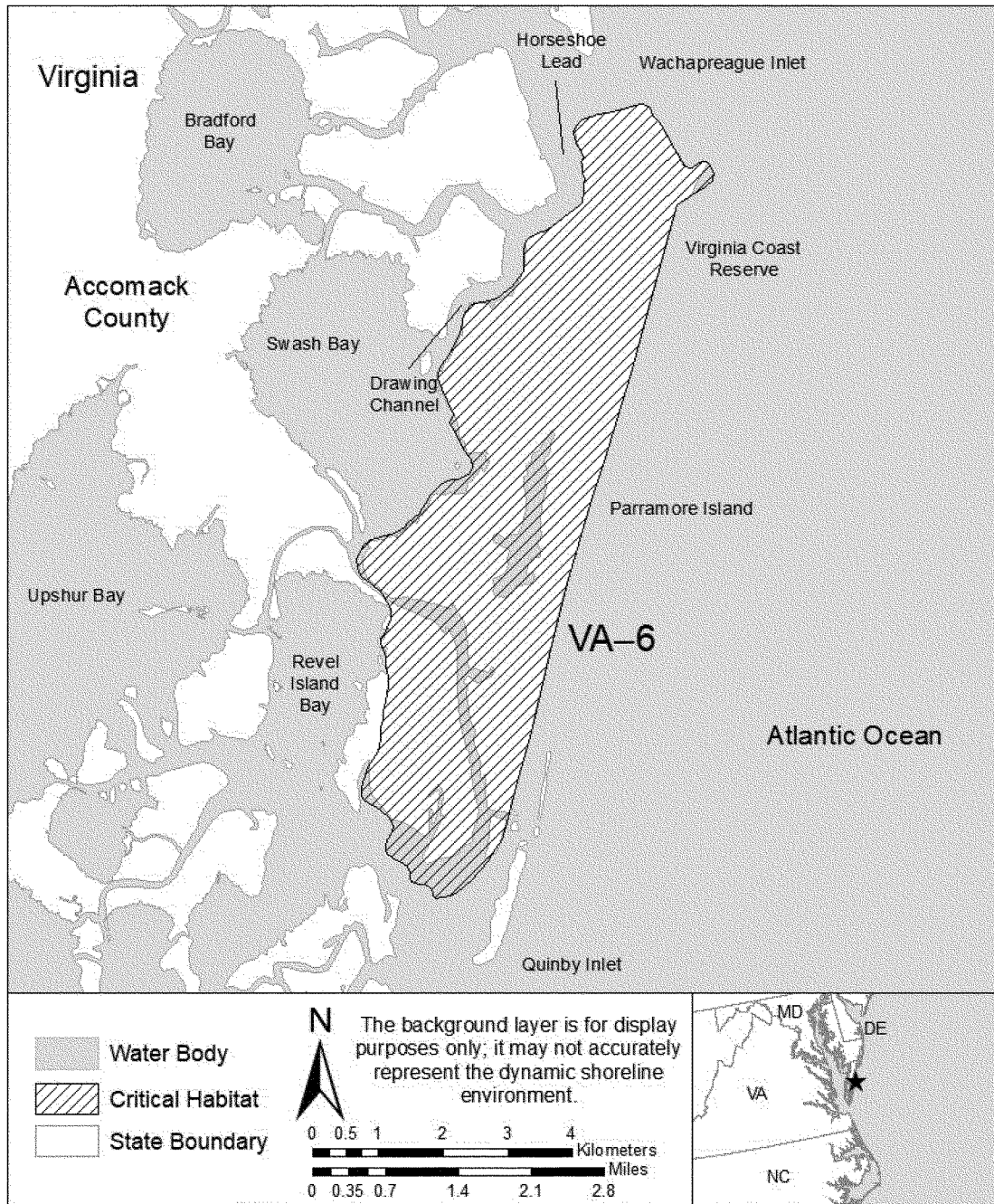
is Horseshoe Lead, Drawing Channel, Swash Bay, and Revel Island Bay. The eastern boundary extends seaward past the MLLW line, including dynamic intertidal areas that are covered at high tide and uncovered at low tide, as well as shoaling areas that are inundated with less than 3 in (7.6 cm) of water. Lands within this unit include

approximately 5,631 ac (2,280 ha) in private/other ownership (TNC) and 1,171 ac (473 ha) that are uncategorized. This coastal area is part of the Virginia Coast Reserve.

(ii) Map of Unit VA-6 follows:

Figure 25 to Rufa Red Knot paragraph (31)(ii)

**Critical Habitat for Rufa Red Knot  
VA-6 Parramore Island; Accomack County, Virginia**



(32) Unit VA-7: Chimney Pole Marsh, Virginia.

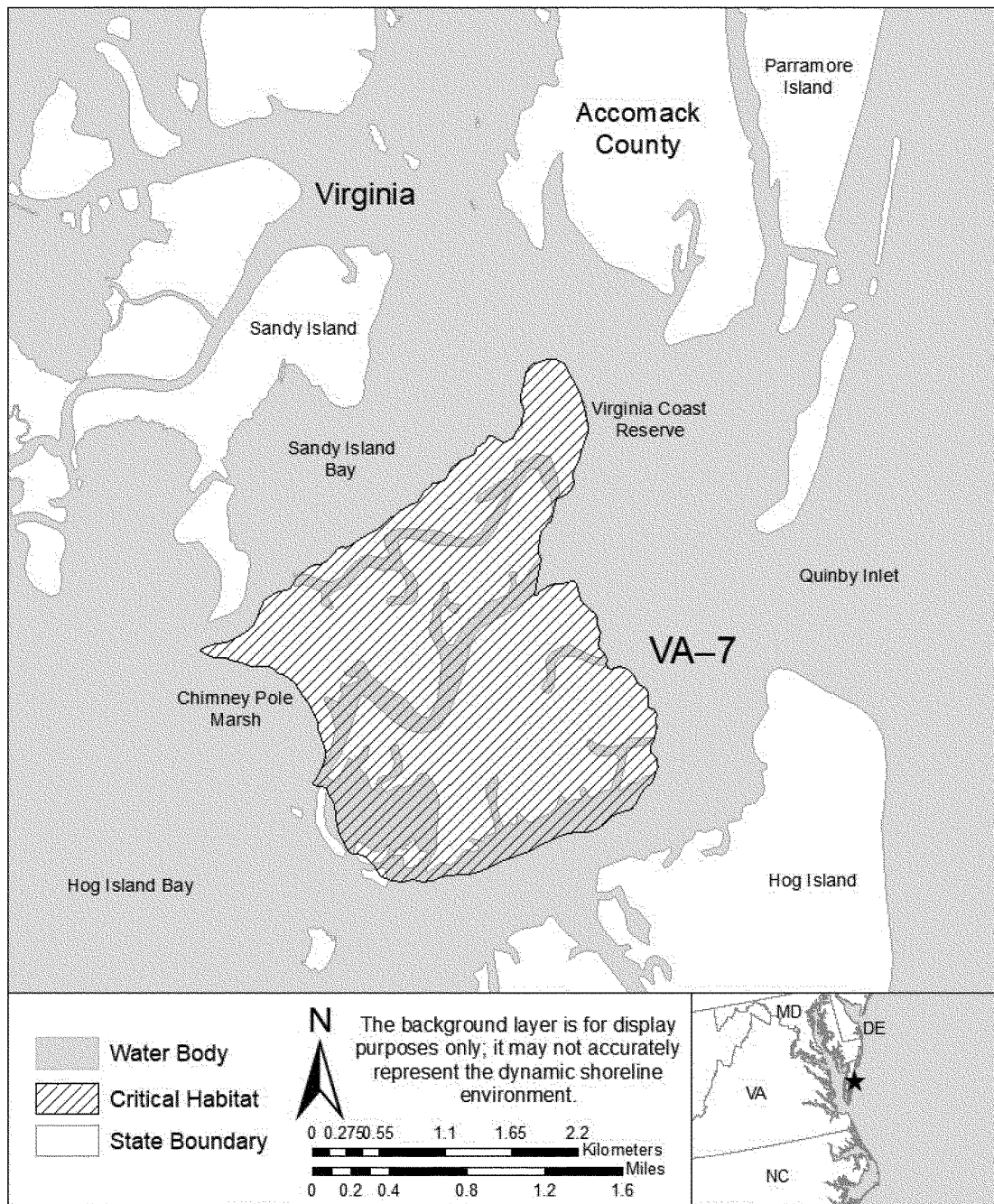
(i) Unit VA-7 consists of approximately 2,004 ac (811 ha) of occupied habitat in Chimney Pole Marsh and the southern portion of Sandy Island in Accomack County consisting of mud flats, low marsh,

sandy beaches, overwash areas, and tidal channels. The boundary of the marsh on all sides extends seaward past the MLLW line, including dynamic intertidal areas that are covered at high tide and uncovered at low tide, as well as shoaling areas that are inundated with less than 3 in (7.6 cm) of water.

Lands within this unit include approximately 1,224 ac (496 ha) in State ownership, 285 ac (116 ha) in private/other ownership (TNC), and 495 ac (200 ha) that are uncategorized.

(ii) Map of Unit VA-7 follows:  
Figure 26 to Rufa Red Knot paragraph (32)(ii)

**Critical Habitat for Rufa Red Knot**  
**VA-7 Chimney Pole Marsh; Accomack County, Virginia**



(33) Unit VA-8: Hog Island, Virginia.

(i) Unit VA-8 consists of approximately 3,235 ac (1,309 ha) of occupied habitat in Northampton County consisting of shoreline habitat. The unit is bounded by the Quinby Inlet to the north and Great Machipongo Inlet to the south. The western boundary is along the marsh line where the habitat changes from lightly vegetated sandy beach and exposed peat with little

vegetation to densely vegetated marshland, peat banks, or densely vegetated forested or herbaceous vegetation landward of the beach and primary dune, or open water including Hog Island Bay. The eastern boundary extends seaward past the MLLW line, including dynamic intertidal areas that are covered at high tide and uncovered at low tide, as well as shoaling areas that are inundated with less than 3 in (7.6

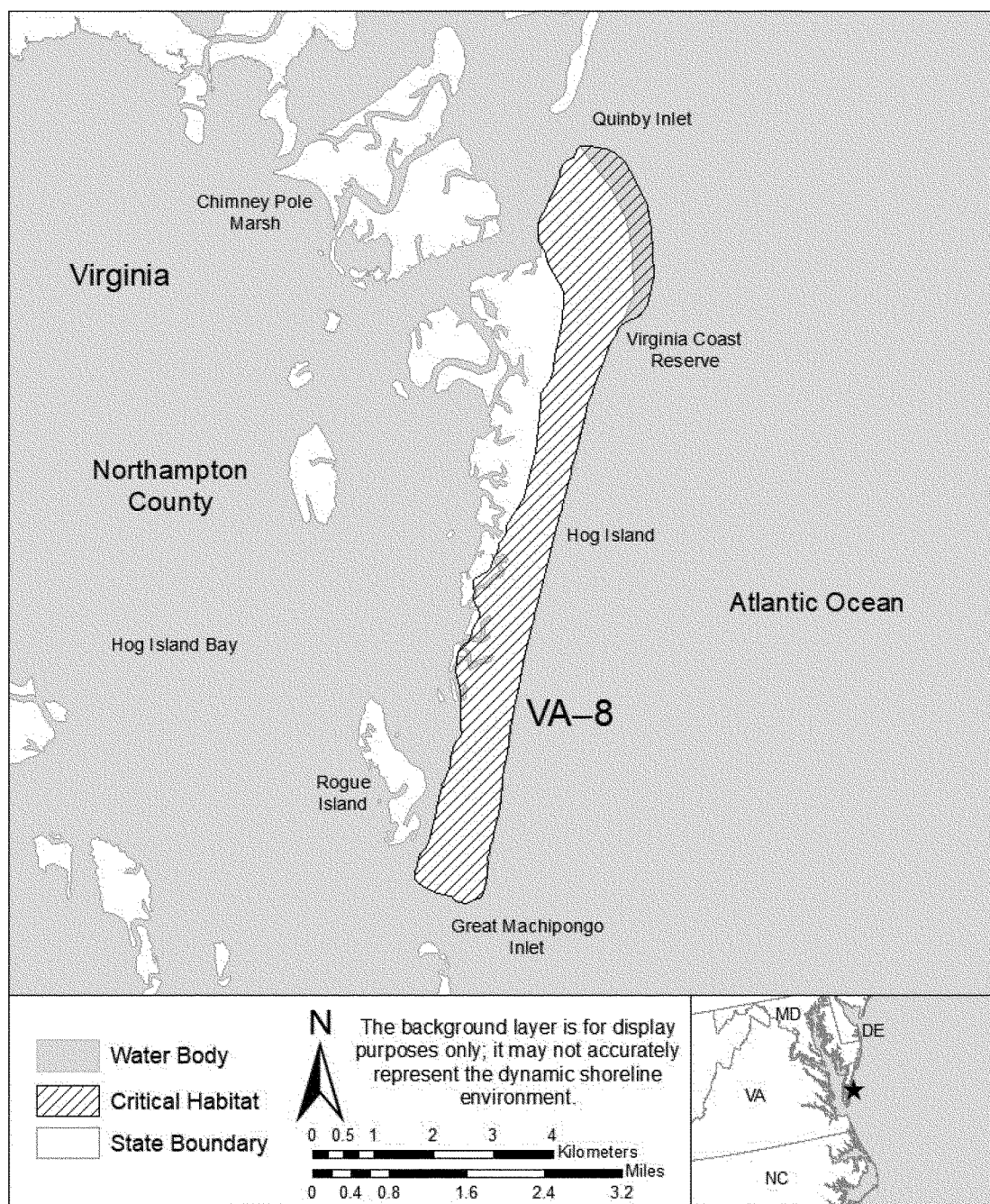
cm) of water. Lands within this unit include approximately 16 ac (7 ha) in State ownership, 2,966 ac (1,201 ha) in private/other ownership, and 253 ac (101 ha) that is uncategorized. This coastal area is part of the Virginia Coast Reserve.

(ii) Map of Unit VA-8 follows:

Figure 27 to Rufa Red Knot paragraph (33)(ii)



### Critical Habitat for Rufa Red Knot VA-8 Hog Island; Northampton County, Virginia



(34) Unit VA-9: Cobb Island, Virginia.

(i) Unit VA-9 consists of approximately 2,342 ac (948 ha) of occupied habitat in Northampton County consisting of shoreline habitat. The unit is bounded by Great Machipongo Inlet to the north and Sand Shoal Inlet to the south. The western boundary is formed by Hog Island Bay,

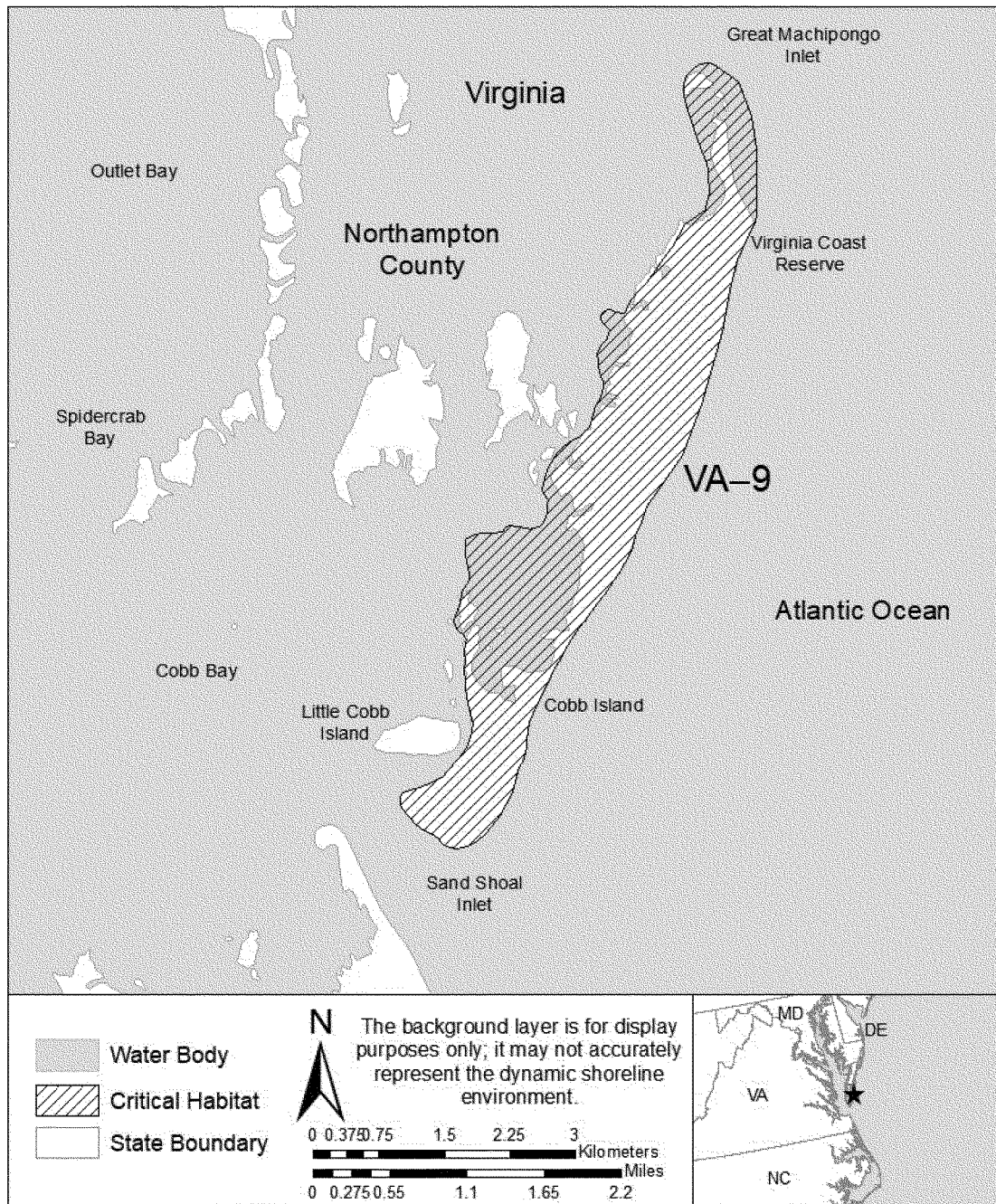
Spidercrab Bay, and Cobb Bay. The eastern boundary extends seaward past the MLLW line, including dynamic intertidal areas that are covered at high tide and uncovered at low tide, as well as shoaling areas that are inundated with less than 3 in (7.6 cm) of water. Lands within this unit include approximately 16 ac (7 ha) in State

ownership, 1,778 ac (720 ha) in private/ other ownership, and 547 ac (221 ha) that are uncategorized. This coastal area is part of the Virginia Coast Reserve.

(ii) Map of Unit VA-9 follows:

Figure 28 to Rufa Red Knot paragraph (34)(ii)

**Critical Habitat for Rufa Red Knot  
VA-9 Cobb Island; Northampton County, Virginia**



(35) Unit VA-10: Little Cobb Island, Virginia.

(i) Unit VA-10 consists of approximately 82 ac (33 ha) of occupied habitat in Northampton County consisting of shoreline habitat lying just west of the southern end of Cobb Island and within the waters of Cobb Bay. The

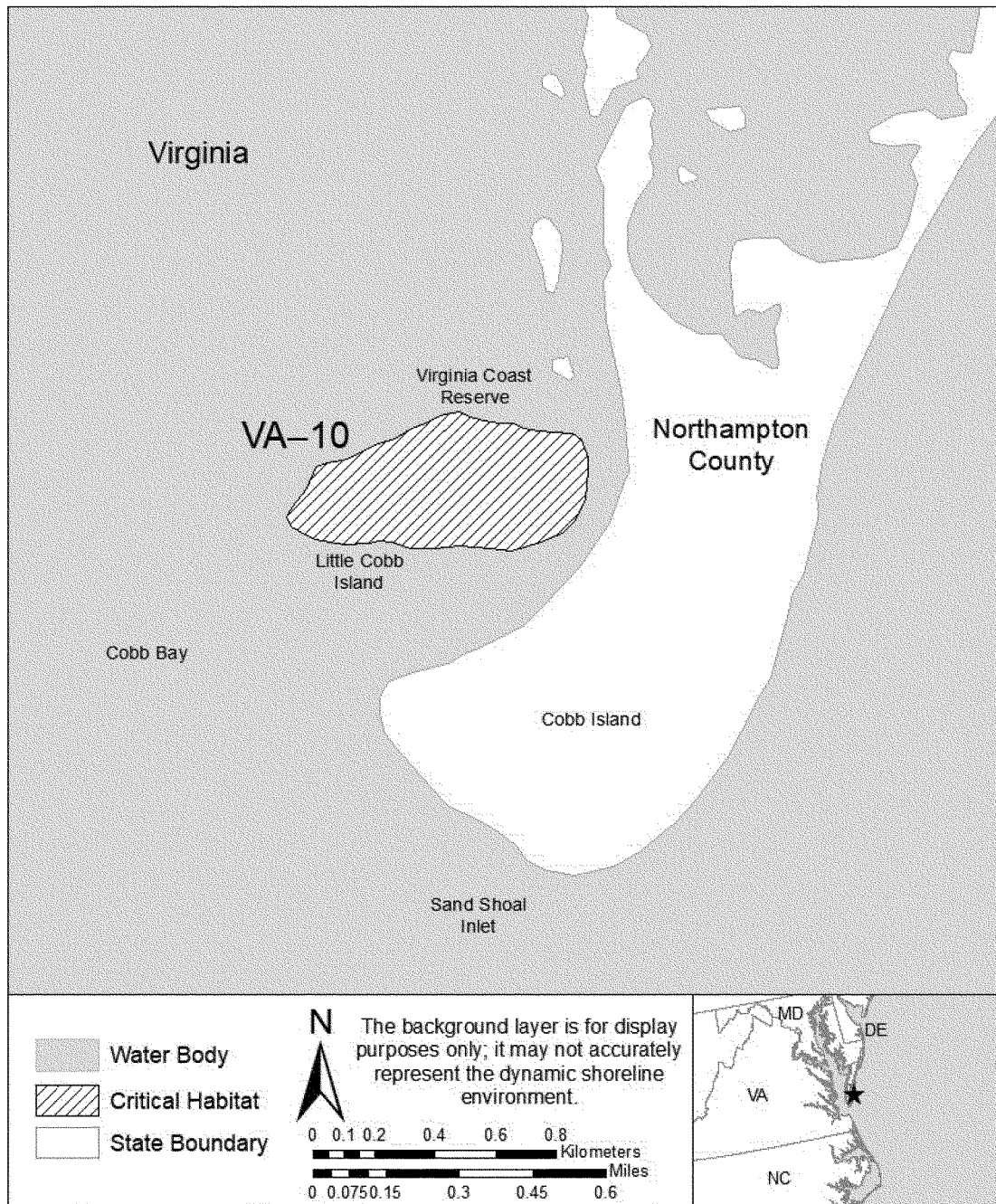
boundary of this small island in all directions is the waters of Cobb Bay and the extent of the boundary seaward past the MLLW line, including dynamic intertidal areas that are covered at high tide and uncovered at low tide, as well as shoaling areas that are inundated with less than 3 in (7.6 cm) of water. All

lands within this unit are in private/ other ownership (TNC) and are part of the Virginia Coast Reserve.

(ii) Map of Unit VA-10 follows:

Figure 29 to Rufa Red Knot paragraph (35)(ii)

**Critical Habitat for Rufa Red Knot**  
**VA-10 Little Cobb Island; Northampton County, Virginia**



(36) Unit VA-11: Wreck Island, Virginia.

(i) Unit VA-11 consists of approximately 1,270 ac (514 ha) of occupied habitat in Northampton County consisting of shoreline habitat bounded to the north by Sand Shoal

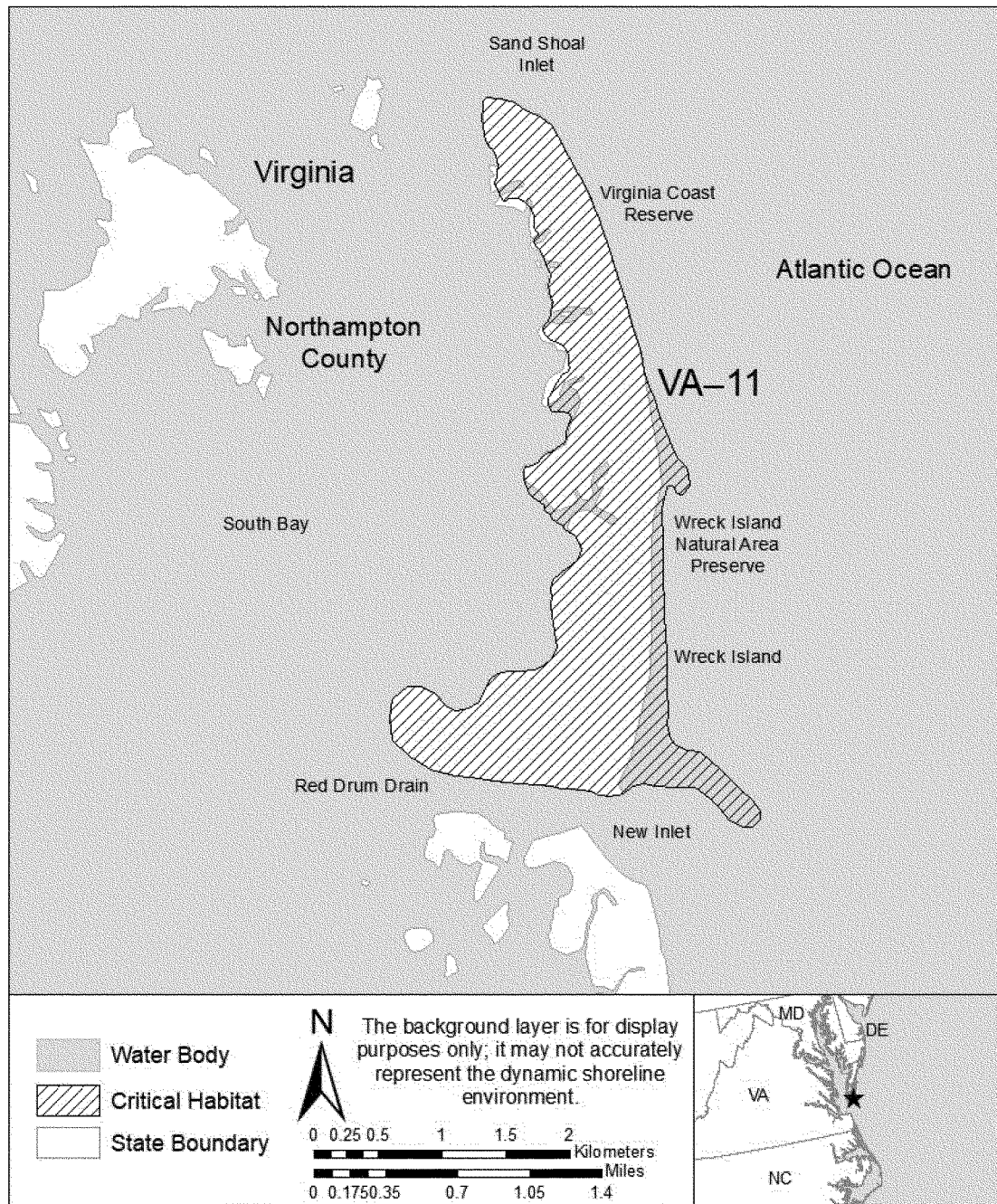
Inlet and Red Drum Drain and New Inlet to the south. The western boundary is South Bay. The eastern boundary extends seaward past the MLLW line, including dynamic intertidal areas that are covered at high tide and uncovered at low tide, as well as shoaling areas that

are inundated with less than 3 in (7.6 cm) of water. All lands within this unit are State owned and managed as Wreck Island Natural Area Preserve.

(ii) Map of Unit VA-11 follows: Figure 30 to Rufa Red Knot paragraph (36)(ii)



# **Critical Habitat for Rufa Red Knot VA-11 Wreck Island; Northampton County, Virginia**



(37) VA-12: Ship Shoal Island, Virginia.

(i) Unit VA-12 consists of approximately 2,426 ac (982 ha) of occupied habitat in Northampton County, including both Ship Shoal Island and the area known as Godwin Island. The north boundary is Red Drum Drain and New Inlet, the south

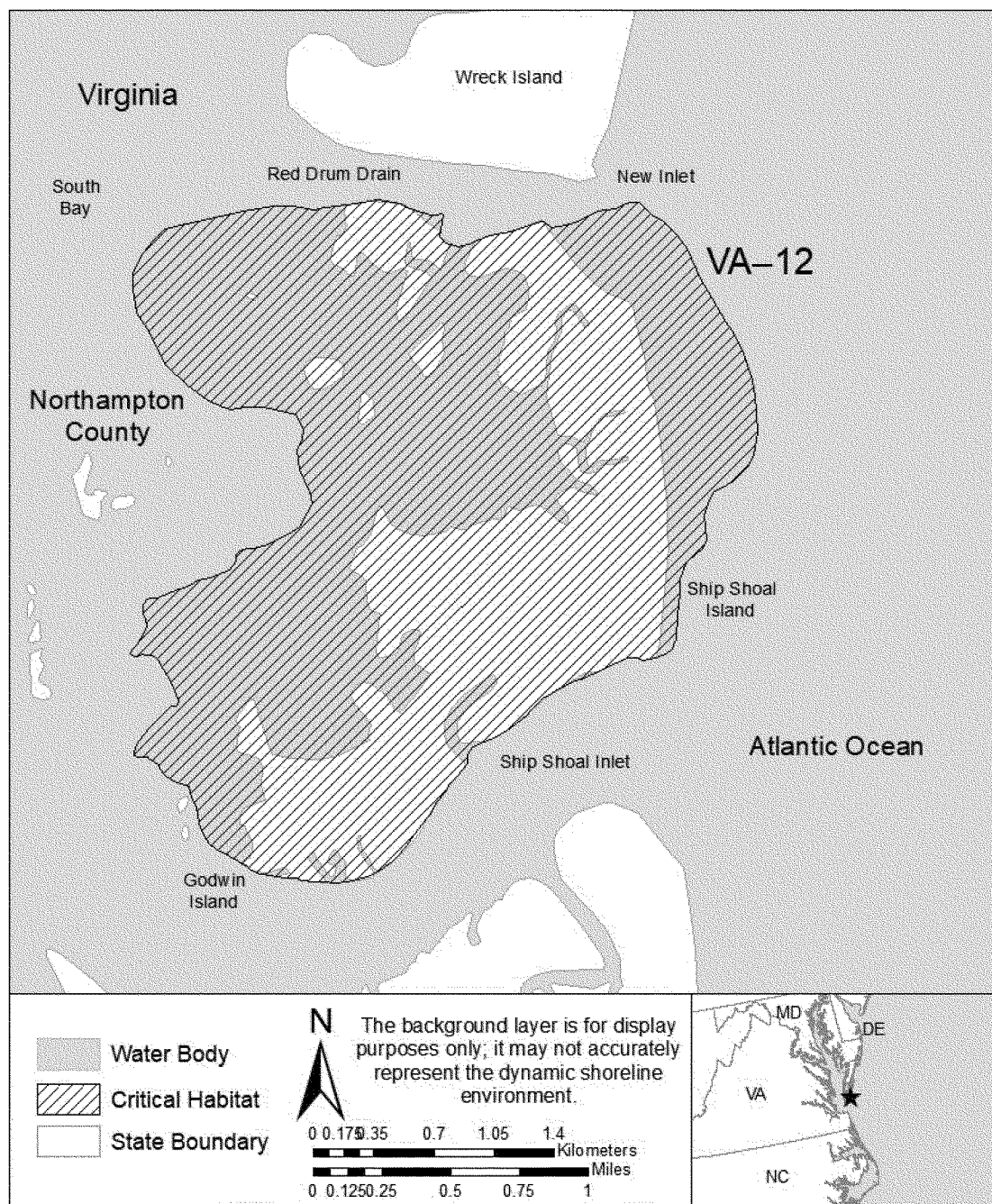
boundary is Ship Shoal Inlet, the west boundary is South Bay, and the east boundary is the Atlantic Ocean, including dynamic intertidal areas that are covered at high tide and uncovered at low tide, as well as shoaling areas that are inundated with less than 3 in (7.6 cm) of water. The majority of lands within this unit are owned and managed

by TNC as part of the Virginia Coast Reserve. Lands within this unit include 426 ac (172 ha) in State ownership, 1,941 ac (785 ha) in private/other ownership, and 60 ac (24 ha) that are uncategorized.

(ii) Map of Unit VA-12 follows: Figure 31 to Rufa Red Knot paragraph (37)(ii)



**Critical Habitat for Rufa Red Knot**  
**VA-12 Ship Shoal Island Island; Northampton County, Virginia**



(38) Unit VA-13: Myrtle Island, Virginia.

(i) Unit VA-13 consists of approximately 1,416 ac (573 ha) of occupied habitat in Northampton County consisting of extensive mud flats, low marsh, sandy beaches, overwash areas, and tidal channels. The north boundary is Ship Shoal Inlet, the south boundary is Little Inlet, the west

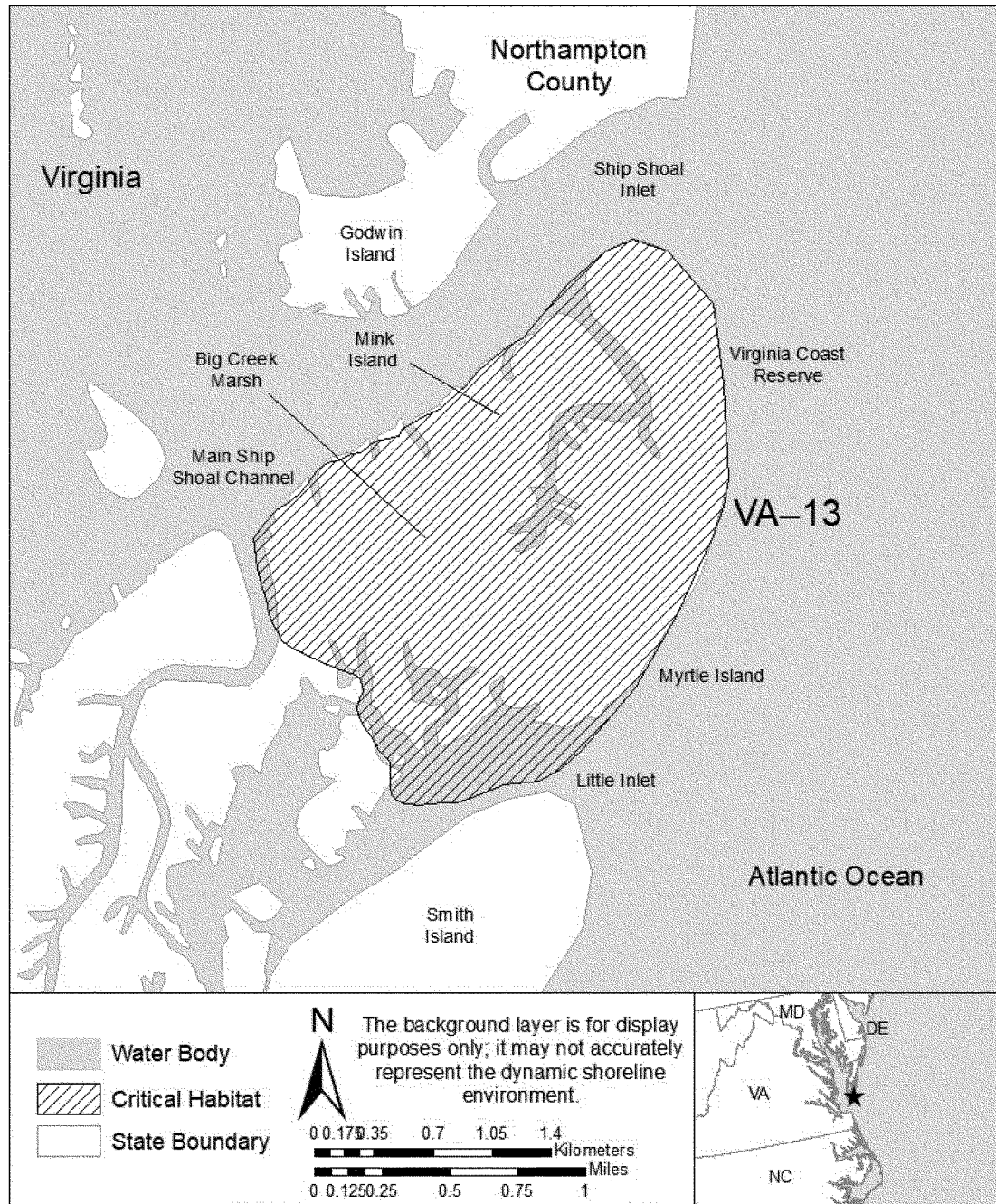
boundary is Main Ship Shoal Channel and Big Creek Marsh, and the east boundary is the Atlantic Ocean. The boundary for the island and marsh complex extends seaward past the MLLW line, including dynamic intertidal areas that are covered at high tide and uncovered at low tide, as well as shoaling areas that are inundated with less than 3 in (7.6 cm) of water.

Lands within this unit include 1,028 ac (417 ha) that are in private/other ownership and 388 ac (156 ha) that are uncategorized. The island is owned and managed by TNC as part of the Virginia Coast Reserve.

(ii) Map of Unit VA-13 follows:

Figure 32 to Rufa Red Knot paragraph (38)(ii)

**Critical Habitat for Rufa Red Knot**  
**VA-13 Myrtle Island; Northampton County, Virginia**



(39) Unit VA-14: Smith Island, Virginia.

(i) Unit VA-14 consists of approximately 3,258 ac (1,319 ha) of occupied habitat in Northampton County consisting of shoreline habitat bounded to the north by Little Inlet, to the south by Smith Island Inlet, and to the west along the dune line where the habitat changes from sandy beach with

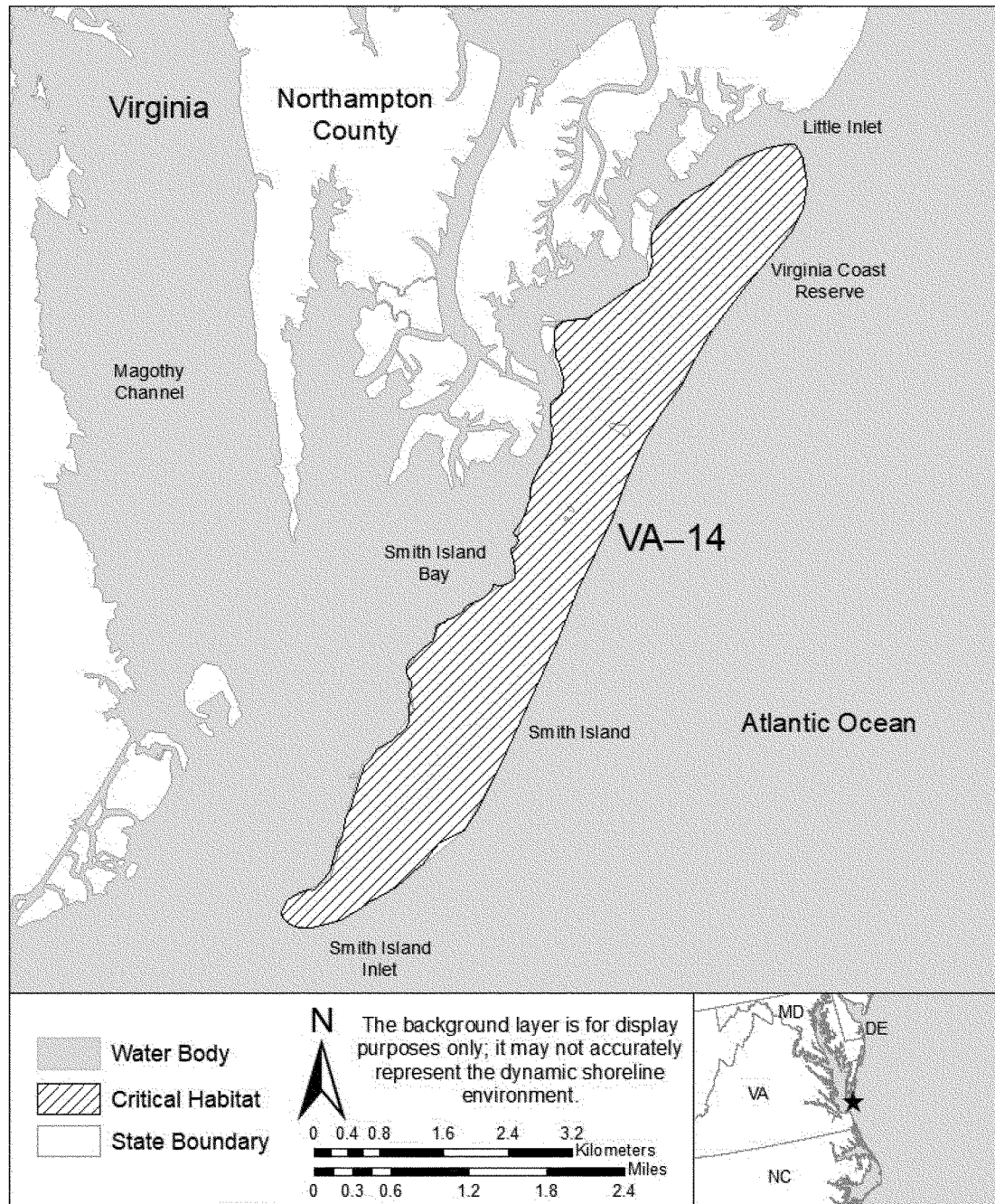
little vegetation to densely vegetated dunes or marshland, as well as densely vegetated forested or herbaceous vegetation landward of the beach and primary dune, or open water including Magothy Bay. The eastern boundary extends seaward past the MLLW line, including dynamic intertidal areas that are covered at high tide and uncovered at low tide, as well as shoaling areas that

are inundated with less than 3 in (7.6 cm) of water. All lands within this unit are in private/other ownership (TNC). The island is owned and managed by TNC as part of the Virginia Coast Reserve.

(ii) Map of Unit VA-14 follows:

Figure 33 to Rufa Red Knot paragraph (39)(ii)

**Critical Habitat for Rufa Red Knot  
VA-14 Smith Island; Northampton County, Virginia**



(40) Unit VA-15: Fisherman Island, Virginia.

(i) Unit VA-15 consists of approximately 2,413 ac (977 ha) of occupied habitat in Northampton County. The unit is an oval-shaped island located at the mouth of the Chesapeake Bay and just south of the tip of the Eastern Shore peninsula. The island is surrounded by the waters of

the Chesapeake Bay and Atlantic Ocean. It is bisected by U.S. Route 13 and the Chesapeake Bay Bridge-Tunnel complex. The interior boundary is along the dune line where the habitat changes from sandy beach with little vegetation to densely vegetated dunes or marshland, as well as densely vegetated forested or herbaceous vegetation landward of the beach and primary

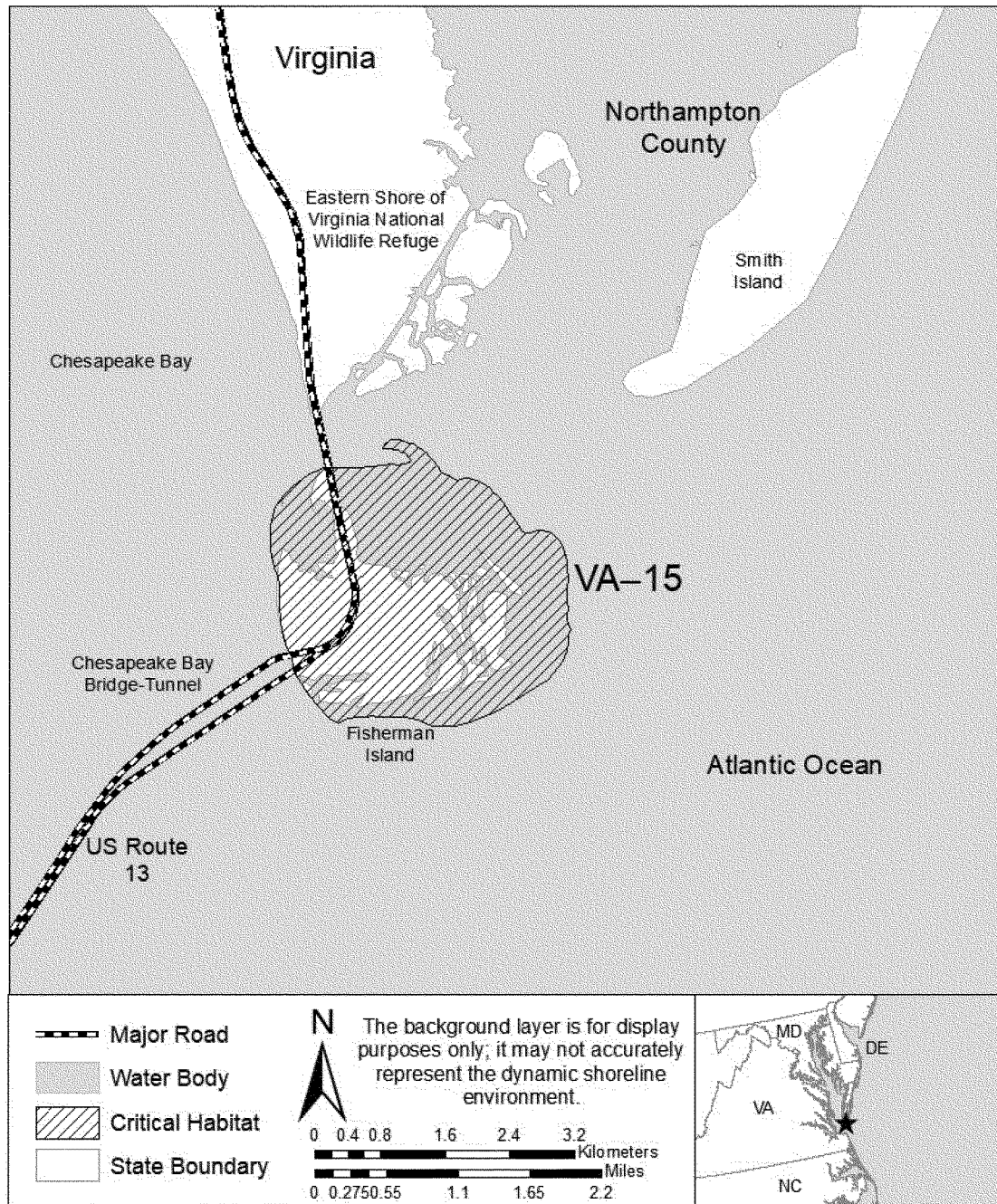
dune. The unit extends seaward past the MLLW line and includes areas that are slightly inundated with less than 3 in (7.6 cm) of water. The unit is federally owned by the Service's Eastern Shore of Virginia NWR.

(ii) Map of Unit VA-15 follows:

Figure 34 to Rufa Red Knot paragraph (40)(ii)



# **Critical Habitat for Rufa Red Knot VA-15 Fisherman Island; Northampton County, Virginia**



(41) Unit NC-1: Outer Banks, North Carolina.

(i) Unit NC-1 consists of two subunits comprising 11,367 ac (4,600 ha) of occupied habitat in Dare and Hyde Counties. This unit consists of Federal lands owned by the National Park Service (NPS) and Service, and lands owned by the State of North Carolina.

(ii) Subunit NC-1A (Hatteras Island and Shoals) consists of approximately 5,754 ac (2,329 ha) of occupied habitat

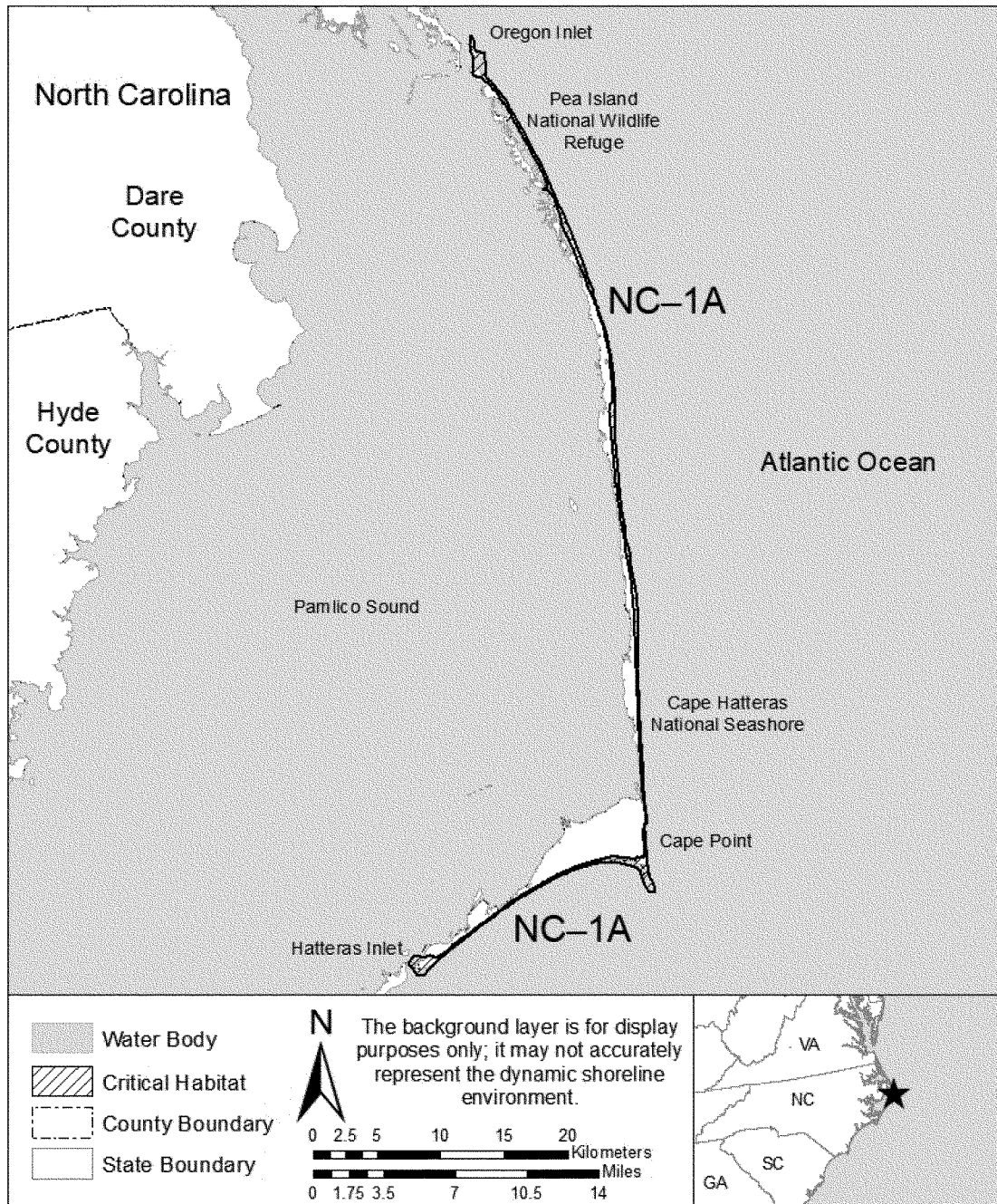
in Dare County consisting of beach shoreline from the southeast side of Oregon Inlet, south along the ocean-facing side of the island (including Pea Island NWR) to Cape Point in Cape Hatteras National Seashore. From Cape Point, the subunit stretches along the ocean side of the island about 13.25 mi (21 km) west to the east side of Hatteras Inlet. This subunit includes from MLLW (*i.e.*, the highly dynamic beach and emergent sand shoals that are covered at

high tide and uncovered at low tide, that are associated with the northeast side of Hatteras Inlet's navigable channel) to the toe of the dunes or where densely vegetated habitat, not used by the rufa red knot, begins. Lands within this subunit include approximately 4,940 ac (1,999 ha) in Federal ownership (Cape Hatteras National Seashore) and 814 ac (329 ha) that are uncategorized.

(iii) Map of Subunit NC-1A follows:

Figure 35 to Rufa Red Knot paragraph  
(41)(iii)

**Critical Habitat for Rufa Red Knot  
NC-1A Outer Banks–Hatteras Island and Shoals;  
Dare County, North Carolina**



(iv) Subunit NC-1B (Ocracoke Island) consists of approximately 5,613 ac (2,271 ha) of occupied habitat in Hyde County consisting of beach shoreline from the southwest side of Hatteras Inlet along the ocean-facing side of the island to the northeast side of Ocracoke Inlet.

This subunit also encompasses shallow areas and mudflats within Pamlico Sound on the west side of Ocracoke Island near Ocracoke Village. This subunit includes from MLLW (*i.e.*, the highly dynamic beach and emergent sand shoals that are covered at high tide

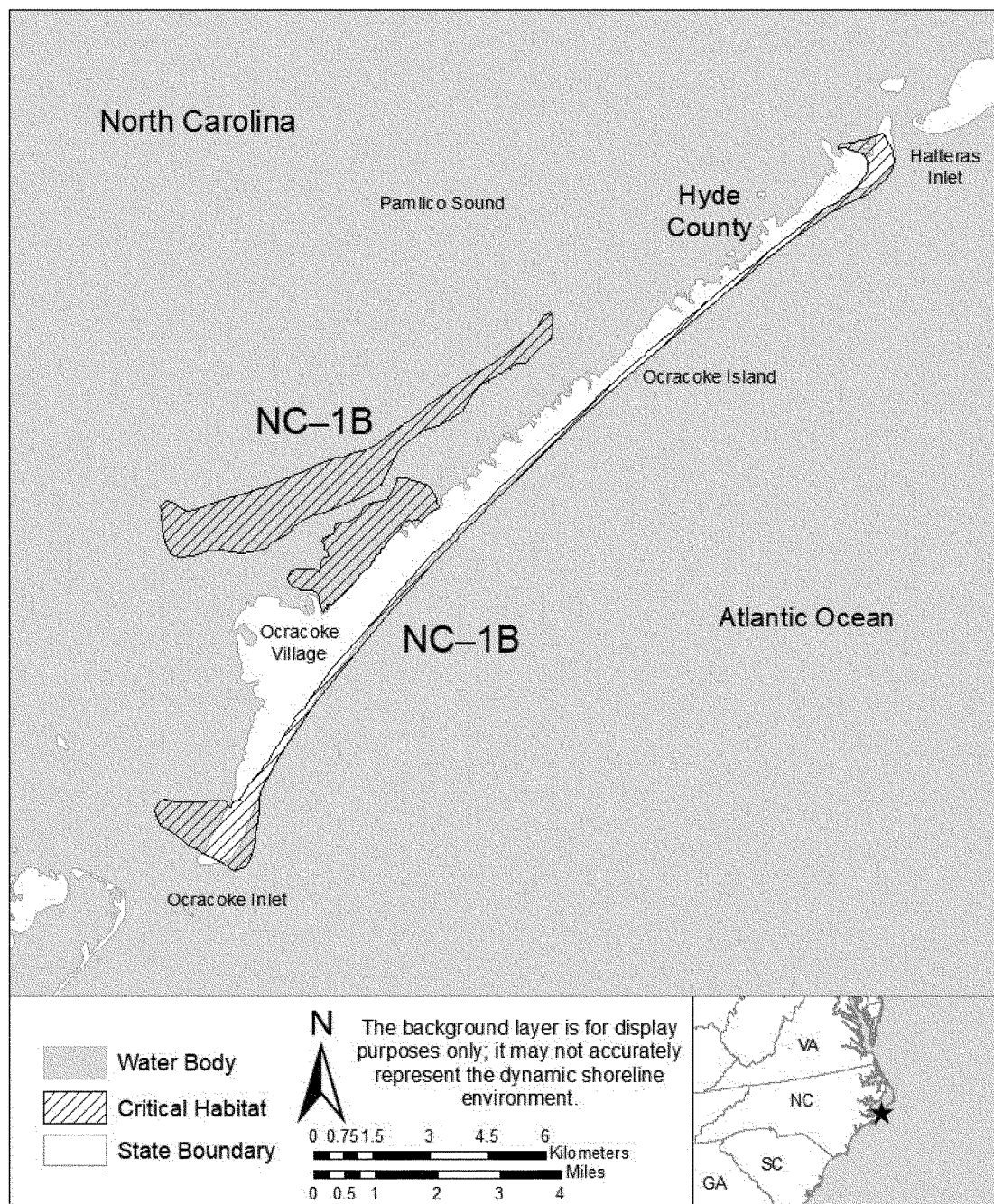
and uncovered at low tide) to the toe of the dunes or where densely vegetated habitat, not used by the rufa red knot, begins, including the flood-tidal and ebb-tidal deltas associated with the southwest side of Hatteras Inlet and the northeast side of Ocracoke Inlet, and the

sand and mud islands identified in Pamlico Sound northeast of Ocracoke Village. Lands within this subunit include approximately 1,427 ac (577 ha) in Federal ownership (*i.e.*, the entire

ocean-facing side of the Ocracoke Island, which is part of Cape Hatteras National Seashore), 3,612 ac (1,462 ha) in State ownership, and 575 ac (233 ha) that are uncategorized.

(v) Map of Subunit NC-1B follows: Figure 36 to Rufa Red Knot paragraph (41)(v)

### Critical Habitat for Rufa Red Knot NC-1B Outer Banks–Ocracoke Island, Hyde County, North Carolina



(42) Unit NC-2: Core Banks, North Carolina.

(i) Unit NC-2 consists of two subunits comprising 11,281 ac (4,565 ha) of occupied habitat in Carteret County.

This unit consists of Federal lands owned by the NPS (Cape Lookout National Seashore).

(ii) Subunit NC-2A (North Core Banks) consists of approximately 8,187

ac (3,313 ha) of occupied habitat in Carteret County consisting of beach shoreline from the North Core Banks side of the Ocracoke Inlet channel south to the North Core Banks side of the New



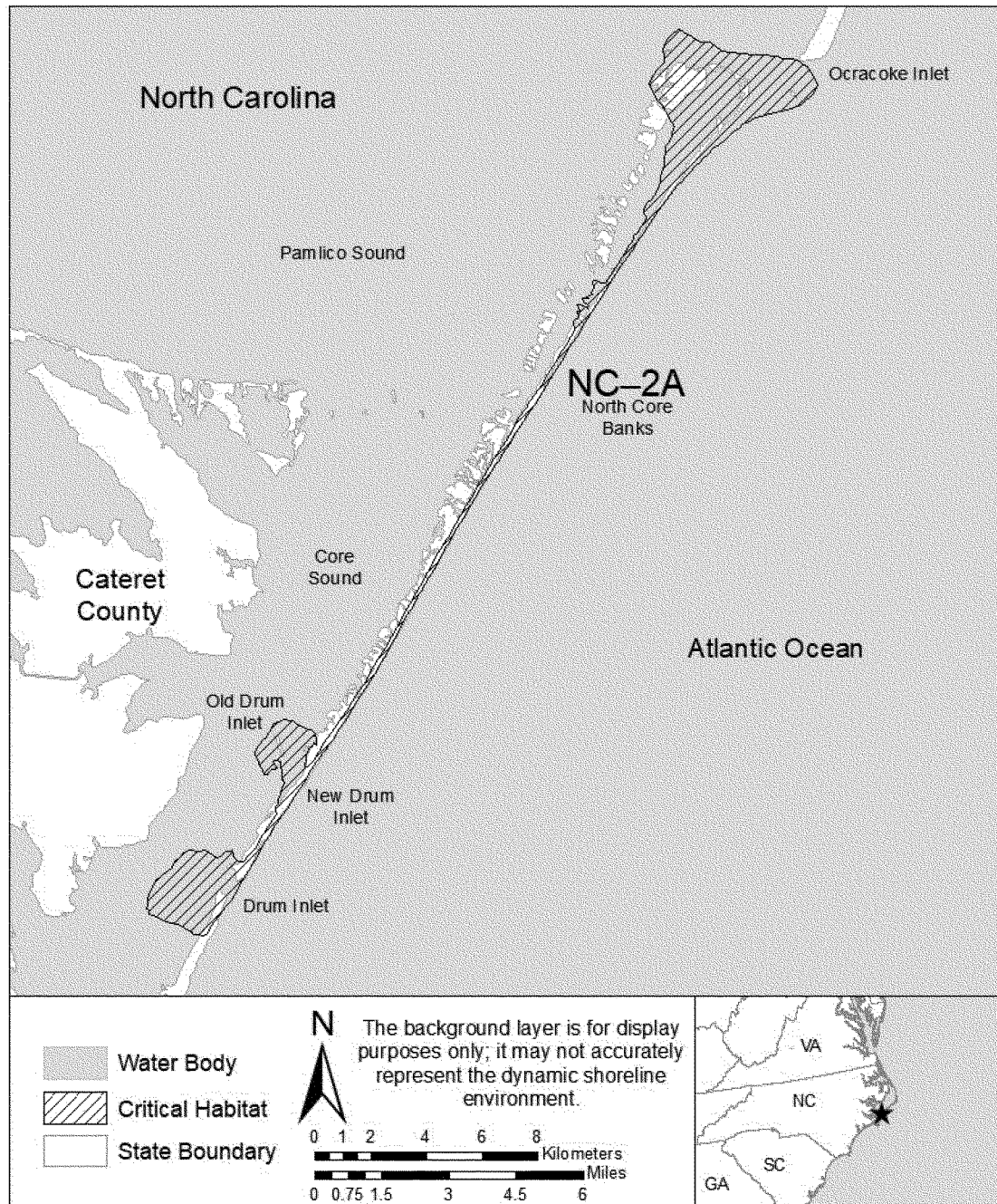
Drum Inlet channel. The west boundary is the toe of the primary dune or dense vegetation line (where the physical or biological features do not occur), and the east boundary is MLLW on the Atlantic Ocean (*i.e.*, the highly dynamic beach and emergent sand shoals that are covered at high tide and uncovered at low tide). This subunit also includes

MLLW on Core Sound to the MLLW on the Atlantic Ocean in washover areas associated with Old Drum Inlet, all emergent sand shoals within the flood-tidal and ebb-tidal deltas associated with the North Core Banks side of the Ocracoke Inlet channel, and the emergent sand shoals within the flood-tidal and ebb-tidal deltas associated

with the North Core Banks side of the New Drum Inlet channel. Lands within this subunit include 6,534 ac (2,644 ha) that are in Federal ownership (Cape Lookout National Seashore) and 1,654 ac (669 ha) that are uncategorized.

(iii) Map of Subunit NC-2A follows: Figure 37 to Rufa Red Knot paragraph (42)(iii)

### Critical Habitat for Rufa Red Knot NC-2A Core Banks–North Core Banks; Carteret County, North Carolina





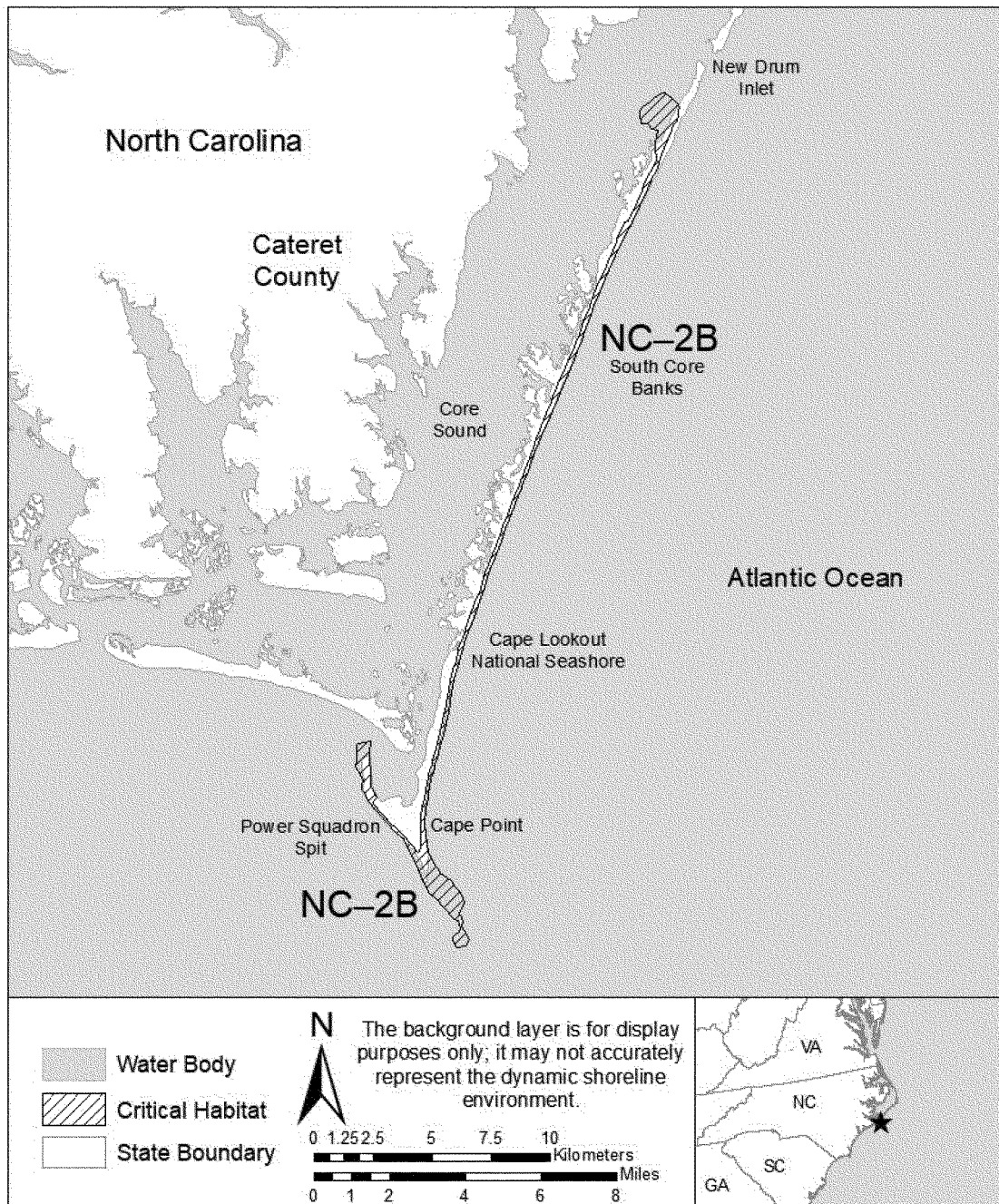
(iv) Subunit NC-2B (South Core Banks) consists of approximately 3,094 ac (1,252 ha) of occupied habitat in Carteret County consisting of beach shoreline from the South Core Banks side of the New Drum Inlet Channel south to the Power Squadron Spit excluding the jetty. The west boundary is at the toe of the primary dune or dense vegetation line where the

physical or biological features do not occur, and the east boundary is MLLW on the Atlantic Ocean (*i.e.*, the highly dynamic beach and emergent sand shoals that are covered at high tide and uncovered at low tide). This subunit also includes MLLW on Core Sound to the MLLW on the Atlantic Ocean in emergent sand shoals within the flood-tidal and ebb-tidal deltas associated

with the South Core Banks side of the New Drum Inlet channel, and all emergent sand shoals associated with Cape Point. All of the lands within this subunit are under Federal ownership (Cape Lookout National Seashore).

(v) Map of Subunit NC-2B follows: Figure 38 to Rufa Red Knot paragraph (42)(v)

### Critical Habitat for Rufa Red Knot NC-2B South Banks–South Core Banks; Carteret County, North Carolina



(43) Unit NC-3: Shackleford Island, North Carolina.

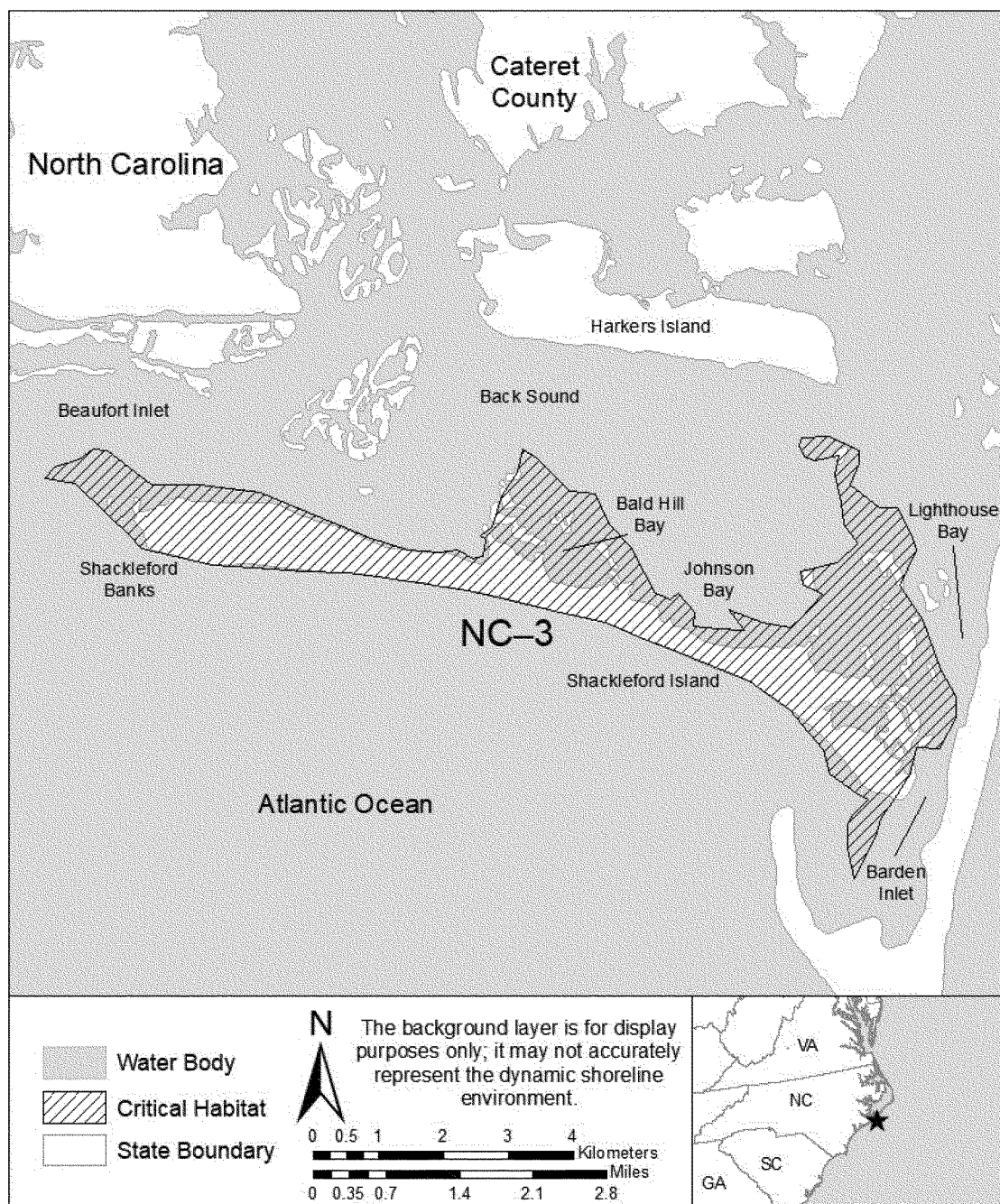
(i) Unit NC-3 consists of approximately 4,972 ac (2,012 ha) of occupied habitat in Carteret County consisting of shoreline habitat bounded to the north by the MLLW along Back Sound and Bald Hill, Johnson, and Lighthouse Bays south to dense vegetation where the physical or biological features do not occur. The

east boundary is the Shackleford Island side of Barden Inlet channel, the south boundary is MLLW on the Atlantic Ocean, and the west boundary is the Shackleford Island side of Beaufort Inlet Channel. This unit includes emergent sand shoals within the flood-tidal and ebb-tidal deltas associated with the Shackleford Island side of the Barden Inlet channel, and the emergent sand shoals within the flood-tidal and ebb-

tidal deltas associated with the west side of the Beaufort Inlet channel (*i.e.*, the highly dynamic beach and emergent sand shoals that are covered at high tide and uncovered at low tide). All lands within this unit are in Federal ownership (Cape Lookout National Seashore).

(ii) Map of Unit NC-3 follows: Figure 39 to Rufa Red Knot paragraph (43)(ii)

### Critical Habitat for Rufa Red Knot NC-3 Shackleford Island; Carteret County, North Carolina



(44) Unit NC-4: Emerald Isle–Atlantic Beach, North Carolina.

(i) Unit NC-4 consists of approximately 2,030 ac (822 ha) of occupied habitat in Carteret County consisting of shoreline habitat that stretches about 23 mi (37 km) from the Beaufort Inlet channel and Fort Macon State Park west to the eastern side of the Bogue Inlet channel. Unit NC-4 includes from MLLW to the toe of the

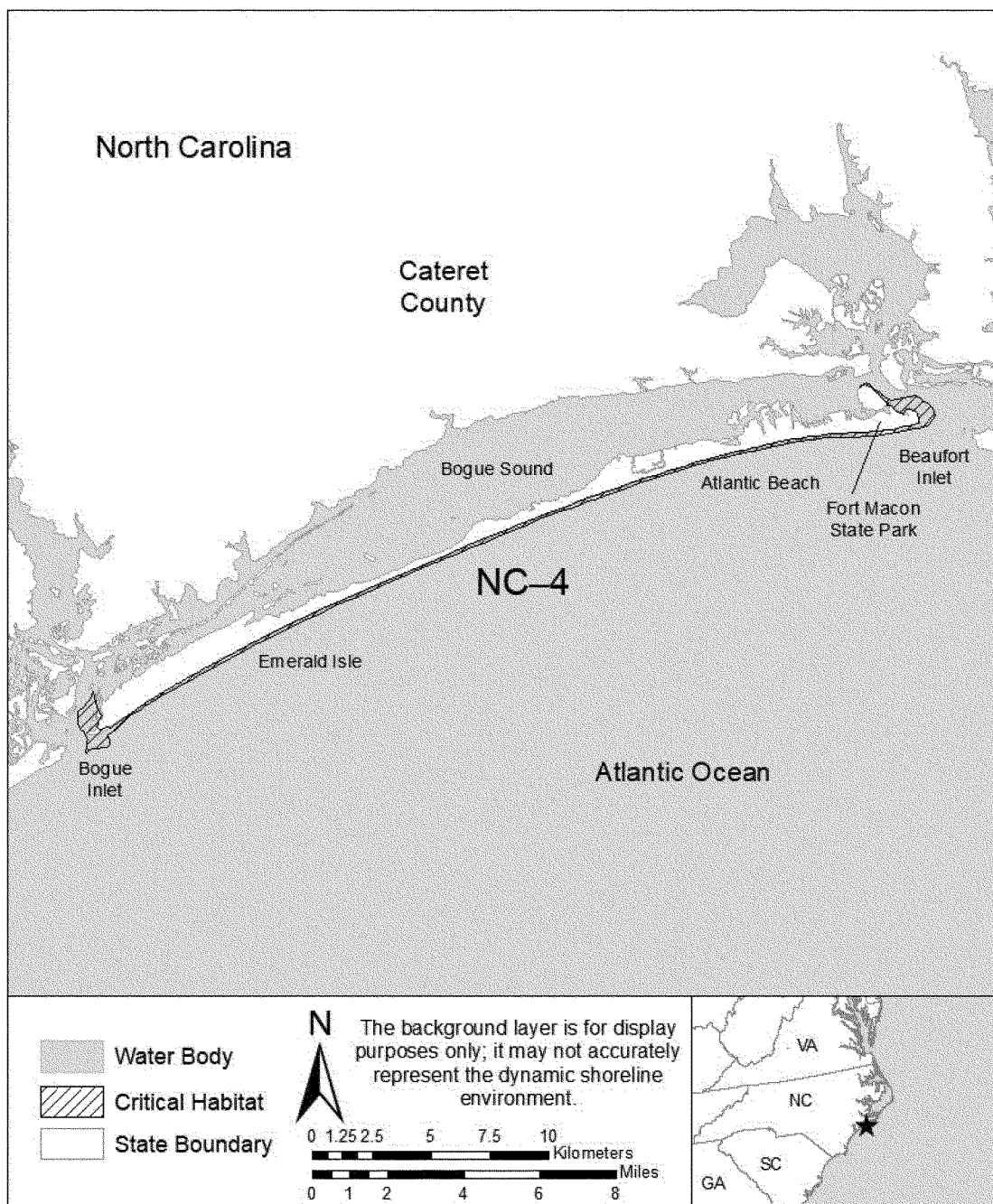
dunes or where densely vegetated habitat, not used by the rufa red knot, begins and where the physical or biological features no longer occur. This unit also includes the emergent sand shoals within the flood-tidal and ebb-tidal deltas associated with the west side of the Beaufort Inlet channel, not including the jetty, as well as the emergent sand shoals within the flood-tidal and ebb-tidal deltas on the east

side of the Bogue Inlet channel. Lands within this unit include approximately 1,908 ac (772 ha) in State ownership and 122 ac (50 ha) in private/other ownership (which includes 1 ac (0.5 ha) in local government ownership and 121 ac (49 ha) in private ownership).

(ii) Map of Unit NC-4 follows:

Figure 40 to Rufa Red Knot paragraph (44)(ii)

### Critical Habitat for Rufa Red Knot NC-4 Emerald Isle–Atlantic Beach, Carteret County, North Carolina



(45) Unit NC-5: New Topsail Inlet–Topsail Beach, North Carolina.

(i) Unit NC-5 consists of approximately 1,612 ac (652 ha) of occupied habitat in Onslow and Pender Counties consisting of shoreline habitat that stretches about 23 mi (37 km) from the west side of the New River Inlet channel west to the east side of the New

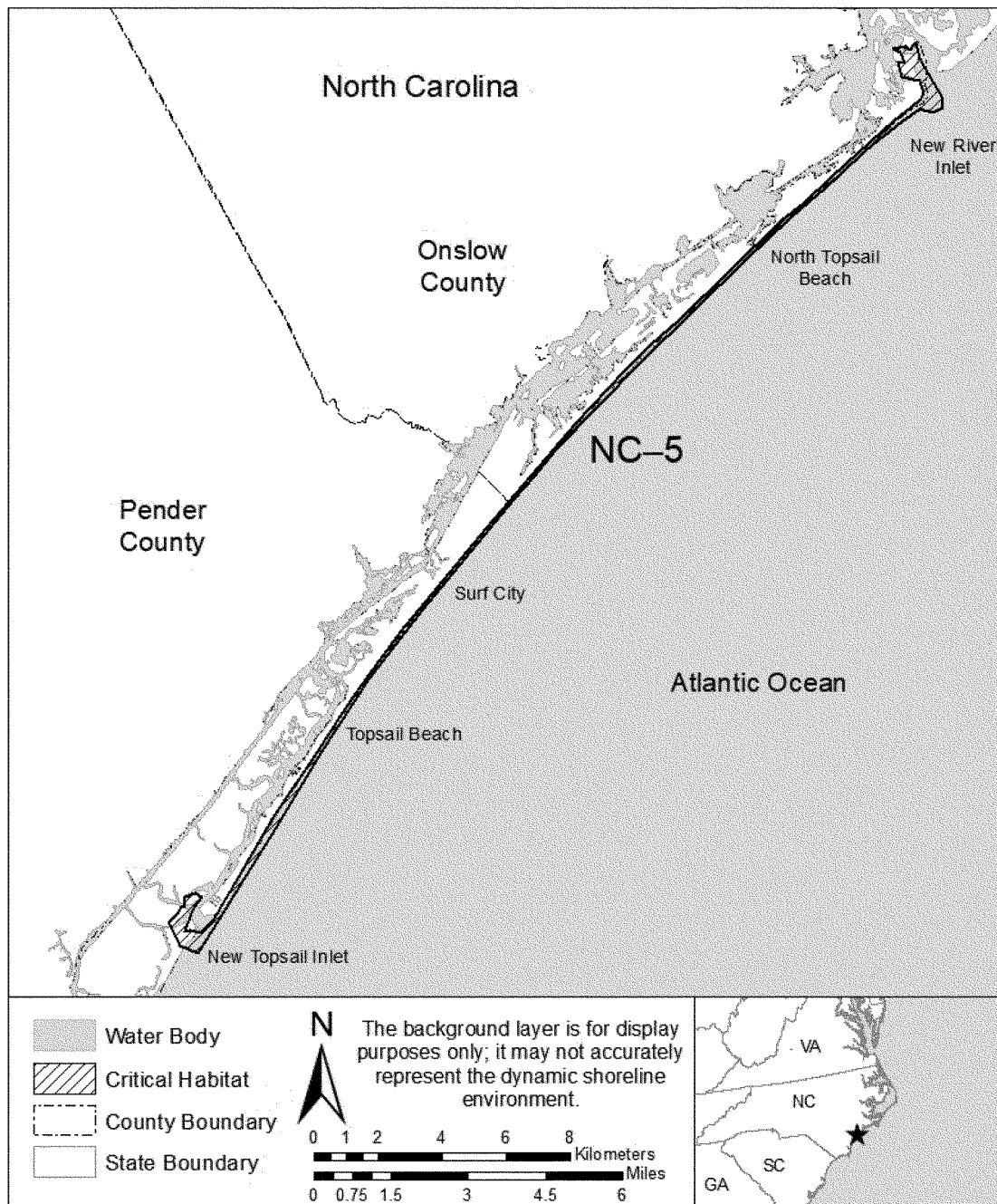
Topsail Inlet channel. This unit includes from MLLW to the toe of the dunes or where densely vegetated habitat, not used by the rufa red knot, begins and where the physical or biological features no longer occur. This unit also includes the emergent sand shoals within the flood-tidal and ebb-tidal deltas associated with the west

side of the New River Inlet channel, as well as the emergent sand shoals within the flood-tidal and ebb-tidal deltas on the east side of the New Topsail Inlet channel. All lands within this unit are in private/other ownership.

(ii) Map of Unit NC-5 follows:

Figure 41 to Rufa Red Knot paragraph (45)(ii)

### Critical Habitat for Rufa Red Knot NC-5 New Topsail Inlet–Topsail Beach; Onslow and Pender Counties, North Carolina





(46) Unit NC-6: Lea-Hutaff Island, North Carolina.

(i) Unit NC-6 consists of approximately 1,085 ac (439 ha) of occupied habitat on Lea-Hutaff Island in Pender and New Hanover Counties consisting of shoreline habitat that stretches about 4.8 mi (7.7 km) from the west side of the New Topsail Inlet channel west across the Rich Inlet channel to the toe of the primary dune

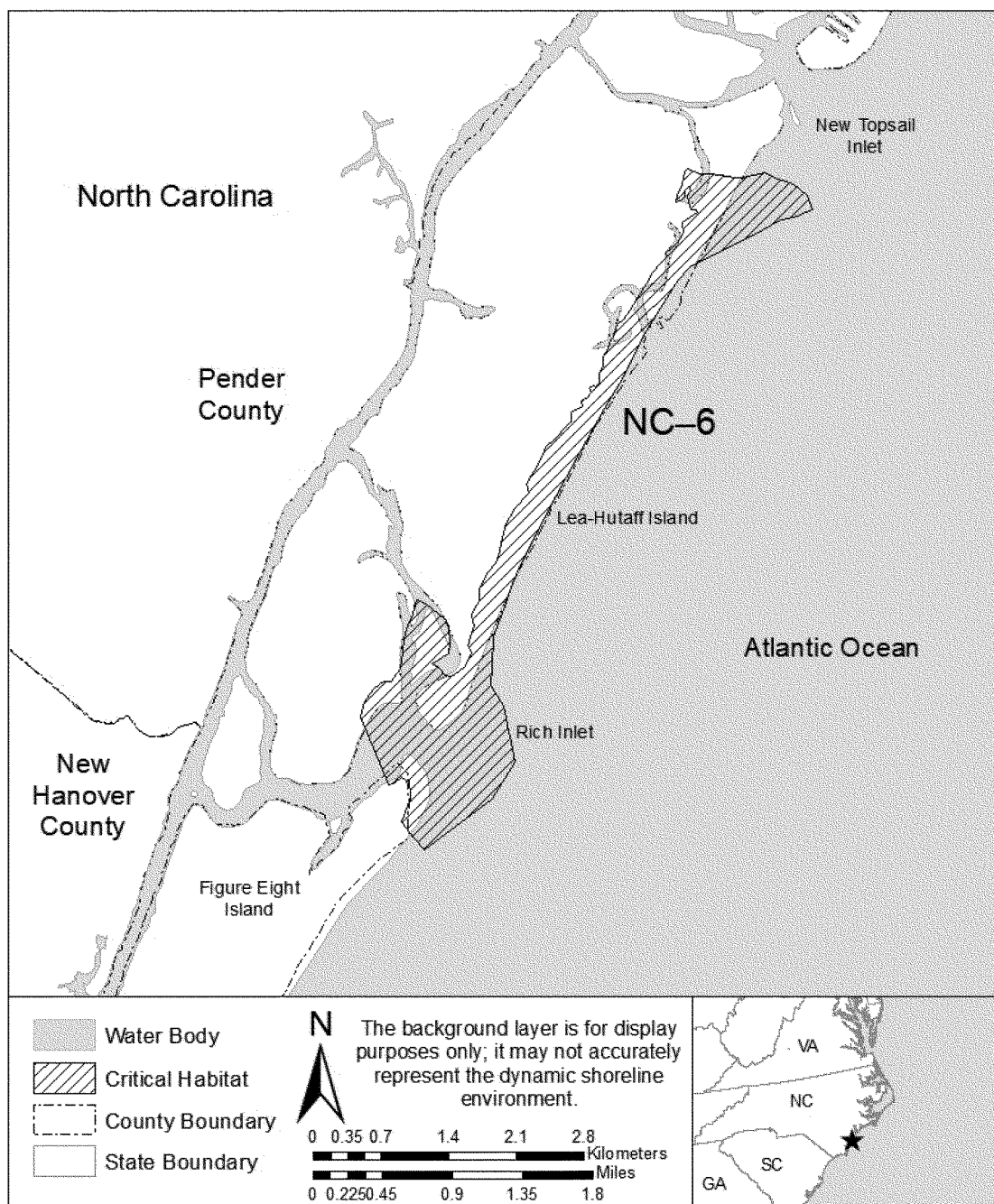
or dense vegetation line on the northeast end of Wrightsville Beach. This unit includes from MLLW to the toe of the dunes or where densely vegetated habitat, not used by the rufa red knot, begins and where the physical or biological features no longer occur. This unit also includes the emergent sand shoals within the flood-tidal and ebb-tidal deltas associated with the west side of the New Topsail Inlet channel,

and the emergent sand shoals within the flood-tidal and ebb-tidal deltas on the west side of Rich Inlet channel. Lands within this unit include approximately 72 ac (29 ha) in State ownership, 427 ac (173 ha) in private/other ownership, and 586 ac (237 ha) that are uncategorized.

(ii) Map of Unit NC-6 follows:

Figure 42 to Rufa Red Knot paragraph (46)(ii)

**Critical Habitat for Rufa Red Knot  
NC-6 Lea-Hutaff Island; Pender and New Hanover Counties,  
North Carolina**



(47) Unit NC-7: Cape Fear-Fort Fisher, North Carolina.

(i) Unit NC-7 consists of approximately 1,986 ac (804 ha) of occupied coastal barrier island from Carolina Beach Inlet in New Hanover County, North Carolina, to the mouth of the Cape Fear River in Brunswick County, North Carolina. The north boundary of this unit is the northeast tip of Pleasure Island south of Carolina Beach Inlet, and the south boundary extends from the tip of Cape Fear west approximately 3.4 mi (5 km) to the

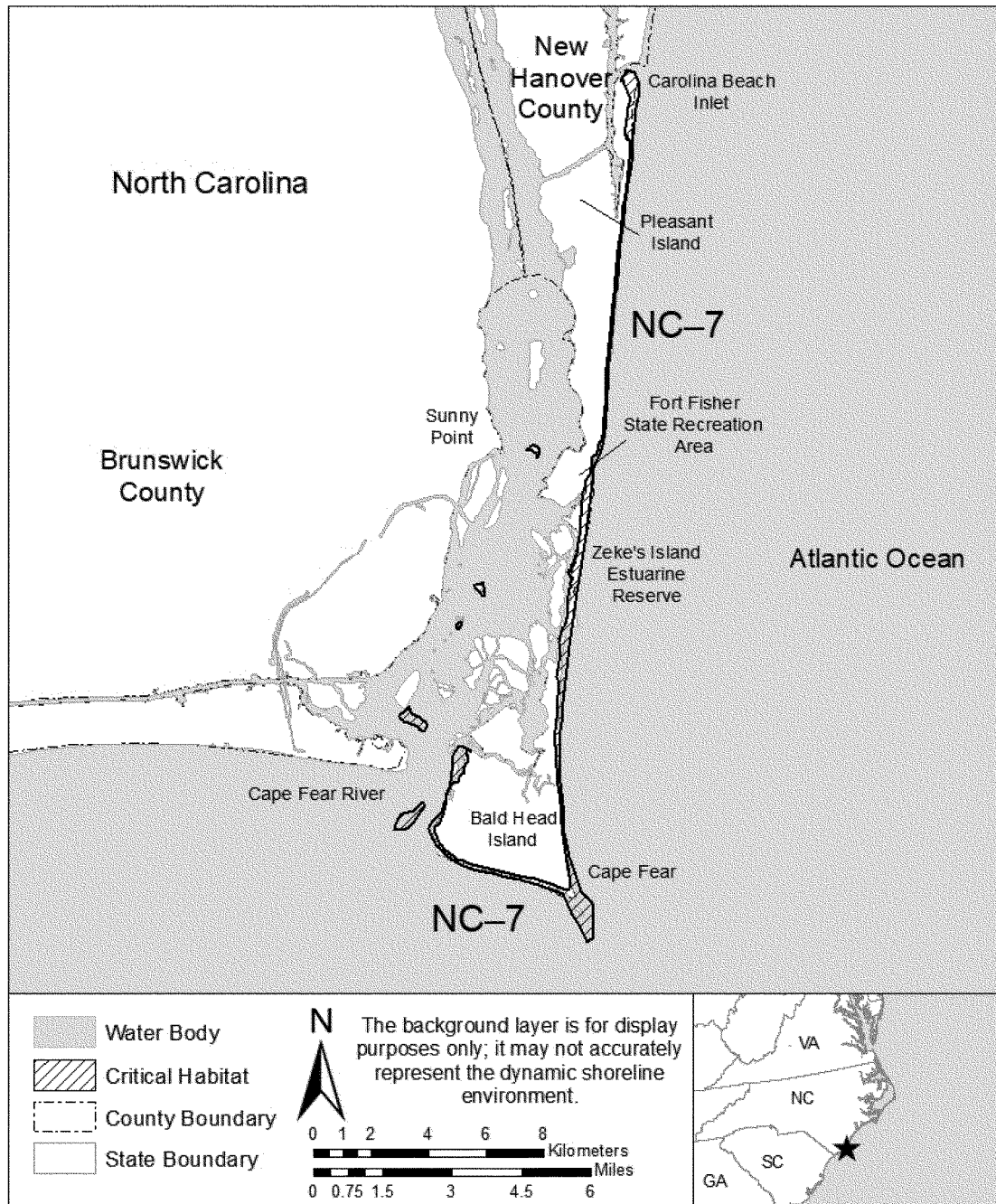
mouth of the Cape Fear River. The west boundary is the toe of the primary dune or where densely vegetated habitat, not used by the rufa red knot, begins and where the physical or biological features no longer occur. The east boundary is MLLW on the Atlantic Ocean excluding groins and jetties. This unit also includes all emergent sand shoals associated with the tip of Cape Fear, the Cape Fear River south of Military Ocean Terminal Sunny Point, and the emergent sand shoals within the flood-

tidal and ebb-tidal deltas associated with the southwest side of Carolina Beach Inlet channel and the southwest tip of Bald Head Island. Lands within this unit include approximately 1,713 ac (693 ha) in State ownership and 274 ac (111 ha) in private/other ownership. State lands in this unit contain parts of Fort Fisher State Recreation Area and Zeke's Island Estuarine Reserve.

(ii) Map of Unit NC-7 follows:

Figure 43 to Rufa Red Knot paragraph (47)(ii)

**Critical Habitat for Rufa Red Knot  
NC-7 Cape Fear-Fort Fisher; New Hanover and  
Brunswick Counties, North Carolina**



(48) Unit NC-8: Ocean Isle Beach, North Carolina.

(i) Unit NC-8 consists of approximately 298 ac (120 ha) of occupied coastal barrier island in Brunswick County, stretching about 6 mi (10 km) from the west side of Shallotte Inlet to the east side of Tubbs Inlet. The east boundary of this unit is the west side of Shallotte Inlet. The south boundary is the MLLW on the

Atlantic Ocean, the west boundary is the east side of Tubbs Inlet, and the north boundary is the toe of the primary dune or where densely vegetated habitat, not used by the rufa red knot, begins and where the physical or biological features no longer occur. This unit also includes the emergent sand shoals within the flood-tidal and ebb-tidal deltas associated with the west side of the Shallotte Inlet channel, as

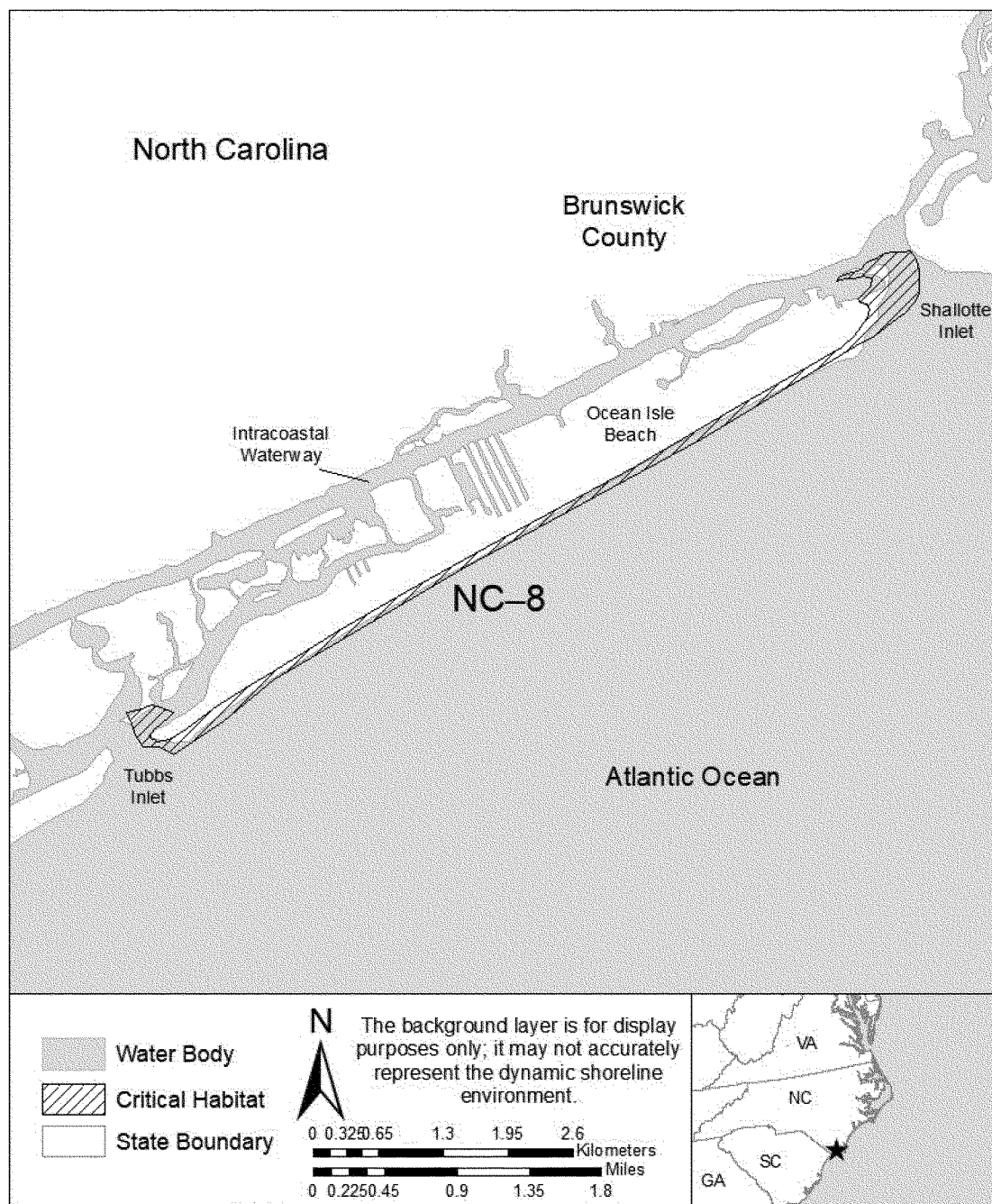
well as the emergent sand shoals within the flood-tidal and ebb-tidal deltas on the east side of the Tubbs Inlet channel. Lands within this unit include approximately 182 ac (73 ha) in State ownership and 116 ac (47 ha) in private/other (municipal) ownership.

(ii) Map of Unit NC-8 follows:

Figure 44 to Rufa Red Knot paragraph (48)(ii)



# **Critical Habitat for Rufa Red Knot** **NC-8 Ocean Isle Beach; Brunswick County, North Carolina**



(49) Unit NC-9: Sunset Beach–Bird Island, North Carolina.

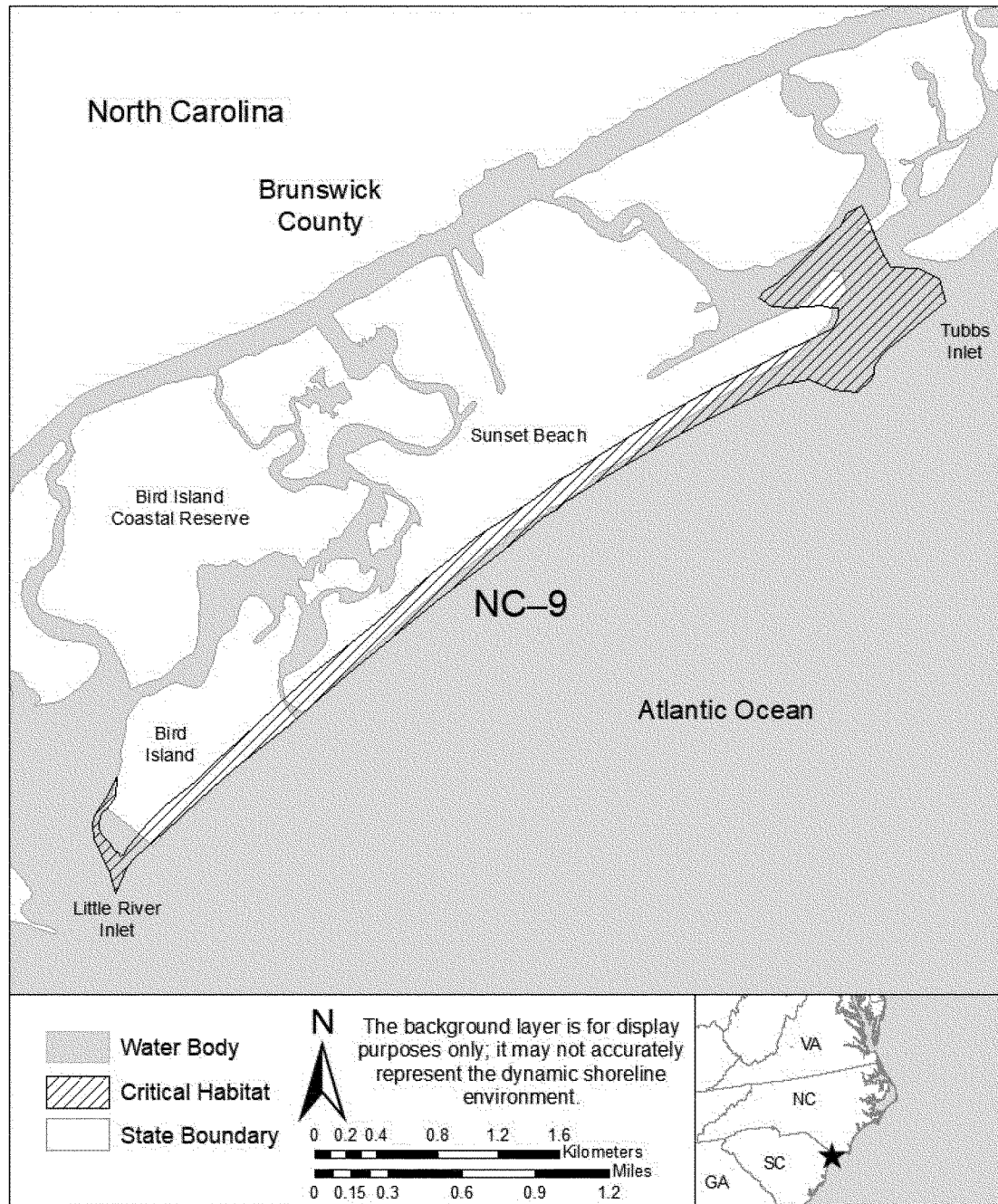
(i) Unit NC-9 consists of approximately 384 ac (155 ha) of occupied coastal barrier island in Brunswick County, stretching about 4.1 mi (6.6 km) from the west side of Tubbs Inlet to the east side of Little River Inlet. The east boundary of this unit is the west side of Tubbs Inlet. The south boundary is the MLLW on the Atlantic

Ocean, the west boundary is the east side of Little River Inlet, and the north boundary is the toe of the primary dune or where densely vegetated habitat, not used by the rufa red knot, begins and where the physical or biological features no longer occur. This unit also includes the emergent sand shoals within the flood-tidal and ebb-tidal deltas associated with the west side of the Tubbs Inlet channel, as well as the

emergent sand shoals within the flood-tidal and ebb-tidal deltas on the east side of the Little River Inlet channel, excluding the jetty. Lands within this unit include approximately 345 ac (139 ha) in State ownership (part of the North Carolina Coastal Reserve) and 39 ac (16 ha) in private/other ownership.

(ii) Map of Unit NC-9 follows: Figure 45 to Rufa Red Knot paragraph (49)(ii)

**Critical Habitat for Rufa Red Knot**  
**NC-9 Sunset Beach–Bird Island; Brunswick County, North Carolina**



(50) Unit SC-1: Garden City Beach, South Carolina.

(i) Unit SC-1 consists of approximately 616 ac (249 ha) of occupied coastal shoreline habitat in Georgetown and Horry Counties. The northern boundary of the unit begins at the Garden City pier in Horry County and extends southwest to the northern side of Murrells Inlet in Georgetown

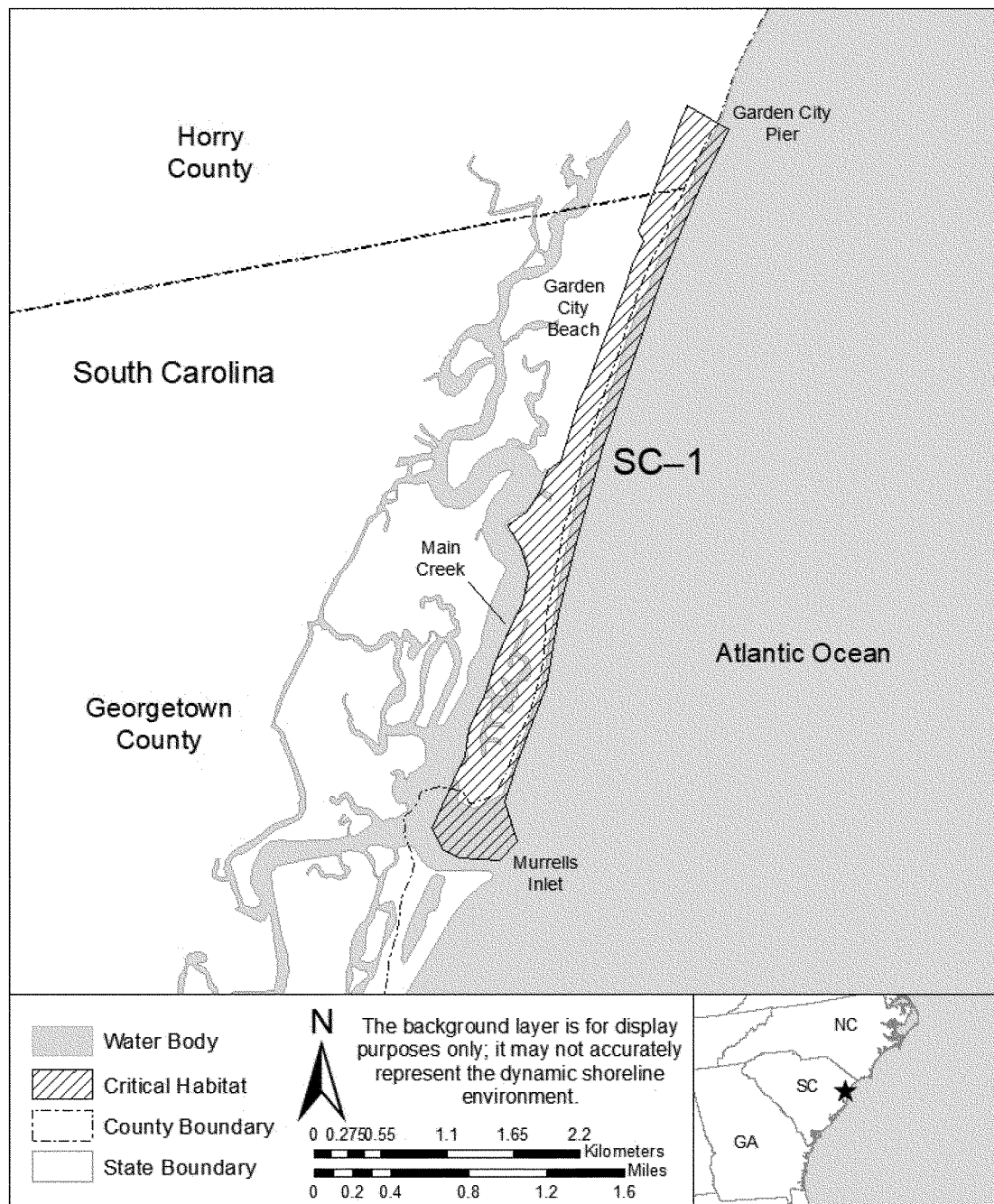
County. The unit includes all emergent land from MLLW (which includes the highly dynamic shoreline and sandy intertidal zone that is covered at high tide and uncovered at low tide) to the toe of the dunes or where densely vegetated habitat, not used by the rufa red knot, begins. This unit also includes the ephemeral, emergent shoals (sand bars) within the flood-tidal and ebb-

tidal deltas associated with the northeastern side of Murrells Inlet's navigable channel. Lands within this unit include approximately 267 ac (108 ha) in State ownership and 349 ac (141 ha) in private/other ownership.

(ii) Map of Unit SC-1 follows:

Figure 46 to Rufa Red Knot paragraph (50)(ii)

**Critical Habitat for Rufa Red Knot  
SC-1 Garden City Beach; Horry and Georgetown  
Counties, South Carolina**



(51) Unit SC-2: Huntington Beach State Park–Litchfield Beach, South Carolina.

(i) Unit SC-2 consists of approximately 1,634 ac (661 ha) of occupied coastal shoreline habitat in Georgetown County. The unit boundary begins on the southern side of Murrells Inlet southwest and extends southwest to the northern side of Midway Inlet. The unit includes all emergent land

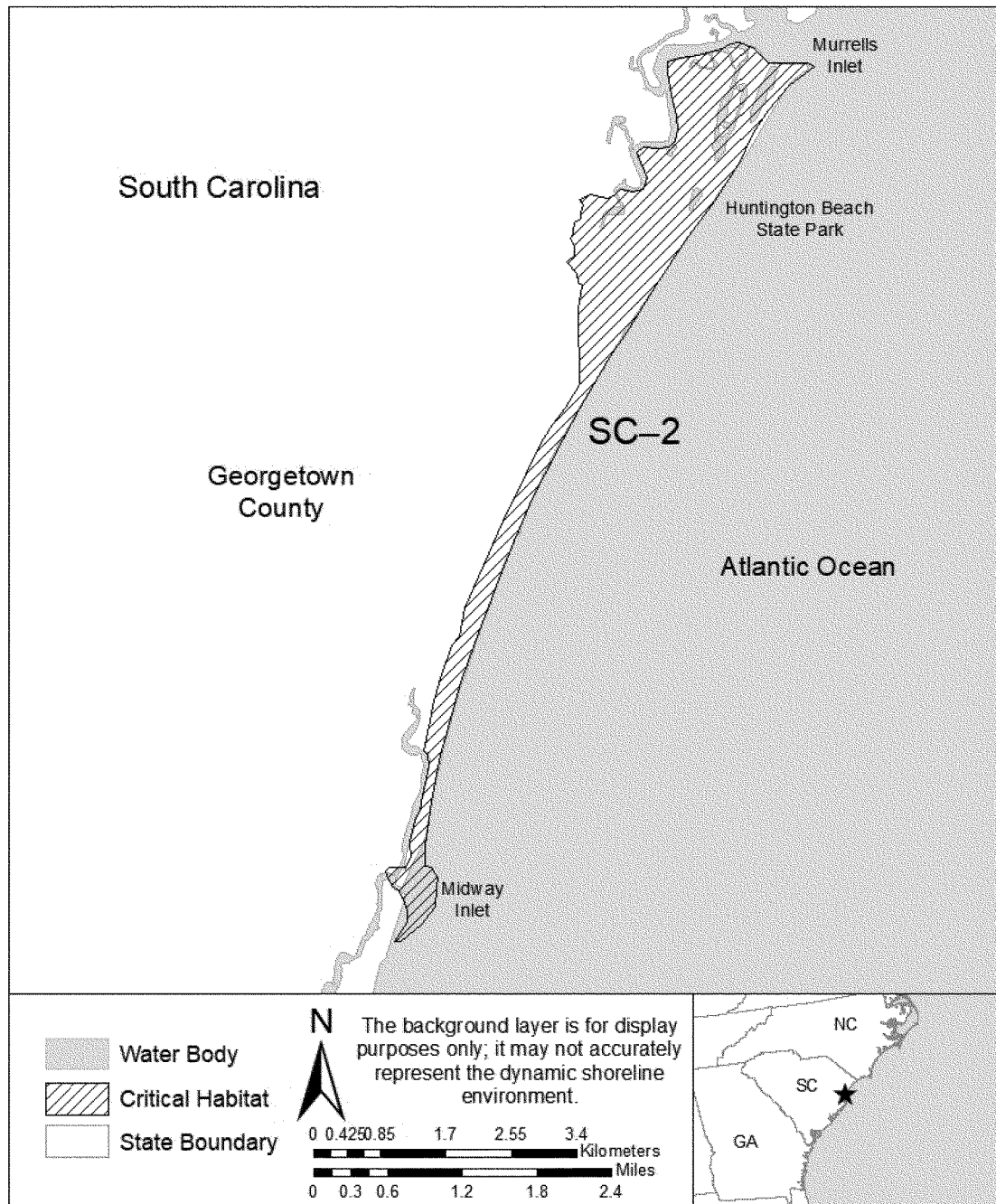
from MLLW (which includes the highly dynamic shoreline and sandy intertidal zone that is covered at high tide and uncovered at low tide) to the toe of the dunes or where densely vegetated habitat, not used by the rufa red knot, begins. This unit also includes the ephemeral, emergent shoals (sand bars) within the flood-tidal and ebb-tidal deltas associated with the southwestern side of Murrells Inlet's navigable

channel and the northeastern side of Midway Inlet's navigable channel. Lands within this unit include approximately 80 ac (32 ha) in State ownership, which includes Huntington Beach State Park, and 1,554 ac (629 ha) in private/other ownership.

(ii) Map of Unit SC-2 follows:

Figure 47 to Rufa Red Knot paragraph (51)(ii)

**Critical Habitat for Rufa Red Knot  
SC-2 Huntington Beach State Park–Litchfield Beach;  
Georgetown County, South Carolina**



(52) Unit SC-3: Sand and South Island Beaches, South Carolina.

(i) Unit SC-3 consists of approximately 8,256 ac (3,341 ha) of occupied coastal shoreline habitat on Sand and South Islands, barrier islands off the coast of Georgetown County. The unit boundary begins on the northeastern edge of South Island in North Inlet behind North Island following the shoreline to include Sand

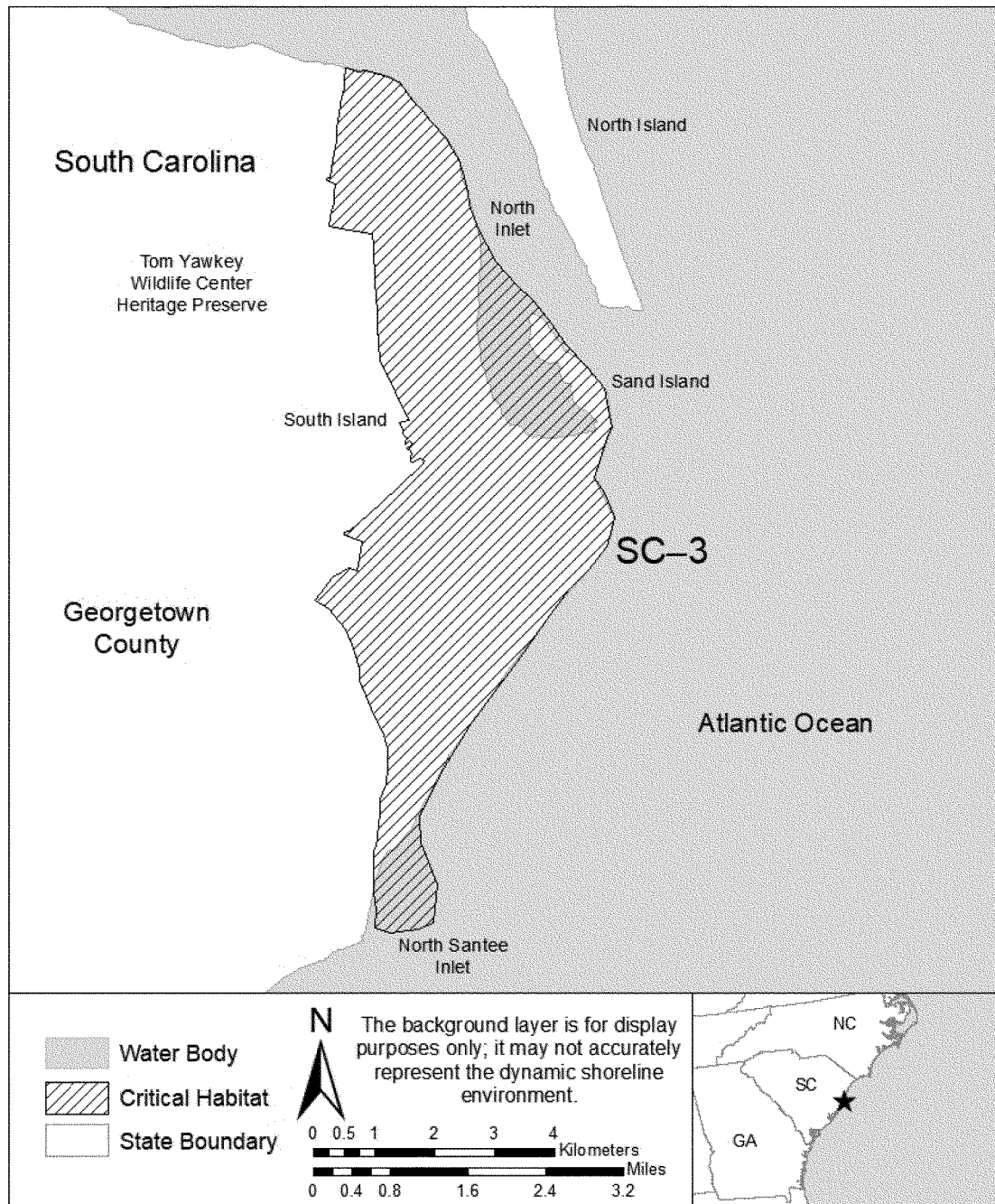
Island and continuing southwest to the southern tip of South Island. The unit includes all emergent land from MLLW (which includes the highly dynamic shoreline and sandy intertidal zone that is covered at high tide and uncovered at low tide) to the toe of the dunes or where densely vegetated habitat, not used by the rufa red knot, begins. This unit also includes the ephemeral, emergent shoals (sand bars) within the

flood-tidal and ebb-tidal deltas associated with the unnamed inlet between Sand and South Islands and the northeastern side of North Santee River Inlet's navigable channel. Lands within this unit include approximately 7,843 ac (3,174 ha) in State ownership (including the Tom Yawkey Wildlife Center Heritage Preserve), 129 ac (52 ha) in private/other ownership, and 283 ac (115 ha) that are uncategorized.

(ii) Map of Unit SC-3 follows:

Figure 48 to Rufa Red Knot paragraph (52)(ii)

**Critical Habitat for Rufa Red Knot  
SC-3 Sand and South Island Beaches;  
Georgetown County, South Carolina**



(53) Unit SC-4: Murphy Island Beach, South Carolina.

(i) Unit SC-4 consists of approximately 8,312 ac (3,364 ha) of occupied coastal shoreline habitat on all of Murphy Island, a barrier island off the coast of Charleston County. The unit

boundary begins on the South Santee River shoreline of Murphy Island and extends to the Alligator Creek shoreline. The unit includes all emergent land from MLLW (which includes the highly dynamic shoreline and sandy intertidal zone that is covered at high tide and

uncovered at low tide) to the toe of the dunes or where densely vegetated habitat, not used by the rufa red knot, begins. This unit also includes the ephemeral, emergent shoals (sand bars) within the flood-tidal and ebb-tidal deltas associated with the unnamed

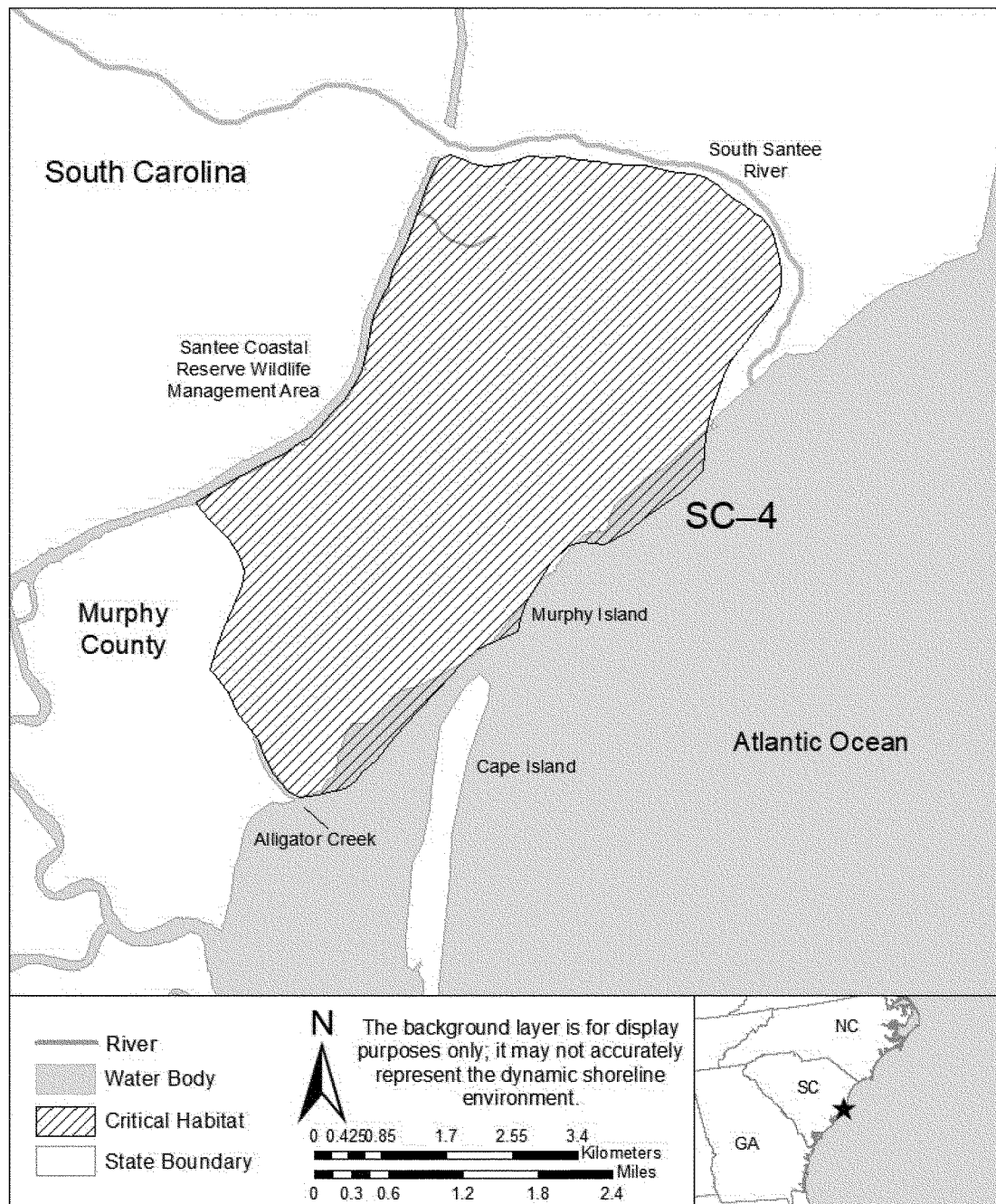


inlets along the shoreline of Murphy Island. Lands within this unit are entirely in State ownership; the South Carolina Department of Natural

Resources manages Murphy Island as part of the Santee Coastal Reserve Wildlife Management Area.  
(ii) Map of Unit SC-4 follows:

Figure 49 to Rufa Red Knot paragraph (53)(ii)

### Critical Habitat for Rufa Red Knot SC-4 Murphy Island Beach; Murphy County, South Carolina



(54) Unit SC-5: North Cape Island Beach, South Carolina.

(i) Unit SC-5 consists of approximately 1,270 ac (514 ha) of occupied coastal shoreline habitat on the northern portion of Cape Island, a

barrier island off the coast of Charleston County. The unit boundary begins on the Cape Romain Harbor shoreline of Cape Island and extends south to the shoreline along the unnamed inlet between South Cape Island and

Lighthouse Island. The unit includes all emergent land from MLLW to the toe of the dunes or where densely vegetated habitat (not used by the rufa red knot) begins (*i.e.*, the highly dynamic shoreline and the sandy intertidal zone



that are covered at high tide and uncovered at low tide). This dynamic habitat also includes the ephemeral emergent shoals (sand bars) within the flood-tidal and ebb-tidal deltas associated with the northern side of the

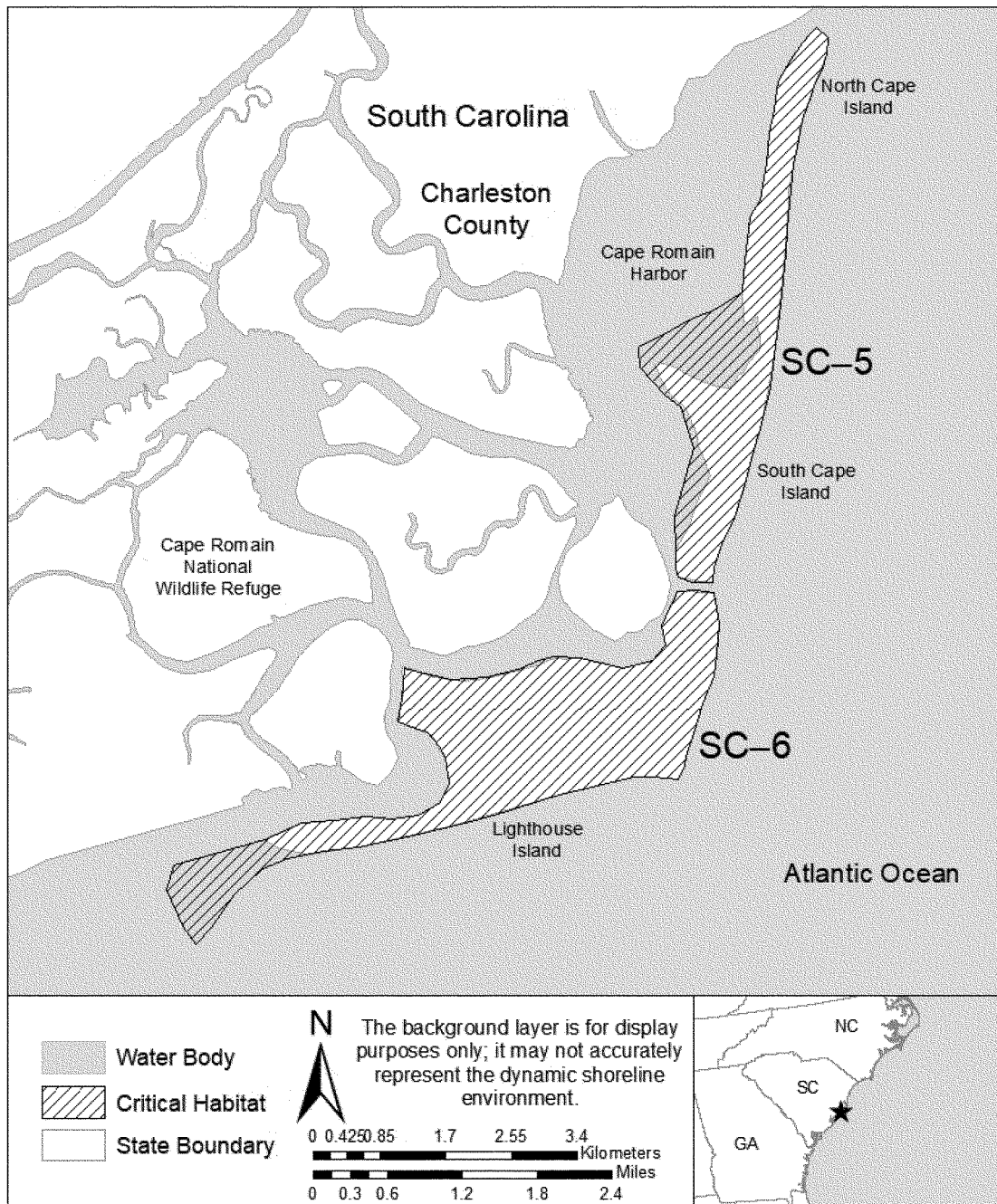
navigable channel of the unnamed inlet between South Cape Island and Lighthouse Island. Lands within this unit include approximately 775 ac (313 ha) in Federal ownership (Cape Romain

NWR) and 495 ac (200 ha) in State ownership.

(ii) Map of Unit SC-5 follows:

Figure 50 to Rufa Red Knot paragraph (54)(ii)

**Critical Habitat for Rufa Red Knot**  
**SC-5 North Cape Island Beach and SC-6 South Cape and**  
**Lighthouse Island Beaches; Charleston County, South Carolina**



(55) Unit SC-6: South Cape and Lighthouse Island Beaches, South Carolina.

(i) Unit SC-6 consists of approximately 2,037 ac (824 ha) of occupied coastal shoreline habitat along the entire southern portion of Cape

Island and all of Lighthouse Island, barrier islands off the coast, in Charleston County. The unit boundary begins at the unnamed inlet between

South Cape Island and Lighthouse Island and extends to the western tip of Lighthouse Island in Key Inlet. The unit includes all emergent land from MLLW to the toe of the dunes or where densely vegetated habitat (not used by the rufa red knot) begins (*i.e.*, the highly dynamic shoreline and the sandy intertidal zone that are covered at high tide and uncovered at low tide). This dynamic habitat also includes the ephemeral emergent shoals (sand bars) within the flood-tidal and ebb-tidal deltas associated with the southern side of the navigable channel of the unnamed inlet between North Cape Island and South Cape Island and the emergent sand shoals associated with

Key Inlet. Lands within this unit include approximately 1,552 ac (628 ha) in Federal ownership (Cape Romain NWR) and 485 ac (196 ha) in State ownership.

(ii) Map of Unit SC-6 is presented at paragraph (54)(ii) of this entry.

(56) Unit SC-7: Raccoon Key Complex and White Banks Beaches, South Carolina.

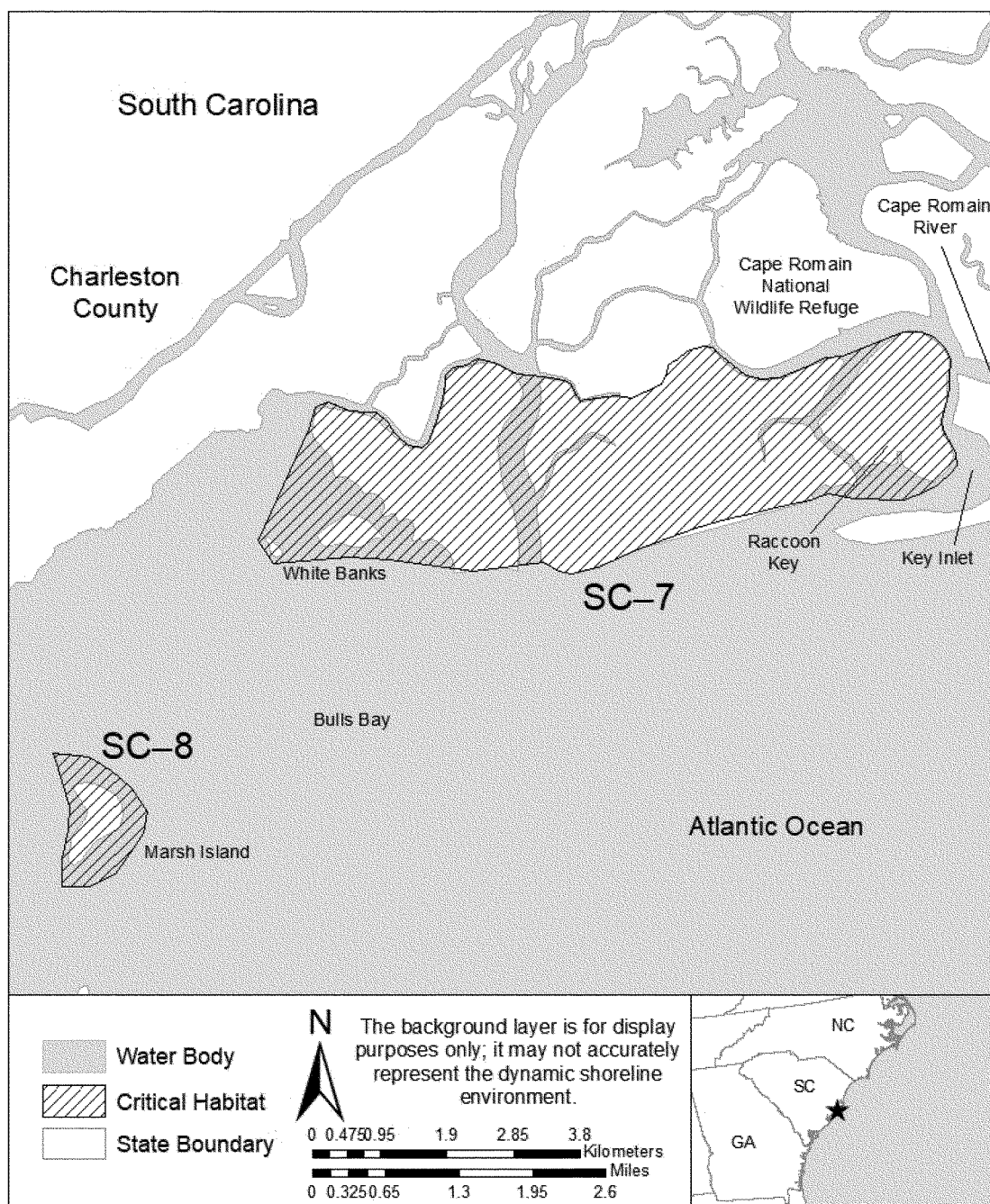
(i) Unit SC-7 consists of approximately 5,324 ac (2,154 ha) of occupied coastal shoreline habitat along the entire Raccoon Key complex and White Banks, islands off the coast, in Charleston County. The unit boundary begins at the intersection of the Romain River and Key Inlet side of Raccoon Key and extends to the western edge of

White Banks in Bulls Bay. The unit includes all emergent land from MLLW to the toe of the dunes or where densely vegetated habitat (not used by the rufa red knot) begins (*i.e.*, the highly dynamic shoreline and the sandy intertidal zone that are covered at high tide and uncovered at low tide). This dynamic habitat also includes the ephemeral emergent shoals (sand bars) within the flood-tidal and ebb-tidal deltas associated with the unnamed inlets in the Raccoon Key complex. Lands within this unit are all in Federal ownership (Cape Romain NWR).

(ii) Map of Unit SC-7 follows:

Figure 51 to Rufa Red Knot paragraph (56)(ii)

**Critical Habitat for Rufa Red Knot**  
**SC-7 Raccoon Key Complex and White Banks Beaches and**  
**SC-8 Marsh Island; Charleston County, South Carolina**



(57) Unit SC-8: Marsh Island, South Carolina.

(i) Unit SC-8 consists of approximately 415 ac (168 ha) of occupied habitat across the entirety of Marsh Island, which is an island in Bulls Bay, Charleston County. The unit includes all emergent land from MLLW to the toe of the dunes or where densely vegetated habitat (not used by the rufa red knot) begins (*i.e.*, the highly

dynamic shoreline and the sandy intertidal zone that are covered at high tide and uncovered at low tide). This dynamic habitat also includes the ephemeral emergent shoals (sand bars) within the flood-tidal and ebb-tidal deltas associated with Marsh Island. Lands within this unit are all in Federal ownership (Cape Romain NWR).

(ii) Map of Unit SC-8 is presented at paragraph (56)(ii) of this entry.

(58) Unit SC-9: Bulls Island Beach, South Carolina.

(i) Unit SC-9 consists of approximately 6,141 ac (2,485 ha) of occupied habitat across the entirety of Bulls Island, which is a barrier island along the coast of Charleston County. The unit boundary begins on the Bulls Bay shoreline of Bulls Island and extends southwest to the Price Inlet shoreline. The unit includes all

emergent land from MLLW to the toe of the dunes or where densely vegetated habitat (not used by the rufa red knot) begins (*i.e.*, the highly dynamic shoreline and the sandy intertidal zone that are covered at high tide and uncovered at low tide). This dynamic

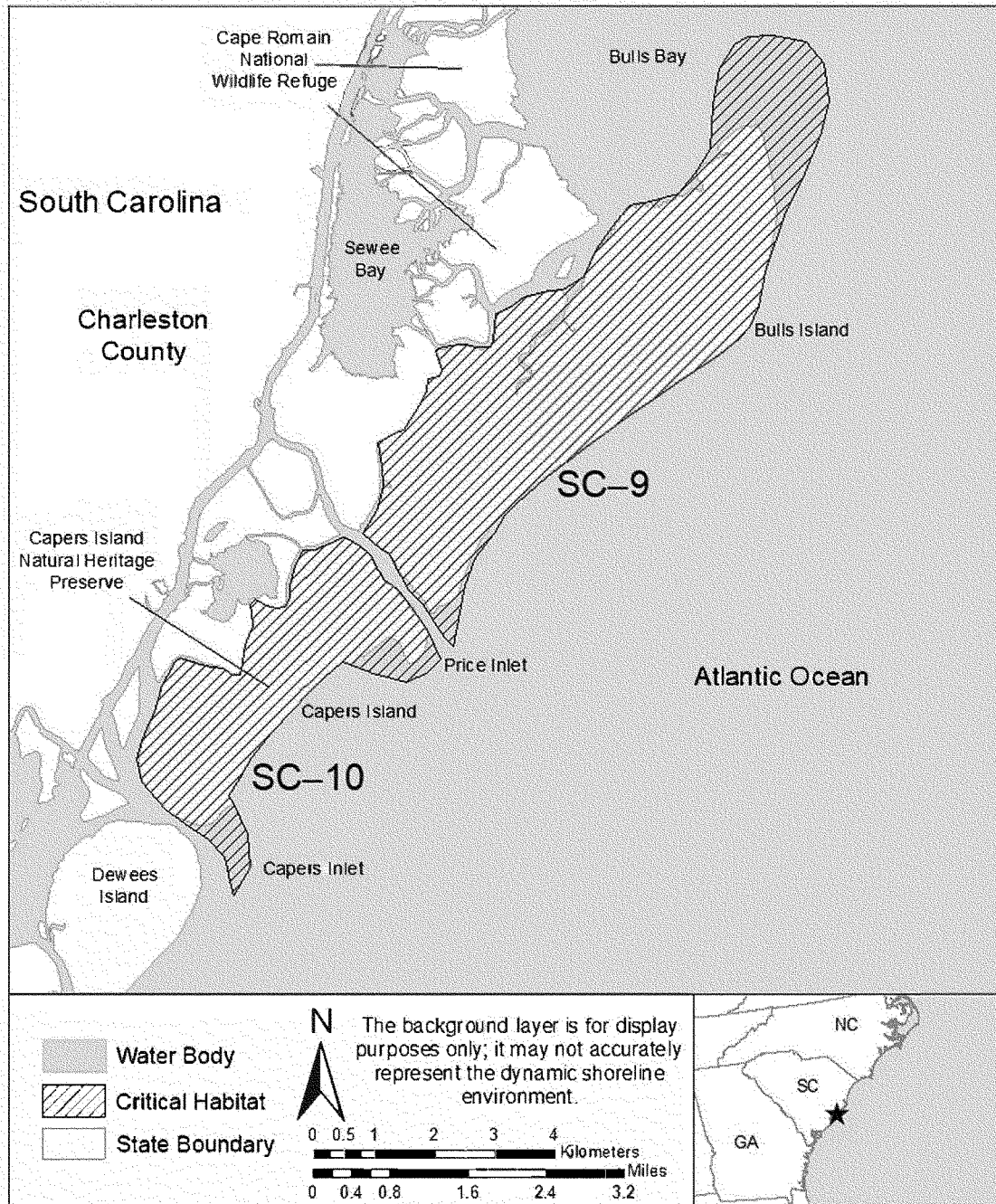
habitat also includes the ephemeral emergent shoals (sand bars) within the flood-tidal and ebb-tidal deltas associated with the northeastern side of Price Inlet's navigable channel. Lands within this unit include approximately 5,200 ac (2,104 ha) in Federal

ownership (Cape Romain NWR) and 941 ac (381 ha) in State ownership.

(ii) Map of Unit SC-9 follows:

Figure 52 to Rufa Red Knot paragraph (58)(ii)

**Critical Habitat for Rufa Red Knot  
SC-9 Bulls Island Beach and SC-10 Capers Island Beach;  
Charleston County, South Carolina**



(59) Unit SC–10: Capers Island Beach, South Carolina.

(i) Unit SC–10 consists of approximately 2,534 ac (1,026 ha) of occupied habitat across the entirety of Capers Island, which is a barrier island off the coast of Charleston County. The unit boundary begins on the Price Inlet shoreline of Capers Island and extends southwest to the Capers Inlet shoreline. The unit includes all emergent land from MLLW to the toe of the dunes or where densely vegetated habitat (not used by the rufa red knot) begins (*i.e.*, the highly dynamic shoreline and the sandy intertidal zone that are covered at high tide and uncovered at low tide). This dynamic habitat also includes the ephemeral emergent shoals (sand bars) within the flood-tidal and ebb-tidal

deltas associated with the southwestern side of Price Inlet's navigable channel and the northeastern side of Capers Inlet's navigable channel. Lands within this unit are entirely in State ownership (Capers Island Natural Heritage Preserve).

(ii) Map of Unit SC–10 is presented at paragraph (58)(ii) of this entry.

(60) Unit SC–11: Dewees Island Beach, South Carolina.

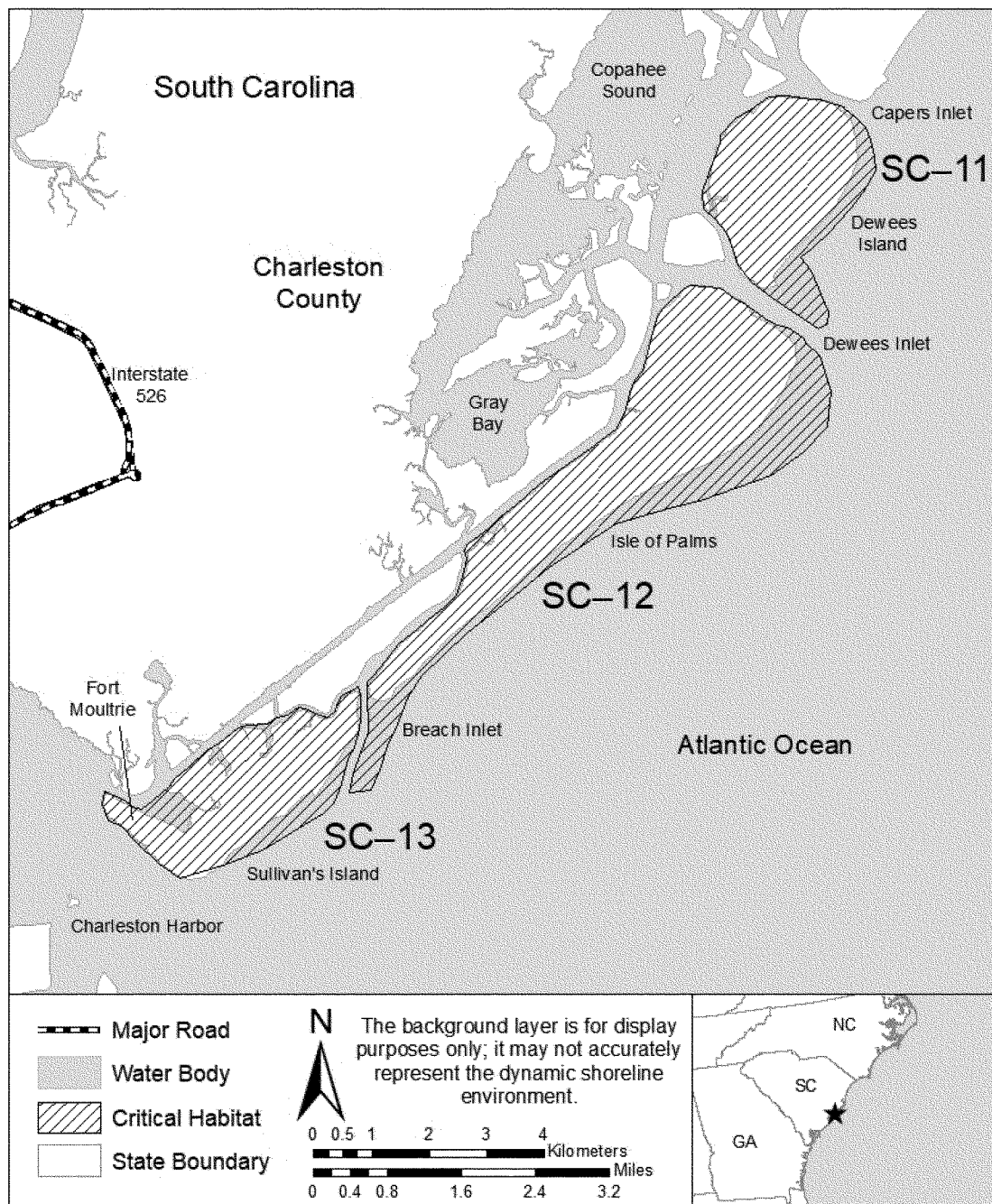
(i) Unit SC–11 consists of approximately 1,812 ac (733 ha) of occupied habitat across the entirety of Dewees Island, which is a barrier island off the coast of Charleston County. The unit boundary begins on the Capers Inlet shoreline of Dewees Island and extends to the Dewees Inlet shoreline. The unit includes all emergent land

from MLLW to the toe of the dunes or where densely vegetated habitat (not used by the rufa red knot) begins (*i.e.*, the highly dynamic shoreline and the sandy intertidal zone that are covered at high tide and uncovered at low tide). This dynamic habitat also includes the ephemeral emergent shoals (sand bars) within the flood-tidal and ebb-tidal deltas associated with the southwestern side of Capers Inlet's navigable channel and the northeastern side of Dewees Inlet's navigable channel. Lands within this unit include approximately 265 ac (107 ha) in State ownership and 1,547 ac (626 ha) in private/other ownership.

(ii) Map of Unit SC–11 follows:

Figure 53 to Rufa Red Knot paragraph (60)(ii)

**Critical Habitat for Rufa Red Knot**  
**SC-11 Dewees Island Beach, SC-12 Isle of Palms Beach, and**  
**SC-13 Sullivan's Island Beach; Charleston County, South Carolina**



(61) Unit SC-12: Isle of Palms Beach, South Carolina.

(i) Unit SC-12 consists of approximately 4,117 ac (1,666 ha) of occupied habitat across the entirety of Isle of Palms, which is a barrier island off the coast of Charleston County. The unit boundary begins at the Dewees Inlet shoreline of the Isle of Palms and extends southwest to the Breach Inlet

shoreline. The unit includes all emergent land from MLLW to the toe of the dunes or where densely vegetated habitat (not used by the rufa red knot) begins (*i.e.*, the highly dynamic shoreline and the sandy intertidal zone that are covered at high tide and uncovered at low tide). This dynamic habitat also includes the ephemeral emergent shoals (sand bars) within the

flood-tidal and ebb-tidal deltas associated with the southwestern side of Dewees Inlet's navigable channel and the northeastern side of Breach Inlet's navigable channel. Lands within this unit include approximately 754 ac (305 ha) in State ownership and 3,363 ac (1,361 ha) in private/other ownership.

(ii) Map of Unit SC-12 is presented at paragraph (53)(ii) of this entry.



(62) Unit SC-13: Sullivan's Island Beach, South Carolina.

(i) Unit SC-13 consists of approximately 1,782 ac (721 ha) of occupied habitat across the entirety of Sullivan's Island, which is a barrier island off the coast of Charleston County. The unit boundary begins on the Breach Inlet shoreline of Sullivan's Island and extends southwest to the Charleston Harbor shoreline. The unit includes all emergent land from MLLW to the toe of the dunes or where densely vegetated habitat (not used by the rufa red knot) begins (*i.e.*, the highly dynamic shoreline and the sandy intertidal zone that are covered at high tide and uncovered at low tide). This dynamic habitat also includes the ephemeral emergent shoals (sand bars) within the flood-tidal and ebb-tidal

deltas associated with the southwestern side of Breach Inlet's navigable channel. Lands within this unit include approximately 83 ac (34 ha) in Federal ownership (Ft. Moultrie, which is part of Ft. Sumter National Monument), 694 ac (281 ha) in State ownership, and 1,005 ac (407 ha) in private/other ownership.

(ii) Map of Unit SC-13 is presented at paragraph (53)(ii) of this entry.

(63) Unit SC-14: Folly Beach, South Carolina.

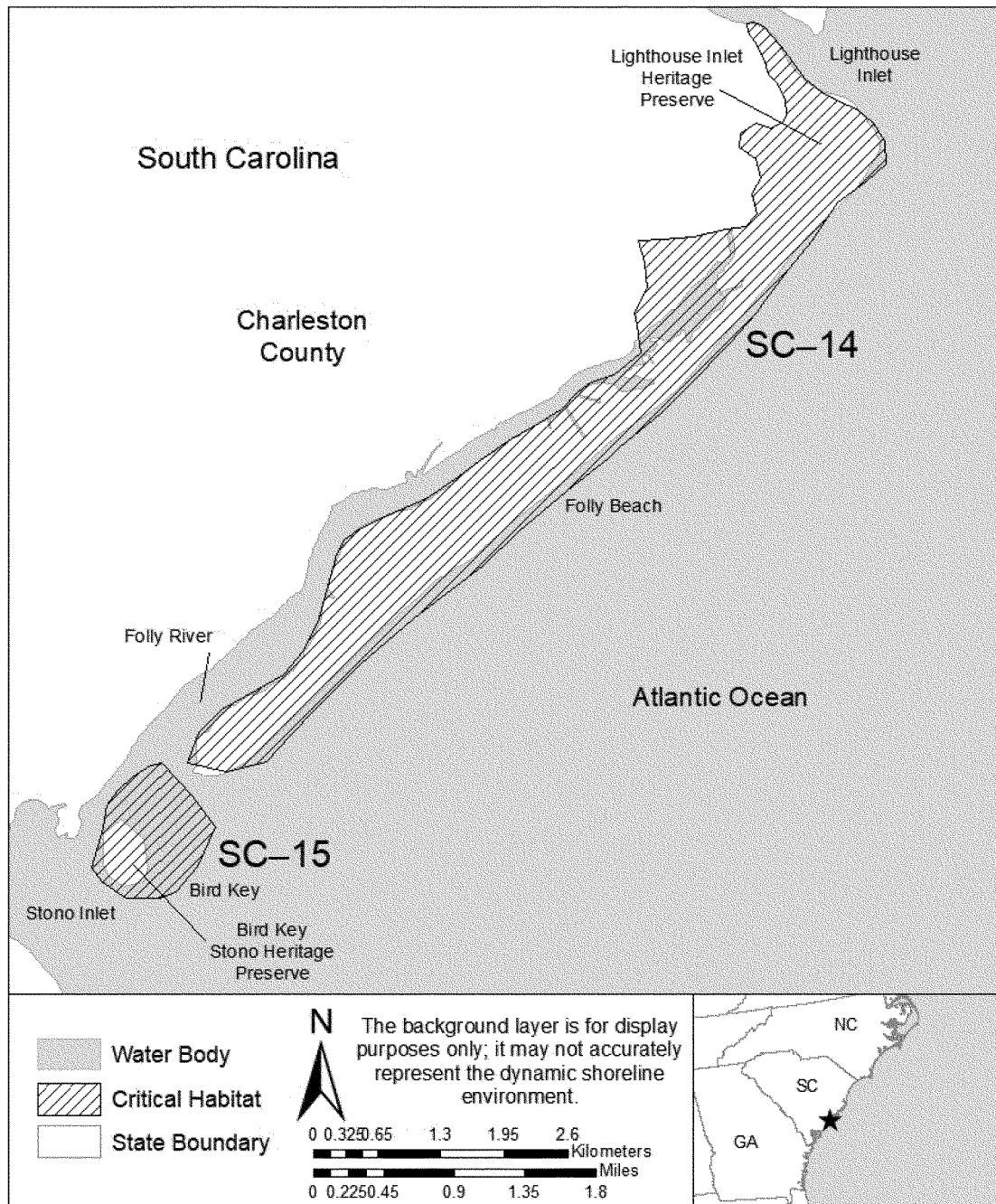
(i) Unit SC-14 consists of approximately 1,989 ac (805 ha) of occupied habitat across the entirety of Folly Beach, which is a barrier island off the coast of Charleston County. The unit boundary begins on the Lighthouse Inlet shoreline of Folly Beach and extends southwest to the Folly River shoreline. The unit includes all emergent land

from MLLW to the toe of the dunes or where densely vegetated habitat (not used by the rufa red knot) begins (*i.e.*, the highly dynamic shoreline and the sandy intertidal zone that are covered at high tide and uncovered at low tide). This dynamic habitat also includes the ephemeral emergent shoals (sand bars) within the flood-tidal and ebb-tidal deltas associated with the southwestern side of Lighthouse Inlet's navigable channel and the Folly Beach side of the Folly River Inlet's navigable channel between Folly Beach and Bird Key. Lands within this unit are entirely in private/other land ownership within the city limits of the municipality of the City of Folly Beach.

(ii) Map of Unit SC-14 follows:

Figure 54 to Rufa Red Knot paragraph (63)(ii)

**Critical Habitat for Rufa Red Knot  
SC-14 Folly Beach and SC-15 Bird Key Stono;  
Charleston County, South Carolina**



(64) Unit SC-15: Bird Key Stono, South Carolina.

(i) Unit SC-15 consists of approximately 294 ac (119 ha) of occupied habitat across the entirety of Bird Key Stono Heritage Preserve, an island in the mouth of the Stono Inlet in Charleston County. The unit includes all emergent land from MLLW to the toe of the dunes or where densely vegetated habitat (not used by the rufa red knot)

begins (*i.e.*, the highly dynamic shoreline and the sandy intertidal zone that are covered at high tide and uncovered at low tide). This dynamic habitat also includes the ephemeral emergent shoals (sand bars) within the flood-tidal and ebb-tidal deltas associated with the southwestern side of the Folly River Inlet. Lands within this unit are entirely in State ownership (managed as a State Seabird Sanctuary).

(ii) Map of Unit SC-15 is presented at paragraph (63)(ii) of this entry.

(65) Unit SC-16: Kiawah and Seabrook Island Beaches, South Carolina.

(i) Unit SC-16 consists of approximately 11,250 ac (4,553 ha) of occupied habitat across the entirety of Kiawah Island and a portion of Seabrook Island, which are barrier islands off the coast of Charleston

County. The unit boundary begins on the Stono Inlet shoreline of Kiawah Island and extends southwest to the tip of the Seabrook Island shoreline in the North Edisto River. The unit includes all emergent land from MLLW to the toe of the dunes or where densely vegetated habitat (not used by the rufa red knot) begins (*i.e.*, the highly dynamic

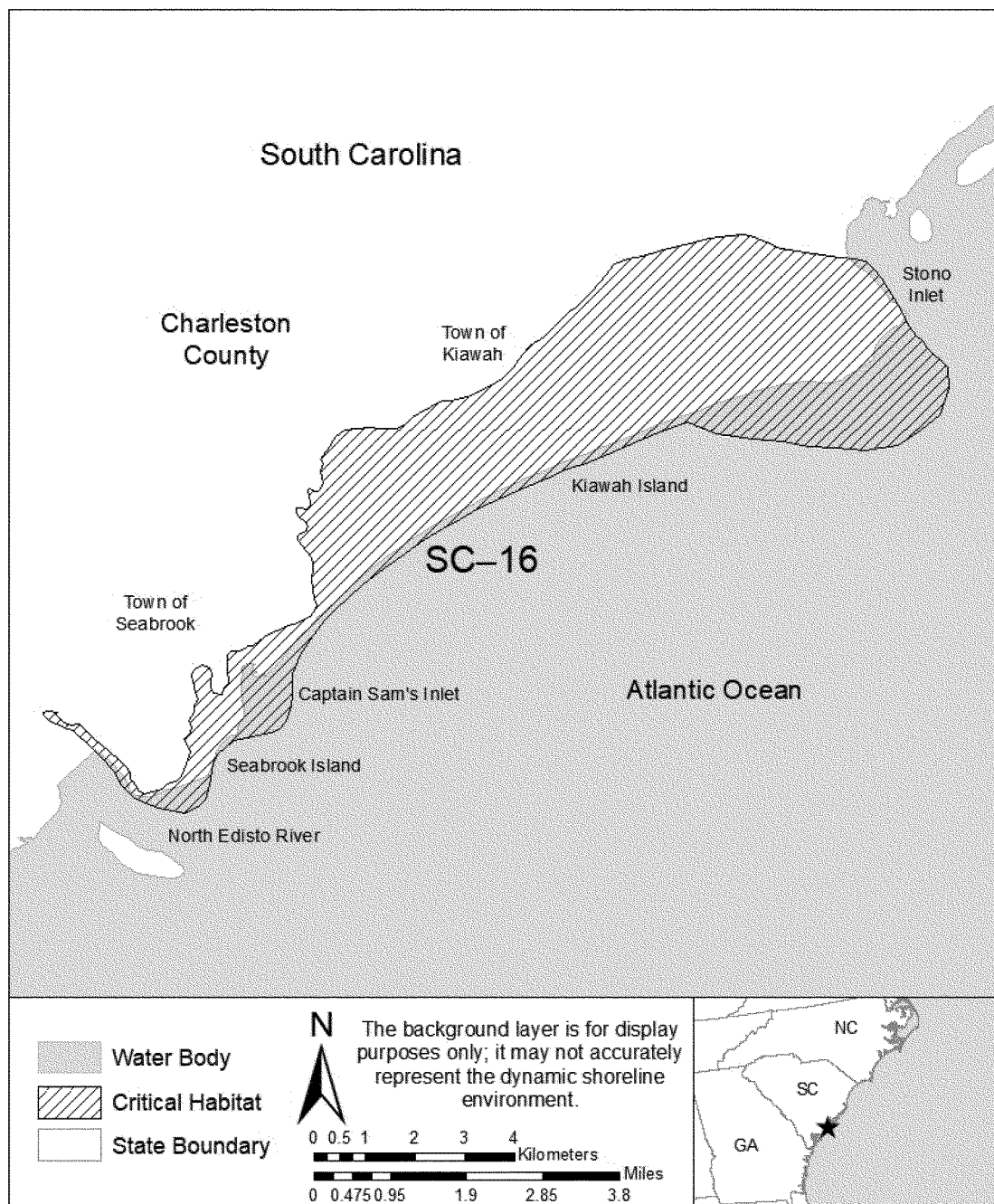
shoreline and the sandy intertidal zone that are covered at high tide and uncovered at low tide). This dynamic habitat also includes the ephemeral emergent shoals (sand bars) within the flood-tidal and ebb-tidal deltas associated with the western side of the Stono Inlet and all of Captain Sam's Inlet. Lands within this unit include

approximately 1,399 ac (566 ha) in State ownership and 9,850 ac (3,986 ha) in private/other ownership within the Town limits of the Town of Kiawah Island and the Town of Seabrook Island.

(ii) Map of Unit SC-16 follows:

Figure 55 to Rufa Red Knot paragraph (65)(ii)

### Critical Habitat for Rufa Red Knot SC-16 Kiawah and Seabrook Island Beaches; Charleston County, South Carolina



(66) Unit SC-17: Deveaux Bank, South Carolina.

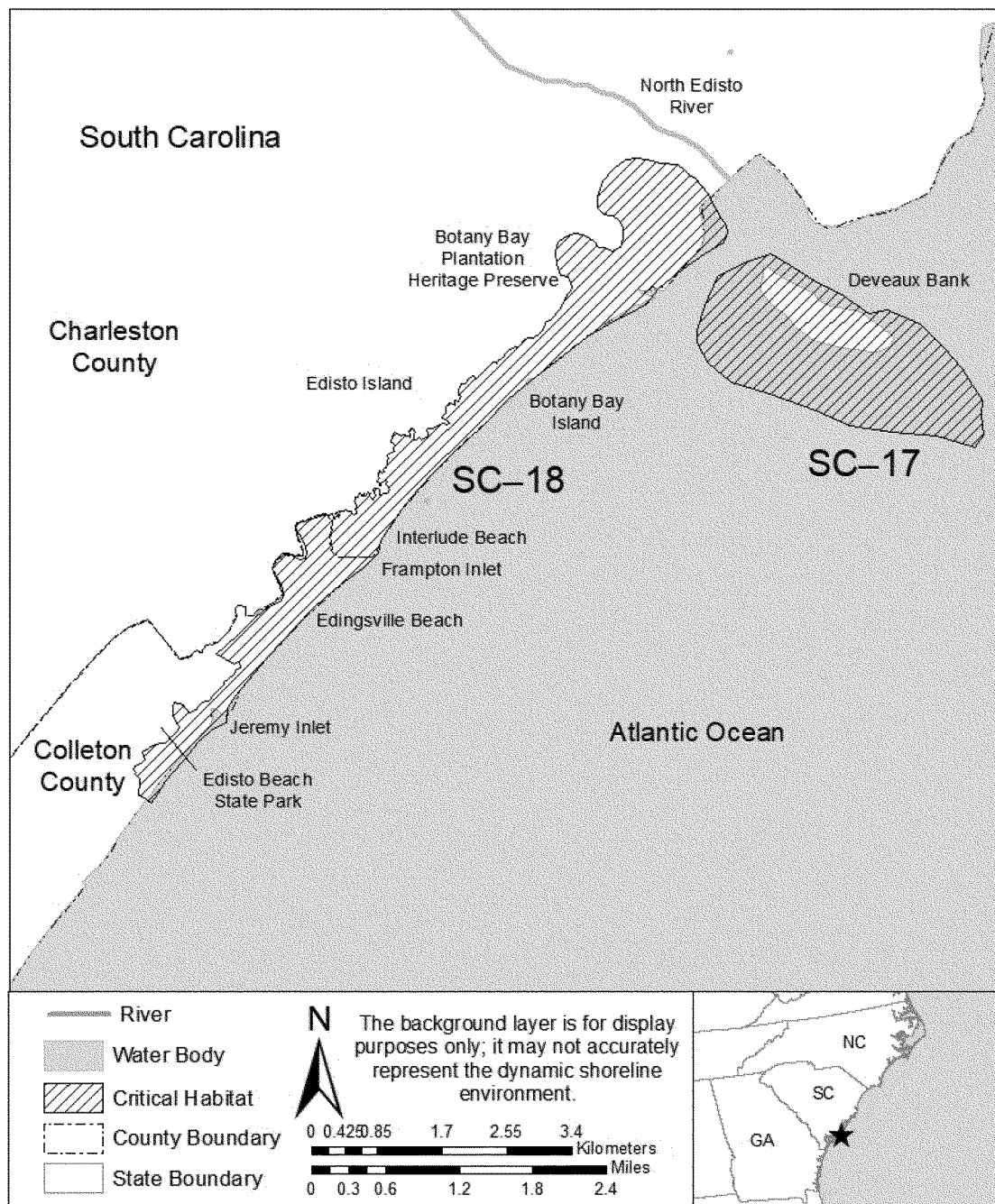
(i) Unit SC-17 consists of approximately 1,328 ac (538 ha) of occupied habitat across the entirety of Deveaux Bank, an island in the mouth of the North Edisto River in Charleston County. The unit includes all emergent

land from MLLW to the toe of the dunes or where densely vegetated habitat (not used by the rufa red knot) begins (*i.e.*, the highly dynamic shoreline and the sandy intertidal zone that are covered at high tide and uncovered at low tide). This dynamic habitat also includes the ephemeral emergent shoals (sand bars)

within the flood-tidal and ebb-tidal deltas associated with the mouth of the North Edisto River. Lands within this unit are entirely in State ownership (managed as a Seabird Sanctuary).

(ii) Map of Unit SC-17 follows: Figure 56 to Rufa Red Knot paragraph (66)(ii)

**Critical Habitat for Rufa Red Knot  
SC-17 Deveaux Bank and SC-18 Edisto Island Beaches;  
Charleston and Colleton Counties, South Carolina**



(67) Unit SC–18: Edisto Island Beaches, South Carolina.

(i) Unit SC–18 consists of approximately 1,743 ac (705 ha) of occupied beach habitat on Edisto Island, a barrier island off the coast of Charleston and Colleton Counties. The unit includes all of Botany Bay Island, Botany Bay Plantation, Interlude Beach, and Edingsville Beach, and a portion of Edisto Beach State Park. The unit boundary begins on the North Edisto River shoreline of Botany Bay Island and extends southwest to the undeveloped eastern half of the beachfront portion of Edisto Beach State Park southwest of Jeremy Inlet. The unit includes all emergent land from MLLW to the toe of the dunes or where densely vegetated habitat (not used by the rufa red knot) begins (*i.e.*, the highly dynamic shoreline and the sandy intertidal zone that are covered at high

tide and uncovered at low tide). This dynamic habitat also includes the ephemeral emergent shoals (sand bars) within the flood-tidal and ebb-tidal deltas associated with Frampton and Jeremy Inlets and the unnamed inlet separating Interlude Beach and Botany Bay Plantation. Lands within this unit include approximately 650 ac (263 ha) in State ownership (including Edisto Beach State Park and Botany Bay Heritage Preserve/Wildlife Management Area) and 1,093 ac (442 ha) in private/other ownership.

(ii) Map of Unit SC–18 is presented at paragraph (66)(ii) of this entry.

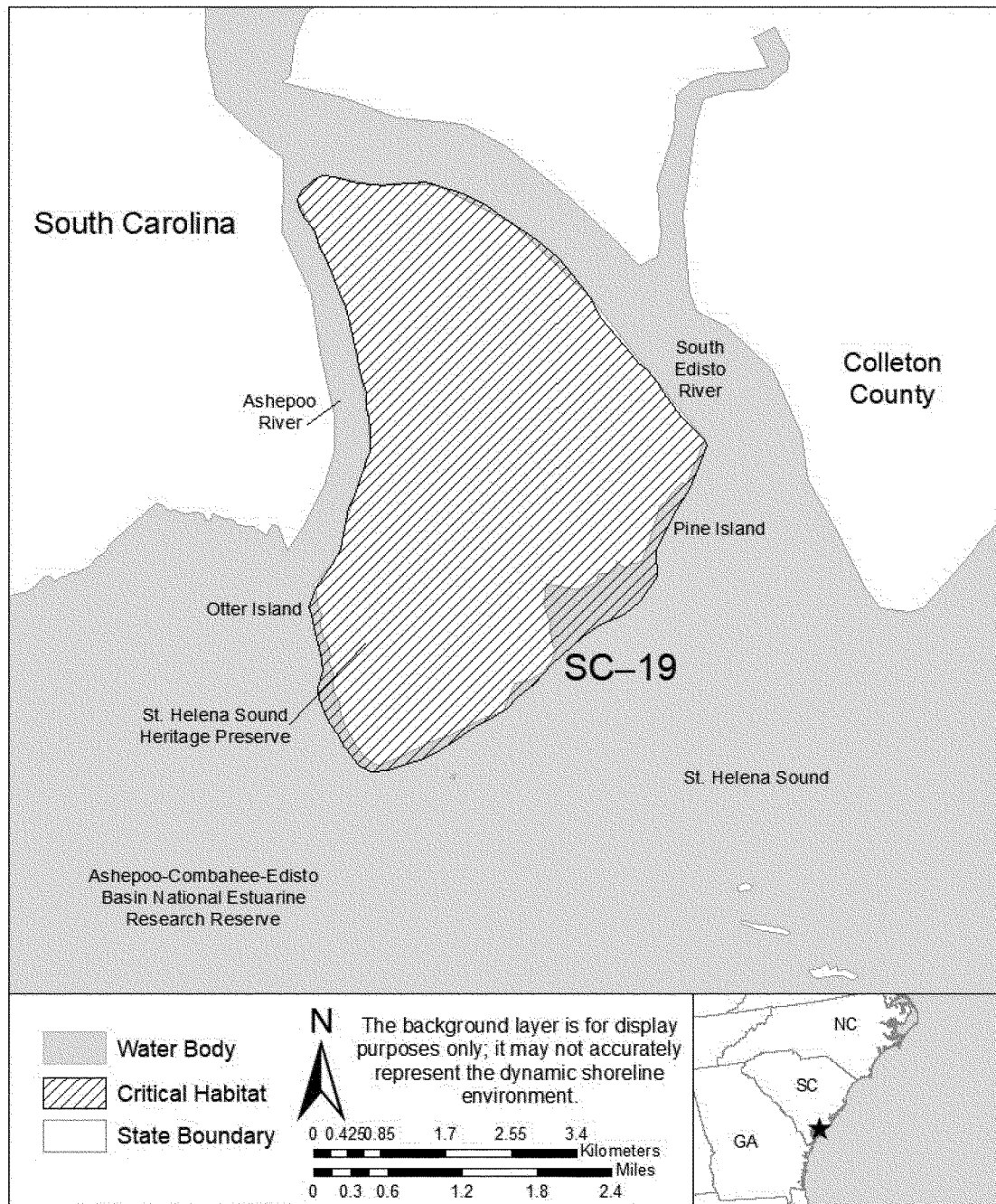
(68) Unit SC–19: Pine and Otter Island Beaches, South Carolina.

(i) Unit SC–19 consists of approximately 6,302 ac (2,550 ha) of occupied habitat across the entirety of Pine and Otter Islands, both of which are sea islands in St. Helena Sound in

Colleton County. The unit includes all emergent land from MLLW to the toe of the dunes or where densely vegetated habitat (not used by the rufa red knot) begins (*i.e.*, the highly dynamic shoreline and the sandy intertidal zone that are covered at high tide and uncovered at low tide). This dynamic habitat also includes the ephemeral emergent shoals (sand bars) within the flood-tidal and ebb-tidal deltas associated with Fish Creek Inlet. Lands within this unit include approximately 6,296 ac (2,548 ha) in State ownership (including the Ashepoo-Combahee-Edisto Basin Preserve/Wildlife Management Area and the St. Helena Sound Heritage Preserve/Wildlife Management Area) and 6 ac (2 ha) in private/other ownership.

(ii) Map of Unit SC–19 follows: Figure 57 to Rufa Red Knot paragraph (68)(ii)

**Critical Habitat for Rufa Red Knot**  
**SC-19 Pine and Otter Island Beaches; Colleton County, South Carolina**



(69) Unit SC-20: Harbor and Hunting Island Beaches, South Carolina.

(i) Unit SC-20 consists of approximately 4,066 ac (1,645 ha) of occupied habitat on Harbor and Hunting Islands, both of which are barrier islands off the coast of Beaufort County. The unit boundary begins on the Harbor River shoreline of Harbor Island and extends southwest to the Fripp Inlet

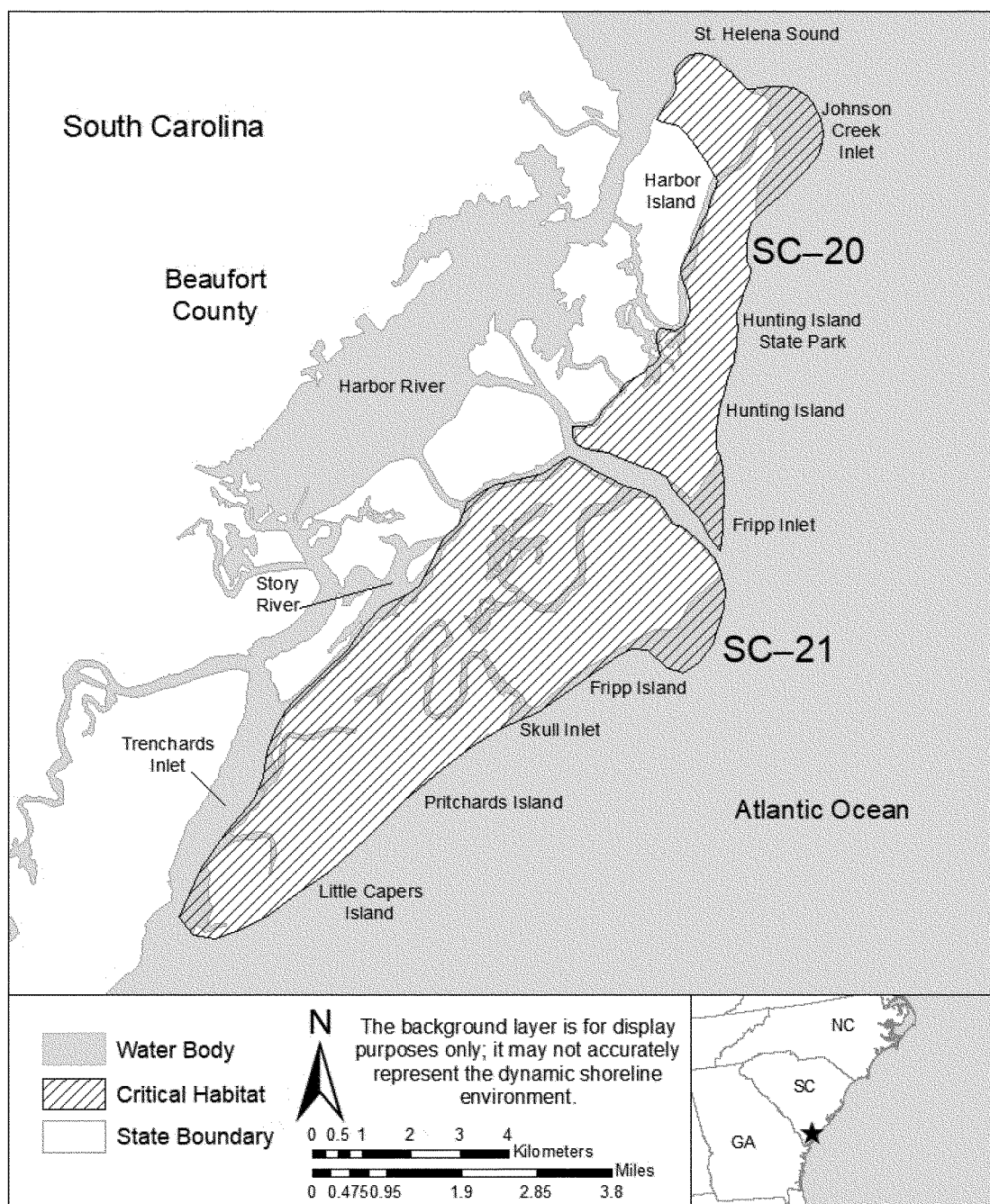
shoreline of Hunting Island. The unit includes all emergent land from MLLW to the toe of the dunes or where densely vegetated habitat (not used by the rufa red knot) begins (*i.e.*, the highly dynamic shoreline and the sandy intertidal zone that are covered at high tide and uncovered at low tide). This dynamic habitat also includes the ephemeral emergent shoals (sand bars)

within the flood-tidal and ebb-tidal deltas associated with Johnson Creek Inlet. Lands within this unit include approximately 3,246 ac (1,313 ha) in State ownership (including Hunting Island State Park) and 820 ac (331 ha) in private/other ownership.

(ii) Map of Unit SC-20 follows: Figure 58 to Rufa Red Knot paragraph (69)(ii)



**Critical Habitat for Rufa Red Knot**  
**SC-20 Harbor and Hunting Island Beaches and SC-21 Fripp, Pritchards**  
**and Little Capers Islands' Beaches; Beaufort County, South Carolina**



(70) Unit SC-21: Fripp, Pritchards, and Little Capers Islands' Beaches, South Carolina.

(i) Unit SC-21 consists of approximately 10,178 ac (4,119 ha) of occupied habitat on Fripp Island, Pritchards Island, and Little Capers Island, barrier islands off the coast in Beaufort County. The unit boundary begins on the shoreline of Fripp Island on the south side of Fripp Inlet and

extends southwest along the Atlantic Ocean shorelines of Fripp Island, Pritchards Island, and Little Capers Island to the eastern side of Trenchards Inlet where the boundary follows the southern shoreline of the Story River. The unit includes all emergent land from MLLW to the toe of the dunes or where densely vegetated habitat (not used by the rufa red knot) begins (*i.e.*, the highly dynamic shoreline and the

sandy intertidal zone that are covered at high tide and uncovered at low tide). This dynamic habitat also includes the ephemeral emergent shoals (sand bars) within the flood-tidal and ebb-tidal deltas associated with Fripp, Skull, and Trenchards Inlets as well as the unnamed inlets along the Little Capers Island shoreline. Lands within this unit include approximately 4,055 ac (1,641

ha) in State ownership and 6,123 ac (2,478 ha) in private/other ownership.

(ii) Map of Unit SC-21 is presented at paragraph (69)(ii) of this entry.

(71) Unit SC-22: Bay Point Island Beach, South Carolina.

(i) Unit SC-22 consists of approximately 1,698 ac (687 ha) of occupied habitat on Bay Point Island, a barrier island off the coast in Beaufort County. The unit boundary begins on the Trenchards Inlet shoreline at the

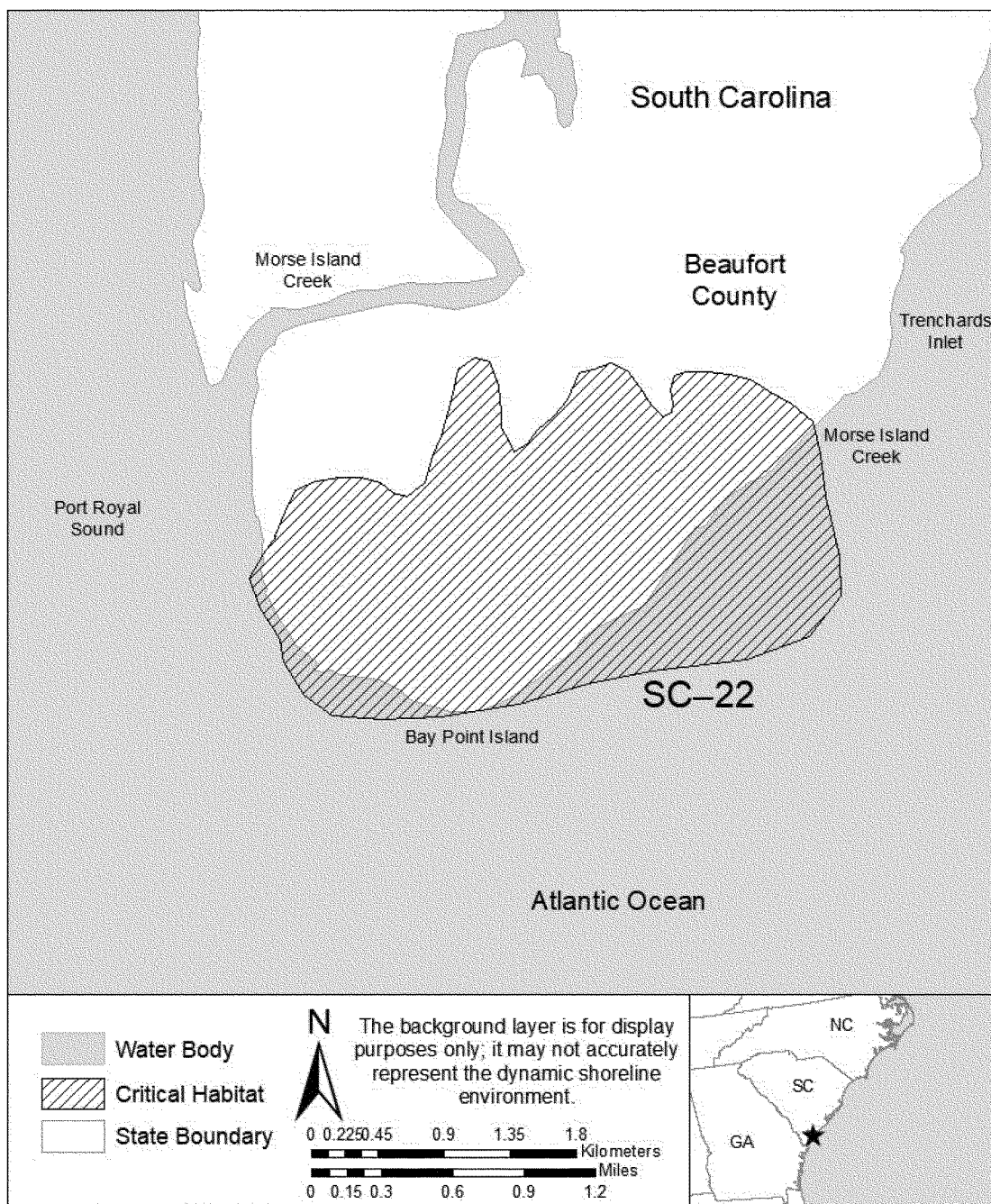
entrance to Morse Island Creek and follows the Atlantic Ocean shoreline to the eastern shoreline of Port Royal Round to the western entrance to Morse Island Creek. The unit includes all emergent land from MLLW to the toe of the dunes or where densely vegetated habitat (not used by the rufa red knot) begins (*i.e.*, the highly dynamic shoreline and the sandy intertidal zone that are covered at high tide and uncovered at low tide). This dynamic

habitat also includes the ephemeral emergent shoals (sand bars) within the flood-tidal and ebb-tidal deltas associated with Morse Creek and Trenchards Inlet within the unit boundary. Lands within this unit include approximately 553 ac (224 ha) in State ownership and 1,145 ac (464 ha) in private/other ownership.

(ii) Map of Unit SC-22 follows:

Figure 59 to Rufa Red Knot paragraph (71)(ii)

### Critical Habitat for Rufa Red Knot SC-22 Bay Point Island Beach, Beaufort County, South Carolina



(72) Unit SC-23: Hilton Head Island Beach, South Carolina.

(i) Unit SC-23 consists of approximately 1,682 ac (681 ha) of occupied habitat on the heel of Hilton Head Island, a barrier island off the coast, in Beaufort County. The unit boundary begins on the Port Royal Sound shoreline beginning at Oyster Shell Lane, continues southeast then turns southwest along the Atlantic

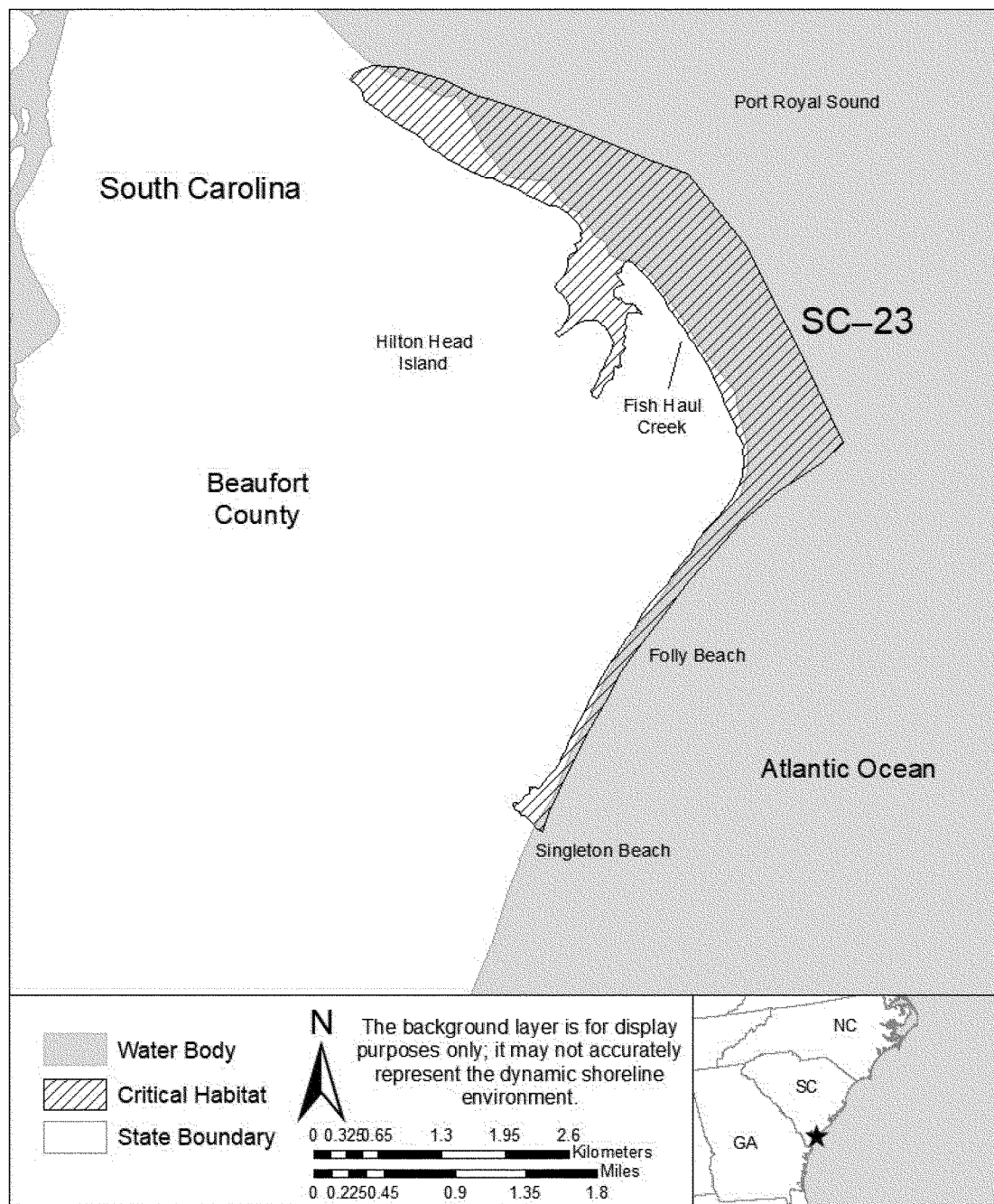
Ocean shoreline, and continues to the undeveloped portion of Singleton Beach southwest of the Folly Beach. The unit includes all emergent land from MLLW to the toe of the dunes or where densely vegetated habitat (not used by the rufa red knot) begins (*i.e.*, the highly dynamic shoreline and the sandy intertidal zone that are covered at high tide and uncovered at low tide). This dynamic habitat also includes the

ephemeral emergent shoals (sand bars) within the flood-tidal and ebb-tidal deltas associated with Fish Haul Creek and unnamed inlets within the unit boundary. Lands within this unit include approximately 1,015 ac (411 ha) in State ownership and 667 ac (270 ha) in private/other ownership.

(ii) Map of Unit SC-23 follows:

Figure 60 to Rufa Red Knot paragraph (72)(ii)

### Critical Habitat for Rufa Red Knot SC-23 Hilton Head Island; Beaufort County, South Carolina



(73) Unit SC-24: Daufuskie Island Beach, South Carolina.

(i) Unit SC-24 consists of approximately 6,370 ac (2,578 ha) of occupied habitat across the entirety of Daufuskie Island, a sea island in Calibogue Sound, in Beaufort County. The unit boundary begins on the Calibogue Sound shoreline of Daufuskie

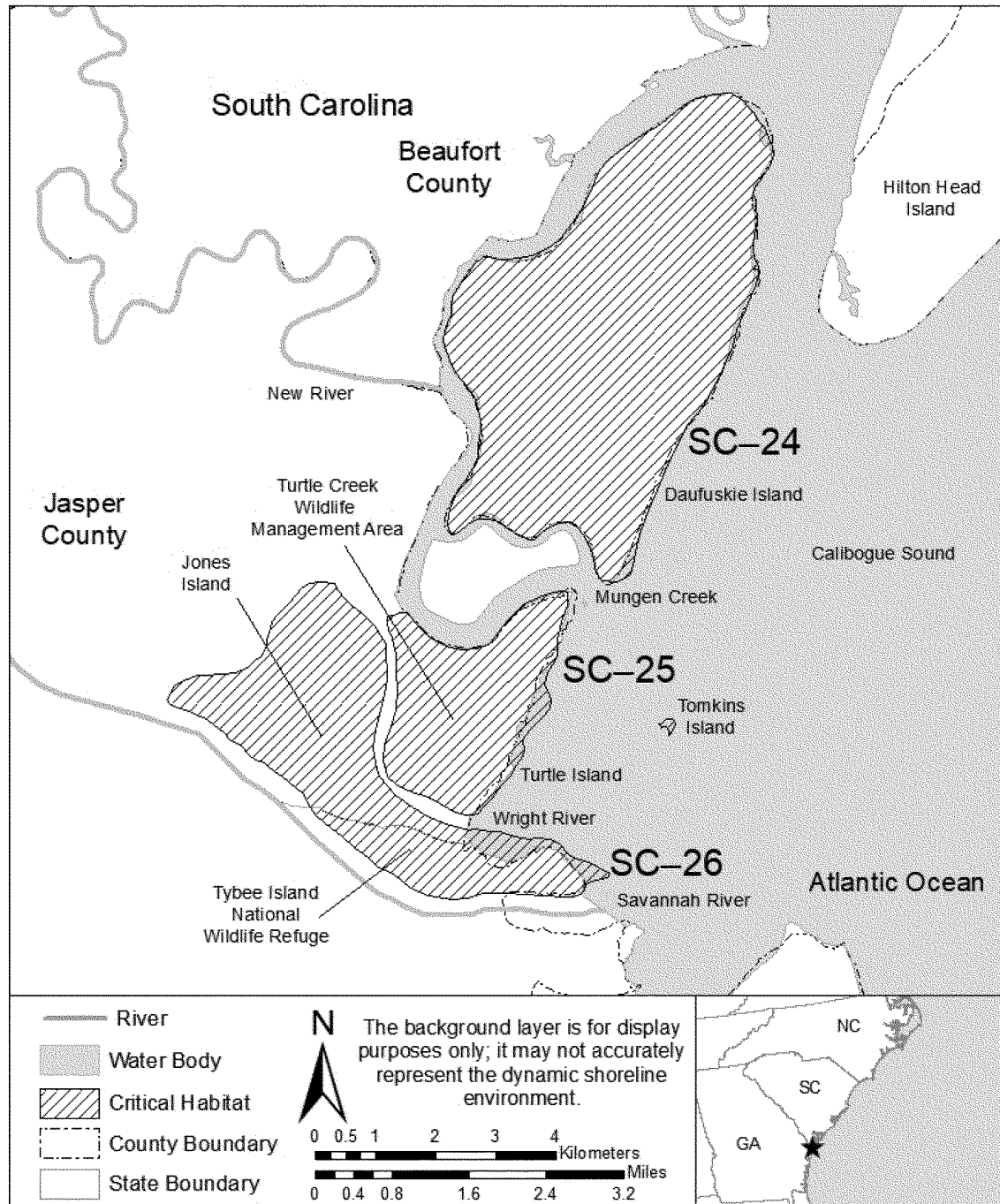
Island and extends southwest to the Mungen Creek shoreline. The unit includes all emergent land from MLLW to the toe of the dunes or where densely vegetated habitat (not used by the rufa red knot) begins (*i.e.*, the highly dynamic shoreline and the sandy intertidal zone that are covered at high tide and uncovered at low tide). This

dynamic habitat also includes the ephemeral emergent shoals (sand bars) within the unit boundary. All lands within this unit are in private/other ownership.

(ii) Map of Unit SC-24 follows:

Figure 61 to Rufa Red Knot paragraph (73)(ii)

**Critical Habitat for Rufa Red Knot**  
**SC-24 Daufuskie Island Beach, SC-25 Turtle Island Beach, and SC-26**  
**Jones Island Beach; Beaufort and Jasper Counties, South Carolina**



(74) Unit SC–25: Turtle Island and Tompkins Island Beaches, South Carolina.

(i) Unit SC–25 consists of approximately 1,771 ac (717 ha) on Turtle Island (a sea island), and Tompkins Island (a human-made island) in Calibogue Sound in Jasper County. The unit boundary begins on the southern shoreline of the New River and extends southwest along the Calibogue Sound shoreline to the Wright River shoreline of Turtle Island. The unit boundary also includes the entire Calibogue Sound shoreline of Tompkins Island located east of Turtle Island. The unit includes all emergent land from MLLW to the toe of the dunes or where densely vegetated habitat (not used by the rufa red knot) begins (*i.e.*, the highly dynamic shoreline and the sandy intertidal zone that are covered at high tide and uncovered at low tide). This dynamic habitat also includes the ephemeral emergent shoals (sand bars) within the flood-tidal and ebb-tidal deltas associated with the unnamed inlet in the center of the Turtle Island shoreline. Lands within this unit are entirely in State ownership as the South

Carolina Department of Natural Resources (SCDNR) Turtle Island Wildlife Management Area and an SCDNR seabird sanctuary.

(ii) Map of Unit SC–25 is presented at paragraph (73)(ii) of this entry.

(75) Unit SC–26: Jones Island Beach, South Carolina.

(i) Unit SC–26 consists of approximately 3,025 ac (1,225 ha) of occupied habitat across the entirety of Jones Island, a sea island along the Savannah River and Calibogue Sound, in Jasper County. The unit boundary begins on the Wright River shoreline of Jones Island to the Savannah River shoreline. The unit includes all emergent land from MLLW to the toe of the dunes or where densely vegetated habitat (not used by the rufa red knot) begins (*i.e.*, the highly dynamic shoreline and the sandy intertidal zone that are covered at high tide and uncovered at low tide). This dynamic habitat also includes the ephemeral emergent shoals (sand bars) within the flood-tidal and ebb-tidal deltas associated with Wright River Inlet. Lands within this unit include approximately 785 ac (318 ha) in Federal ownership (Tybee Island NWR)

and 2,240 ac (907 ha; 74 percent) in State ownership.

(ii) Map of Unit SC–26 is presented at paragraph (73)(ii) of this entry.

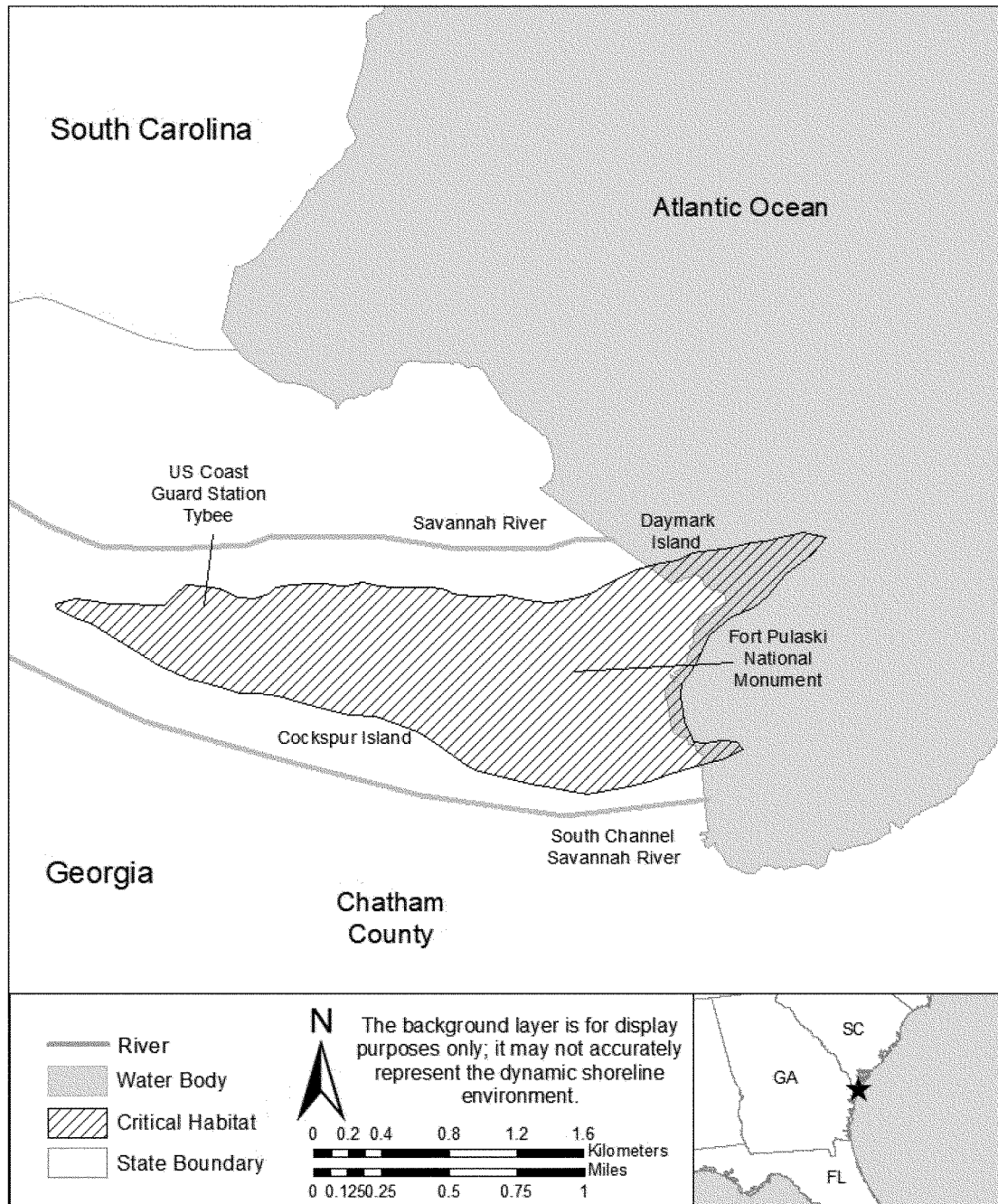
(76) Unit GA–1: Cockspur Island and Daymark Island Beaches, Georgia.

(i) Unit GA–1 consists of approximately 802 ac (325 ha) of occupied habitat on Cockspur and Daymark Islands in the mouth of the Savannah River in Chatham County. The unit boundary includes the entire Savannah River and South Channel of the Savannah River shorelines of Cockspur and Daymark Islands and includes all emergent land from MLLW to the toe of the dunes or where densely vegetated habitat (not used by the rufa red knot) begins (*i.e.*, the highly dynamic shoreline and sandy intertidal zone that is covered at high tide and uncovered at low tide). Lands within this unit include approximately 708 ac (287) in Federal ownership as part of the U.S. Coast Guard's Station Tybee and NPS's Fort Pulaski National Monument, and 94 ac (38) in State ownership.

(ii) Map of Unit GA–1 follows: Figure 62 to Rufa Red Knot paragraph (76)(ii)



**Critical Habitat for Rufa Red Knot  
GA-1 Cockspur Island and Daymark Island Beaches;  
Chatham County, Georgia**



(77) Unit GA-2: Tybee Island Beach, Georgia.

(i) Unit GA-2 consists of approximately 2,046 ac (828 ha) of occupied habitat on Tybee Island (north, mid, and south beaches), a barrier island off the coast in Chatham County. The northern boundary of the unit begins at the Savannah River shoreline of Tybee Island and extends south to Tybee Creek Inlet, which separates Tybee Island from

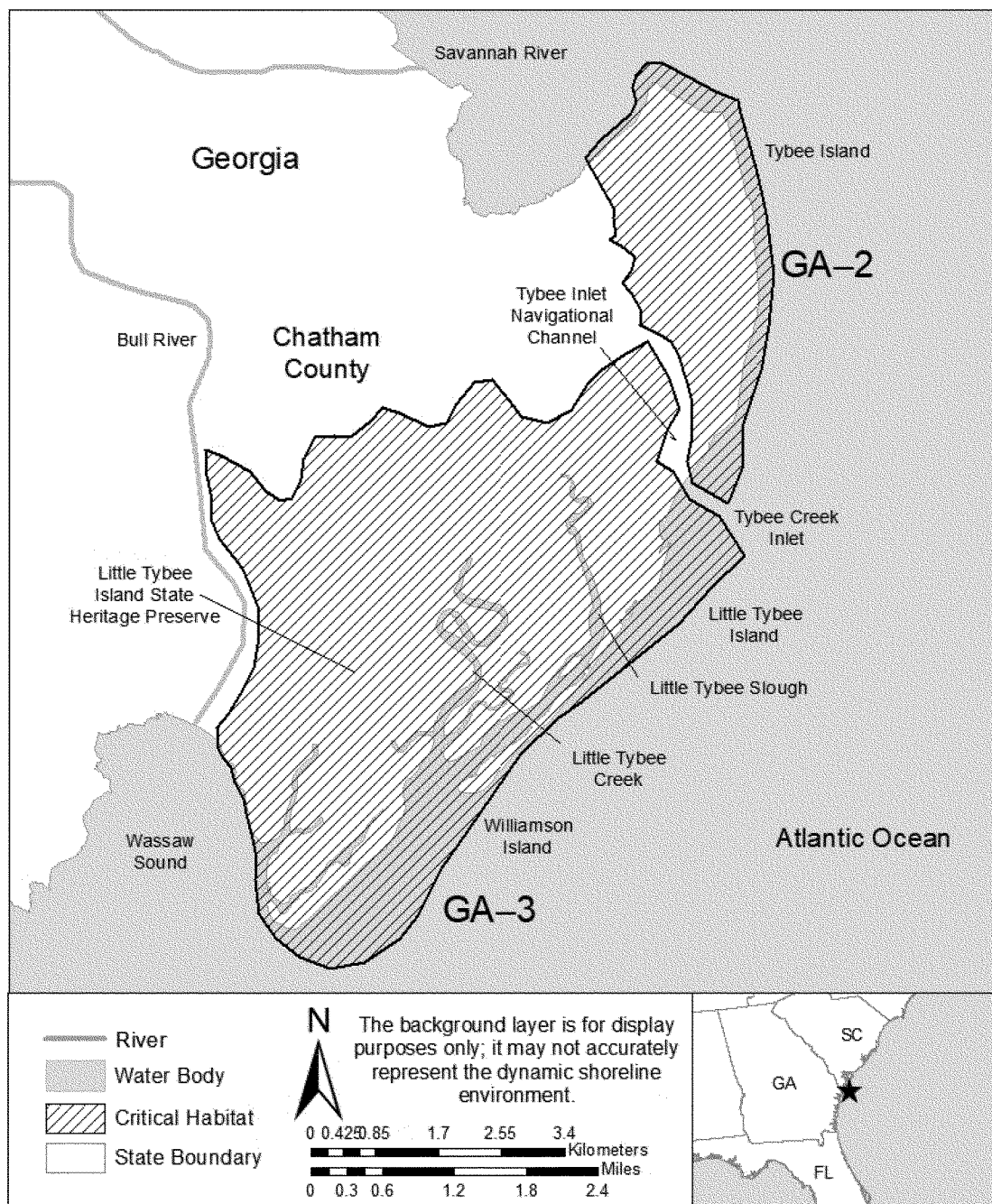
Little Tybee Island, and includes all emergent land from MLLW to the toe of the dunes or where densely vegetated habitat (not used by the rufa red knot) begins (*i.e.*, the highly dynamic shoreline and sandy intertidal zone that is covered at high tide and uncovered at low tide). This dynamic habitat also includes the ephemeral emergent shoals (sand bars) within the flood-tidal and ebb-tidal deltas associated with the

eastern side of Tybee Inlet's navigable channel. Lands within this unit include approximately 6 ac (2 ha) in State ownership, 1,721 ac (697 ha) in private/other ownership, and 319 ac (129 ha) that are uncategorized.

(ii) Map of Unit GA-2 follows:

Figure 63 to Rufa Red Knot paragraph (77)(ii)

**Critical Habitat for Rufa Red Knot**  
**GA-2 Tybee Island and GA-3 Little Tybee Island Complex;**  
**Chatham County, Georgia**



(78) Unit GA-3: Little Tybee Island Complex, Georgia.

(i) Unit GA-3 consists of approximately 8,265 ac (3,345 ha) of occupied habitat across the entirety of Little Tybee Island complex, a series of barrier islands off the coast of Chatham County. The unit boundary begins on the western side of Tybee Creek Inlet and extends southwest to Wassaw Sound and includes Little Tybee Island,

Williamson Island, and all emergent land from MLLW to the toe of the dunes or where densely vegetated habitat (not used by the rufa red knot) begins (*i.e.*, the highly dynamic shoreline and the sandy intertidal zone that are covered at high tide and uncovered at low tide). This dynamic habitat also includes the ephemeral emergent shoals (sand bars) within the flood-tidal and ebb-tidal deltas associated with the western side

of Tybee Inlet's navigable channel, Little Tybee Slough, and Little Tybee Creek. All lands within this unit are in State ownership (Little Tybee Island State Heritage Preserve).

(ii) Map of Unit GA-3 is presented at paragraph (77)(ii) of this entry.

(79) Unit GA-4: Wassaw Island Beach, Georgia.

(i) Unit GA-4 consists of approximately 4,296 ac (1,738 ha) of

occupied habitat on Wassaw Island, a barrier island off the coast in Chatham County. The unit boundary begins on the southwestern side of Wassaw Sound off the northern tip of Wassaw Island and extends southwest to Ossabaw Sound shoreline. The unit includes all emergent land from MLLW (which includes the highly dynamic shoreline and sandy intertidal zone that is

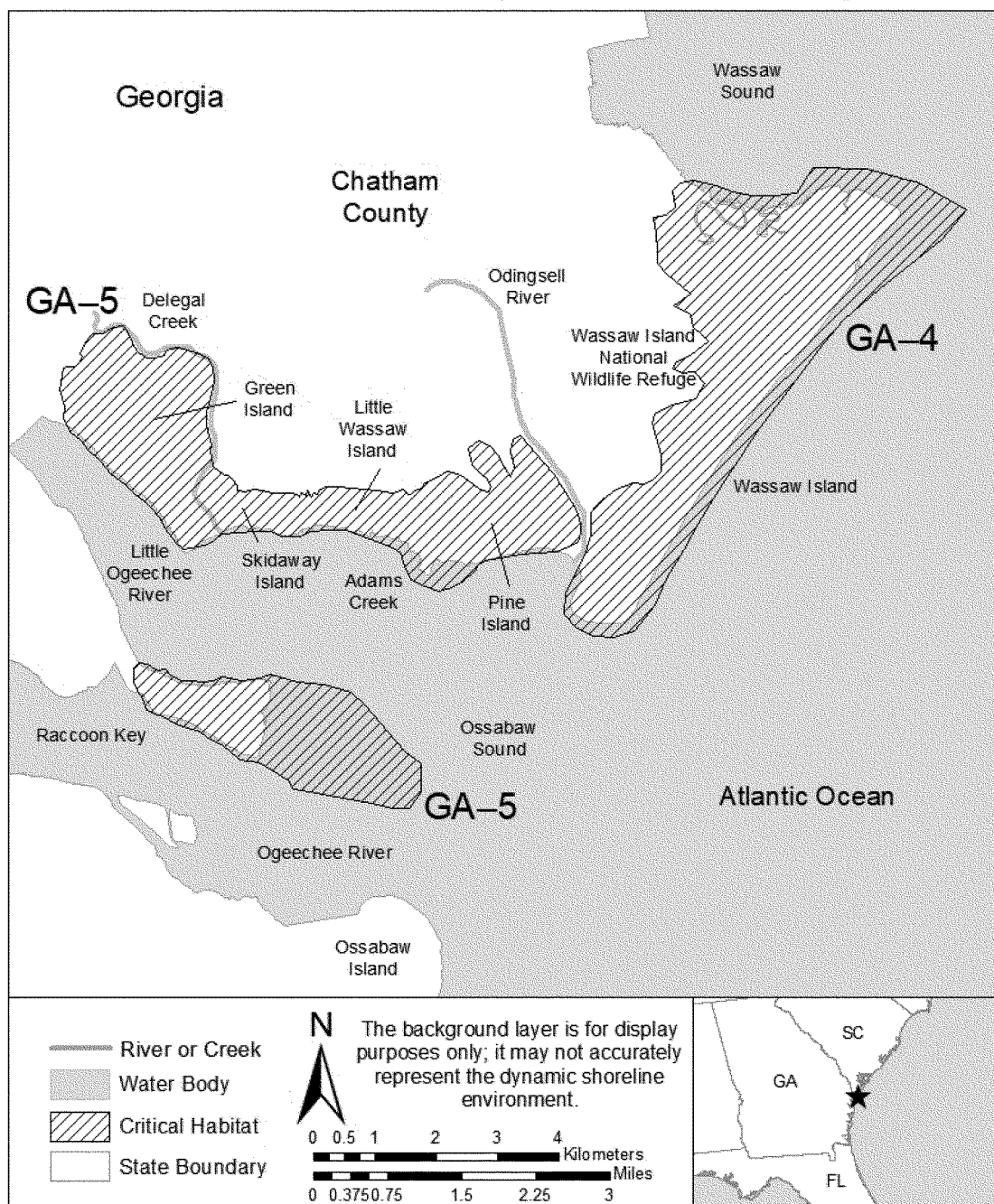
covered at high tide and uncovered at low tide) to the toe of the dunes or where densely vegetated habitat, not used by the rufa red knot, begins. This unit also includes the ephemeral, emergent shoals (sand bars) within the flood-tidal and ebb-tidal deltas associated with the southwestern side of Wassaw Sound off the northern tip of Wassaw Island. Lands within this unit

include approximately 3,001 ac (1,215 ha) in Federal ownership (Wassaw Island NWR), 274 ac (111 ha) in private/other ownership, and 1,020 ac (412 ha) that are uncategorized.

(ii) Map of Unit GA-4 follows:

Figure 64 to Rufa Red Knot paragraph (79)(ii)

### Critical Habitat for Rufa Red Knot GA-4 Wassaw Island Beach and GA-5 Little Ogeechee River Shoreline and Raccoon Key; Chatham County, Georgia



(80) Unit GA-5: Little Ogeechee River Shoreline and Raccoon Key, Georgia.

(i) Unit GA-5 consists of approximately 4,571 ac (1,850 ha) of occupied habitat of the Little Ogeechee River shoreline along Green Island, Little Wassaw Island, and Pine Island and all of Raccoon Key in Ossabaw Sound in Chatham County. The unit boundary begins at the Green Island shoreline of the Little Ogeechee River and continues east along the shorelines of Little Wassaw Island and Pine Island to the Odingsell River entrance behind Wassaw Island. The boundary continues north along the Pine Island and Little Wassaw Island shoreline of the Odingsell River and follows the Little Wassaw Island shoreline along Adams Creek through marshlands south of Skidaway Island to Delegal Creek behind Green Island. The unit includes all emergent land from MLLW to where

densely vegetated habitat (not used by the rufa red knot) begins (*i.e.*, the highly dynamic shoreline and the sandy intertidal zone that are covered at high tide and uncovered at low tide). This dynamic habitat also includes the ephemeral emergent shoals (sand bars) within the Ossabaw entrance. Lands within this unit include approximately 3,136 ac (1,267 ha) in Federal ownership and 1,435 ac (581 ha) in State ownership.

(ii) Map of Unit GA-5 is presented at paragraph (79)(ii) of this entry.

(81) Unit GA-6: Ossabaw Island Beach, Georgia.

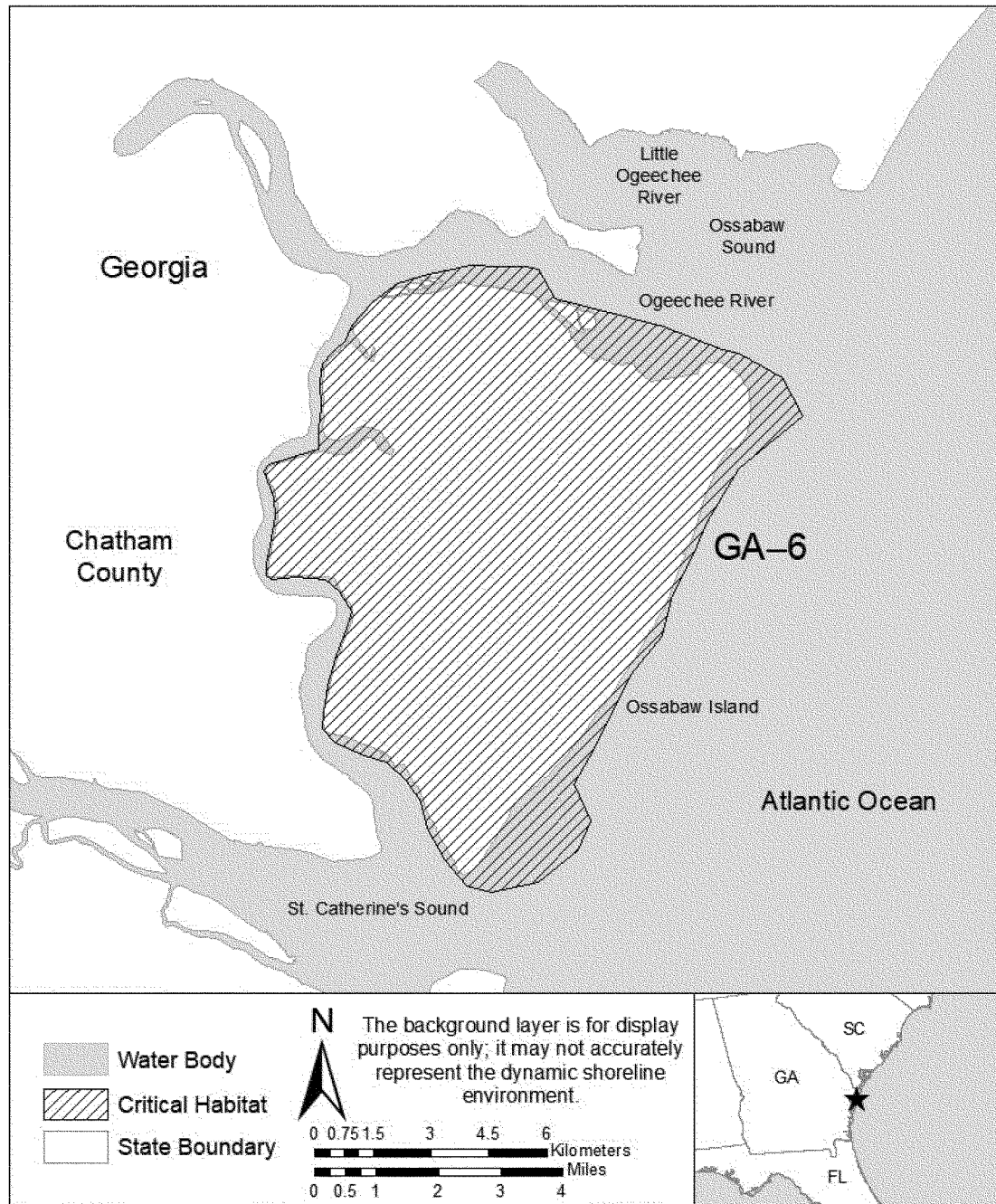
(i) Unit GA-6 consists of approximately 32,357 ac (13,095 ha) of occupied habitat on Ossabaw Island, a barrier island off the coast in Chatham County. The unit boundary begins at the Ogeechee River shoreline of Ossabaw Island and extends southwest to the St.

Catherine's Sound shoreline. The unit includes all emergent land from MLLW to the toe of the dunes or where densely vegetated habitat (not used by the rufa red knot) begins (*i.e.*, the highly dynamic shoreline and the sandy intertidal zone that are covered at high tide and uncovered at low tide). This dynamic habitat also includes the ephemeral emergent shoals (sand bars) within the flood-tidal and ebb-tidal deltas associated with Ossabaw Sound off the northeastern tip of the island and St. Catherine's Sound off the southwestern tip of the island. Lands within this unit include approximately 28,621 ac (11,582 ha) in State ownership and 3,736 ac (1,512 ha) that are uncategorized.

(ii) Map of Unit GA-6 follows:

Figure 65 to Rufa Red Knot paragraph (81)(ii)

**Critical Habitat for Rufa Red Knot**  
**GA-6 Ossabaw Island Beach, Chatham County, Georgia**



(82) Unit GA-7: St. Catherine's Island Beach and St. Catherine's Island Bar, Georgia.

(i) Unit GA-7 consists of approximately 15,962 ac (6,460 ha) of occupied habitat on St. Catherine's Island, a barrier island off the coast in Liberty County. The unit boundary begins at the St. Catherine's Sound shoreline of St. Catherine's Island and extends southwest to the Sapelo Sound shoreline. The unit includes all

emergent land from MLLW to the toe of the dunes or where densely vegetated habitat (not used by the rufa red knot) begins (*i.e.*, the highly dynamic shoreline and the sandy intertidal zone that are covered at high tide and uncovered at low tide). This dynamic habitat also includes the ephemeral emergent shoals (sand bars) within the flood-tidal and ebb-tidal deltas associated with St. Catherine's Sound entrance off the northern tip of the

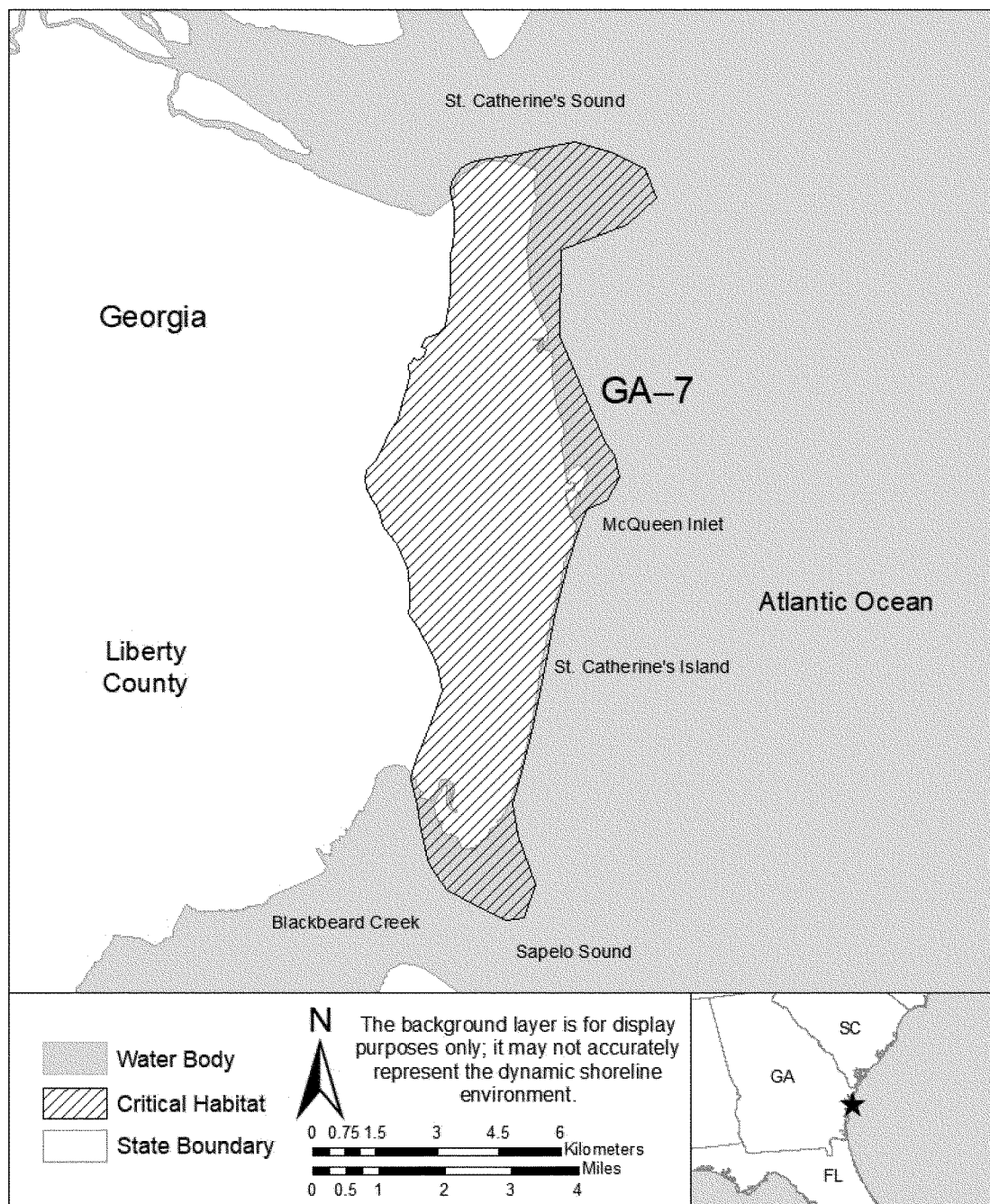
island, McQueen Inlet, and Sapelo Sound entrance off the southern tip of the island. Lands within this unit include approximately 2,106 ac (853 ha) in State ownership, 11,810 ac (4,779 ha) in private/other ownership, and 2,046 ac (828 ha) that are uncategorized.

(ii) Map of Unit GA-7 follows:

Figure 66 to Rufa Red Knot paragraph (82)(ii)



**Critical Habitat for Rufa Red Knot**  
**GA-7 St. Catherine's Island Beach and St. Catherine's Island Bar;**  
**Liberty County, Georgia**



(83) Unit GA-8: Blackbeard Island Beach, Georgia.

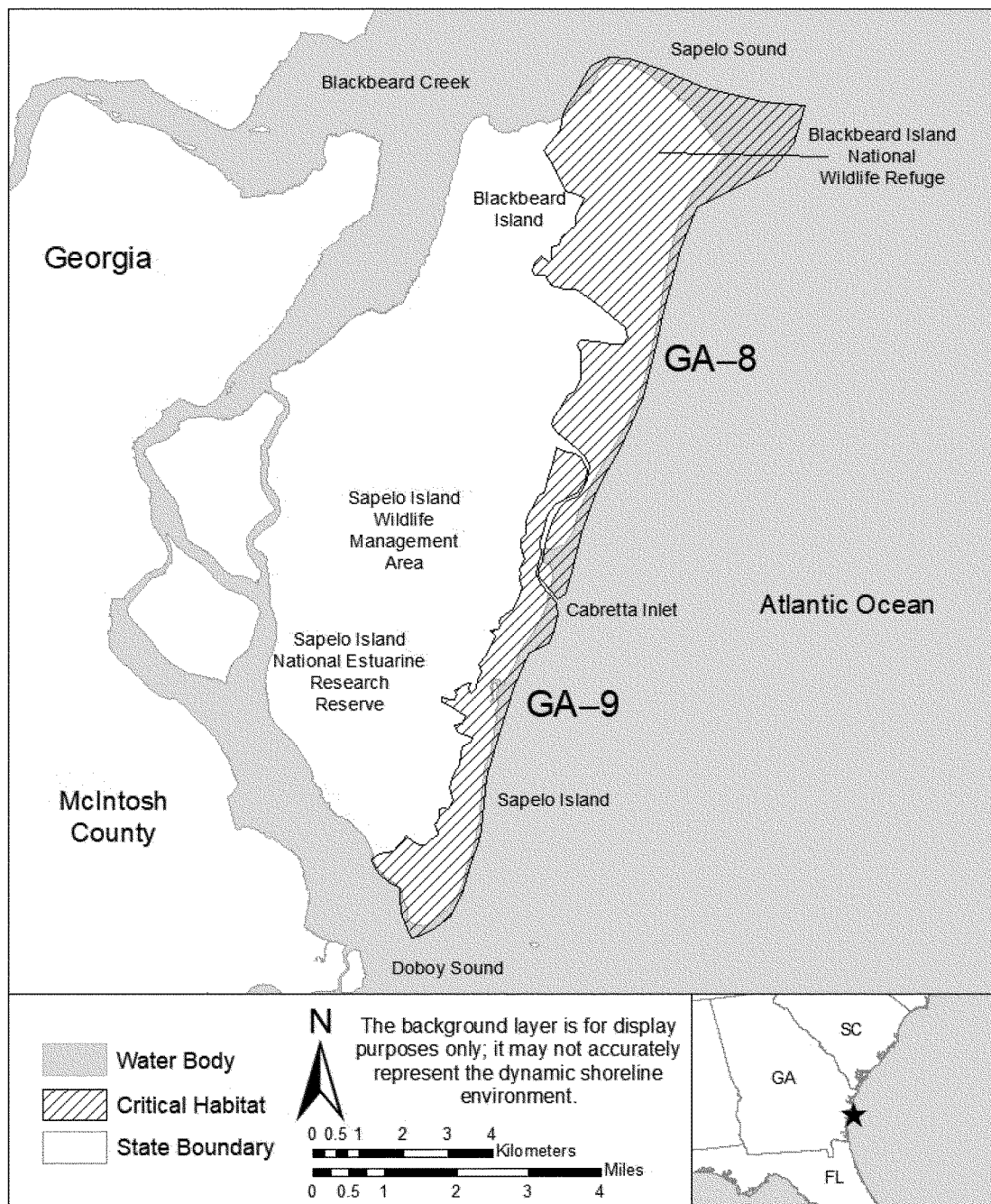
(i) Unit GA-8 consists of approximately 6,321 ac (2,557 ha) of occupied habitat on Blackbeard Island, a barrier island off the coast in McIntosh County. The unit boundary begins at the Sapelo Sound shoreline of Blackbeard Island and extends southwest to the Cabretta Inlet shoreline. The unit includes all emergent land from MLLW

to the toe of the dunes or where densely vegetated habitat (not used by the rufa red knot) begins (*i.e.*, the highly dynamic shoreline and the sandy intertidal zone that are covered at high tide and uncovered at low tide). This dynamic habitat also includes the ephemeral emergent shoals (sand bars) within the flood-tidal and ebb-tidal deltas associated with the Sapelo Sound entrance off the northern tip of the

island and the northeastern side of Cabretta Inlet's navigable channel. Lands within this unit include approximately 4,954 ac (2,006 ha) in Federal ownership (Blackbeard Island NWR), 80 ac (32 ha) in State ownership, and 1,287 ac (519 ha) that are uncategorized.

(ii) Map of Unit GA-8 follows: Figure 67 to Rufa Red Knot paragraph (83)(ii)

**Critical Habitat for Rufa Red Knot**  
**GA-8 Blackbeard Island Beach and GA-9 Sapelo Island Beach;**  
**McIntosh County, Georgia**



(84) Unit GA-9: Sapelo Island Beach, Georgia.

(i) Unit GA-9 consists of approximately 2,481 ac (1,004 ha) of occupied habitat on Sapelo Island, a barrier island off the coast in McIntosh County. The unit boundary begins at the Cabretta Inlet shoreline of Sapelo Island and extends southwest to the Doboy Sound shoreline. The unit includes all emergent land from MLLW to the toe of

the dunes or where densely vegetated habitat (not used by the rufa red knot) begins (*i.e.*, the highly dynamic shoreline and the sandy intertidal zone that are covered at high tide and uncovered at low tide). This dynamic habitat also includes the ephemeral emergent shoals (sand bars) within the flood-tidal and ebb-tidal deltas associated with the southwestern side of Cabretta Inlet's navigable channel. The

lands within this unit are State-owned and comprise the Sapelo Island Wildlife Management Area and Sapelo Island National Estuarine Research Reserve (NERR).

(ii) Map of Unit GA-9 is presented at paragraph (83)(ii) of this entry.

(85) Unit GA-10: Queens Island, Wolf Island, Egg Island, Little Egg Island, and Little Egg Island Bar, Georgia.

(i) Unit GA-10 consists of approximately 11,901 ac (4,816 ha) of

occupied habitat on Queens Island, Wolf Island, Egg Island, Little Egg Island, and Little Egg Island Bar at the Altamaha Sound in McIntosh County. The unit boundary begins at the Black River shoreline of Queens Island and extends south along the Wolf Island shoreline, which includes Wolf Island Bar, to the eastern and southern shorelines of Little Egg Island Bar Natural Area southwest to Egg Island in the Altamaha Sound. The boundary continues northwest along the Altamaha River shoreline of Egg Island and north

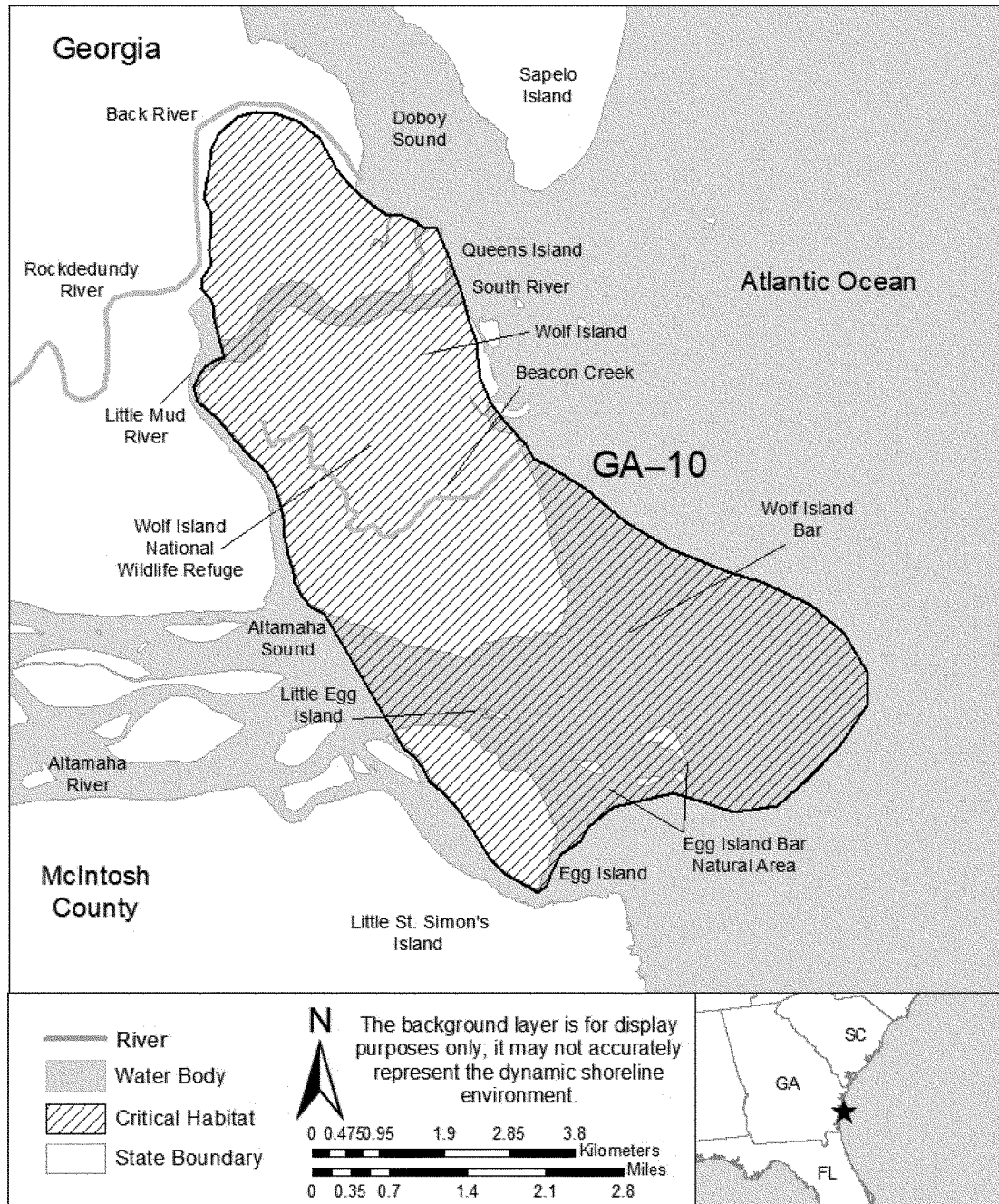
along the Little Mud River shoreline of Wolf Island and Rockdedundy River shoreline of Queens Island. The unit includes all emergent land from MLLW to the toe of the dunes or where densely vegetated habitat (not used by the rufa red knot) begins (*i.e.*, the highly dynamic shoreline and the sandy intertidal zone that are covered at high tide and uncovered at low tide). This dynamic habitat also includes the ephemeral emergent shoals (sand bars) within the flood-tidal and ebb-tidal deltas associated with the entrance to

Altamaha Sound and Beacon Creek. Lands within this unit include approximately 5,527 ac (2,237 ha) in Federal ownership (Wolf Island NWR, which is also a designated wilderness area), 261 ac (106 ha) in State ownership, 1,865 ac (755 ha) in private/other ownership, and 4,248 ac (1,719 ha) that are uncategorized.

(ii) Map of Unit GA-10 follows:

Figure 68 to Rufa Red Knot paragraph (85)(ii)

**Critical Habitat for Rufa Red Knot**  
**GA-10 Queens Island, Wolf Island, Egg Island, Little Egg Island**  
**and Little Egg Island Bar; McIntosh County, Georgia**



(86) Unit GA-11: Little St. Simon's Island Beach, Georgia.

(i) Unit GA-11 consists of approximately 9,053 ac (3,664 ha) of occupied habitat on Little St. Simon's Island off the coast of Glynn County. The unit boundary begins at the Altamaha Sound shoreline of Little St. Simon's Island and extends south to the Hampton River shoreline. The unit includes all emergent land from MLLW

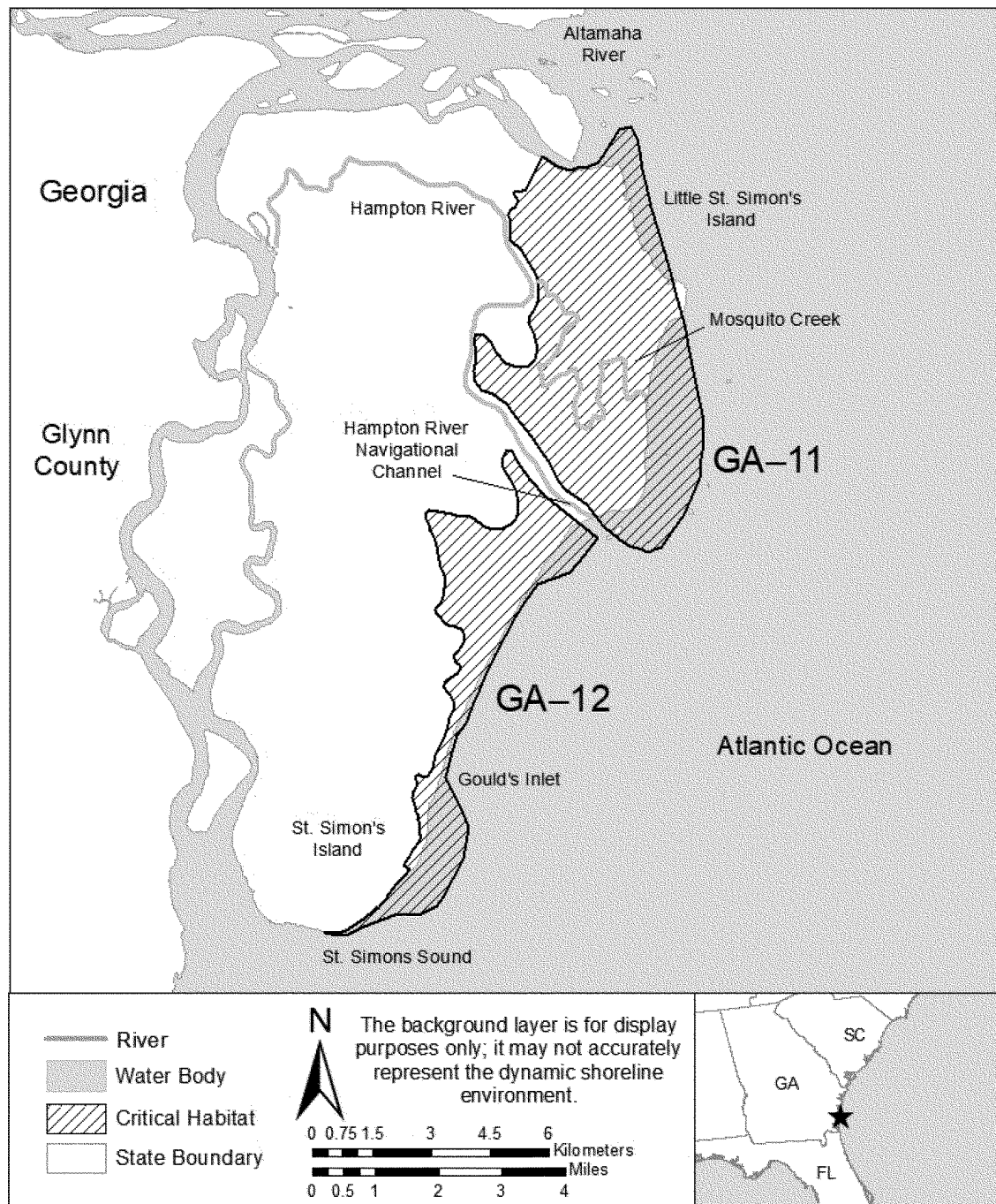
to the toe of the dunes or where densely vegetated habitat (not used by the rufa red knot) begins (*i.e.*, the highly dynamic shoreline and the sandy intertidal zone that are covered at high tide and uncovered at low tide). This dynamic habitat also includes the ephemeral emergent shoals (sand bars) within the flood-tidal and ebb-tidal deltas associated with the Altamaha Sound off the northeastern tip of the

island, Mosquito Creek, and the northern side of Hampton River Inlet's navigable channel. Lands within this unit include approximately 113 ac (46 ha) in State ownership, 7,462 ac (3,022 ha) in private/other ownership (TNC-owned preserve lands), and 1,479 ac (596 ha) that are uncategorized.

(ii) Map of Unit GA-11 follows:

Figure 69 to Rufa Red Knot paragraph  
(86)(ii)

**Critical Habitat for Rufa Red Knot**  
**GA-11 Little St. Simon's Beach and GA-12 Sea and St. Simon's**  
**Island Beaches; Glynn County, Georgia**



(87) Unit GA-12: Sea and St. Simon's Island Beaches, Georgia.

(i) Unit GA-12 consists of approximately 4,033 ac (1,631 ha) of occupied habitat across the entirety of Sea Island and a portion of St. Simon's

Island, both of which are barrier islands off the coast of Glynn County. The unit boundary begins at the Hampton River shoreline of Sea Island and extends southwest to the St. Simon's Sound shoreline of St. Simon's Island. The unit

includes all emergent land from MLLW to the toe of the dunes or where densely vegetated habitat (not used by the red knot) begins (*i.e.*, the highly dynamic shoreline and the sandy intertidal zone that are covered at high tide and



uncovered at low tide). This dynamic habitat also includes the ephemeral emergent shoals (sand bars) within the flood-tidal and ebb-tidal deltas associated with Gould's Inlet. Lands within this unit include approximately 4 ac (2 ha) in State ownership, 3,448 ac (1,395 ha) in private/other ownership, and 581 ac (235 ha) that are uncategorized.

(ii) Map of Unit GA-12 is presented at paragraph (86)(ii) of this entry.

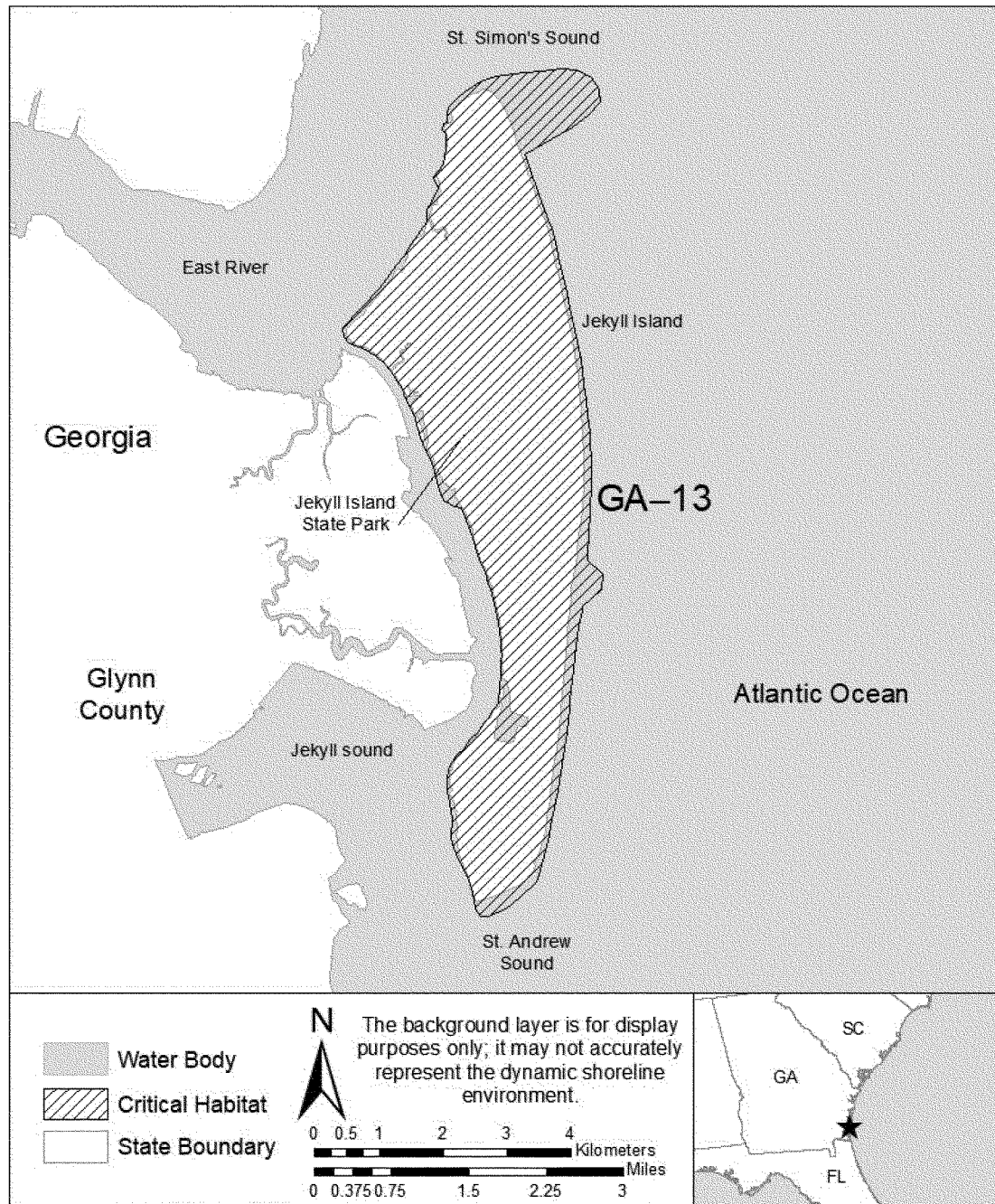
(88) Unit GA-13: Jekyll Island Beach, Georgia.

(i) Unit GA-13 consists of approximately 6,287 ac (2,545 ha) of occupied habitat on Jekyll Island, a barrier island off the coast of Glynn County. The unit boundary begins at the St. Simon's Sound shoreline of Jekyll Island and extends south to St. Andrew Sound shoreline. The unit includes all emergent land from MLLW to the toe of the dunes or where densely vegetated habitat (not used by the rufa red knot) begins (*i.e.*, the highly dynamic shoreline and the sandy intertidal zone that are covered at high tide and

uncovered at low tide). This dynamic habitat also includes the ephemeral emergent shoals (sand bars) within the flood-tidal and ebb-tidal deltas associated with the southern side of St. Simon's Sound off the northern tip of the island. Lands within this unit include approximately 5,944 ac (2,406 ha) in State ownership (including Jekyll Island State Park) and 343 ac (139 ha) that are uncategorized.

(ii) Map of Unit GA-13 follows: Figure 70 to Rufa Red Knot paragraph (88)(ii)

# **Critical Habitat for Rufa Red Knot** **GA-13 Jekyll Island Beach; Glynn County, Georgia**



(89) Unit GA-14: Little Cumberland and Cumberland Island Beaches, Georgia.

(i) Unit GA-14 consists of approximately 28,137 ac (11,387 ha) of occupied habitat on Little Cumberland Island and Cumberland Island, a barrier island complex off the coast in Camden County. The unit boundary begins at the St. Andrew Sound shoreline of Little Cumberland Island and extends west across the Cumberland River and marsh

to the East River and continues south to the St. Mary's River shoreline of Cumberland Island. The unit includes all emergent land from MLLW to the toe of the dunes or where densely vegetated habitat (not used by the rufa red knot) begins (*i.e.*, the highly dynamic shoreline and the sandy intertidal zone that are covered at high tide and uncovered at low tide). This dynamic habitat also includes the ephemeral emergent shoals (sand bars) within the

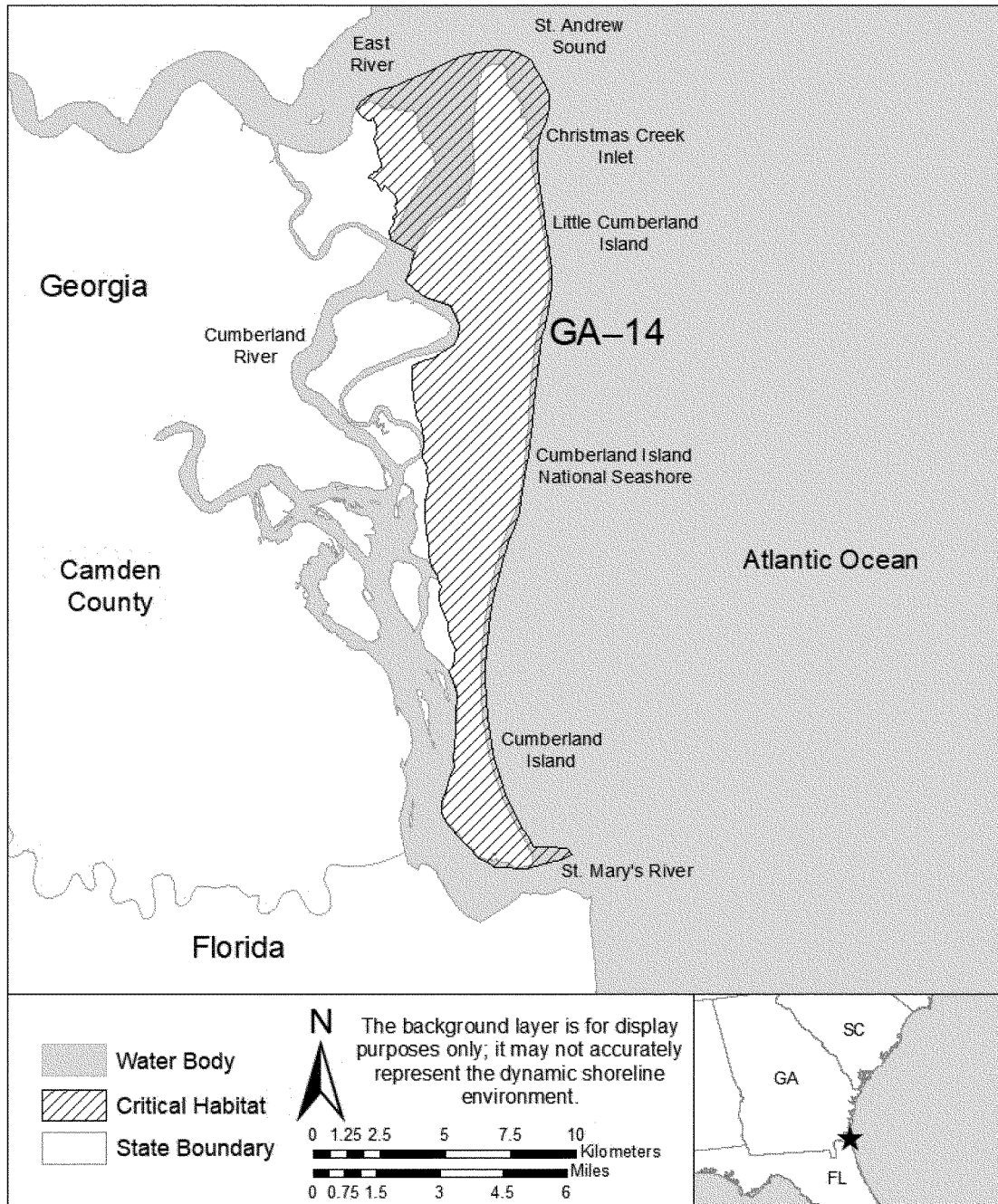
flood-tidal and ebb-tidal deltas associated with St. Andrew Sound off the northern tip of Little Cumberland Island and Christmas Creek Inlet between Little Cumberland and Cumberland Islands. Lands within this unit include approximately 23,367 ac (9,456 ha) in Federal ownership (Cumberland Island National Seashore, which is also a designated wilderness area), 1,685 ac (682 ha) in State

ownership, and 3,085 ac (1,248 ha) that are uncategorized.

Figure 71 to Rufa Red Knot paragraph (89)(ii)

(ii) Map of Unit GA-14 follows:

**Critical Habitat for Rufa Red Knot  
GA-14 Little Cumberland and Cumberland Island Beaches;  
Camden County, Georgia**



(90) Unit FL-1: Nassau Sound–Fort George Sound–Fort George Inlet Complex, Florida.

(i) Unit FL-1 consists of approximately 4,324 ac (1,750 ha) of

occupied habitat consisting of beach, inlet, and intertidal sandflats in Nassau and Duval Counties. The unit extends from the north shore of Nassau Sound in Nassau County south to the north

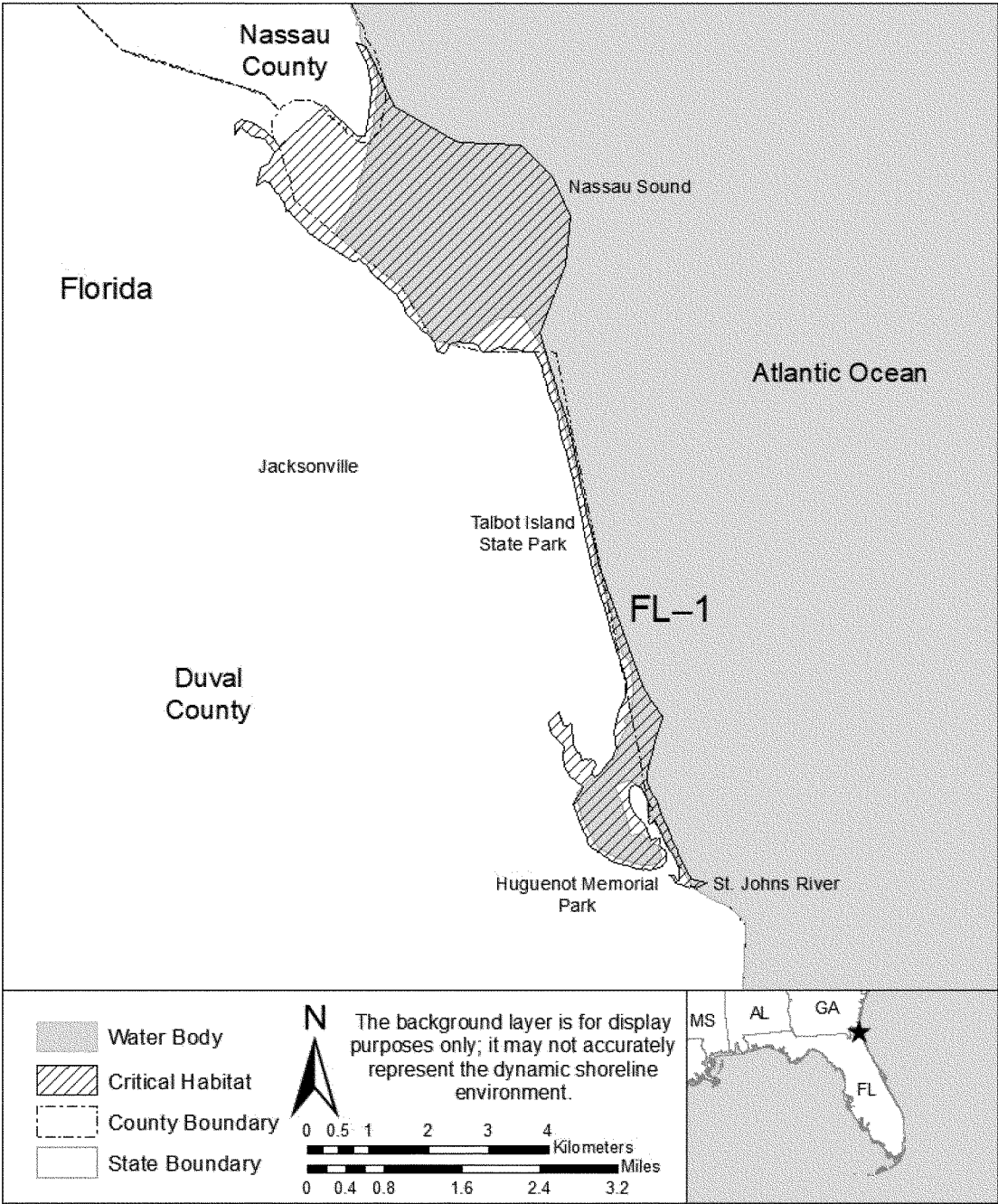
shore of the St. Johns River at Huguenot Memorial Park in Duval County. The landward boundary is the line indicating the beginning of dense vegetation or hardened structures,

including emergent, dynamic shoreline to MLLW that is covered at high tide and uncovered at low tide. The majority of this unit is within the Talbot Islands State Parks Complex and Huguenot Memorial Park, which is a Federal and State-owned parcel leased to the City of Jacksonville. Lands within this unit include approximately 996 ac (404 ha) in Federal ownership, 522 ac (211 ha) in State ownership, 27 ac (11 ha) in private/other ownership, and 2,779 ac (1,125 ha) that are uncategorized.

(ii) Map of Unit FL-1 follows:

Figure 72 to Rufa Red Knot paragraph (90)(ii)

Critical Habitat for Rufa Red Knot  
FL-1 Nassau Sound–Fort George Sound–Fort George Inlet Complex;  
Nassau and Duval Counties, Florida



(91) Unit FL-2: Ponce Inlet Complex, Florida.

(i) Unit FL-2 consists of approximately 19,683 ac (7,965 ha) of occupied habitat consisting of beach, inlet, and intertidal sandflats in Volusia and Brevard Counties. The unit extends from approximately Ocean Edge Drive

in Ormond Beach south to the south end of Merritt Island NWR along the Atlantic Ocean. The landward boundary is the line indicating the beginning of dense vegetation or hardened structures, including emergent, dynamic shoreline

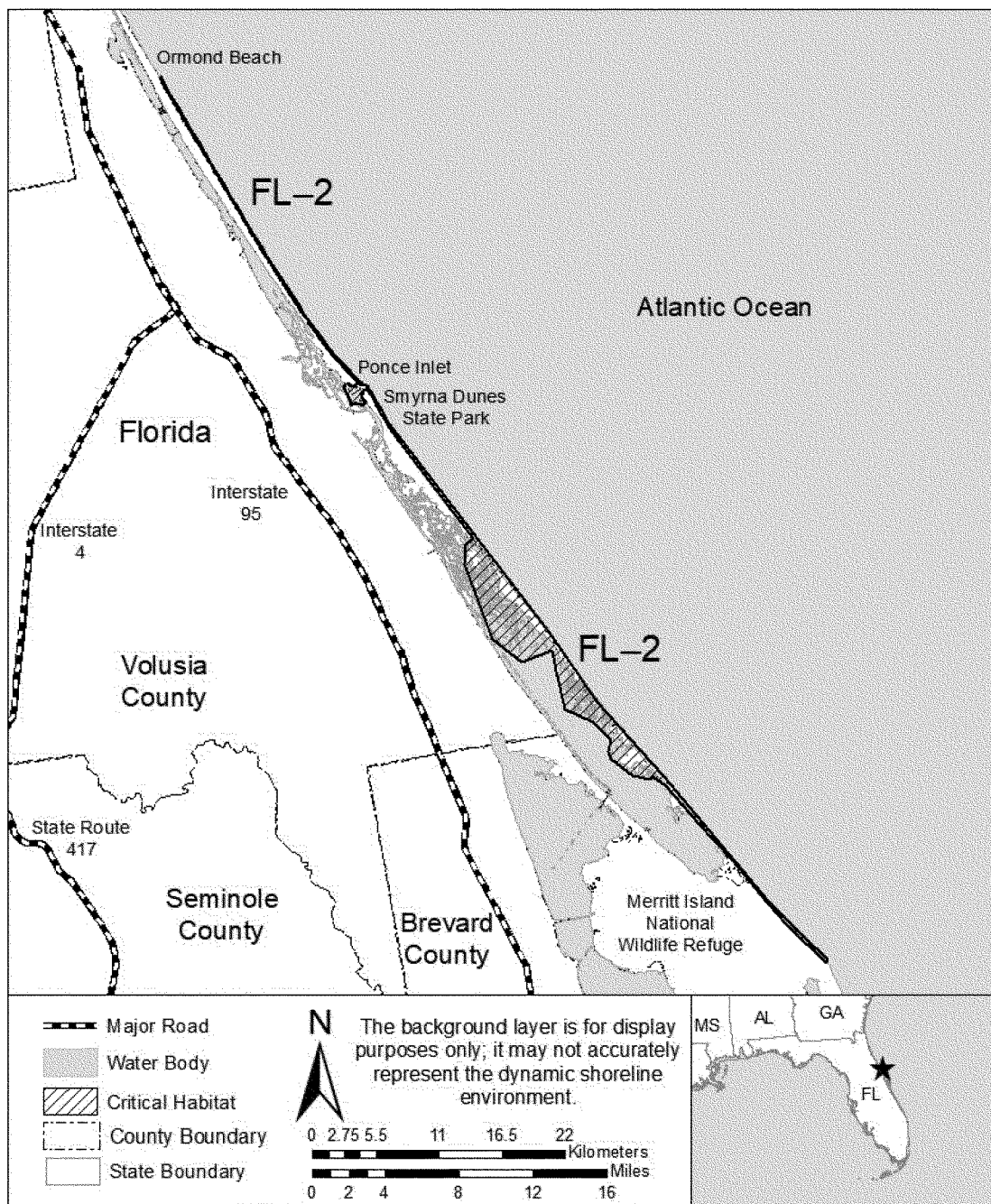
to MLLW that is covered at high tide and uncovered at low tide. Lands within this unit include approximately 16,660 ac (6,742 ha) in Federal ownership (Merritt Island NWR), 3,005 ac (1,216 ha) in State ownership (Smyrna Dunes

State Park), and 18 ac (7 ha) that are uncategorized.

(ii) Map of Unit FL-2 follows:

Figure 73 to Rufa Red Knot paragraph (91)(ii)

### Critical Habitat for Rufa Red Knot FL-2 Ponce Inlet Complex; Volusia and Brevard Counties, Florida



(92) Unit FL-3: Merritt Island National Wildlife Refuge Impoundments, Florida.

(i) Unit FL-3 consists of approximately 6,947 ac (2,811 ha) of occupied and managed impoundment and intertidal mudflats in Brevard

County. The landward boundary is the line indicating the beginning of dense vegetation or hardened structures, including emergent, dynamic shoreline



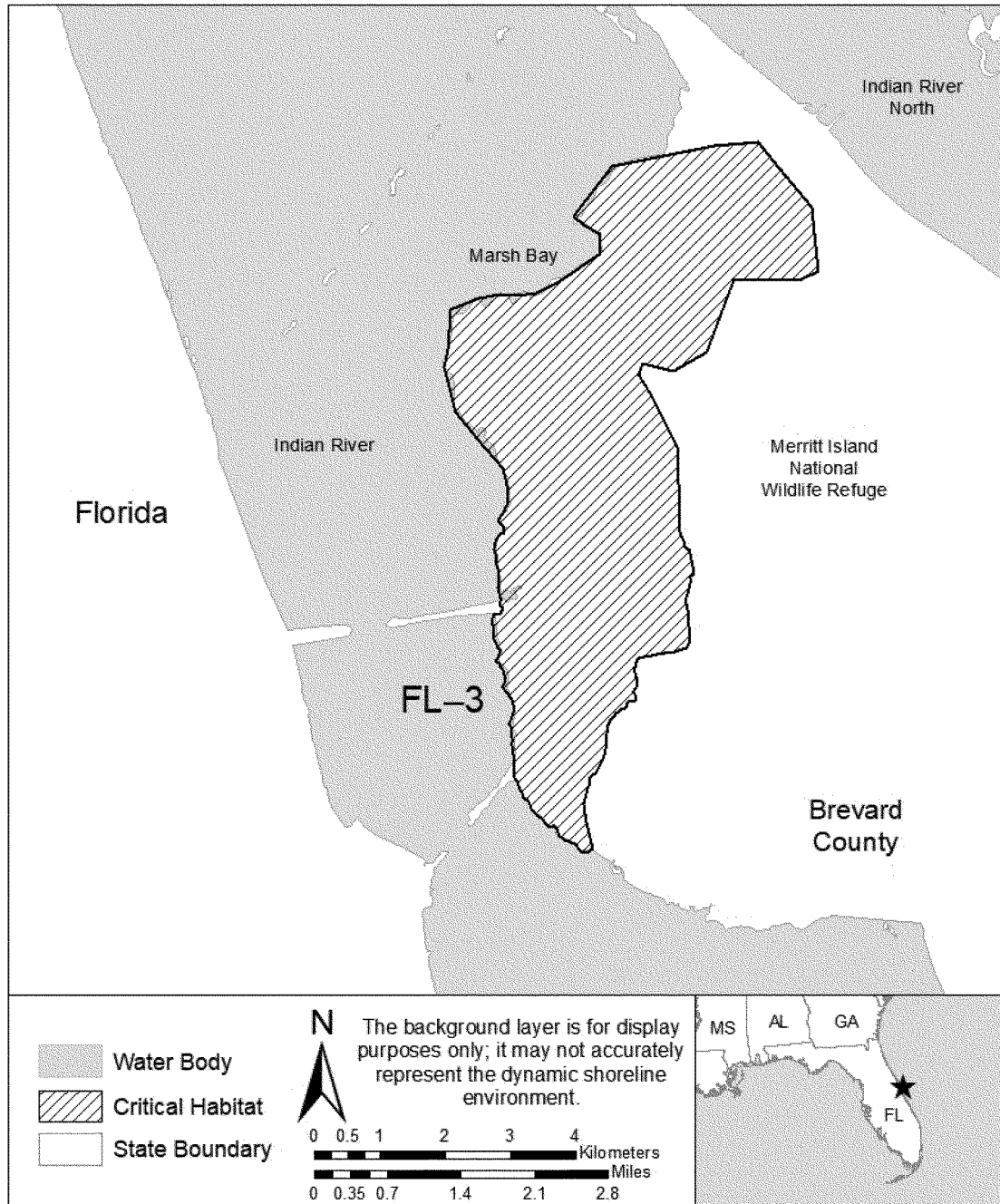
to MLLW that is covered at high tide and uncovered at low tide. This unit

consists of Federal lands (Merritt Island NWR).

(ii) Map of Unit FL-3 follows:

Figure 74 to Rufa Red Knot paragraph (92)(ii)

**Critical Habitat for Rufa Red Knot  
FL-3 Merritt Island National Wildlife Refuge Impoundments;  
Brevard County, Florida**



(93) Unit FL-4: Cape Romano and Marco Island, Florida.

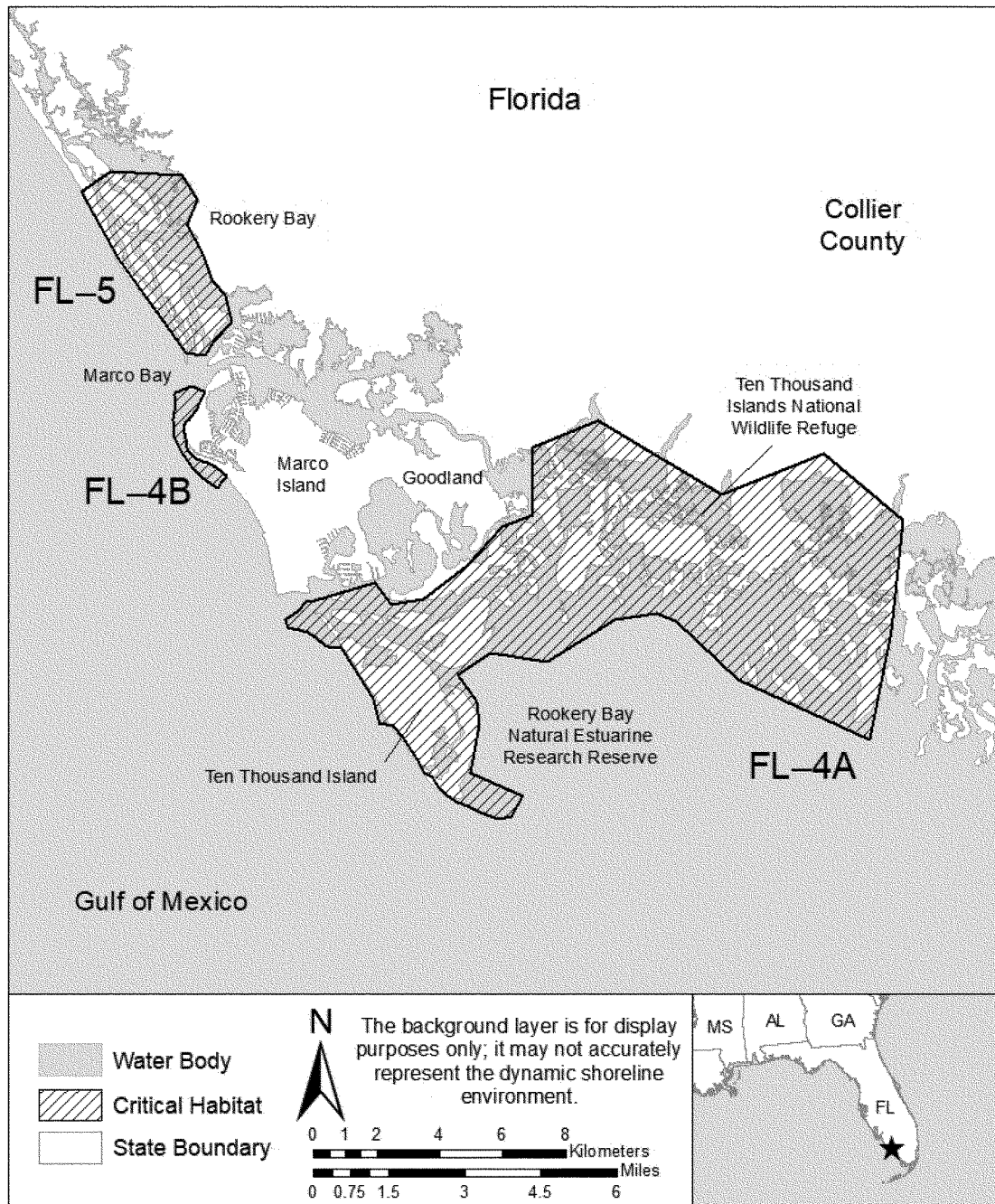
(i) Unit FL-4 consists of two subunits comprising 26,629 ac (10,776 ha) of

occupied habitat in Collier County. This unit consists of Federal (Ten Thousand Islands NWR), State, and private landowners.

(ii) Map of Unit FL-4 follows:

Figure 75 to Rufa Red Knot paragraph (93)(ii)

**Critical Habitat for Rufa Red Knot**  
**FL-4 Cape Romano and Marco Island and FL-5 Marco Bay Complex;**  
**Collier County, Florida**



(iii) Subunit FL-4A (Cape Romano Complex) consists of approximately 26,213 ac (10,608 ha) of occupied beach and intertidal sandflats habitat in Collier County, in the wetland complex south of Marco Island and the community of Goodland. The landward boundary is the line indicating the beginning of dense vegetation, including emergent, dynamic shoreline to MLLW that is covered at high tide and

uncovered at low tide. Lands within this subunit include approximately 13,138 ac (5,317 ha) in Federal ownership (Ten Thousand Islands NWR), 12,605 ac (5,101 ha) in State ownership (Rookery Bay NERR), and 470 ac (190 ha) that are uncategorized.

(iv) Map of Subunit FL-4A is presented at paragraph (93)(ii) of this entry.

(v) Subunit FL-4B (Marco Island) consists of approximately 416 ac (168 ha) of occupied habitat beach, inlet, and intertidal sandflats in Collier County. The subunit extends from the south side of the inlet north of Marco Island south along the Gulf of Mexico approximately 4 mi (6.5 km). The landward boundary is the line indicating the beginning of dense vegetation or hardened structures, including emergent, dynamic shoreline

to MLLW that is covered at high tide and uncovered at low tide. Lands within this subunit include approximately 408 ac (165 ha) in State ownership (Rookery Bay NERR) and 8 ac (3 ha) in private/other ownership.

(vi) Map of Subunit FL-4B is presented at paragraph (93)(ii) of this entry.

(94) Unit FL-5: Marco Bay Complex, Florida.

(i) Unit FL-5 consists of approximately 3,589 ac (1,453 ha) of occupied beach, inlet, and intertidal

sandflats habitat in Collier County, from the north side of the inlet north of Marco Island north along the Gulf of Mexico approximately 3.7 mi (6 km) and inclusive of the wetland complex inland to the east side of Rookery Bay. The landward boundary is the line indicating the beginning of dense vegetation, including emergent, dynamic shoreline to MLLW that is covered at high tide and uncovered at low tide. Lands within this unit include approximately 3,531 ac (1,429 ha) in State ownership (Rookery Bay NERR)

and 58 ac (24 ha) in private/other ownership.

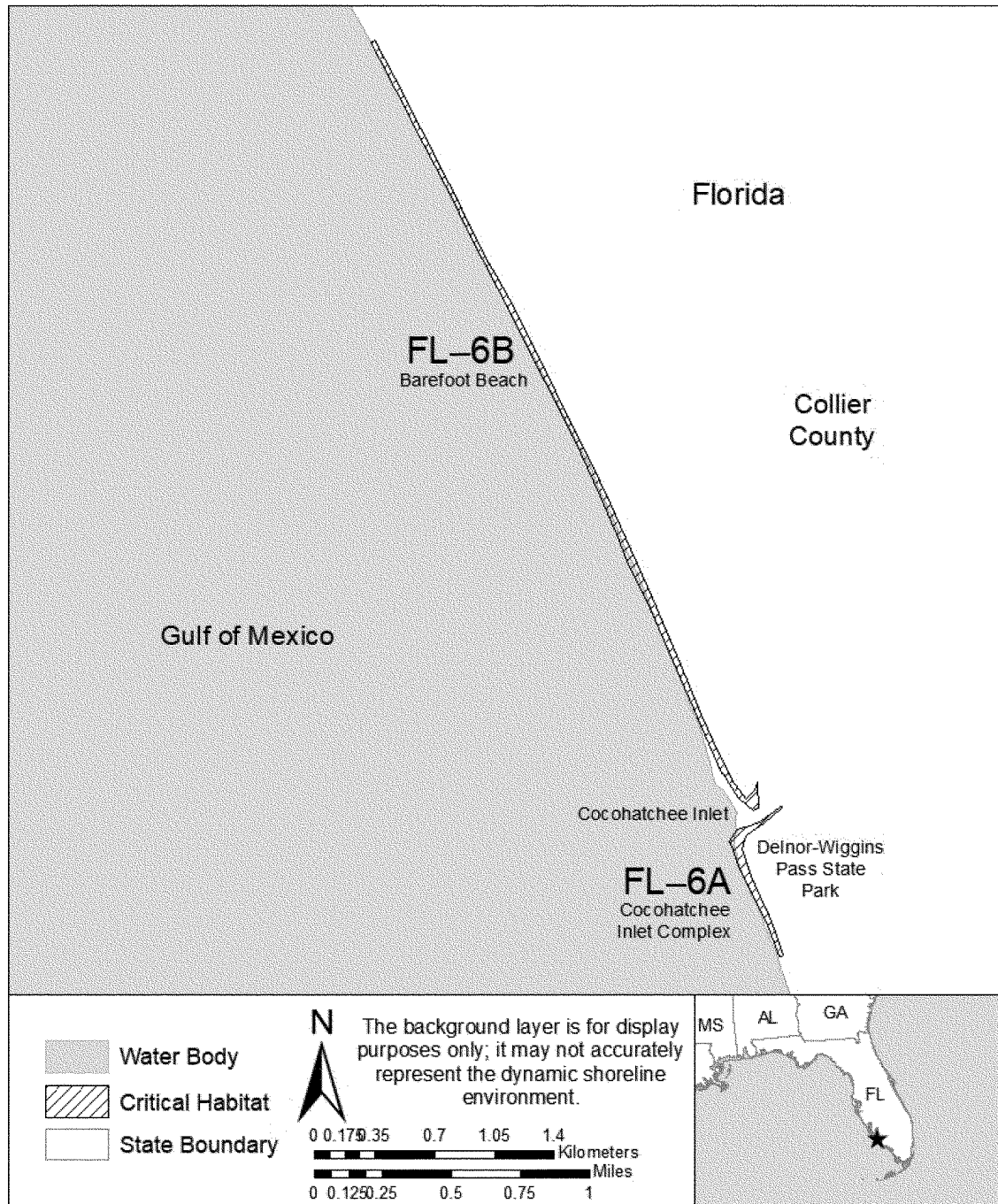
(ii) Map of Unit FL-5 is presented at paragraph (93)(ii) of this entry.

(95) Unit FL-6: Cocohatchee Inlet Complex and Barefoot Beach, Florida.

(i) Unit FL-6 consists of two subunits comprising 48 ac (20 ha) of occupied habitat in Collier County. This unit consists of Delnor-Wiggins Pass State Park and private landowners.

(ii) Map of Unit FL-6 follows: Figure 76 to Rufa Red Knot paragraph (95)(ii)

**Critical Habitat for Rufa Red Knot**  
**FL-6 Cocohatchee Inlet Complex and Barefoot Beach;**  
**Collier County, Florida**



(iii) Subunit FL-6A (Cocohatchee Inlet Complex) consists of approximately 9 ac (4 ha) of occupied beach, inlet, and intertidal sandflats habitat in Collier County, from the south side of the Cocohatchee Inlet south along the Gulf of Mexico approximately 3,281 ft (1 km). The landward boundary is the line indicating the beginning of dense vegetation, including emergent,

dynamic shoreline to MLLW that is covered at high tide and uncovered at low tide. Lands within this subunit are entirely under State ownership (Delnor-Wiggins Pass State Park).

(iv) Map of Subunit FL-6A is presented at paragraph (95)(ii) of this entry.

(v) Subunit FL-6B (Barefoot Beach) consists of approximately 39 ac (16 ha)

of occupied beach, inlet, and intertidal sandflats habitat in Collier County, from the north side of the Cocohatchee Inlet north along the Gulf of Mexico approximately 3.1 mi (5 km). The landward boundary is the line indicating the beginning of dense vegetation or hardened structures, including emergent, dynamic shoreline to MLLW that is covered at high tide

and uncovered at low tide. Lands within this subunit include approximately 18 ac (7 ha) in State ownership and 21 ac (9 ha) in private/other ownership.

(vi) Map of Subunit FL-6B is presented at paragraph (95)(ii) of this entry.

(96) Unit FL-7: Lovers Key and Estero Island, Florida.

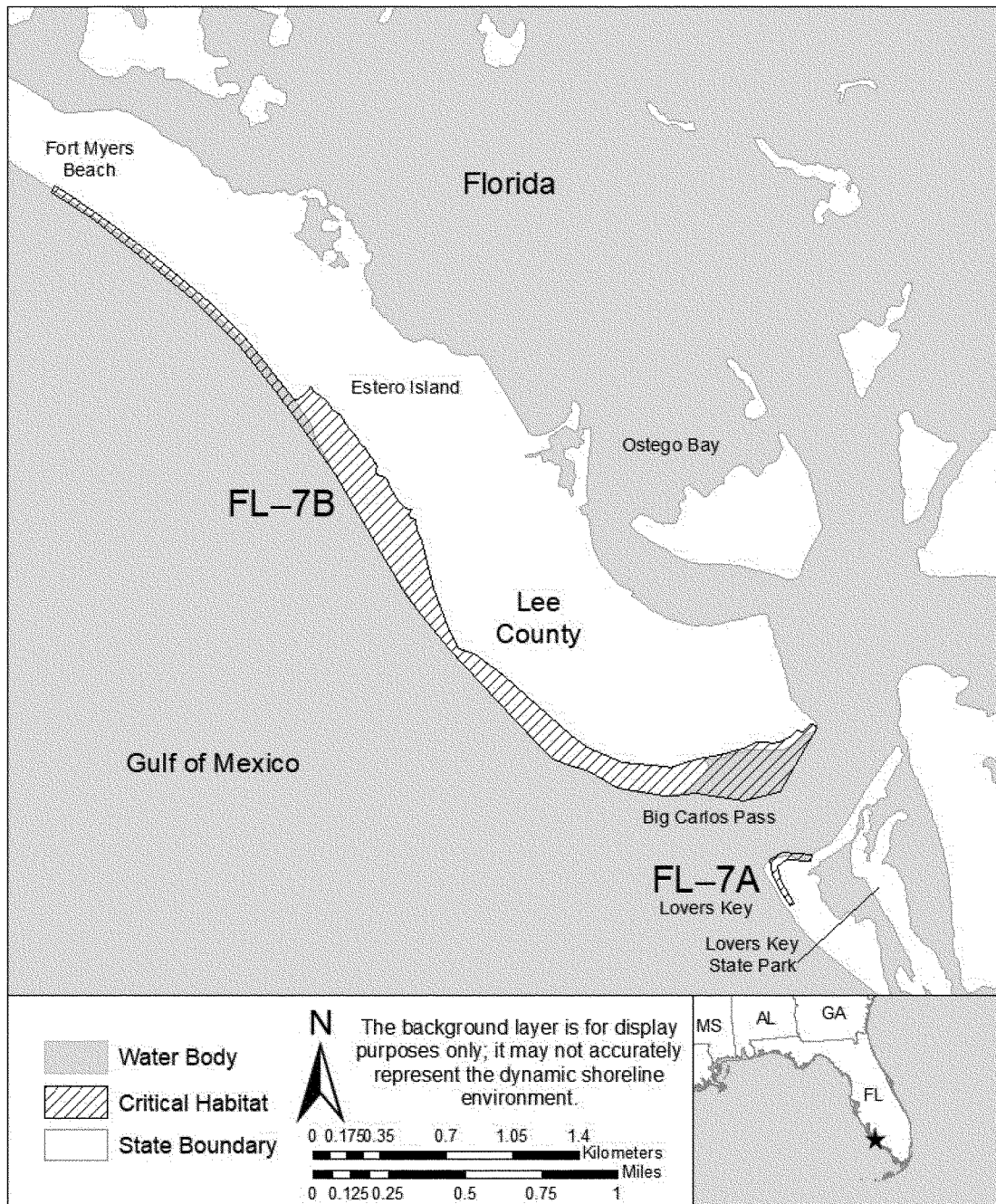
(i) Unit FL-7 consists of two subunits comprising 175 ac (70 ha) of occupied

habitat in Lee County. This unit consists of portions of Lovers Key State Park and Estero Island.

(ii) Map of Unit FL-7 follows:

Figure 77 to Rufa Red Knot paragraph (96)(ii)

### Critical Habitat for Rufa Red Knot FL-7 Lovers Key and Estero Island; Lee County, Florida



(iii) Subunit FL-7A (Lovers Key) consists of approximately 4 ac (1 ha) of occupied beach, inlet, and intertidal sandflats habitat in Lee County, at the

north point of Lovers Key. The landward boundary is the line indicating the beginning of dense vegetation or hardened structures,

including emergent, dynamic shoreline to MLLW that is covered at high tide and uncovered at low tide. Lands within



this subunit are entirely State owned (Lovers Key State Park).

(iv) Map of Subunit FL-7A is presented at paragraph (96)(ii) of this entry.

(v) Subunit FL-7B (Estero Island) consists of approximately 171 ac (69 ha) of occupied beach, inlet, and intertidal sandflats habitat in Lee County, from Key West Court on Fort Myers Beach south along the Gulf of Mexico to the southern point of the island. The landward boundary is the line indicating the beginning of dense vegetation or hardened structures,

including emergent, dynamic shoreline to MLLW that is covered at high tide and uncovered at low tide. Lands within this subunit are entirely in State ownership.

(vi) Map of Subunit FL-7B is presented at paragraph (96)(ii) of this entry.

(97) Unit FL-8: Bunche Beach, Florida.

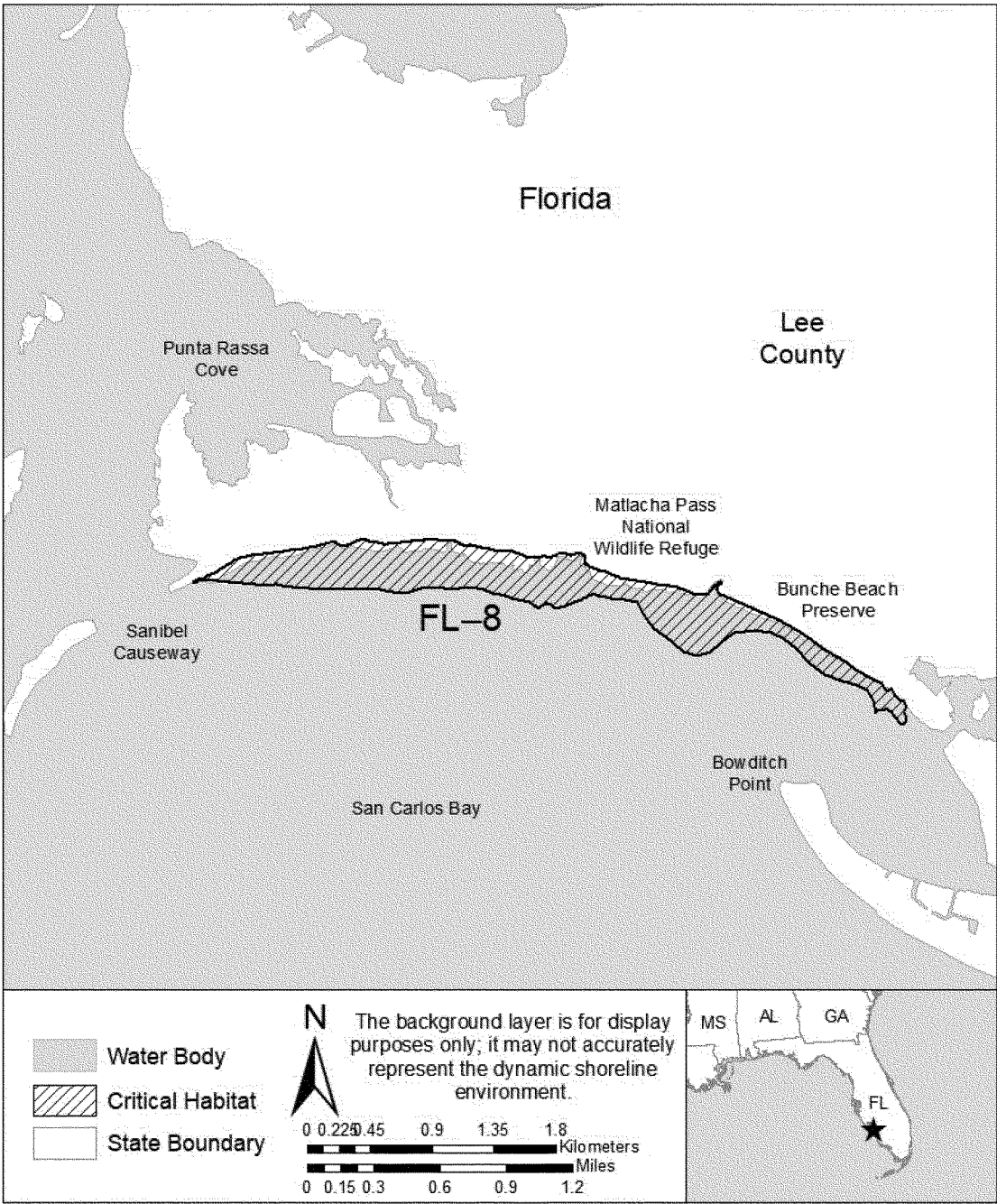
(i) Unit FL-8 consists of approximately 334 ac (135 ha) of occupied beach, inlet, and intertidal sandflats habitat in Lee County, in San Carlos Bay south of the Sanibel Causeway in Fort Myers. The landward

boundary is the line indicating the beginning of dense vegetation or hardened structures, including emergent, dynamic shoreline to MLLW that is covered at high tide and uncovered at low tide. Lands within this unit include approximately 23 ac (9 ha) in Federal ownership (Matlacha Pass NWR), 264 ac (107 ha) in State ownership (Bunche Beach Preserve), and 47 ac (19 ha) in private/other ownership.

(ii) Map of Unit FL-8 follows:

Figure 78 to Rufa Red Knot paragraph (97)(ii)

Critical Habitat for Rufa Red Knot  
FL-8 Bunche Beach; Lee County, Florida

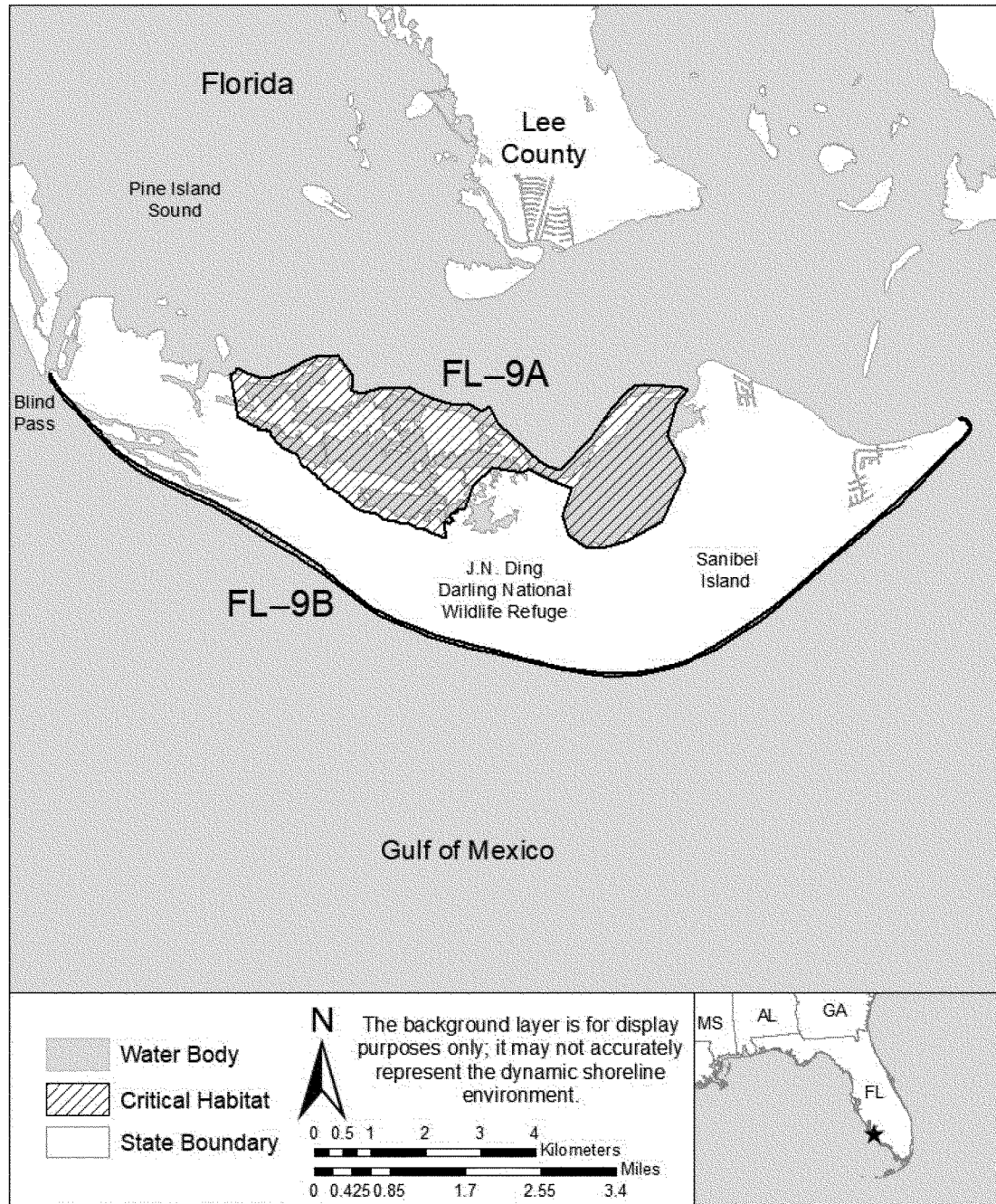


(98) Unit FL-9: Sanibel Island Complex, Florida.  
(i) Unit FL-9 consists of two subunits comprising 3,759 ac (1,521 ha) of

occupied habitat in Lee County. This unit consists of Federal lands that are part of the J.N. "Ding" Darling NWR and Sanibel Island.

(ii) Map of Unit FL-9 follows:  
Figure 79 to Rufa Red Knot paragraph (98)(ii)

**Critical Habitat for Rufa Red Knot**  
**FL-9 Sanibel Island Complex; Lee County, Florida**



(iii) Subunit FL-9A (J.N. "Ding" Darling National Wildlife Refuge) consists of approximately 3,451 ac (1,397 ha) of occupied beach, inlet, and intertidal sandflats habitat, as well as managed impoundments in Lee County on Sanibel Island. The landward boundary is the line indicating the beginning of dense vegetation or hardened structures, including emergent, dynamic shoreline to MLLW that is covered at high tide and

uncovered at low tide. Lands within this subunit are entirely in Federal ownership (J.N. "Ding" Darling NWR).

(iv) Map of Subunit FL-9A is presented at paragraph (98)(ii) of this entry.

(v) Subunit FL-9B (Sanibel Island) consists of approximately 307 ac (124 ha) of occupied beach, inlet, and intertidal sandflats habitat in Lee County on Sanibel Island. The landward boundary is the line indicating the

beginning of dense vegetation or hardened structures, including emergent, dynamic shoreline to MLLW that is covered at high tide and uncovered at low tide. Lands within this subunit are entirely in State ownership.

(vi) Map of Subunit FL-9B is presented at paragraph (98)(ii) of this entry.

(99) Unit FL-10: Don Pedro Complex, Florida.

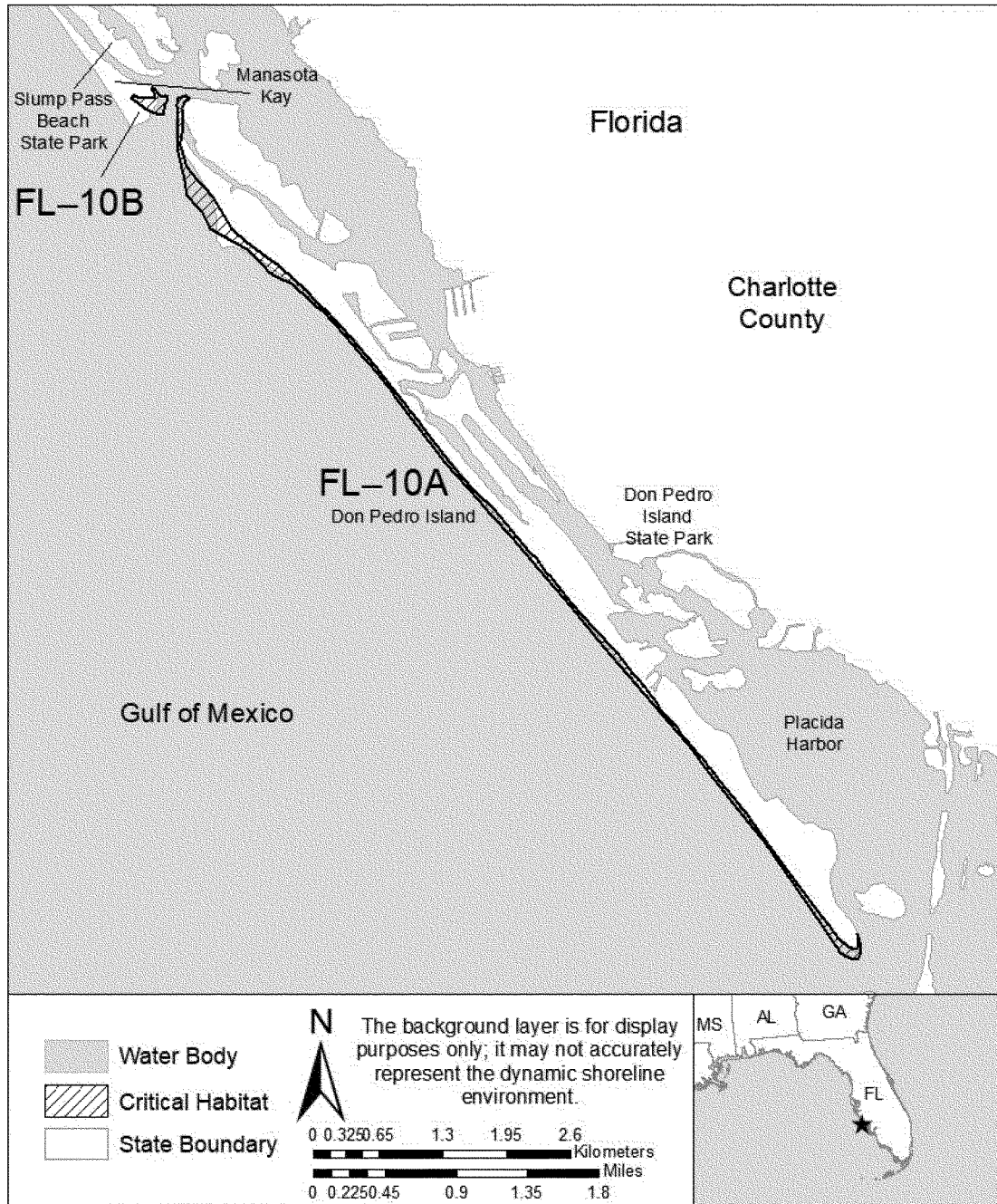
(i) Unit FL-10 consists of two subunits comprising 158 ac (64 ha) of occupied habitat in Charlotte County. This unit consists of State lands, a

portion of which are part of the Don Pedro Island State Park and Stump Pass Beach State Park.

(ii) Map of Unit FL-10 follows:

Figure 80 to Rufa Red Knot paragraph (99)(ii)

### Critical Habitat for Rufa Red Knot FL-10 Don Pedro Complex; Charlotte County, Florida



(iii) Subunit FL-10A (Don Pedro) consists of approximately 147 ac (60 ha) of occupied beach, inlet, and intertidal sandflats habitat in Charlotte County on Don Pedro Island. The landward boundary is the line indicating the

beginning of dense vegetation or hardened structures, including emergent, dynamic shoreline to MLLW that is covered at high tide and uncovered at low tide. Lands within this subunit are entirely in State ownership,

a portion of which includes Don Pedro Island State Park.

(iv) Map of Subunit FL-10A is presented at paragraph (99)(ii) of this entry.

(v) Subunit FL-10B (Stump Pass Beach State Park) consists of approximately 11 ac (4 ha) of occupied beach, inlet, and intertidal sandflats habitat in Charlotte County at the southern point of Manasota Key. The landward boundary is the line indicating the beginning of dense vegetation, including emergent, dynamic shoreline to MLLW that is covered at high tide and uncovered at

low tide. Lands within this subunit are entirely in State ownership (Stump Pass Beach State Park).

(vi) Map of Subunit FL-10B is presented at paragraph (99)(ii) of this entry.

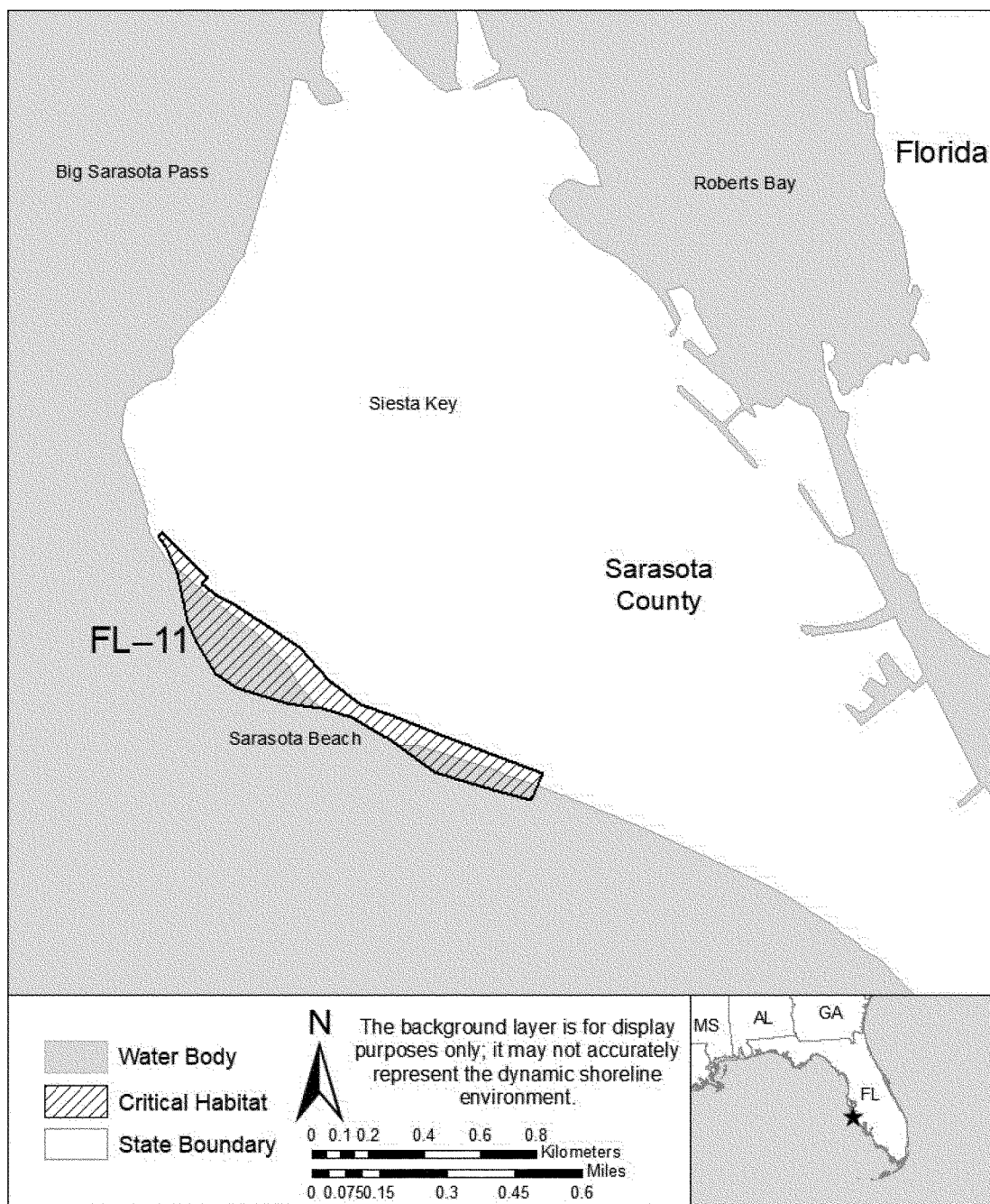
(100) Unit FL-11: Siesta Key, Florida.

(i) Unit FL-11 consists of approximately 53 ac (21 ha) of occupied beach, inlet, and intertidal sandflats habitat in Sarasota County on Siesta

Key, from Avenida Messina (road) south to Avenida del Mare. The landward boundary is the line indicating the beginning of dense vegetation, including emergent, dynamic shoreline to MLLW that is covered at high tide and uncovered at low tide. Lands within this unit are entirely in State ownership.

(ii) Map of Unit FL-11 follows: Figure 81 to Rufa Red Knot paragraph (100)(ii)

### Critical Habitat for Rufa Red Knot FL-11 Siesta Key; Sarasota County, Florida





(101) Unit FL-12: Lido-Longboat Keys Complex, Florida.

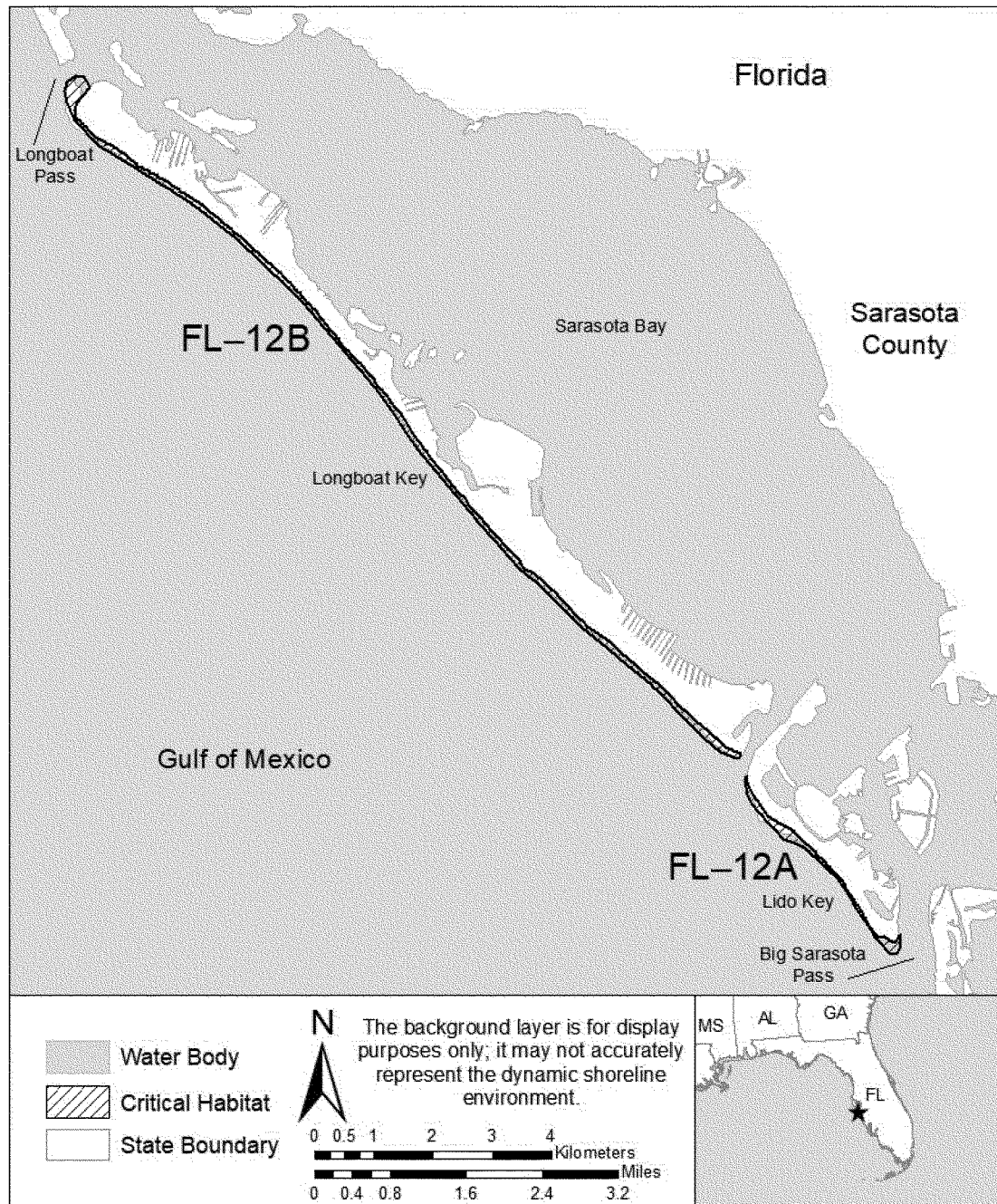
(i) Unit FL-12 consists of two subunits comprising 450 ac (182 ha) of

occupied habitat in Sarasota County. This unit consists of State lands.

(ii) Map of Unit FL-12 follows:

Figure 82 to Rufa Red Knot paragraph (101)(ii)

### Critical Habitat for Rufa Red Knot FL-12 Lido-Longboat Keys Complex; Sarasota County, Florida



(iii) Subunit FL-12A (Lido Key) consists of approximately 81 ac (33 ha) of occupied beach, inlet, and intertidal sandflats habitat in Sarasota County on Lido Key. The landward boundary is the line indicating the beginning of dense

vegetation, including emergent, dynamic shoreline to MLLW that is covered at high tide and uncovered at low tide. Lands within this subunit are entirely in State ownership.

(iv) Map of Subunit FL-12A is presented at paragraph (101)(ii) of this entry.

(v) Subunit FL-12B (Longboat Key) consists of approximately 369 ac (149 ha) of occupied beach, inlet, and

intertidal sandflats habitat in Sarasota County on Longboat Key. The landward boundary is the line indicating the beginning of dense vegetation or hardened structures, including emergent, dynamic shoreline to MLLW that is covered at high tide and uncovered at low tide. Lands within this subunit are entirely in State ownership.

(vi) Map of Subunit FL–12B is presented at paragraph (101)(ii) of this entry.

(102) Unit FL–13: North Anna Maria Island, Florida.

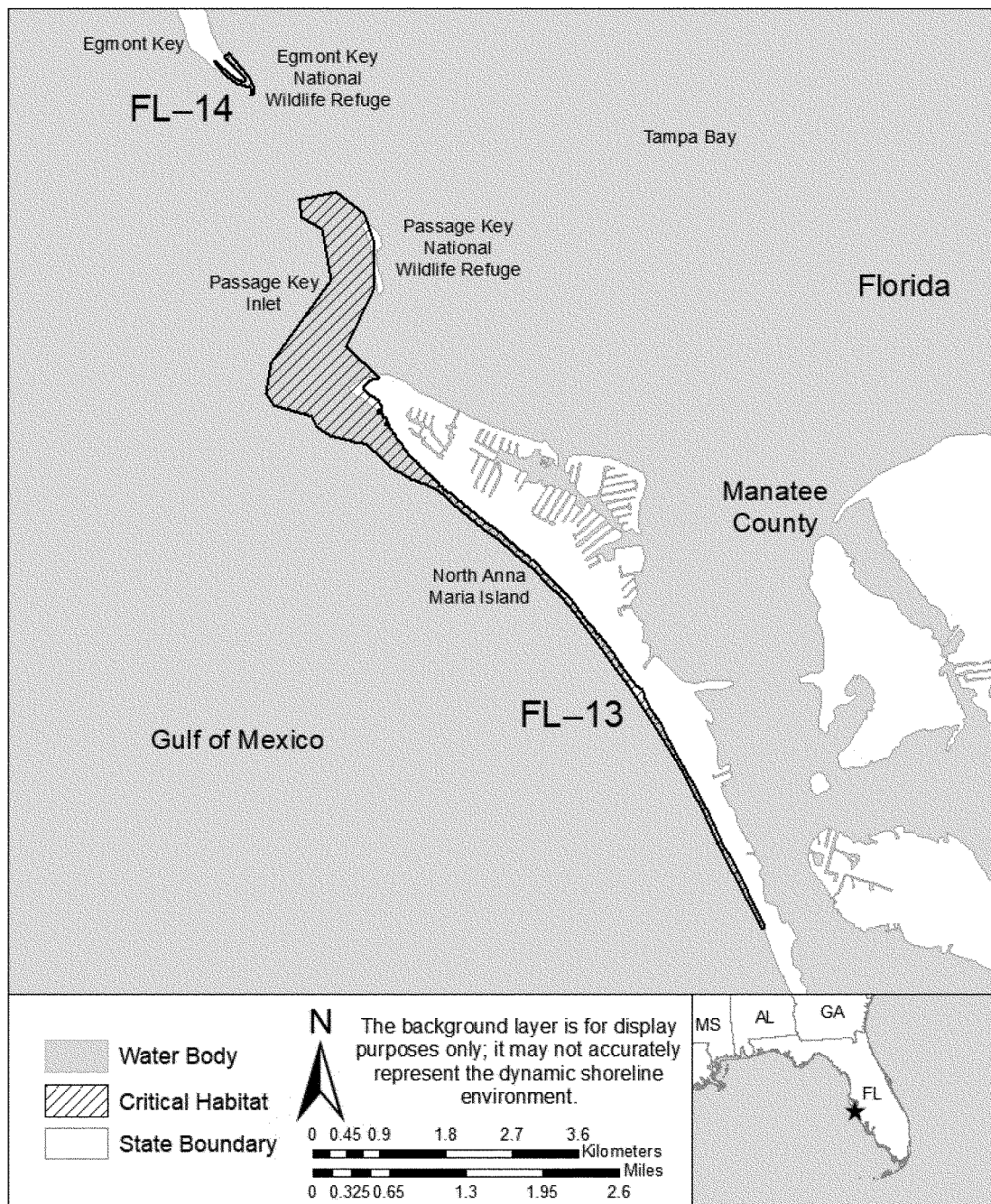
(i) Unit FL–13 consists of approximately 945 ac (383 ha) of occupied beach, inlet, and intertidal sandflats habitat in Manatee County, from the north point of Anna Maria Island south to Cortez Road West. The landward boundary is the line

indicating the beginning of dense vegetation, including emergent, dynamic shoreline to MLLW that is covered at high tide and uncovered at low tide. Lands within this unit include approximately 56 ac (23 ha) in Federal ownership (Passage Key NWR) and 889 ac (360 ha) in State ownership.

(ii) Map of Unit FL–13 follows:

Figure 83 to Rufa Red Knot paragraph (102)(ii)

**Critical Habitat for Rufa Red Knot**  
**FL-13 North Anna Maria Island and FL-14 Egmont Key;**  
**Manatee County, Florida**



(103) Unit FL-14: Egmont Key, Florida.

(i) Unit FL-14 consists of approximately 15 ac (6 ha) of occupied beach and intertidal sandflats habitat in Manatee County, on the south end of Egmont Key at the mouth of Tampa Bay. The landward boundary is the line indicating the beginning of dense vegetation, including emergent,

dynamic shoreline to MLLW that is covered at high tide and uncovered at low tide. Lands within this unit are entirely under Federal ownership (Egmont Key NWR).

(ii) Map of Unit FL-14 is presented at paragraph (102)(ii) of this entry.

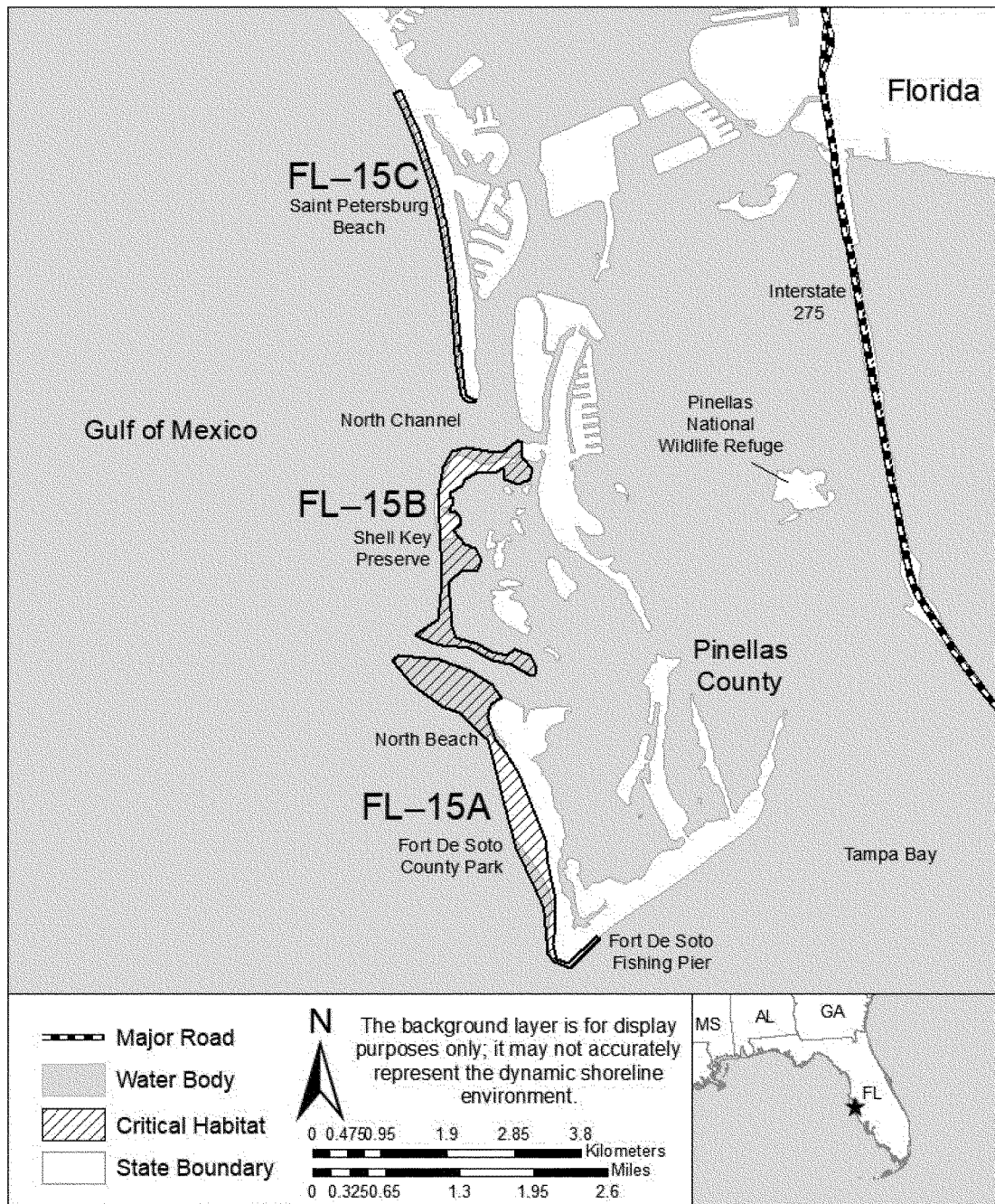
(104) Unit FL-15: Fort De Soto Complex, Florida.

(i) Unit FL-15 consists of three subunits comprising 856 ac (346 ha) of occupied habitat in Pinellas County. This unit consists of State lands and private/other ownership.

(ii) Map of Unit FL-15 follows:

Figure 84 to Rufa Red Knot paragraph (104)(ii)

**Critical Habitat for Rufa Red Knot**  
**FL-15 Fort De Soto Complex; Pinellas County, Florida**



(iii) Subunit FL-15A (Fort De Soto County Park) consists of approximately 427 ac (173 ha) of occupied beach, inlet, and intertidal sandflats habitat in Pinellas County, from North Beach south along the Gulf of Mexico to the Fort De Soto Fishing Pier at the mouth of Tampa Bay. The landward boundary is the line indicating the beginning of dense vegetation or hardened structures, including emergent, dynamic shoreline

to MLLW that is covered at high tide and uncovered at low tide. Lands within this subunit are entirely in county ownership (which is captured under the private/other category) within Fort De Soto County Park.

(iv) Map of Subunit FL-15A is presented at paragraph (104)(ii) of this entry.

(v) Subunit FL-15B (Shell Key Preserve) consists of approximately 322

ac (130 ha) of occupied beach, inlet, and intertidal sandflats habitat in Pinellas County on Shell Key. The landward boundary is the line indicating the beginning of dense vegetation, including emergent, dynamic shoreline to MLLW that is covered at high tide and uncovered at low tide. Lands within this subunit are entirely in State/county ownership (Shell Key Preserve).

(vi) Map of Subunit FL–15B is presented at paragraph (104)(ii) of this entry.

(vii) Subunit FL–15C (Saint Petersburg Beach) consists of approximately 107 ac (43 ha) of occupied beach, inlet, and intertidal sandflats habitat in Pinellas County on Saint Petersburg Beach from 46th Avenue south to 1st Avenue inclusive of the inlet. The landward boundary is the line indicating the beginning of dense vegetation, including emergent,

dynamic shoreline to MLLW that is covered at high tide and uncovered at low tide. Lands within this subunit are entirely in State ownership.

(viii) Map of Subunit FL–15C is presented at paragraph (104)(ii) of this entry.

(105) Unit FL–16: Indian Shores–Redington Beach, Florida.

(i) Unit FL–16 consists of approximately 196 ac (79 ha) of occupied beach, inlet, and intertidal sandflats habitat in Pinellas County, from the Indian Shores Florida Coastal

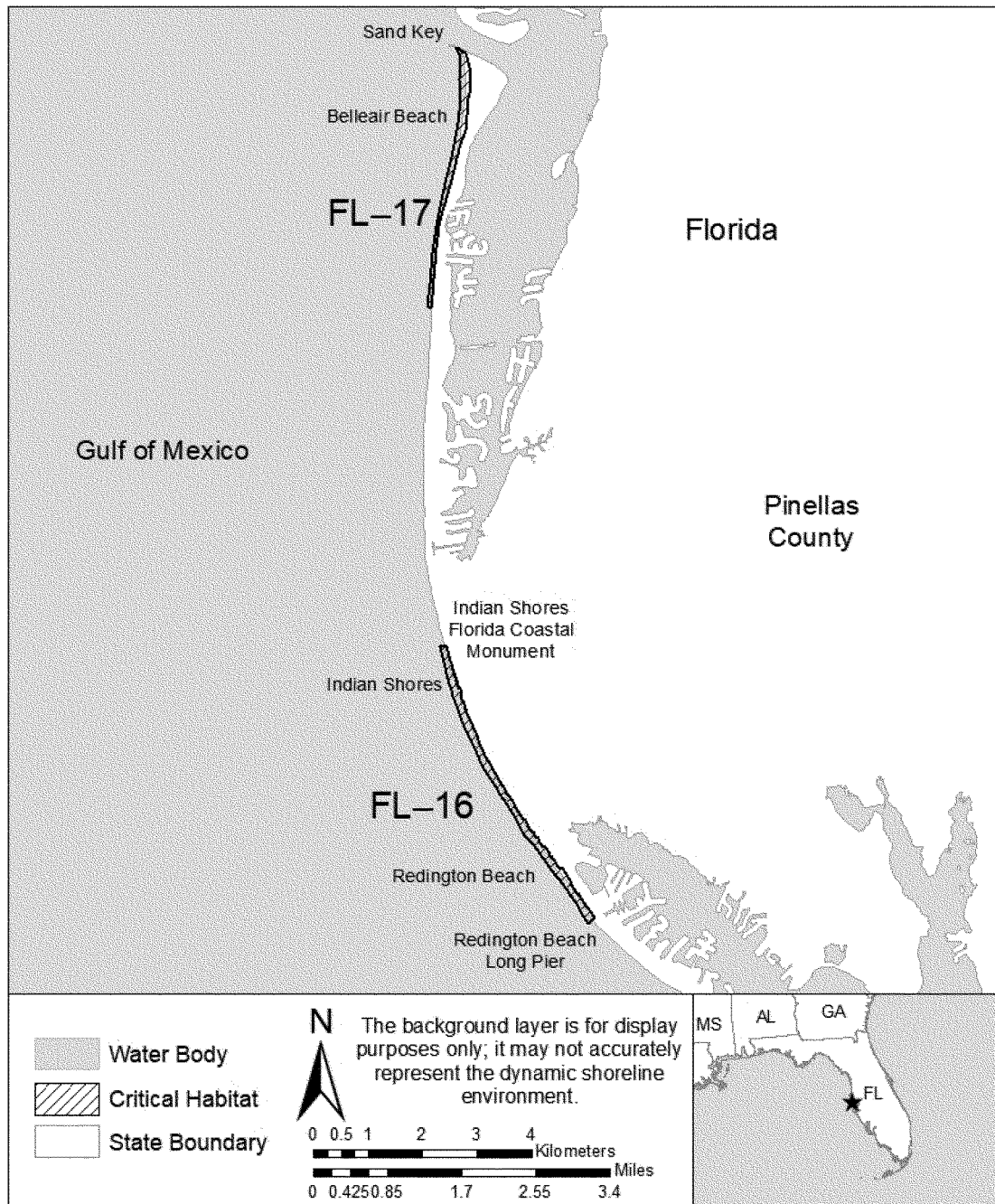
Range Monument R–086 at the north end of the unit to the Redington Beach Long Pier at the south end of the unit. The landward boundary is the line indicating the beginning of dense vegetation, including emergent, dynamic shoreline to MLLW that is covered at high tide and uncovered at low tide. Lands within this unit are entirely in State ownership.

(ii) Map of Unit FL–16 follows:

Figure 85 to Rufa Red Knot paragraph (105)(ii)



**Critical Habitat for Rufa Red Knot**  
**FL-16 Indian Shores–Redington Beach and FL-17 Belleair Beach;**  
**Pinellas County, Florida**



(106) Unit FL-17: Belleair Beach, Florida.

(i) Unit FL-17 consists of approximately 123 ac (50 ha) of occupied beach, inlet, and intertidal sandflats habitat in Pinellas County, on Belleair Beach from the north point (Sand Key) south to 19th Street. The landward boundary is the line

indicating the beginning of dense vegetation, including emergent, dynamic shoreline to MLLW that is covered at high tide and uncovered at low tide. Lands within this unit are entirely in State ownership.

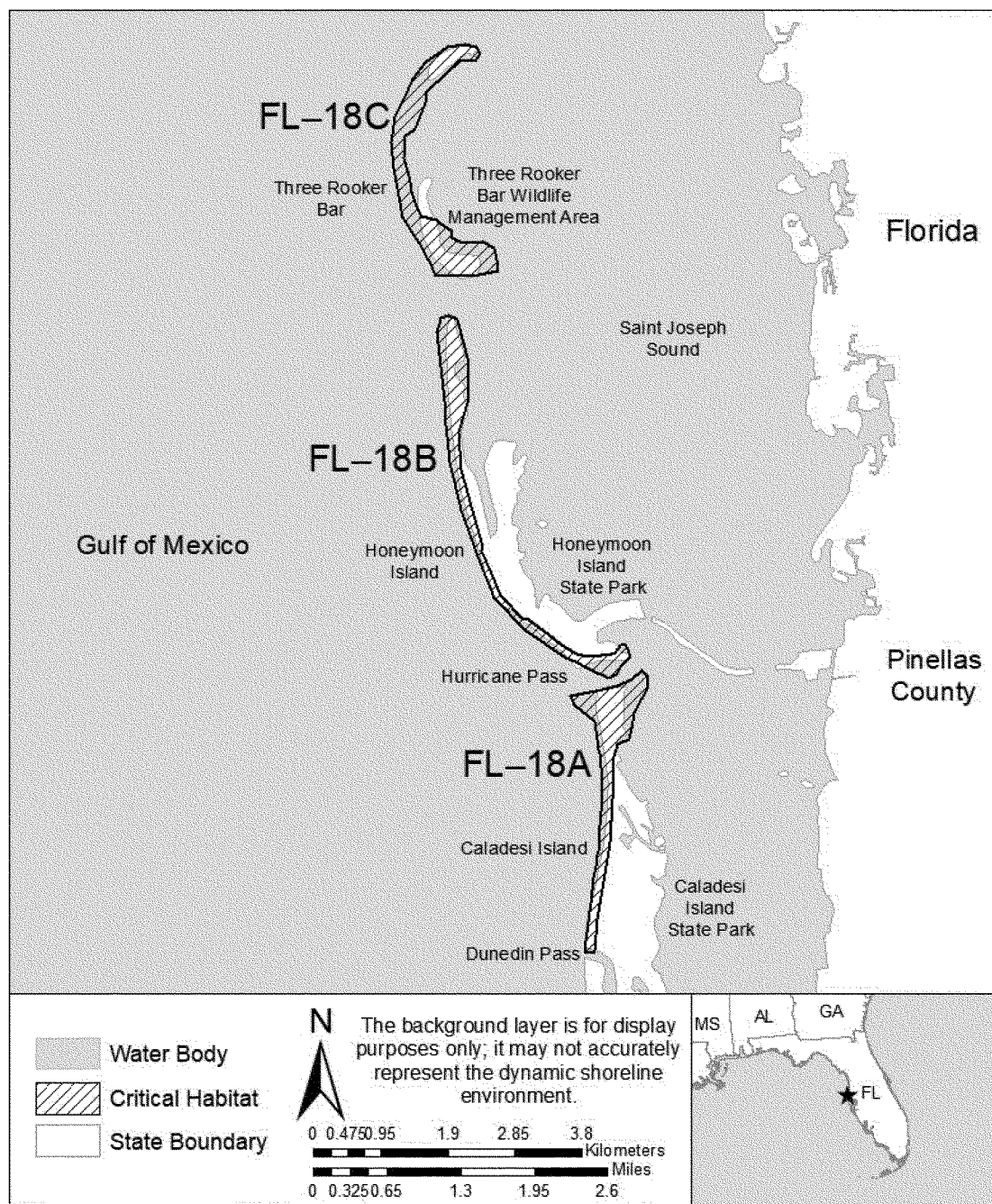
(ii) Map of Unit FL-17 is presented at paragraph (105)(ii) of this entry.

(107) Unit FL-18: Saint Joseph Sound Complex, Florida.

(i) Unit FL-18 consists of three subunits comprising 888 ac (360 ha) of occupied habitat in Pinellas County. This unit consists of State-owned lands.

(ii) Map of Unit FL-18 follows: Figure 86 to Rufa Red Knot paragraph (107)(ii)

**Critical Habitat for Rufa Red Knot**  
**FL-18 Saint Joseph Sound Complex; Pinellas County, Florida**



(iii) Subunit FL-18A (Caladesi Island) consists of approximately 259 ac (105 ha) of occupied beach and intertidal sandflats habitat in Pinellas County. This subunit includes shoreline from the southern boundary of Caladesi Island State Park to Dunedin Pass. The landward boundary is the line indicating the beginning of dense vegetation, including emergent, dynamic shoreline to MLLW that is covered at high tide and uncovered at

low tide. Lands in this subunit are entirely in State ownership (Caladesi Island State Park).

(iv) Map of Subunit FL-18A is presented at paragraph (107)(ii) of this entry.

(v) Subunit FL-18B (Honeymoon Island) consists of approximately 294 ac (119 ha) of occupied beach and intertidal sandflats habitat in Pinellas County. This subunit includes the Gulf of Mexico shoreline in Honeymoon

Island State Park from Dunedin Pass to Hurricane Pass. The landward boundary is the line indicating the beginning of dense vegetation, including emergent, dynamic shoreline to MLLW that is covered at high tide and uncovered at low tide. Lands in this subunit are entirely in State ownership (Honeymoon Island State Park).

(vi) Map of Subunit FL-18B is presented at paragraph (107)(ii) of this entry.

(vii) Subunit FL–18C (Three Rooker Bar) consists of approximately 335 ac (136 ha) of occupied beach and intertidal sandflats habitat on Three Rooker Island in Pinellas County. Three Rooker Island includes shoreline from Hurricane Pass to the northern tip of Three Rooker Island. The landward boundary is the line indicating the beginning of dense vegetation, including emergent, dynamic shoreline to MLLW that is covered at high tide and

uncovered at low tide. Lands in this subunit are entirely in State ownership (Three Rooker Bar Wildlife Management Area).

(viii) Map of Subunit FL–18C is presented at paragraph (107)(ii) of this entry.

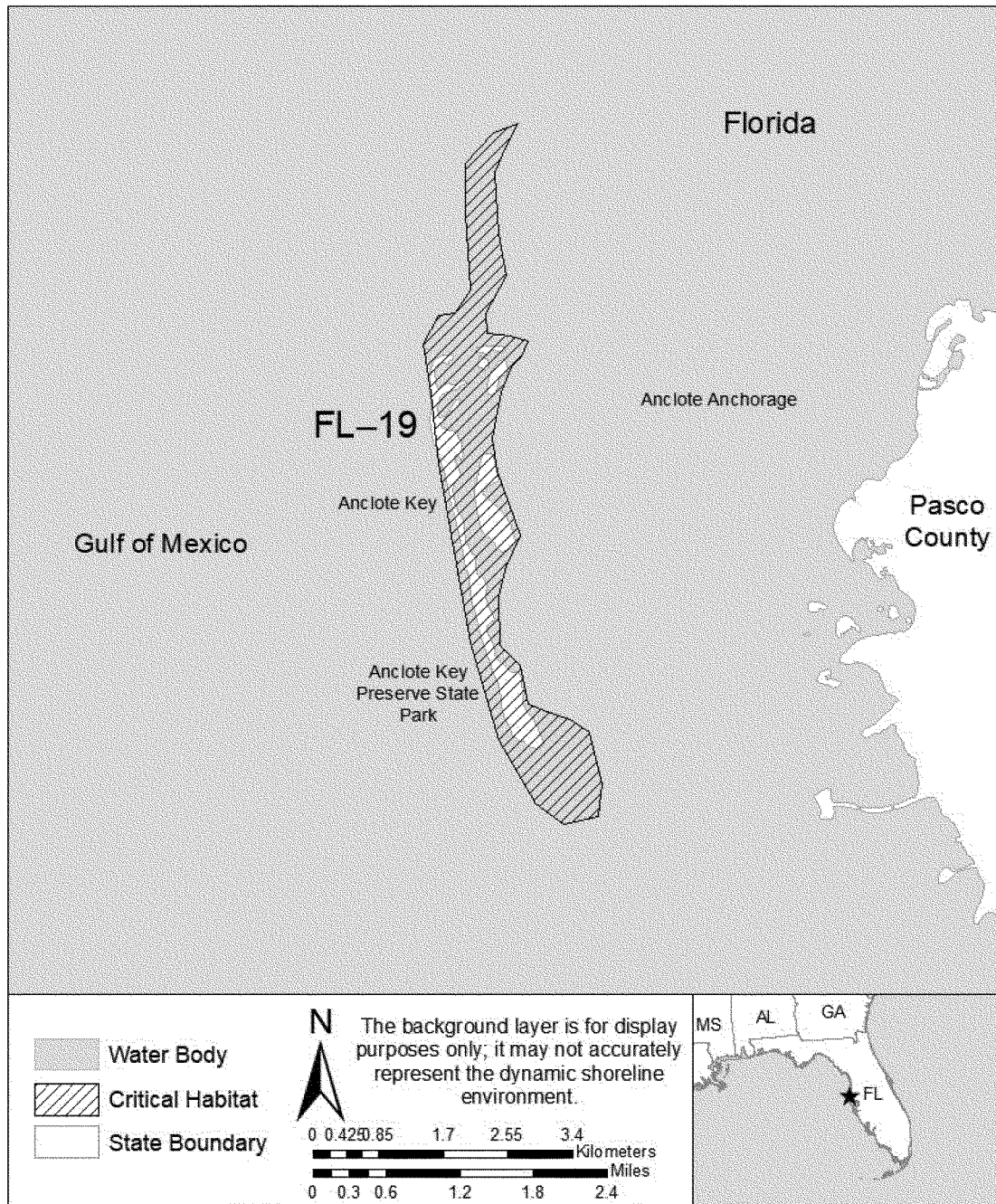
(108) Unit FL–19: Anclote Key, Florida.

(i) Unit FL–19 consists of approximately 1,547 ac (626 ha) of occupied beach and intertidal sandflats

habitat in Pasco County on Anclote Key. The landward boundary is the line indicating the beginning of dense vegetation, including emergent, dynamic shoreline to MLLW that is covered at high tide and uncovered at low tide. Lands within this unit are entirely in State ownership (Anclote Key Preserve State Park).

(ii) Map of Unit FL–19 follows: Figure 87 to Rufa Red Knot paragraph (108)(ii)

**Critical Habitat for Rufa Red Knot  
FL-19 Anclote Key; Pasco County, Florida**



(109) Unit FL-20: Cedar Keys Complex, Florida.

(i) Unit FL-20 consists of approximately 35,626 ac (14,417 ha) of occupied beach and intertidal sandflats habitat in Levy County on Cedar Key, including the complex of sandbars and flats seaward. The landward boundary

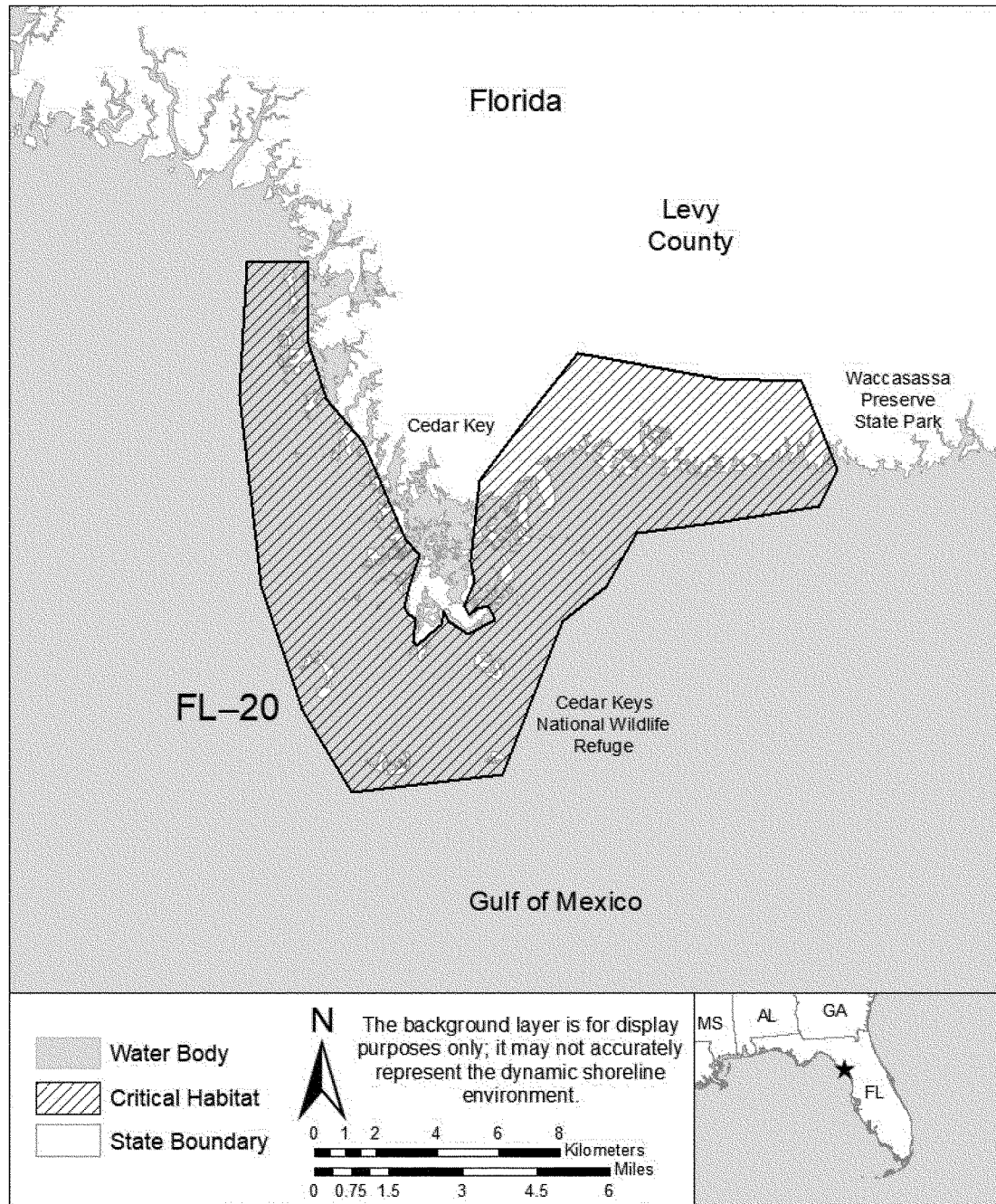
is the line indicating the beginning of dense vegetation or hardened structures, including emergent, dynamic shoreline to MLLW that is covered at high tide and uncovered at low tide. Lands within this unit include approximately 2,498 ac (1,011 ha) in Federal ownership (Cedar Keys NWR), 7,792 ac (3,153 ha) in State

ownership (Waccasassa Preserve State Park), 5,928 ac (2,399 ha) in private/other ownership, and 19,407 ac (7,854 ha) that are uncategorized.

(ii) Map of Unit FL-20 follows: Figure 88 to Rufa Red Knot paragraph (109)(ii)



### Critical Habitat for Rufa Red Knot FL-20 Cedar Keys Complex; Levy County, Florida



(110) Unit FL-21: St. Marks National Wildlife Refuge, Florida.

(i) Unit FL-21 consists of approximately 2,074 ac (839 ha) of occupied beach, inlets, shoals, intertidal mud, mud flats, and impoundments habitat in Wakulla County. The unit extends from the eastern boundary of Big Cove inlet west to the inlet west of Lighthouse Pool and includes areas to the north up to 1.25 mi (2 km) into East River Pool. This unit includes from the

base of the berm road to the lowest water level and areas up to 4 in (10 cm) of water depth within Lighthouse Pool, Picnic Pond, Tower Pond, Headquarters Pond, Mounds Pools 1 and 2, Stoney Bayou Pool 1, and within the open water and emergent marsh portion of East River Pool and all shoals and shoreline habitats within Sand Cove and Minnie Cove. Areas to the east of Lighthouse Road between Lighthouse Pool and Picnic Pond, and areas to the

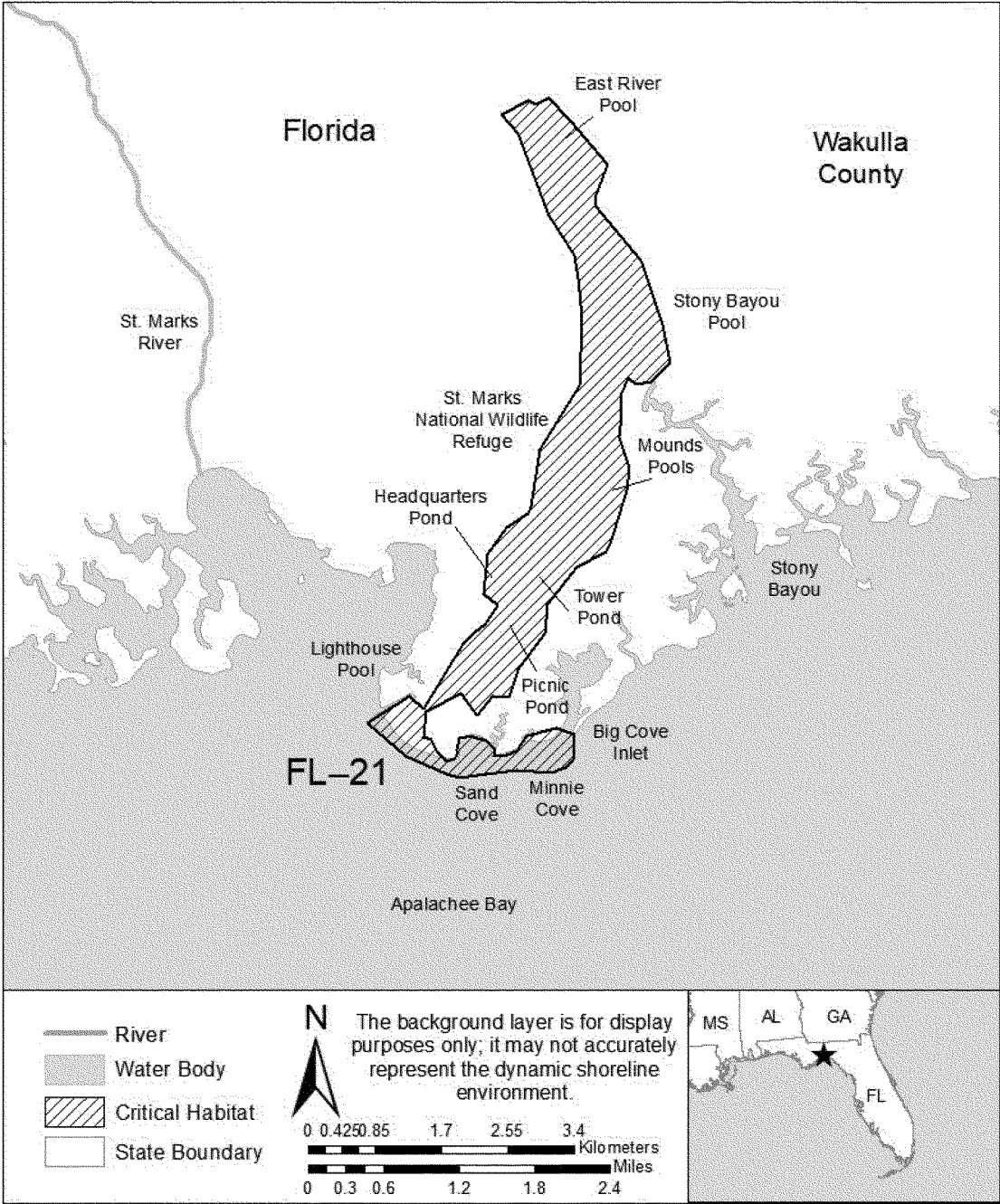
east of Picnic and Tower Ponds that have the physical or biological features, are also included. This unit includes lands from MLLW to the landward limit of the physical or biological features and any ephemeral pools or natural brackish ponds and any emergent sand shoals in Apalachee Bay appearing near shore within 3 mi (4.8 km) of the critical habitat boundary found along the southernmost portion of Lighthouse Road and Lighthouse Levee Trail that



parallels Apalachee Bay. Lands within this unit are entirely in Federal ownership (St. Marks NWR).  
(ii) Map of Unit FL-21 follows:

Figure 89 to Rufa Red Knot paragraph (110)(ii)

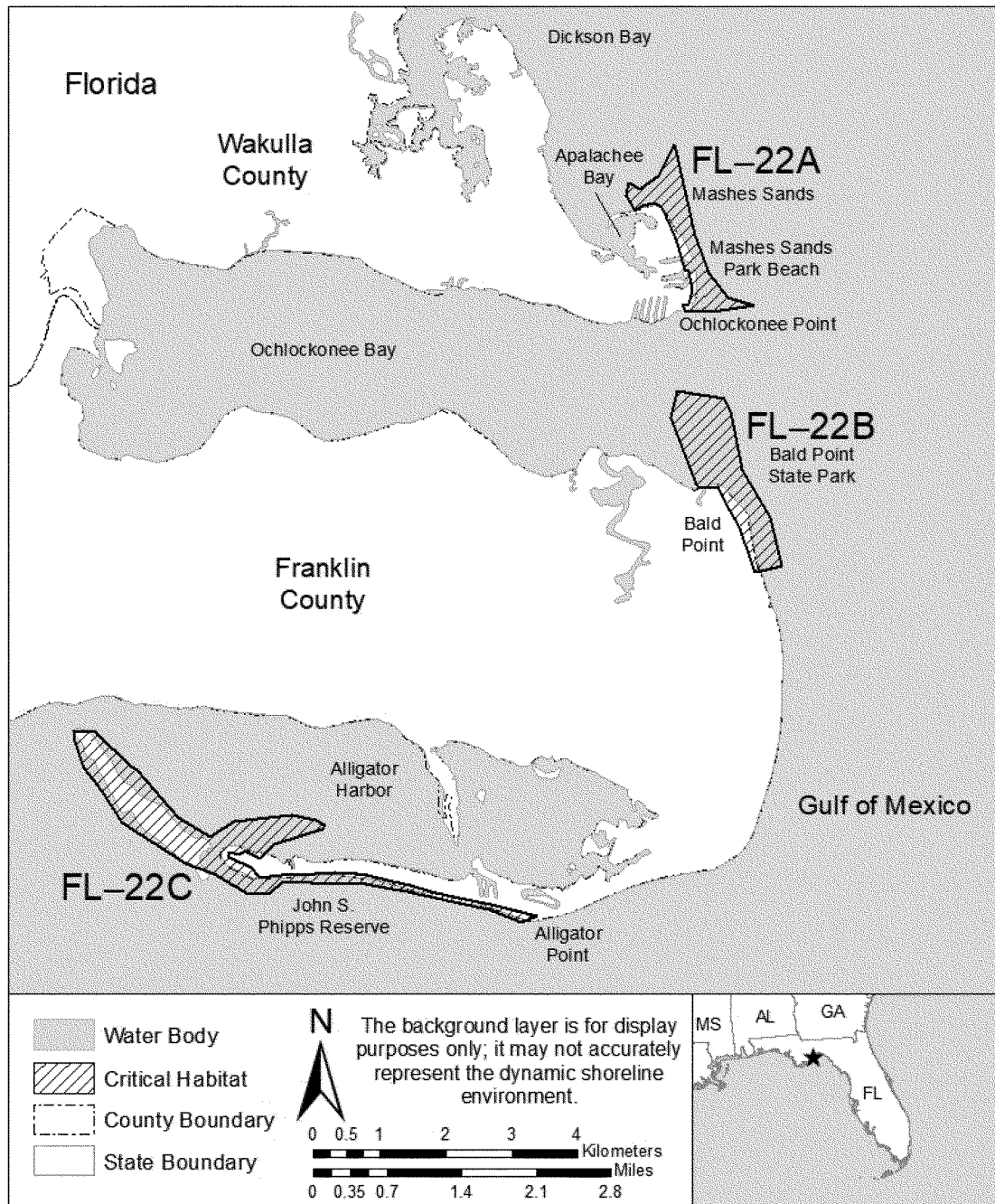
Critical Habitat for Rufa Red Knot  
FL-21 St. Marks National Wildlife Refuge; Wakulla County, Florida



(111) Unit FL-22: Eastern Franklin County Complex, Florida.  
(i) Unit FL-22 consists of three subunits comprising 1,429 ac (578 ha) of occupied habitat in Wakulla and Franklin Counties. This unit consists of beaches within the areas of Apalachee Bay, Dickson Bay, Ochlockonee Bay, and Alligator Point.  
(ii) Map of Unit FL-22 follows:

Figure 90 to Rufa Red Knot paragraph (111)(ii)

**Critical Habitat for Rufa Red Knot  
FL-22 Eastern Franklin County Complex;  
Wakulla and Franklin Counties, Florida**



(iii) Subunit FL-22A (Mashes Sands) consists of approximately 262 ac (106 ha) of occupied beach, inlet, shoals, and intertidal sandflats at Mashes Sands Park beach, and the inlet and shoals of Apalachee Bay, Dickson Bay, and Ochlockonee Bay in Wakulla County, from near Ochlockonee Point in Ochlockonee Bay north towards Dickson Bay. This subunit includes lands from MLLW (*i.e.*, highly dynamic

beach and intertidal seashore that is covered at high tide and uncovered at low tide) to the landward boundary indicated by the beginning of dense vegetation or hardened structures. This area includes any ephemeral pools, lagoons, or natural brackish ponds and any adjacent or near-shore emergent sand shoals. Lands within this subunit are all in State ownership but leased and managed by Wakulla County.

(iv) Map of Subunit FL-22A is presented at paragraph (111)(ii) of this entry.

(v) Subunit FL-22B (Bald Point State Park) consists of approximately 445 ac (180 ha) of occupied beaches and shoals habitat in Franklin County, from a dirt road 0.35 mi (0.56 km) north of Marlin Street to the north near Bald Point, and including shoals within Ochlockonee Bay approximately 0.9 mi (1.4 km) north

of Bald Point. This subunit includes lands from MLLW (*i.e.*, highly dynamic beach and intertidal seashore that is covered at high tide and uncovered at low tide) to the landward boundary indicated by the beginning of dense vegetation or hardened structures. It includes any ephemeral pools, lagoons, or natural brackish ponds and any adjacent or near-shore emergent sand shoals. Lands within this subunit include approximately 439 ac (178 ha) in State ownership (Bald Point State Park) and 6 ac (2 ha) in private/other ownership.

(vi) Map of Subunit FL–22B is presented at paragraph (111)(ii) of this entry.

(vii) Subunit FL–22C (Alligator Point) consists of approximately 722 ac (292 ha) of occupied beaches at Alligator Point and John S. Phipps Preserve, and shoals in Franklin County, from 0.07 mi (0.11 km) east of Florida Coastal Range Monument 210 west to the shoals associated with the northwestern end of the point. This subunit includes lands from MLLW (*i.e.*, highly dynamic beach and intertidal seashore that is covered at high tide and uncovered at low tide) to the landward boundary indicated by the beginning of dense vegetation or hardened structures. It includes any ephemeral pools, lagoons, or natural brackish ponds and any adjacent or near-shore emergent sand shoals. Lands within this subunit are entirely in

private/other ownership (John S. Phipps Preserve, managed by the TNC).

(viii) Map of Subunit FL–22C is presented at paragraph (111)(ii) of this entry.

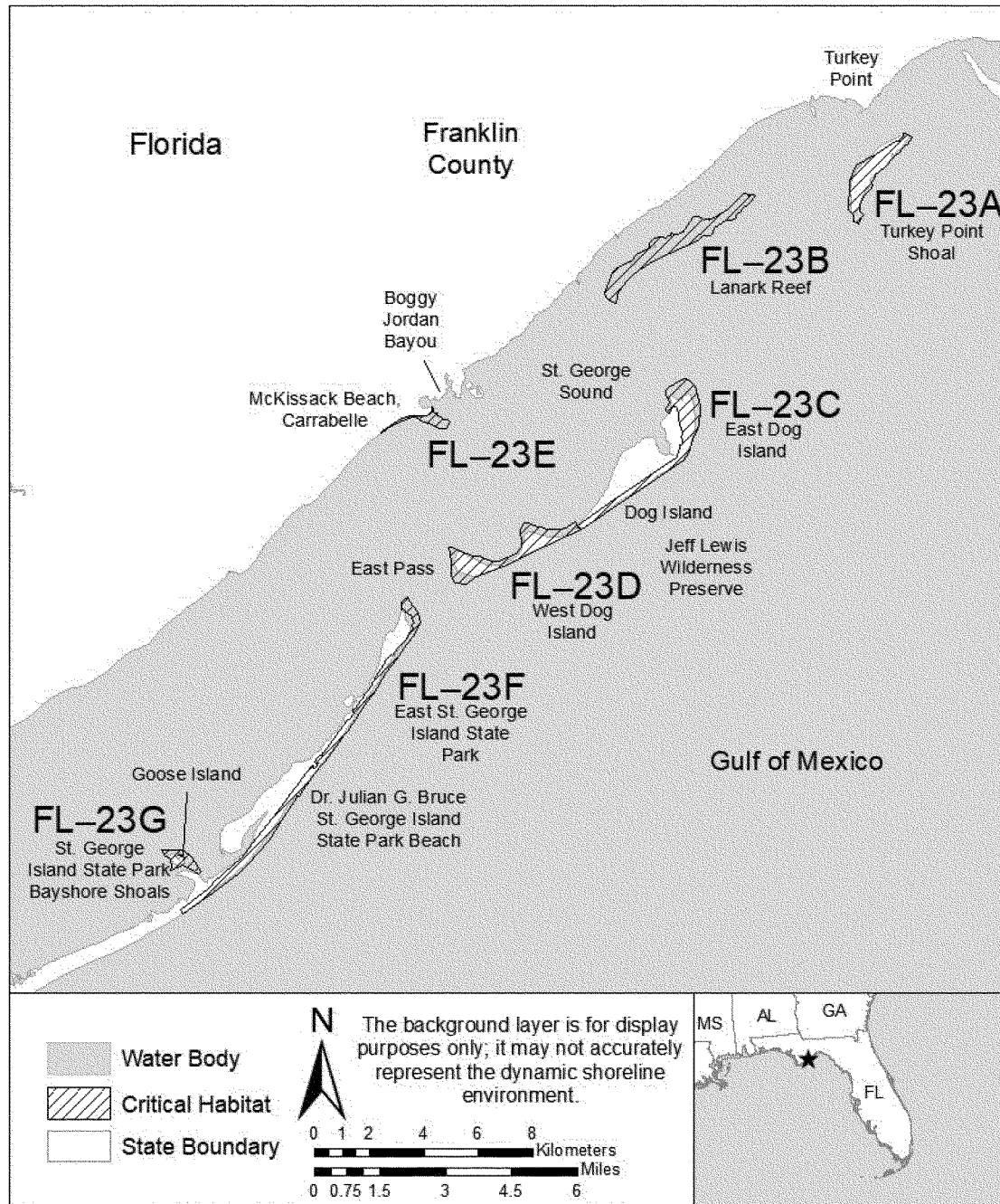
(112) Unit FL–23: Central Franklin County Complex, Florida.

(i) Unit FL–23 consists of seven subunits comprising 4,175 ac (1,689 ha) of occupied habitat in Franklin County. This unit consists of beaches and barrier island areas of St. George Sound shoreline, the Carrabelle River outlet, Boggy Jordan Bayou outlet, Dog Island, and St. George Island.

(ii) Map of Unit FL–23 follows:

Figure 91 to Rufa Red Knot paragraph (112)(ii)

# **Critical Habitat for Rufa Red Knot** **FL-23 Central Franklin County Complex; Franklin County, Florida**



(iii) Subunit FL-23A (Turkey Point Shoal) consists of approximately 531 ac (215 ha) of occupied habitat, including emergent, isolated shoal habitat within the Gulf of Mexico and St. George Sound, Franklin County. This subunit includes emergent shoals approximately 1 mi (1.5 km) south of Turkey Point. This subunit includes lands from MLLW (*i.e.*, highly dynamic beach and intertidal seashore that is covered at high tide and uncovered at low tide) to

the landward limit of the physical or biological features, including any ephemeral pools, lagoons, and emergent sand shoals adjacent to the island or reef. All lands within this subunit are in State ownership.

(iv) Map of Subunit FL-23A is presented at paragraph (112)(ii) of this entry.

(v) Subunit FL-23B (Lanark Reef) consists of approximately 865 ac (350 ha) of occupied beach and intertidal

shoreline habitat of Lanark Reef in St. George Sound off the coast of Franklin County. This subunit includes lands from MLLW (*i.e.*, highly dynamic beach and intertidal seashore that is covered at high tide and uncovered at low tide) to the landward limit of the physical or biological features, including any ephemeral pools, lagoons, and emergent sand shoals within 3 mi (4.8 km) of the island or reef. Lands within this subunit include 805 ac (326 ha) in State

ownership and 61 ac (25 ha) in private/other ownership.

(vi) Map of Subunit FL-23B is presented at paragraph (112)(ii) of this entry.

(vii) Subunit FL-23C (East Dog Island) consists of approximately 771 ac (312 ha) of occupied beach shoreline and shoals on East Dog Island off the coast of Franklin County. The subunit is from midway between Florida Coastal Range Monuments 168 and 169 east to the tip of the island and extending around the tip to include St. George Sound shoreline and shoals approximately horizontal to Florida Coastal Range Monument 190. This subunit includes lands from MLLW (*i.e.*, highly dynamic beach and intertidal seashore that is covered at high tide and uncovered at low tide) to the landward boundary indicated by the beginning of dense vegetation or hardened structures, and also includes ephemeral pools, lagoons, natural brackish ponds, and any adjacent or near-shore emergent sand shoals. Lands within this subunit are entirely private/other ownership (including the Jeff Lewis Wilderness Preserve, which is owned/managed by the TNC).

(viii) Map of Subunit FL-23C is presented at paragraph (112)(ii) of this entry.

(ix) Subunit FL-23D (West Dog Island) consists of approximately 751 ac (304 ha) of occupied habitat on West Dog Island in Franklin County. This subunit includes the entirety of this island from the eastern boundary at the Gulf of Mexico shoreline midway between Florida Coastal Range Monuments 168 and 169 and west 3.1 mi (5 km) to East Pass. This subunit includes lands from MLLW (*i.e.*, highly dynamic beach and intertidal seashore that is covered at high tide and

uncovered at low tide) to the landward boundary indicated by the beginning of dense vegetation or hardened structures, as well as ephemeral and emergent sand shoals appearing in the near shore.

Lands within this subunit are entirely in private/other ownership, including the Jeff Lewis Wilderness Preserve that is owned/managed by the TNC.

(x) Map of Subunit FL-23D is presented at paragraph (112)(ii) of this entry.

(xi) Subunit FL-23E (McKissack Beach, Carrabelle) consists of approximately 117 ac (47 ha) of occupied habitat along McKissack Beach and Marsh in Carrabelle and associated shoals in Franklin County, from 0.18 mi (0.30 km) east of the intersection of U.S. Highway 98 and Cape Street east to the cove that forms the outlet of Boggy Jordan Bayou. This subunit includes lands from MLLW (*i.e.*, highly dynamic beach and intertidal seashore that is covered at high tide and uncovered at low tide) to the landward boundary indicated by the beginning of dense vegetation or hardened structures, as well as any ephemeral and emergent sand shoals appearing in the near shore. Lands within this subunit include 114 ac (46 ha) in State ownership (the Florida Trustees of the Internal Improvement Fund, although the City of Carrabelle retains a lease on McKissack Beach and Marsh), and 3 ac (1 ha) in private/other ownership.

(xii) Map of Subunit FL-23E is presented at paragraph (112)(ii) of this entry.

(xiii) Subunit FL-23F (East St. George Island State Park) consists of approximately 978 ac (396 ha) of occupied habitat within Dr. Julian G. Bruce St. George Island State Park Beach in Franklin County, from Florida Coastal Range Monument 105 to the

eastern tip of the island at East Pass. This subunit includes lands from MLLW (*i.e.*, highly dynamic beach and intertidal seashore that is covered at high tide and uncovered at low tide) to the landward boundary indicated by the beginning of dense vegetation or hardened structures. All lands within this subunit are in State ownership (East St. George Island State Park).

(xiv) Map of Subunit FL-23F is presented at paragraph (112)(ii) of this entry.

(xv) Subunit FL-23G (St. George Island State Park and Bayshore Shoals) consists of approximately 162 ac (65 ha) of occupied habitat on Goose Island and associated shoals in Franklin County. This subunit includes lands from MLLW (*i.e.*, highly dynamic beach and intertidal seashore that is covered at high tide and uncovered at low tide) to the landward limit of the physical and biological features, including ephemeral pools, lagoons, and any emergent sand shoals adjacent to the island. All lands within this subunit are in State ownership (St. George Island State Park).

(xvi) Map of Subunit FL-23G is presented at paragraph (112)(ii) of this entry.

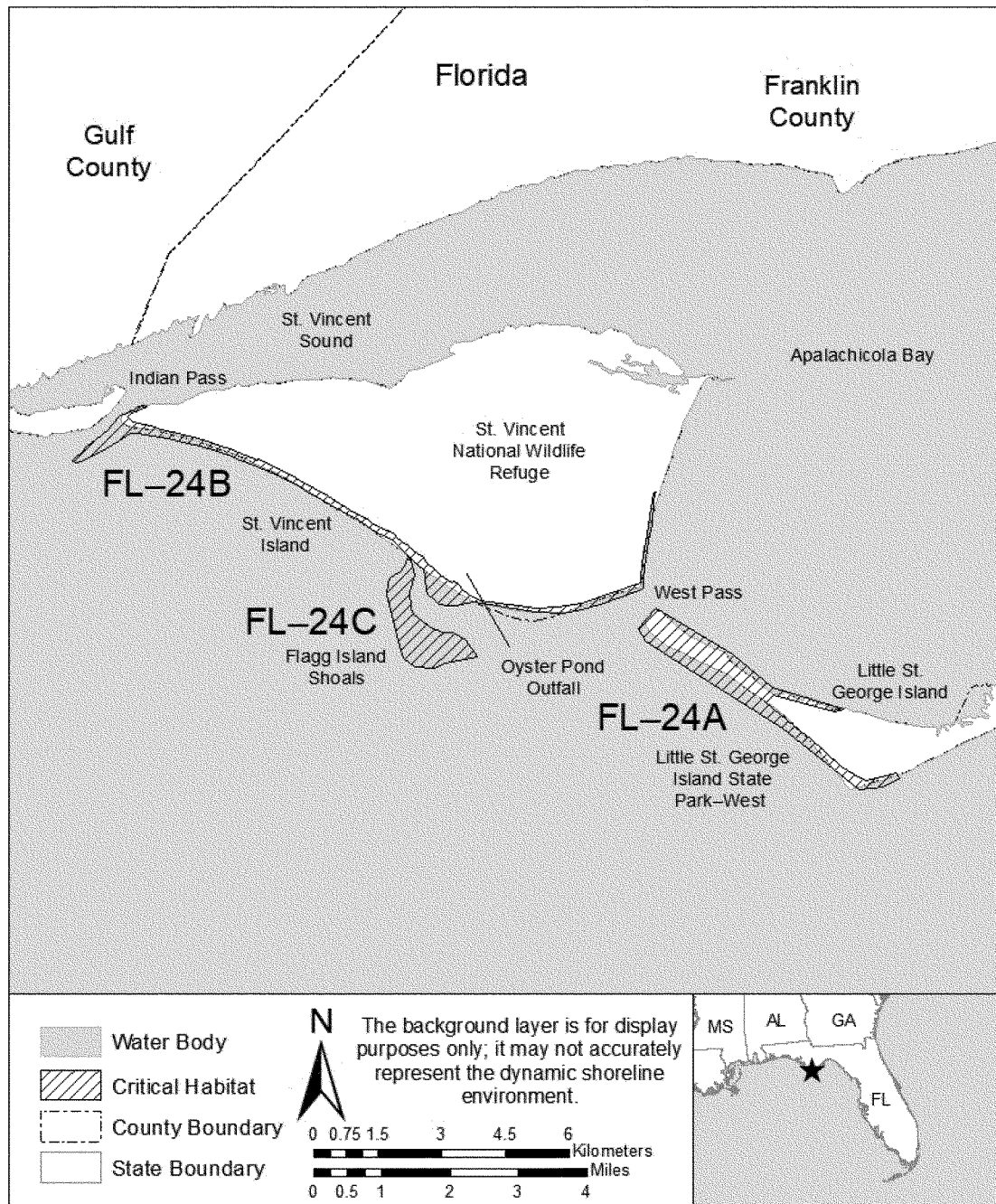
(113) Unit FL-24: St. Vincent National Wildlife Refuge Complex, Florida.

(i) Unit FL-24 consists of three subunits comprising 2,212 ac (895 ha) of occupied habitat in Franklin and Gulf Counties. This unit consists of beaches of Apalachicola Bay, St. Vincent Sound, Indian Pass, St. Vincent Island, and Flagg Island.

(ii) Map of Unit FL-24 follows: Figure 92 to Rufa Red Knot paragraph (113)(ii)



**Critical Habitat for Rufa Red Knot**  
**FL-24 St. Vincent National Wildlife Refuge Complex;**  
**Franklin and Gulf Counties, Florida**



(iii) Subunit FL-24A (Little St. George Island State Park-West) consists of approximately 953 ac (386 ha) of occupied habitat on Little St. George Island beach and shoals in Franklin County, from West Pass east to Florida Coastal Range Monument 25 and including bayside beach from West Pass east to the point at the Marshall Dock. This subunit includes lands from MLLW (*i.e.*, highly dynamic beach and

intertidal seashore that is covered at high tide and uncovered at low tide) to the landward boundary indicated by the beginning of dense vegetation or hardened structures, and includes ephemeral pools, natural brackish ponds, and emergent sand shoals appearing in the near shore of the Gulf or Apalachicola Bay. All lands within this subunit are in State ownership (Little St. George Island State Park).

(iv) Map of Subunit FL-24A is presented at paragraph (113)(ii) of this entry.

(v) Subunit FL-24B (St. Vincent National Wildlife Refuge) consists of approximately 742 ac (300 ha) of occupied beach and shoals habitat on the St. Vincent NWR in Franklin and Gulf Counties, from the Refuge boat house at the confluence of St. Vincent Sound and Indian Pass east to 0.60 mi

(0.96 km) north of Shell Road. This subunit includes lands from MLLW (*i.e.*, highly dynamic beach and intertidal seashore that is covered at high tide and uncovered at low tide) to the landward boundary indicated by the beginning of dense vegetation or hardened structures, including ephemeral pools, natural brackish ponds, and emergent sand shoals appearing in the near shore of the Gulf. Lands within this subunit are all in Federal ownership (St. Vincent NWR).

(vi) Map of Subunit FL–24B is presented at paragraph (113)(ii) of this entry.

(vii) Subunit FL–24C (Flagg Island Shoals) consists of approximately 517 ac (209 ha) of occupied habitat that encompasses the entire ebb-tidal delta referred to as Flagg Island off the southernmost tip of St. Vincent Island (near Oyster Pond outfall) in Franklin County. This subunit includes lands from MLLW (*i.e.*, highly dynamic beach and intertidal seashore that is covered at high tide and uncovered at low tide) to the landward limit of the physical or biological features, including ephemeral pools, natural brackish ponds, and emergent sand shoals. All lands within this subunit (which constantly change in size and shape due to the dynamic

nature of the area) are in State ownership.

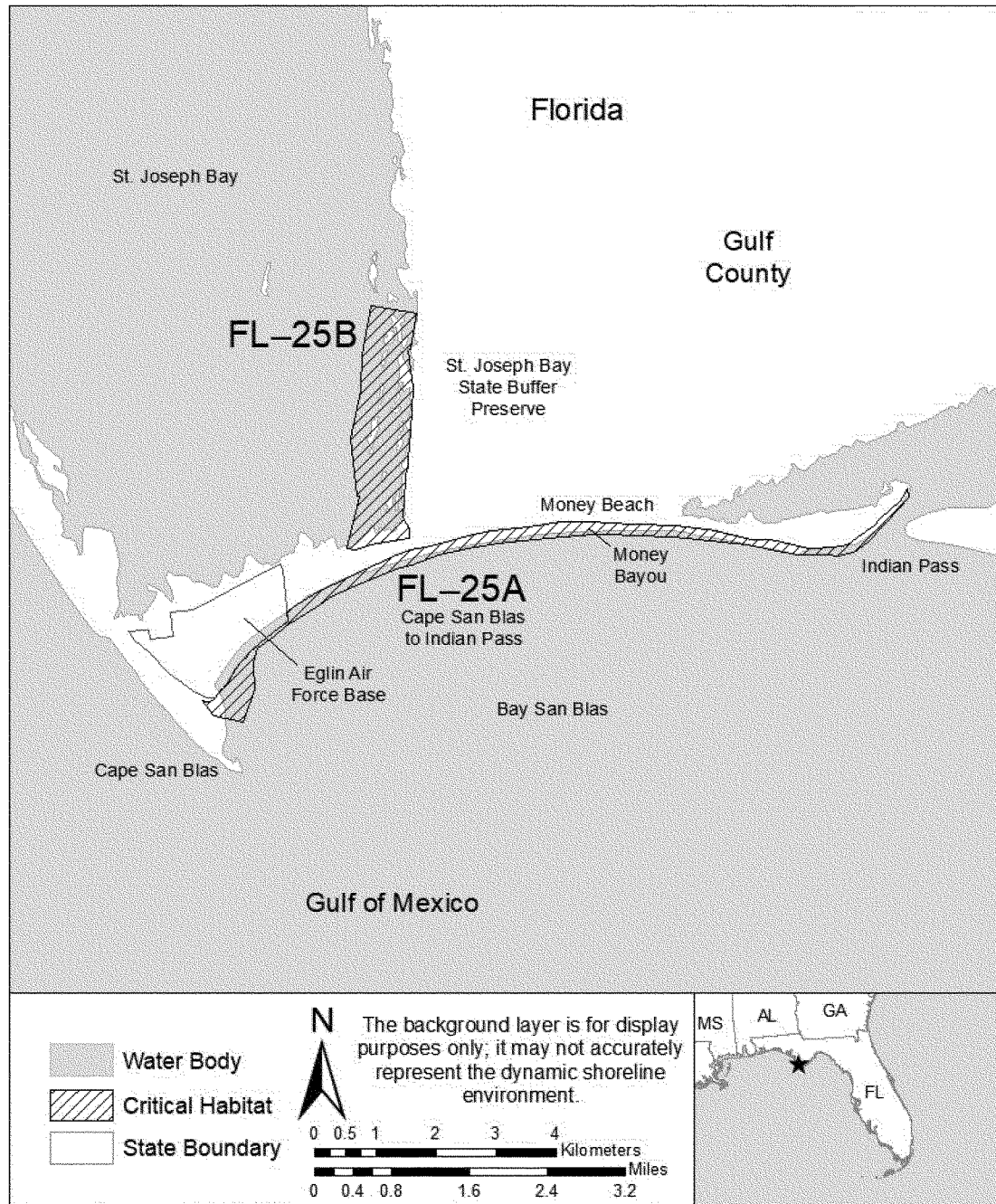
(viii) Map of Subunit FL–24C is presented at paragraph (113)(ii) of this entry.

(114) Unit FL–25: Gulf County Complex, Florida.

(i) Unit FL–25 consists of two subunits comprising 1,520 ac (616 ha) of occupied habitat in Gulf County. This unit consists of beaches of Cape San Blas, Money, and Indian Pass, and the southeastern portion of St. Joseph Bay.

(ii) Map of Unit FL–25 follows: Figure 93 to Rufa Red Knot paragraph (114)(ii)

# **Critical Habitat for Rufa Red Knot FL-25 Gulf County Complex, Gulf County, Florida**



(iii) Subunit FL-25A (Cape San Blas to Indian Pass) consists of approximately 620 ac (251 ha) of occupied beach habitat at Cape San Blas, Money Bayou, and Indian Pass beaches in Gulf County, from the southwestern point of Cape San Blas to 0.11 mi (0.18 km) northeast of the Indian Pass Beach Boat Ramp. This subunit includes lands from MLLW (*i.e.*, highly dynamic beach and intertidal seashore that is covered at high tide and

uncovered at low tide) to the landward limit of the physical or biological features, including ephemeral pools, natural brackish ponds, and emergent sand shoals in the near shore. Lands within this subunit include 133 ac (54 ha) in State ownership and 486 ac (197 ha) in private/other ownership. Adjacent Federal lands under Eglin Air Force Base jurisdiction are exempt under section 4(a)(3) of the Act, but the shoal and any emergent shoal

formations that appear along the shoreline are considered part of this unit, starting from the MLLW south and up 0.5 mi (0.81 km) from Eglin Air Force Base lands on the southernmost side of Cape San Blas.

(iv) Map of Subunit FL-25A is presented at paragraph (114)(ii) of this entry.

(v) Subunit FL-25B (St. Joseph Bay–Eastern Shore) consists of approximately 827 ac (335 ha) of

occupied beaches and shoals within the southeastern portion of St. Joseph Bay in Gulf County, from 0.09 mi (0.14 km) east of the intersection of County Road 30A and Cape San Blas Road to the west 0.66 mi (1.1 km) and to the north 2.4 mi (3.8 km). This subunit includes lands from MLLW (*i.e.*, highly dynamic beach and intertidal seashore that is covered at high tide and uncovered at low tide) to the landward limit of the physical or biological features, including ephemeral pools, natural brackish ponds, lagoons, and emergent sand shoals in the near shore. Lands within this subunit include 761 ac (308 ha) in State

ownership (St. Joseph Bay State Buffer Preserve) and 66 ac (27 ha) in private/other ownership.

(vi) Map of Subunit FL–25B is presented at paragraph (114)(ii) of this entry.

(115) Unit AL–1: Dauphin Island, Alabama.

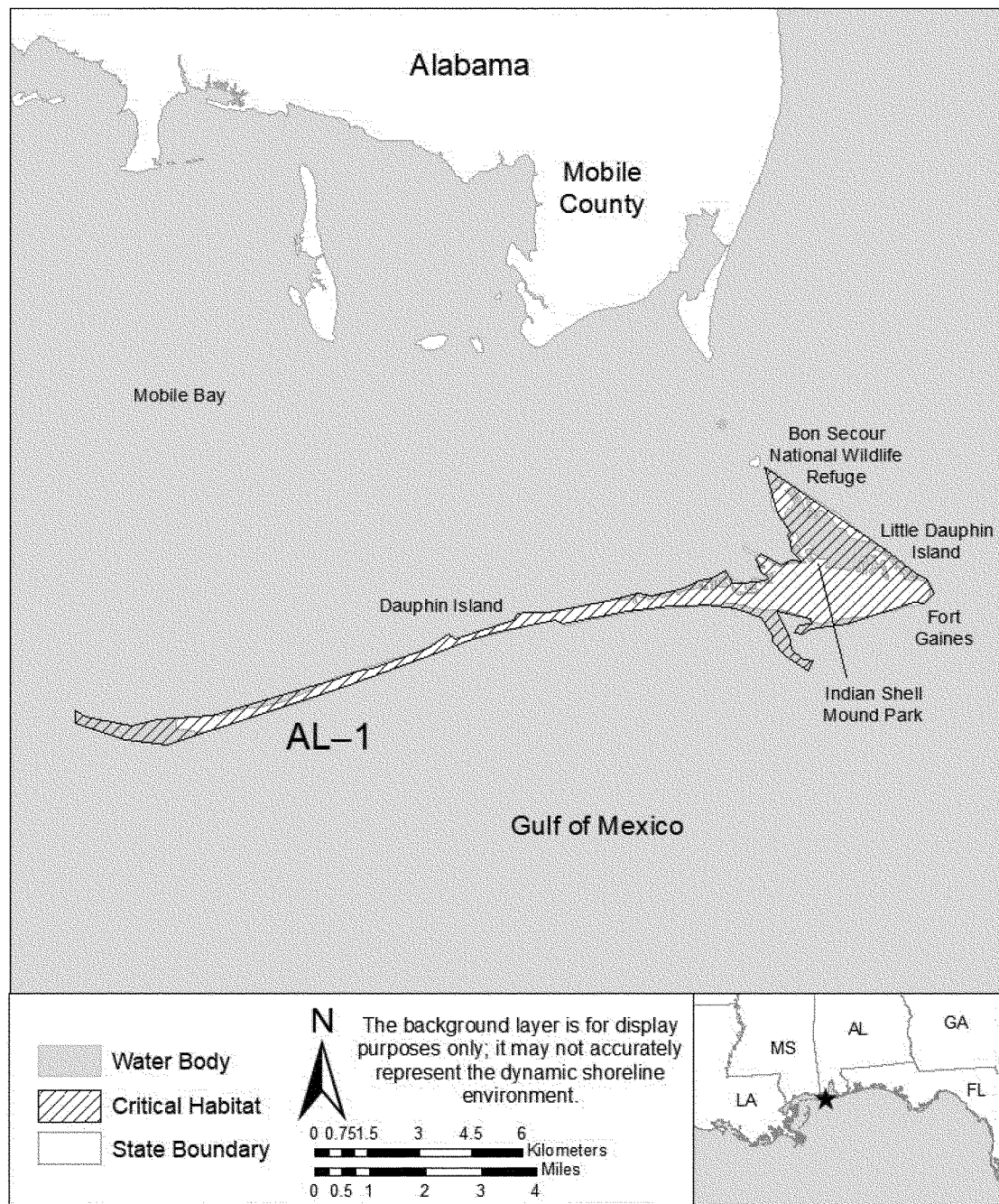
(i) Unit AL–1 consists of approximately 5,167 ac (2,091 ha) of occupied habitat on Dauphin Island, a barrier island south of Mobile Bay in Mobile County. The unit includes all of Dauphin Island from the historic 19th Century Fort Gaines site on the eastern side of the island, continuing

approximately 16 mi (26 km) west to the MLLW on the westernmost tip, and all of Little Dauphin Island (which is uninhabited) to MLLW. Lands within this unit include approximately 484 ac (196 ha) in Federal ownership (Bon Secour NWR), 848 ac (343 ha) in State ownership (Shell Mound Park or Indian Mound Park, and a newly acquired habitat conservation area on the west end of the island), and 3,834 ac (1,552 ha) in private/other ownership.

(ii) Map of Unit AL–1 follows:

Figure 94 to Rufa Red Knot paragraph (115)(ii)

# **Critical Habitat for Rufa Red Knot AL-1 Dauphin Island; Mobile County, Alabama**



(116) Unit MS-1: Ship Island, Mississippi.

(i) Unit MS-1 consists of approximately 2,452 ac (993 ha) of occupied habitat on Ship Island in Harrison County. The unit consists of

emergent lands and intertidal area to MLLW on the island and its adjacent sand shoals (*i.e.*, highly dynamic beaches and intertidal seashore that is covered at high tide and uncovered at low tide). This unit is all under Federal

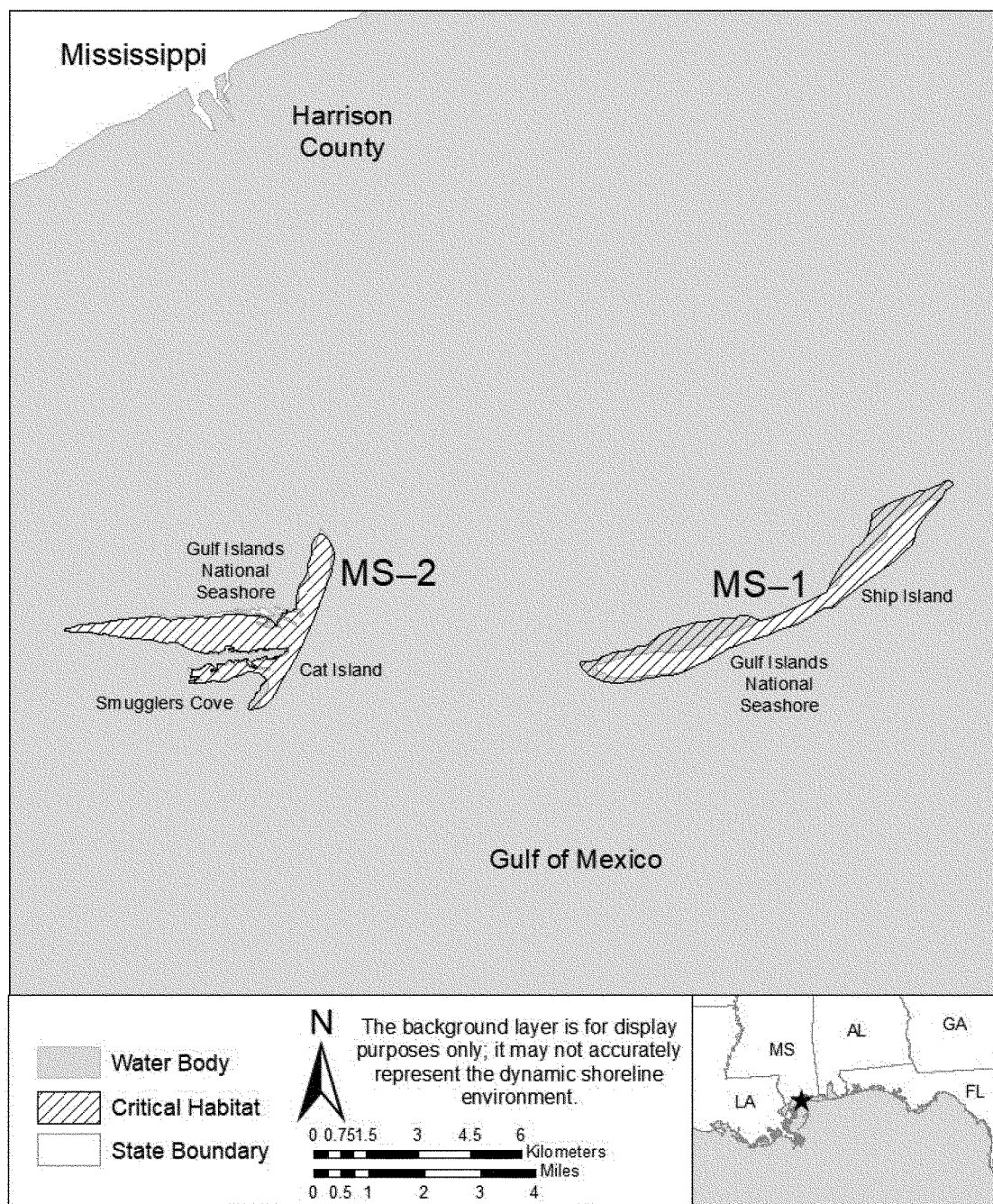
ownership (Gulf Islands National Seashore).

(ii) Map of Unit MS-1 follows:

Figure 95 to Rufa Red Knot paragraph (116)(ii)



**Critical Habitat for Rufa Red Knot**  
**MS-1 Ship Island and MS-2 Cat Island; Harrison County, Mississippi**



(117) Unit MS-2: Cat Island, Mississippi.

(i) Unit MS-2 consists of approximately 2,121 ac (858 ha) of occupied habitat on Cat Island in Harrison County. This unit consists of emergent lands and intertidal area to MLLW on Cat Island and its adjacent sand shoals (*i.e.*, highly dynamic beaches and intertidal seashore that is covered at high tide and uncovered at low tide). Lands within this unit

include approximately 686 ac (278 ha) in Federal ownership (Gulf Islands National Seashore), 1,305 ac (528 ha) in State ownership, and 129 ac (52 ha) in private/other ownership.

(ii) Map of Unit MS-2 is presented at paragraph (116)(ii) of this entry.

(118) Unit LA-1: Chandeleur Islands, Louisiana.

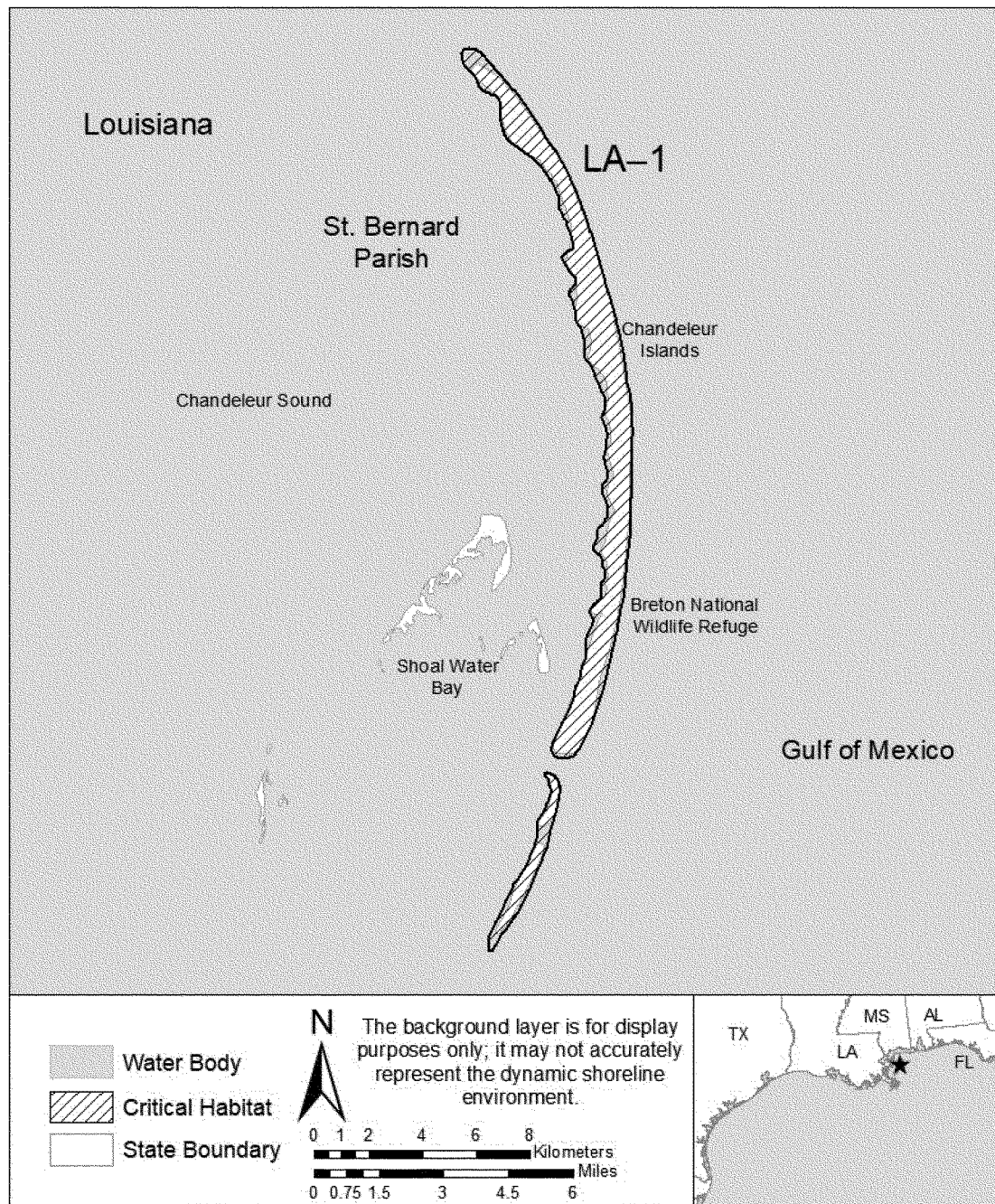
(i) Unit LA-1 consists of approximately 7,632 ac (3,088 ha) of occupied habitat in St. Bernard Parish.

The unit includes all emergent lands to MLLW on the Chandeleur Islands and their adjacent sand shoals (*i.e.*, highly dynamic beaches and intertidal seashore that is covered at high tide and uncovered at low tide). All lands in this unit are federally owned (Breton NWR, and designated wilderness area created as a refuge and breeding ground for resident and migratory birds).

(ii) Map of Unit LA-1 follows:

Figure 96 to Rufa Red Knot paragraph  
(118)(ii)

**Critical Habitat for Rufa Red Knot**  
**LA-1 Chandeleur Islands; St. Bernard Parish, Louisiana**



(119) Unit LA-2: Barataria Barrier Islands and Headlands, Louisiana.

(i) Unit LA-2 consists of approximately 7,795 ac (3,155 ha) of occupied habitat within Plaquemines, Jefferson, and Lafourche Parishes, including emergent lands and/or sand shoals to MLLW (*i.e.*, highly dynamic

beaches and intertidal seashore that is covered at high tide and uncovered at low tide). This unit includes: Emergent lands of Lanaux and Shell Islands to MLLW in Plaquemines Parish; emergent sand shoals of Grand Bayou Pass in Plaquemines Parish; the Gulf of Mexico shoreline to MLLW between Grand

Bayou Pass and Quatre Bayou Pass (known as the Chaland Headland and Chenier Ronquille); emergent sand shoals of Bastian Bay, Bay Joe Wise, Chaland Pass, and Bayou Cheniere Ronquille in Plaquemines Parish; all emergent lands of the Grand Terre Islands and adjacent unnamed island to

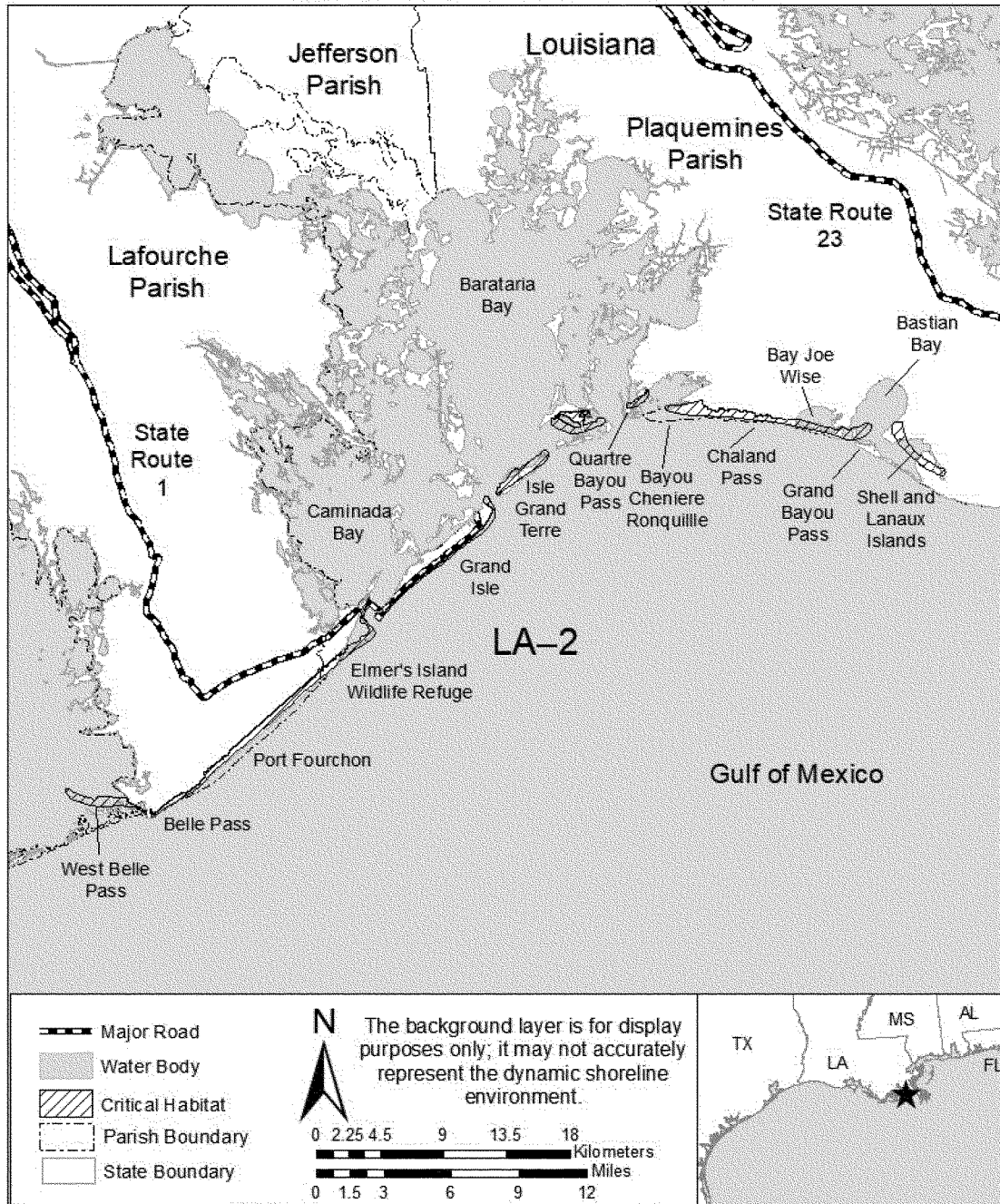
MLLW between Quatre Bayou Pass and Barataria Pass in Plaquemines and Jefferson Parishes; the Gulf of Mexico shoreline of Grand Isle from the toe of the Gulf-side hurricane protection levee to MLLW in Jefferson Parish; the west side of the Caminada Pass shoreline and the Gulf of Mexico shoreline to MLLW beginning just north of Louisiana

Highway 1 in Caminada Pass extending approximately 15 mi (24 km) westward to the east side of Belle Pass (known as the Caminada Headland, which includes the Louisiana Department of Wildlife and Fisheries' Elmer's Island Wildlife Refuge) in Jefferson and Lafourche Parishes; and all emergent lands of the West Belle Pass peninsula

to the MLLW. Lands within this unit include approximately 126 ac (51 ha) in State ownership (Grand Isle State Park and Elmer's Island Wildlife Refuge) and 7,669 ac (3,104 ha) in private/other ownership.

(ii) Map of Unit LA-2 follows:  
Figure 97 to Rufa Red Knot paragraph (119)(ii)

### Critical Habitat for Rufa Red Knot LA-2 Barataria Barrier Islands and Headlands; Plaquemines, Jefferson, and Lafourche Parishes, Louisiana





(120) Unit LA-3: Terrebonne Barrier Islands, Louisiana.

(i) Unit LA-3 consists of approximately 5,072 ac (2,052 ha) of occupied habitat within Lafourche and Terrebonne Parishes, including emergent lands and/or sand shoals to MLLW (*i.e.*, highly dynamic beaches and intertidal seashore that is covered at high tide and uncovered at low tide). This unit includes: Emergent lands on

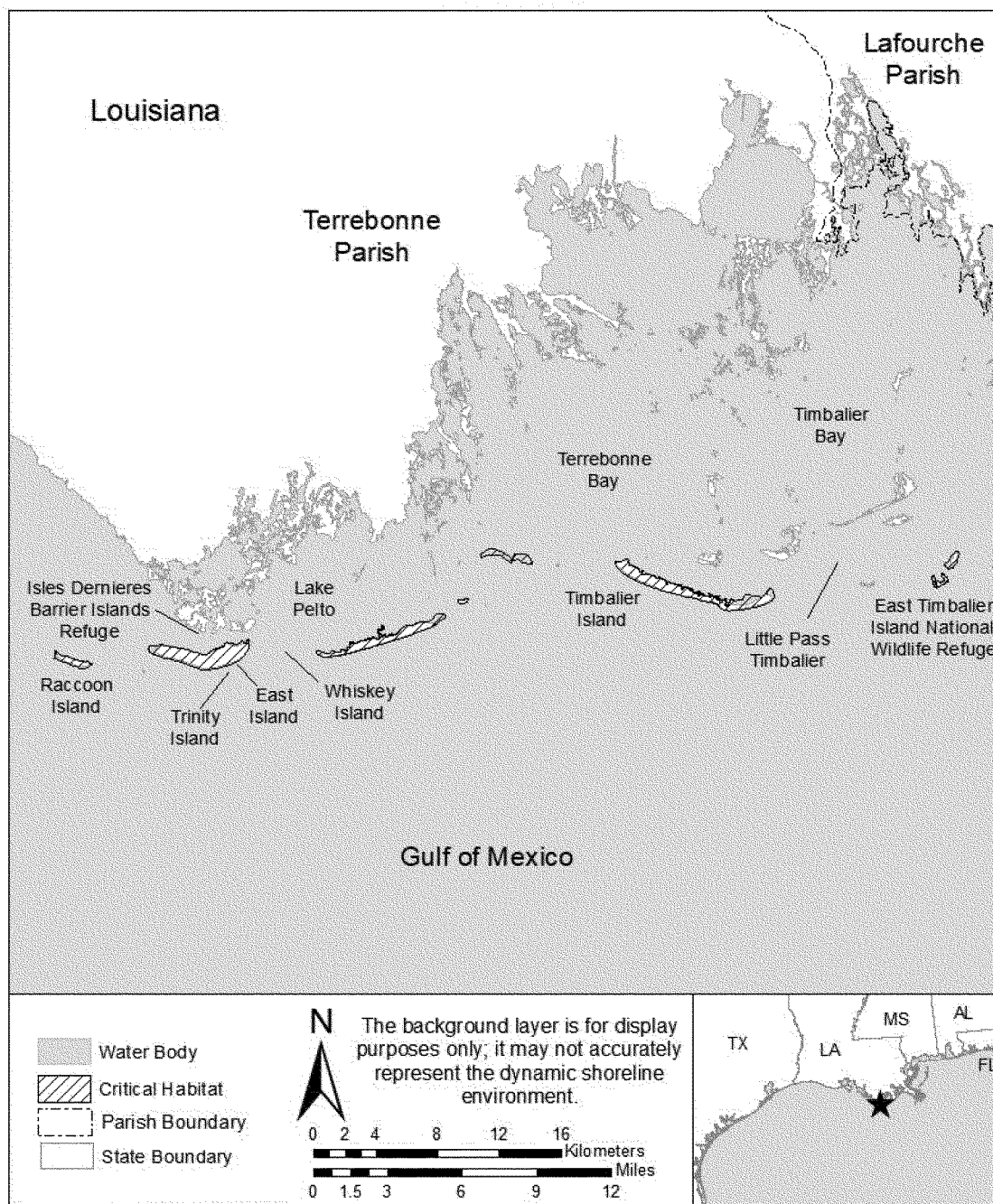
East Timbalier Island in Lafourche Parish; emergent sand shoals at Little Pass Timbalier in Jefferson Parish; emergent lands of Timbalier Island (also known as Big or West Timbalier Island) in Terrebonne Parish; and emergent lands and associated sand shoals on East, Trinity, Whiskey, and Raccoon Islands (known as the Louisiana Department of Wildlife and Fisheries

Isles Dernieres Barrier Islands Refuge) in Terrebonne Parish. Lands within this unit include approximately 2,900 ac (1,173 ha) in State ownership (Isles Dernieres Barrier Islands Refuge) and 2,172 ac (879 ha) in private/other ownership.

(ii) Map of Unit LA-3 follows:

Figure 98 to Rufa Red Knot paragraph (120)(ii)

### Critical Habitat for Rufa Red Knot LA-3 Terrebonne Barrier Islands; Lafourche and Terrebonne Parishes; Louisiana



(121) Unit LA-4: Southwest Louisiana Beaches, Louisiana.

(i) Unit LA-4 consists of approximately 6,130 ac (2,481 ha) of occupied habitat within Cameron and Vermillion Parishes. The unit includes land along the Gulf of Mexico shoreline to the MLLW (*i.e.*, highly dynamic intertidal seashore that is covered at high tide and uncovered at low tide) from the eastern Vermilion Parish line

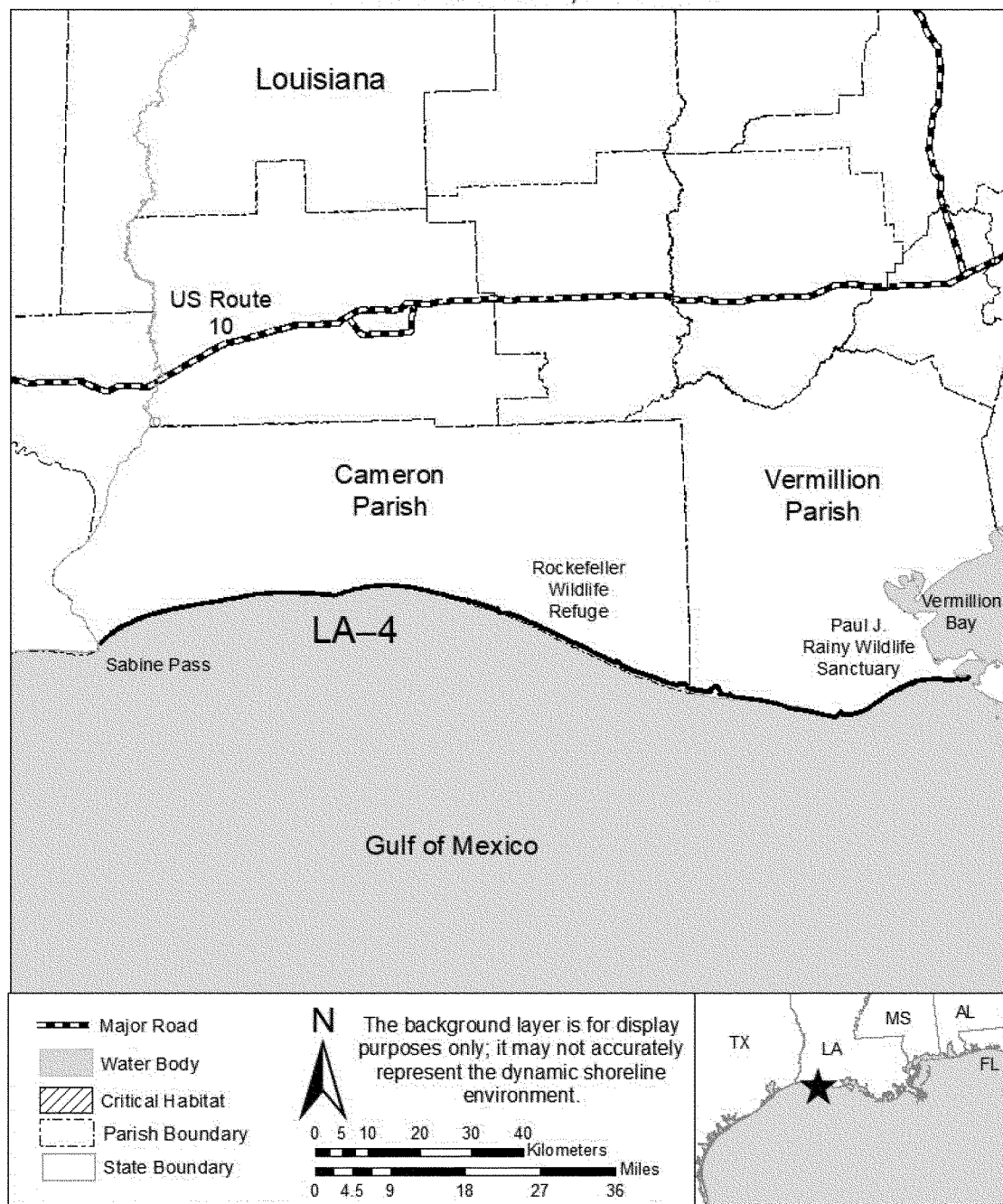
starting at the eastern boundary of the Audubon Society's Paul J. Rainey Wildlife Sanctuary, extending approximately 128 mi (206 km) westward and terminating at Louisiana Point, and also including its associated sand/mud shoals on the east side of Sabine Pass in Cameron Parish. Along its entire length, the unit includes the shoreline beach from the MLLW line landward to the edge of where dense

vegetation begins. Lands within this unit include approximately 1,497 ac (606 ha) in State ownership (Rockefeller Wildlife Refuge) and 4,633 ac (1,875 ha) in private/other ownership (including the Paul J. Rainey Wildlife Sanctuary, managed by the Audubon Society).

(ii) Map of Unit LA-4 follows:

Figure 99 to Rufa Red Knot paragraph (121)(ii)

### Critical Habitat for Rufa Red Knot LA-4 Southwest Louisiana Beaches; Vermillion and Cameron Parishes; Louisiana





(122) Unit TX–1: Rollover Pass to Bolivar Flats, Texas.

(i) Unit TX–1 consists of approximately 1,478 ac (598 ha) of occupied habitat in Galveston County. This unit begins bayside of Rollover Pass and extends southwest along the beachfront ending at the north jetty on the Bolivar Peninsula. It includes 17 mi (27 km) of Gulf shoreline. The landward boundary is the line indicating the beginning of dense vegetation, and the gulfside boundary is the MLLW, including emergent lands and intertidal area characterized as highly dynamic

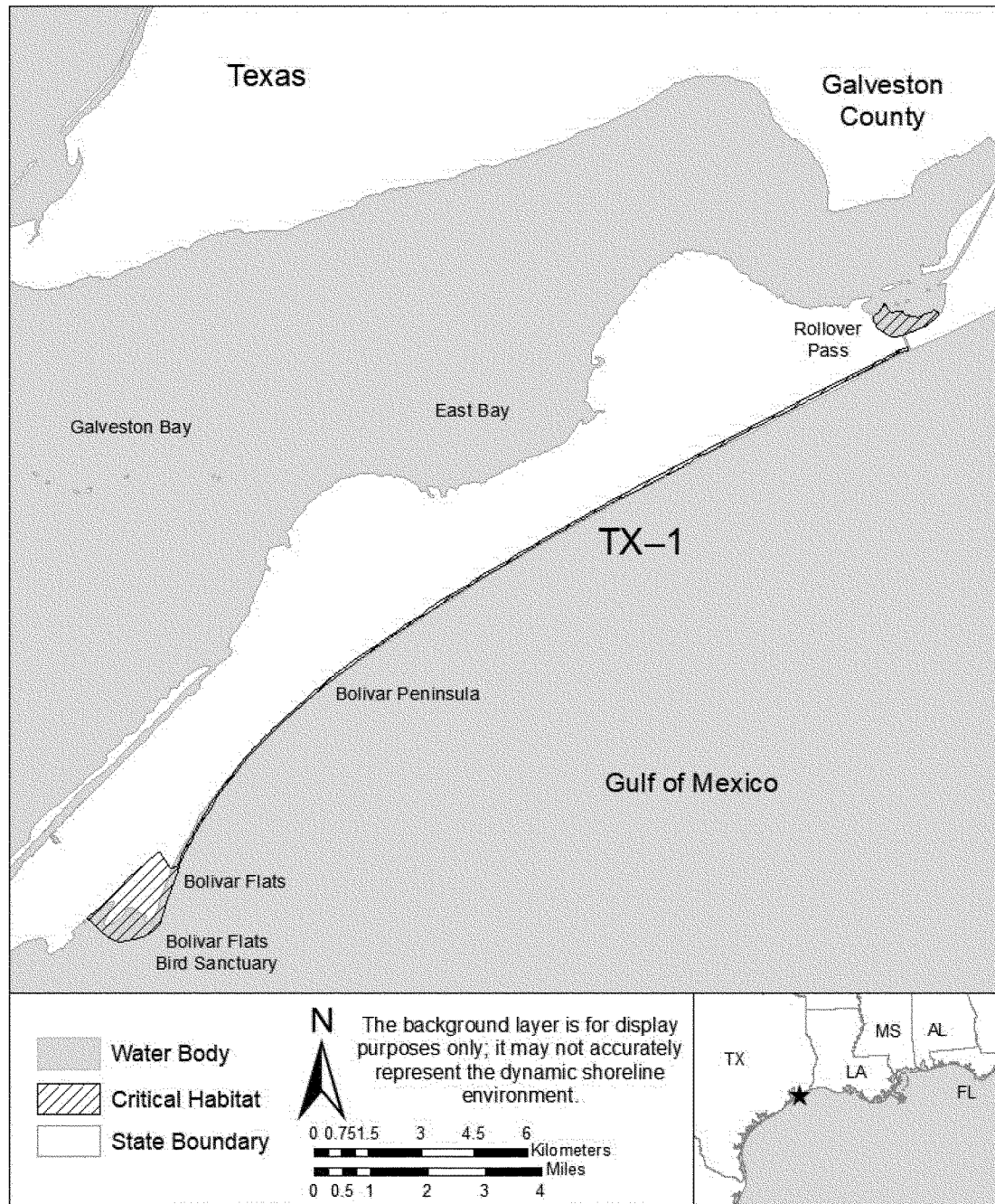
beach/seashore that is covered at high tide and uncovered at low tide. The bayside of Rollover Pass and west end of the unit includes lands known as wind tidal flats that are infrequently inundated. Specific habitat types within this unit include: estuarine (bayside) seagrass mud or sand flats that are subtidal, seagrass flats that are nearly flat areas with rooted vascular plants (seagrass) growing below the water surface in subtidal mud or sand substrate; estuarine (bayside) sandy shore (beach/sandbar) rarely exposed due to tidal fluctuation; estuarine

(bayside) sandy shore (beach/sandbar) that is irregularly or regularly, depending upon the location, inundated by tides; and marine sandy coastline (beach) irregularly or regularly inundated by tides, depending upon the location. Lands within this unit include approximately 482 ac (195 ha) in State ownership and 996 ac (403 ha) in private/other ownership (includes the Bolivar Flats Bird Sanctuary).

(ii) Map of Unit TX–1 follows:

Figure 100 to Rufa Red Knot paragraph (122)(ii)

**Critical Habitat for Rufa Red Knot**  
**TX-1 Rollover Pass to Bolivar Flats, Galveston County, Texas**



(123) Unit TX-2: West Galveston Island, Texas.

(i) Unit TX-2 consists of approximately 590 ac (239 ha) of occupied habitat in Galveston County. The unit is along the gulf with boundaries from the MLLW up to the vegetation line, including emergent lands and intertidal area characterized

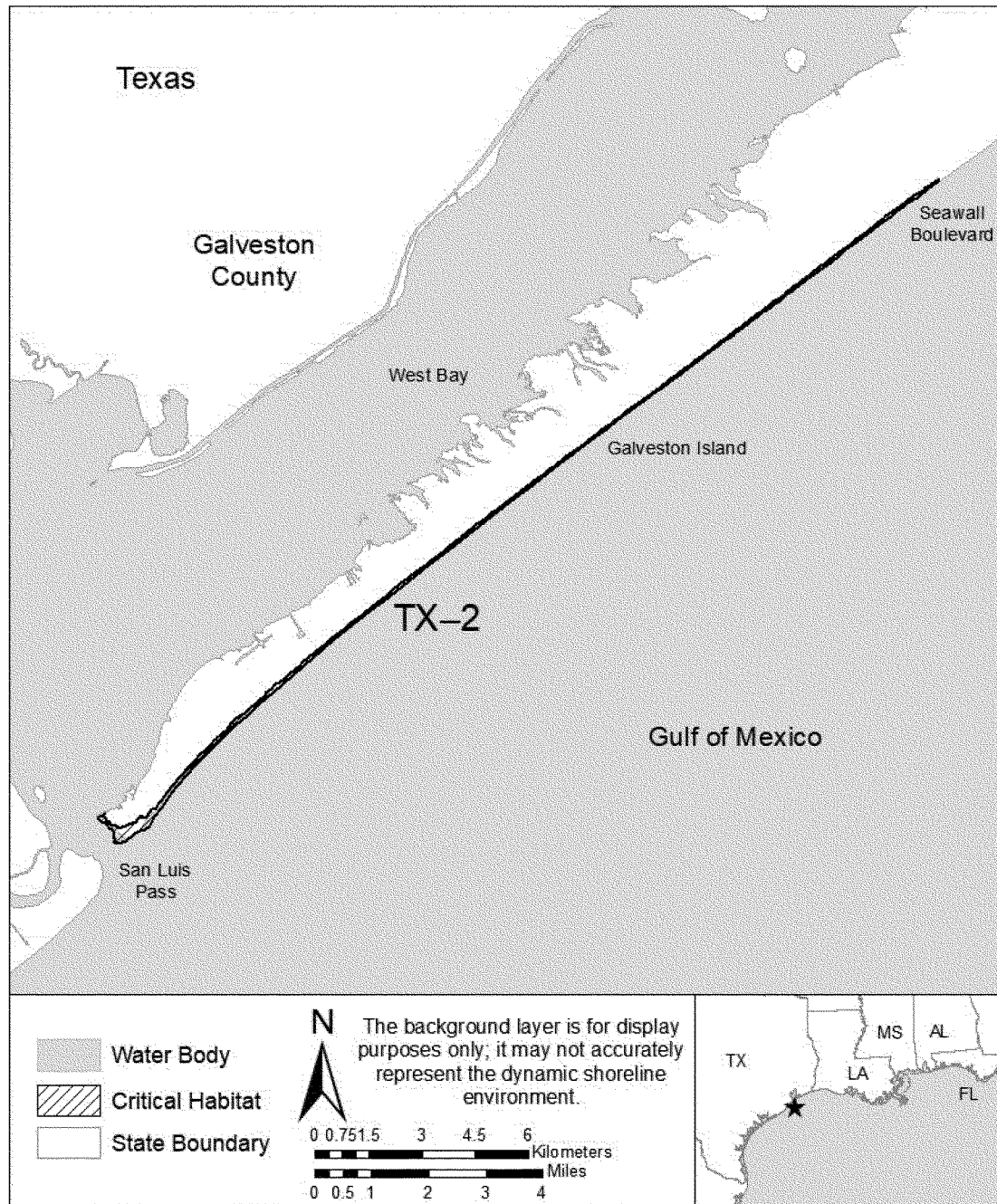
as highly dynamic beach/seashore that is covered at high tide and uncovered at low tide. The northeastern boundary is the end of the Seawall Boulevard (end of the seawall), and the southwestern boundary is San Luis Pass. Specific habitat types within this unit include marine sandy coastline beach that is irregularly or regularly inundated by

tides, depending upon the location. Lands within this unit include approximately 307 ac (124 ha) in State ownership and 282 ac (114 ha) in private/other ownership.

(ii) Map of Unit TX-2 follows:

Figure 101 to Rufa Red Knot paragraph (123)(ii)

**Critical Habitat for Rufa Red Knot**  
**TX-2 West Galveston Island; Galveston County, Texas**



(124) Unit TX-3: Cedar Lake to Colorado River, Texas.

(i) Unit TX-3 consists of approximately 1,204 ac (487 ha) of occupied habitat in Matagorda County. The unit is along the gulf with boundaries from the MLLW up to the vegetation line, including emergent lands and intertidal area characterized

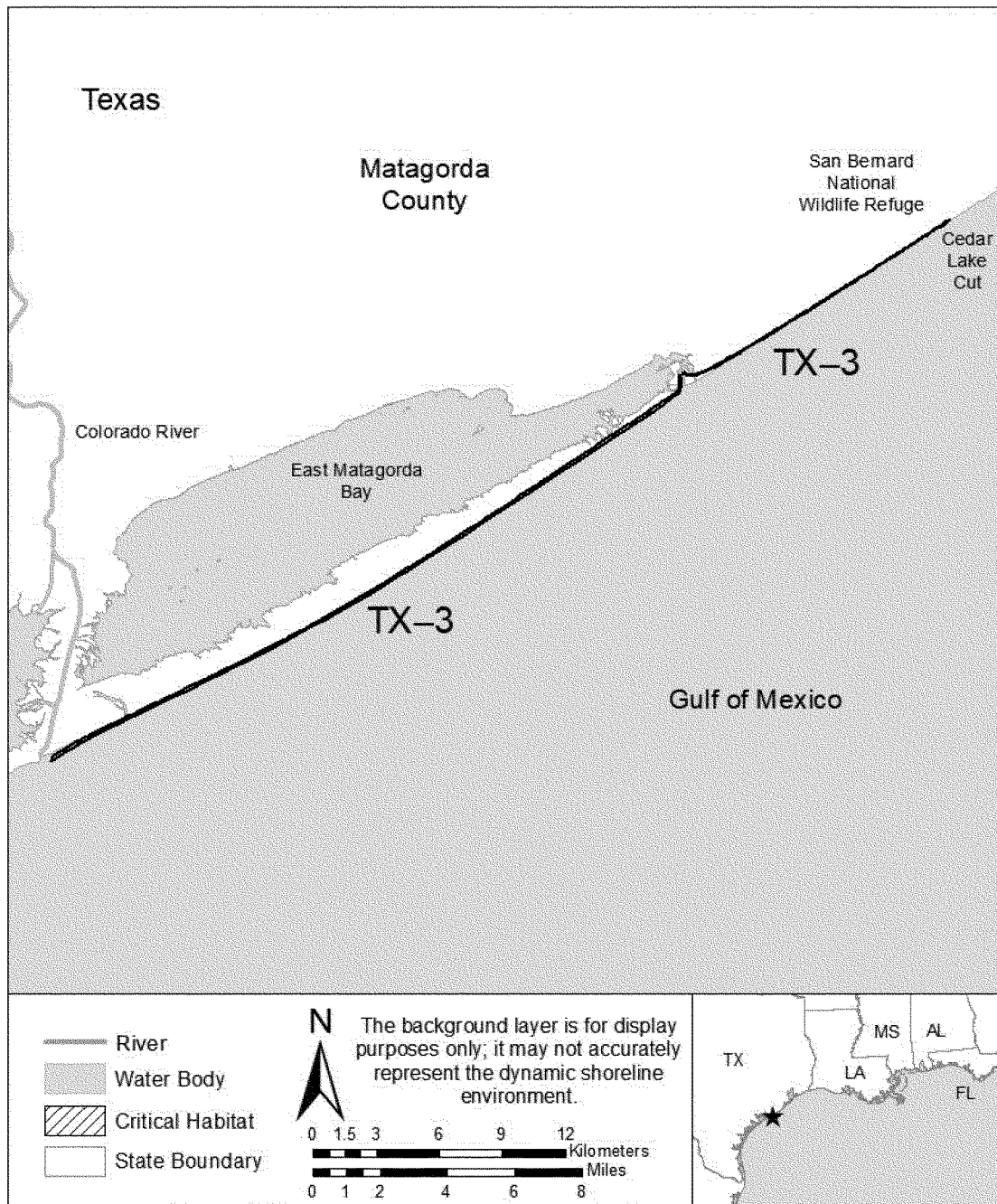
as highly dynamic beach/seashore that is covered at high tide and uncovered at low tide. The northeastern boundary is the south side of Cedar Lake Cut, and the southwestern boundary is near the Colorado River. Specific habitat types within this unit include marine sandy coastline beach that is irregularly or regularly inundated by tides, depending

upon the location. Lands within this unit include 1,075 ac (435 ha) in State ownership and 128 ac (52 ha) in private/other ownership.

(ii) Map of Unit TX-3 follows:

Figure 102 to Rufa Red Knot paragraph (124)(ii)

**Critical Habitat for Rufa Red Knot**  
**TX-3 Cedar Lake to Colorado River; Matagorda County, Texas**



(125) Unit TX-4: Mustang Island, Texas.

(i) Unit TX-4 consists of approximately 648 ac (262 ha) of occupied habitat in Nueces County. The unit is along the gulf with boundaries from the MLLW up to the vegetation line, including emergent lands and intertidal area characterized as highly

dynamic beach/seashore that is covered at high tide and uncovered at low tide. The northern boundary is the south jetty at Port Aransas, and the southern boundary is the north jetty of Packery Channel. Specific habitat types within this unit include marine sandy coastline beach that is irregularly or regularly

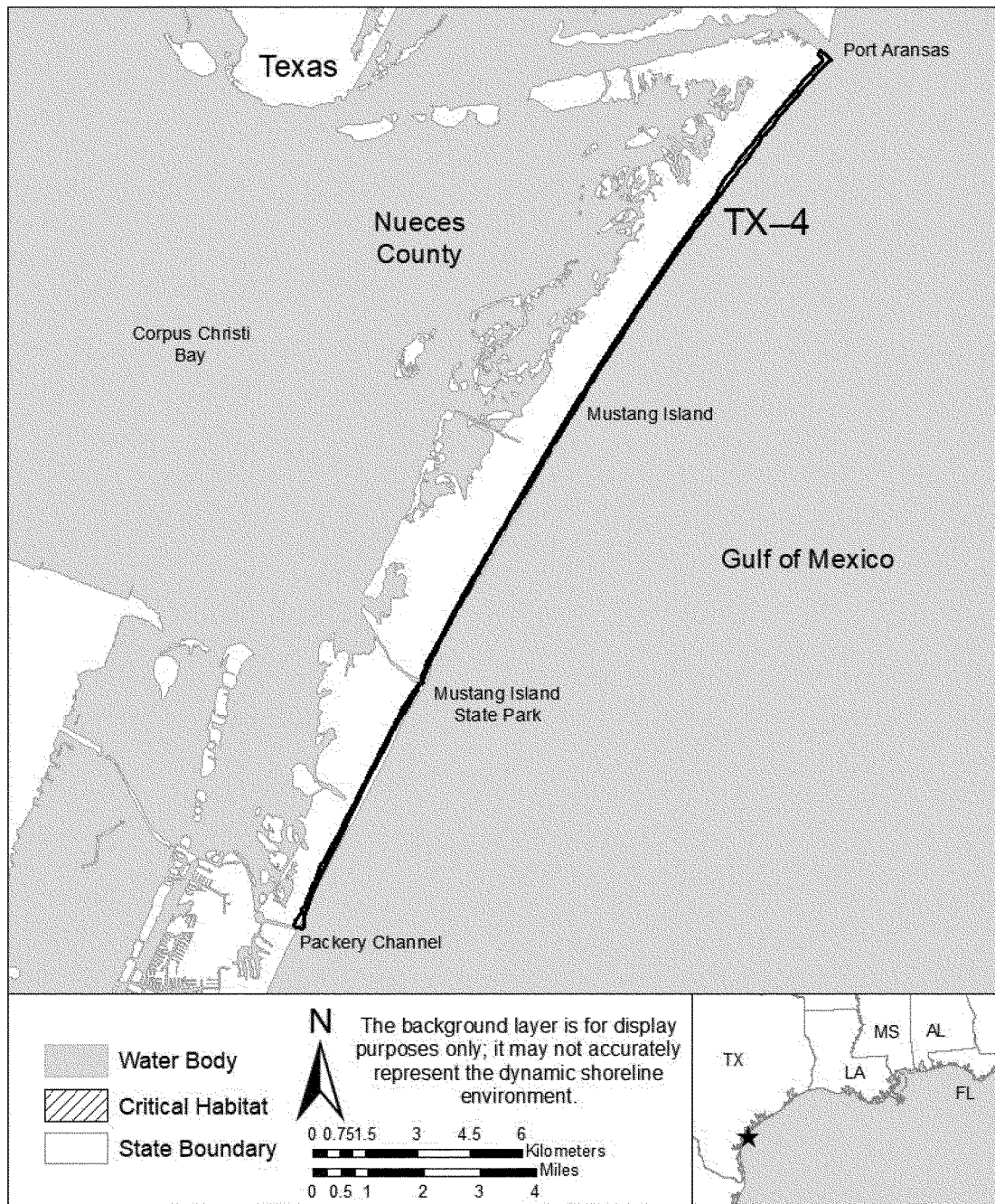
inundated by tides, depending upon the location. Lands within this unit include approximately 395 ac (160 ha) in State ownership and 253 ac (102 ha) in private/other ownership.

(ii) Map of Unit TX-4 follows:

Figure 103 to Rufa Red Knot paragraph (125)(ii)



### Critical Habitat for Rufa Red Knot TX-4 Mustang Island; Nueces County, Texas



(126) Unit TX-5: Mollie Beattie Coastal Habitat, Texas.

(i) Unit TX-5 consists of approximately 723 ac (293 ha) of occupied habitat in Nueces County. This unit is located north of Packery Channel and extends along the bayside west of Sylvan Beach Park west of Texas State Highway 361. The northern boundary is the Corpus Christi Pass with the southern boundary

approximately 2 mi (3.2 km) south of Corpus Christi Pass. The eastern boundary is where the dense vegetation begins, and the western boundary is the MLLW (*i.e.*, the highly dynamic beach and intertidal seashore that is covered at high tide and uncovered at low tide). This unit includes two hurricane washover passes known as Newport and Corpus Christi Passes in areas where wind tidal flats are infrequently

inundated, bayside flats are exposed during low tide regimes, and wind tidal flats are infrequently inundated. The unit does not include densely vegetated habitat within these boundaries, but it includes all seagrass beds exposed at low tides. Specific habitat types within this unit include: estuarine (bayside) sandy shore/beach/sandbar that is irregularly or regularly, depending upon the location, inundated by tides; and

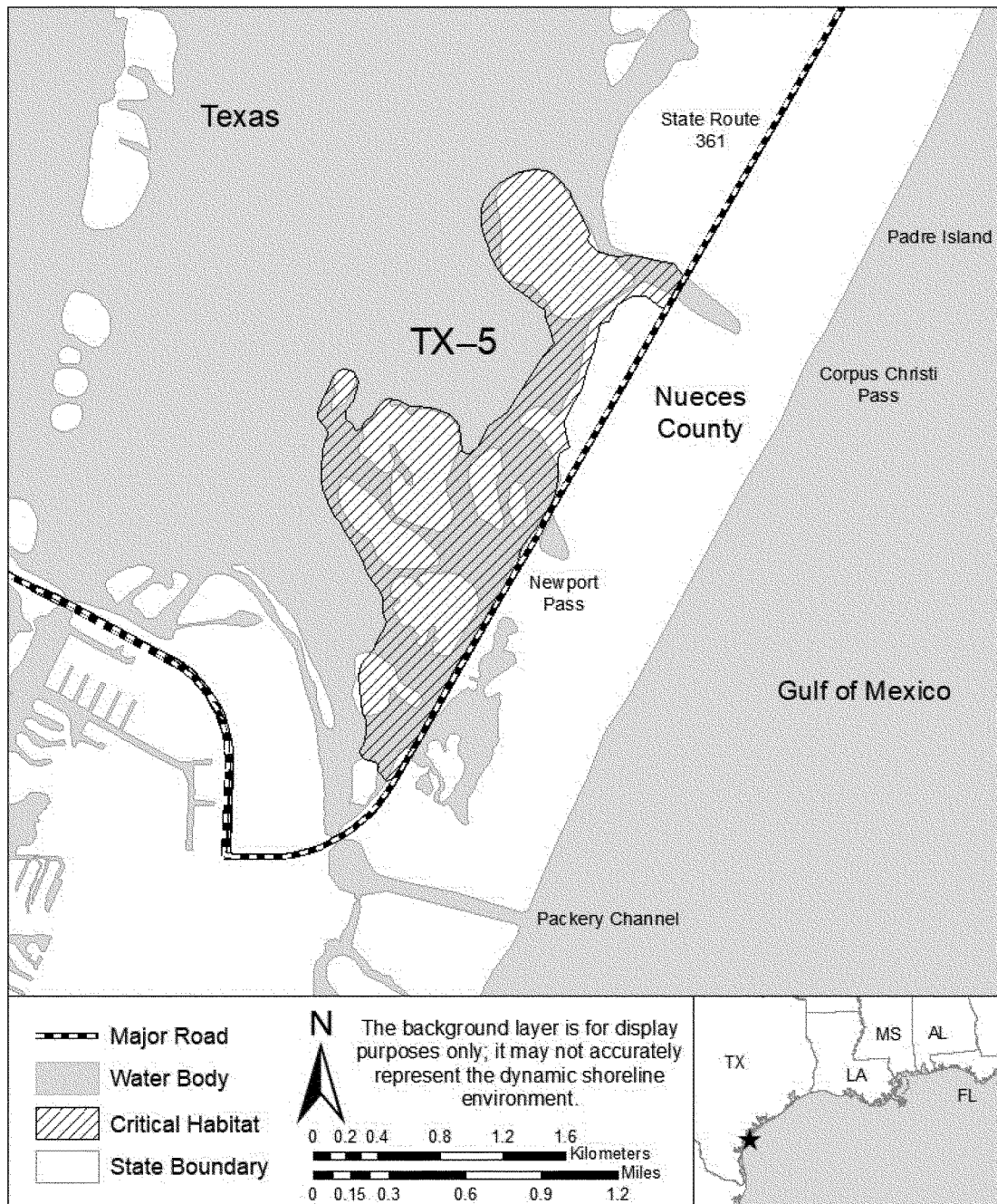


estuarine (bayside) sandy shore (beach/sandbar) and spoils irregularly inundated by tides. Lands within this

unit include approximately 505 ac (205 ha) in State ownership and 218 ac (88 ha) in private/other ownership.

(ii) Map of Unit TX-5 follows: Figure 104 to Rufa Red Knot paragraph (126)(ii)

**Critical Habitat for Rufa Red Knot  
TX-5 Mollie Beattie Coastal Habitat, Nueces County, Texas**



(127) Unit TX-6: North Padre Island, Texas.

(i) Unit TX-6 consists of approximately 2,817 ac (1,140 ha) of occupied habitat in Nueces, Kleberg, Kenedy, and Willacy Counties. The unit

is along the gulf with boundaries from the MLLW up to the vegetation line, to include emergent lands and intertidal area characterized as highly dynamic beach/seashore that is covered at high tide and uncovered at low tide. The

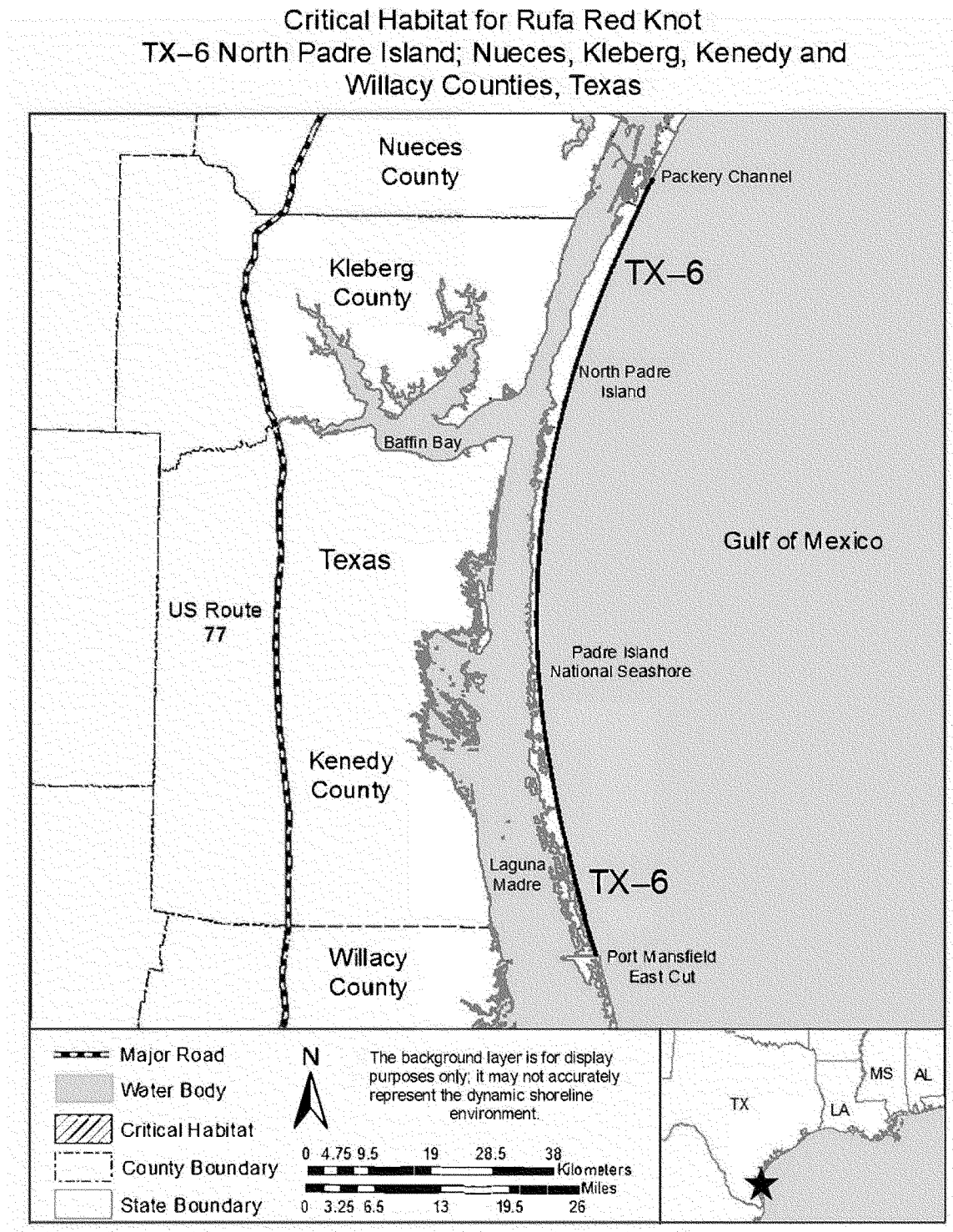
northern boundary is the south side of Packery Channel extending along the Gulf shoreline to Port Mansfield East Cut. Specific habitat types within this unit include marine sandy coastline beach that is irregularly or regularly

inundated by tides, depending upon the location. Lands within this unit include approximately 2,487 ac (1,007 ha) in Federal ownership (Padre Island

National Seashore), 68 ac (27 ha) in State ownership, and 262 ac (106 ha) in private/other ownership.

(ii) Map of Unit TX-6 follows:

Figure 105 to Rufa Red Knot paragraph (127)(ii)



(128) Unit TX-7: Upper Laguna Madre-Nighthawk Bay, Texas.

(i) Unit TX-7 consists of approximately 1,157 ac (469 ha) of

occupied habitat in Kleberg County. The unit is along the bayside of Texas Park Road 22. The northeastern boundary is the northern edge of the Kleberg County

line in Nighthawk Bay, and the southwestern boundary ends bayside of Bird Island Basin Road. This unit includes a series of small flats along the

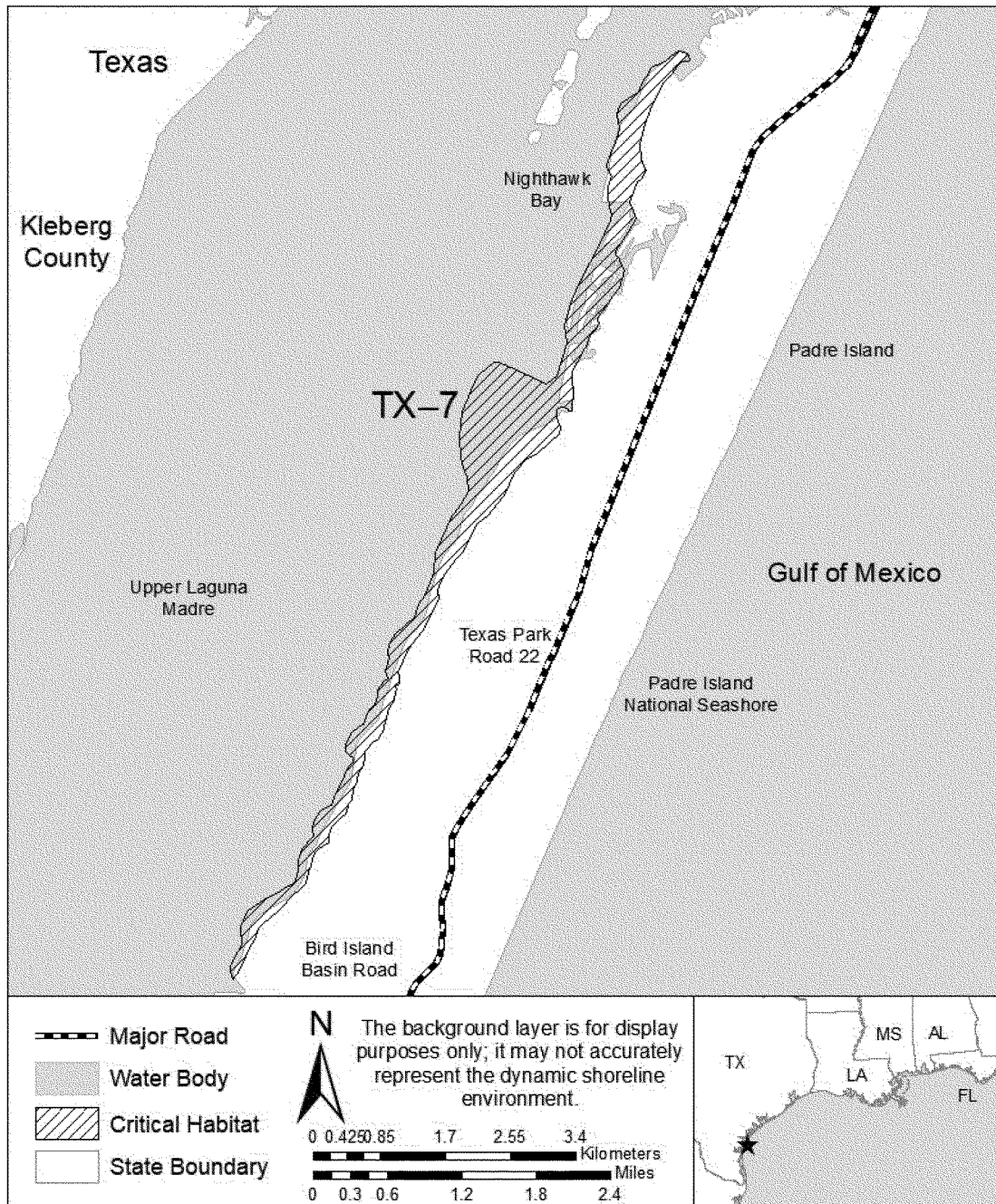
bayside of Padre Island in the Upper Laguna Madre. The unit includes bayside flats and seagrass beds that are exposed during low tide regimes and wind tidal flats that are infrequently inundated. Specific habitat types within this unit include: estuarine (bayside) seagrass mud or sand flats that are subtidal, seagrass flats that are nearly

flat areas with rooted vascular plants (seagrass) growing below the water surface in subtidal mud or sand substrate; estuarine (bayside) sandy shore (beach/sandbar) rarely exposed due to tidal fluctuation; and estuarine (bayside) sandy shore (beach/sandbar) that is irregularly or regularly inundated by tide, depending upon the location.

Lands within this unit include approximately 273 ac (111 ha) in Federal ownership (Padre Island National Seashore), 816 ac (330 ha) in State ownership, and 68 ac (28 ha) in private/other ownership.

(ii) Map of Unit TX-7 follows: Figure 106 to Rufa Red Knot paragraph (128)(ii)

### Critical Habitat for Rufa Red Knot TX-7 Upper Laguna Madre–Nighthawk Bay, Kleberg County, Texas



(129) Unit TX–8: Dagger Hill–Yarborough Pass–Nine Mile Hole, Texas.

(i) Unit TX–8 consists of approximately 32,773 ac (13,263 ha) of occupied habitat in Kleberg and Kenedy Counties. The unit is located bayside along and within the Laguna Madre adjacent to the west side of the Padre Island National Seashore. The northern boundary of the unit is Dagger Hill, and the southern boundary is approximately 6 mi (9.7 km) south of the land cut at Nine Mile Hole. The eastern boundary of this unit is the dense vegetation line on the bayside of the Padre Island National Seashore. The western

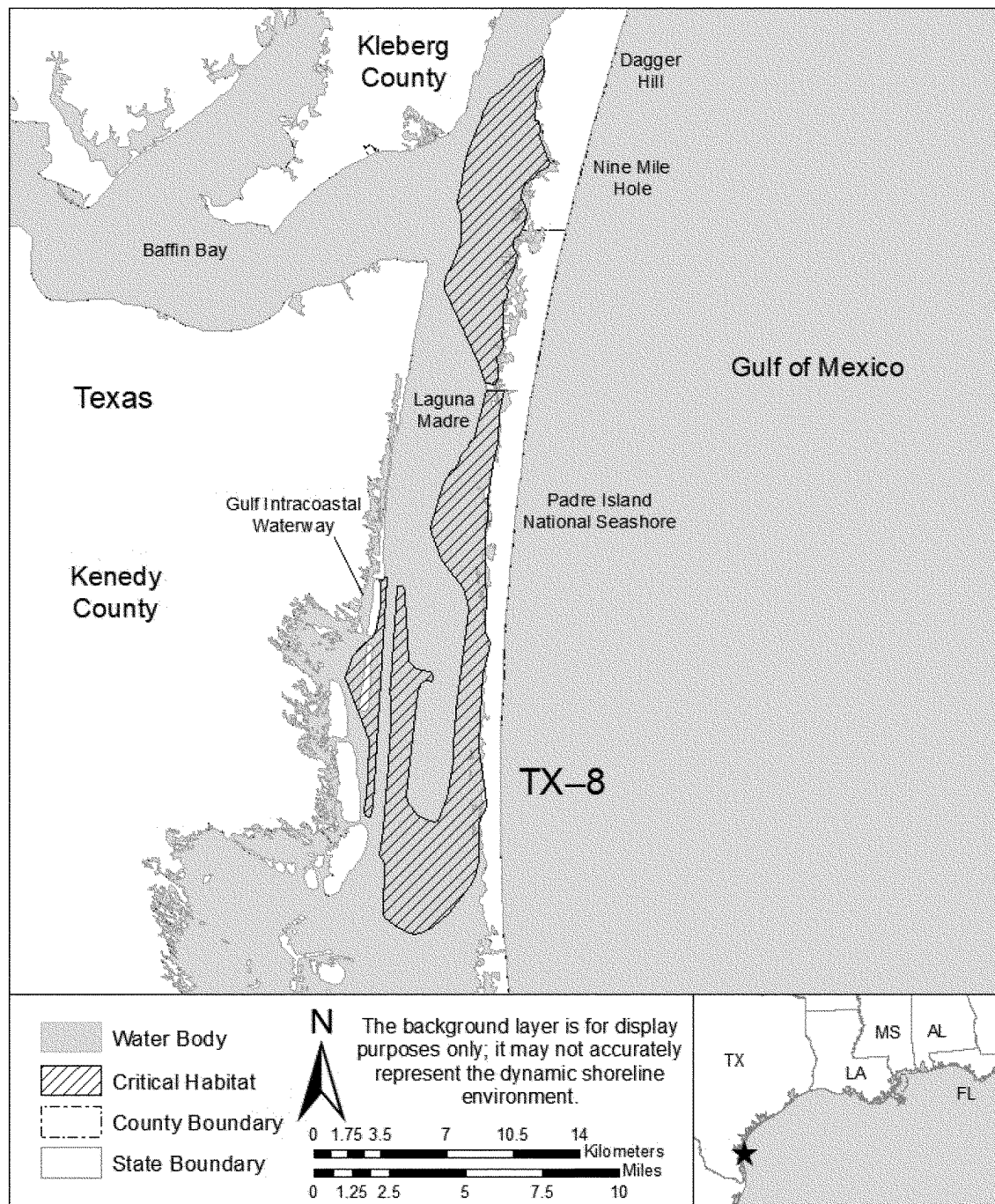
boundary extends toward the Gulf Intracoastal Waterway to the MLLW (*i.e.*, the highly dynamic beach and emergent sand shoals that are covered at high tide and uncovered at low tide). The southern portion of this unit extends across the Gulf Intracoastal Waterway dredge spoil islands. The unit includes bayside flats and all seagrass beds that are exposed during low tide regimes and wind tidal flats that are infrequently inundated. Specific habitat types within this unit include: estuarine (bayside) seagrass mud or sand flats that are subtidal and are nearly flat areas with rooted vascular plants (seagrass) growing below the water surface in

subtidal mud or sand substrate; estuarine (bayside) sandy shore (beach/sandbar) that is irregularly or regularly inundated by tides, depending upon the location; and estuarine (bayside) sandy shore (beach/sandbar) and spoils irregularly inundated by tides. Lands within this unit include approximately 9,731 ac (3,938 ha) in Federal ownership (Padre Island National Seashore) and 23,042 ac (9,325 ha) in State ownership.

(ii) Map of Unit TX–8 follows:

Figure 107 to Rufa Red Knot paragraph (129)(ii)

**Critical Habitat for Rufa Red Knot**  
**TX-8 Dagger Hill–Yarborough Pass–Nine Mile Hole;**  
**Kleberg and Kenedy Counties, Texas**



(130) Unit TX-9: Pintail Lake–Padre Island–La Punta Larga, Texas.

(i) Unit TX-9 consists of approximately 94,171 ac (38,110 ha) of occupied habitat in Kenedy, Willacy, and Cameron Counties. The northern boundary is Pintail Cut, extending south along the bay side of North Padre and South Padre Islands, with the southern

boundary being Andy Bowie County Park. The center of the unit is approximately at Port Mansfield East Cut. North of the East Cut the western boundary is the MLLW (*i.e.*, the highly dynamic beach and emergent sand shoals that are covered at high tide and uncovered at low tide), and the eastern boundary is where dense vegetation

begins. South of East Cut the western boundary is the MLLW, and the eastern boundary includes the beach side Gulf of Mexico out to the MLLW. The unit includes bayside flats and seagrass beds that are exposed during low tide regimes, and wind tidal flats that are infrequently inundated. Specific habitat types within this unit include: estuarine



(bayside) algal mud or sand flats irregularly inundated by tides; estuarine (bayside) sandy shore (beach/sandbar) regularly inundated by tides; and estuarine (bayside) sandy shore (beach/sandbar); and marine sandy coastline

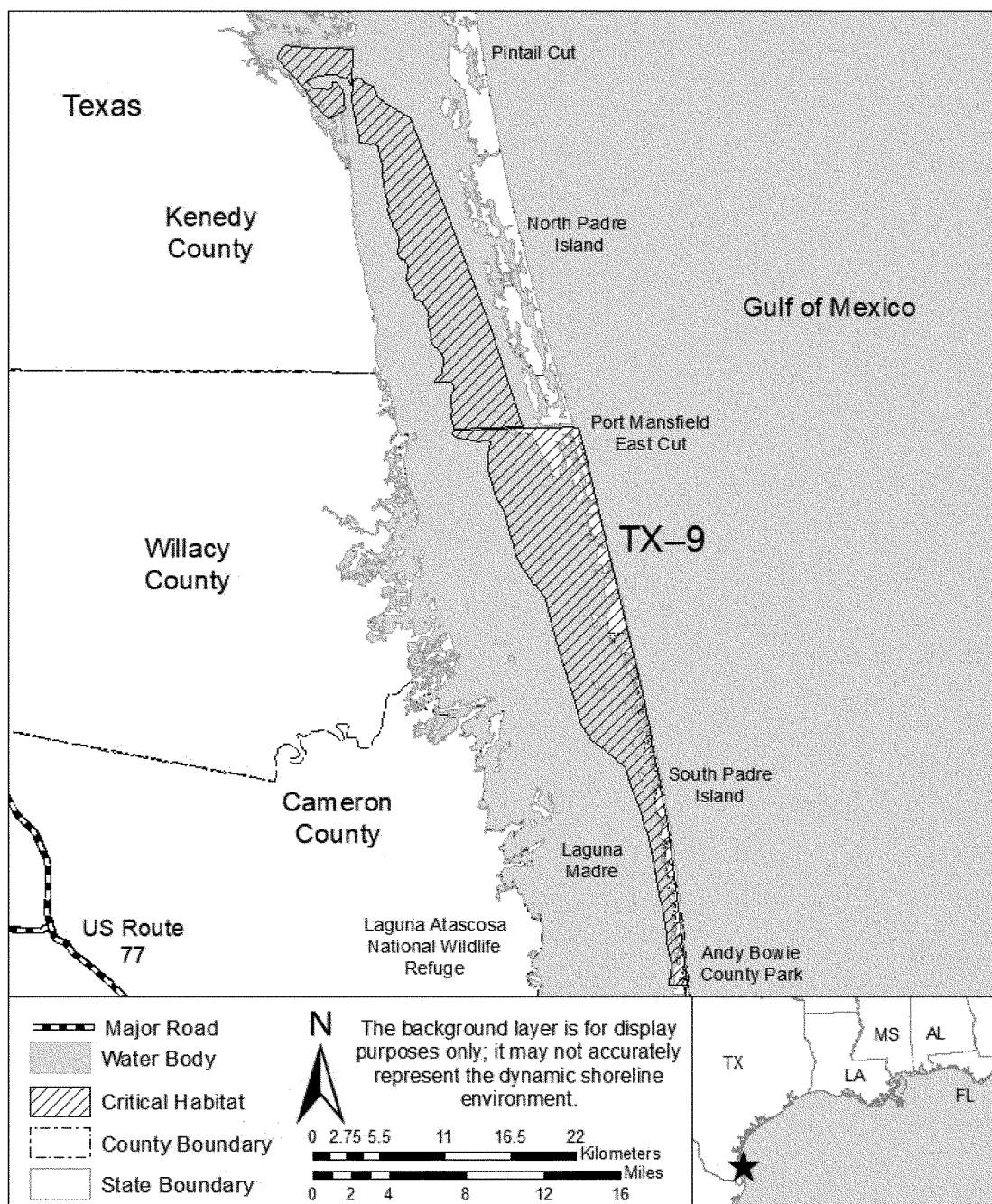
beach (irregularly or regularly inundated by tides, depending upon the location). Lands within this unit include approximately 25,881 ac (10,474 ha) in Federal ownership (Laguna Atascosa NWR), 34,165 ac (13,826 ha) in State

ownership, and 34,125 ac (13,810 ha; 36 percent) in private/other ownership.

(ii) Map of Unit TX-9 follows:

Figure 108 to Rufa Red Knot paragraph (130)(ii)

**Critical Habitat for Rufa Red Knot  
TX-9 Pintail Lake–Padre Island–La Punta Larga;  
Kenedy, Willacy, and Cameron Counties, Texas**



(131) Unit TX-10: Peyton's Bay–Arroyo Colorado–Three Island–Gabrielson Island, Texas.

(i) Unit TX-10 consists of approximately 35,651 ac (14,427 ha) of occupied habitat in Willacy and

Cameron Counties. The northern boundary of this unit is approximately 11 mi (18 km) north of the Arroyo

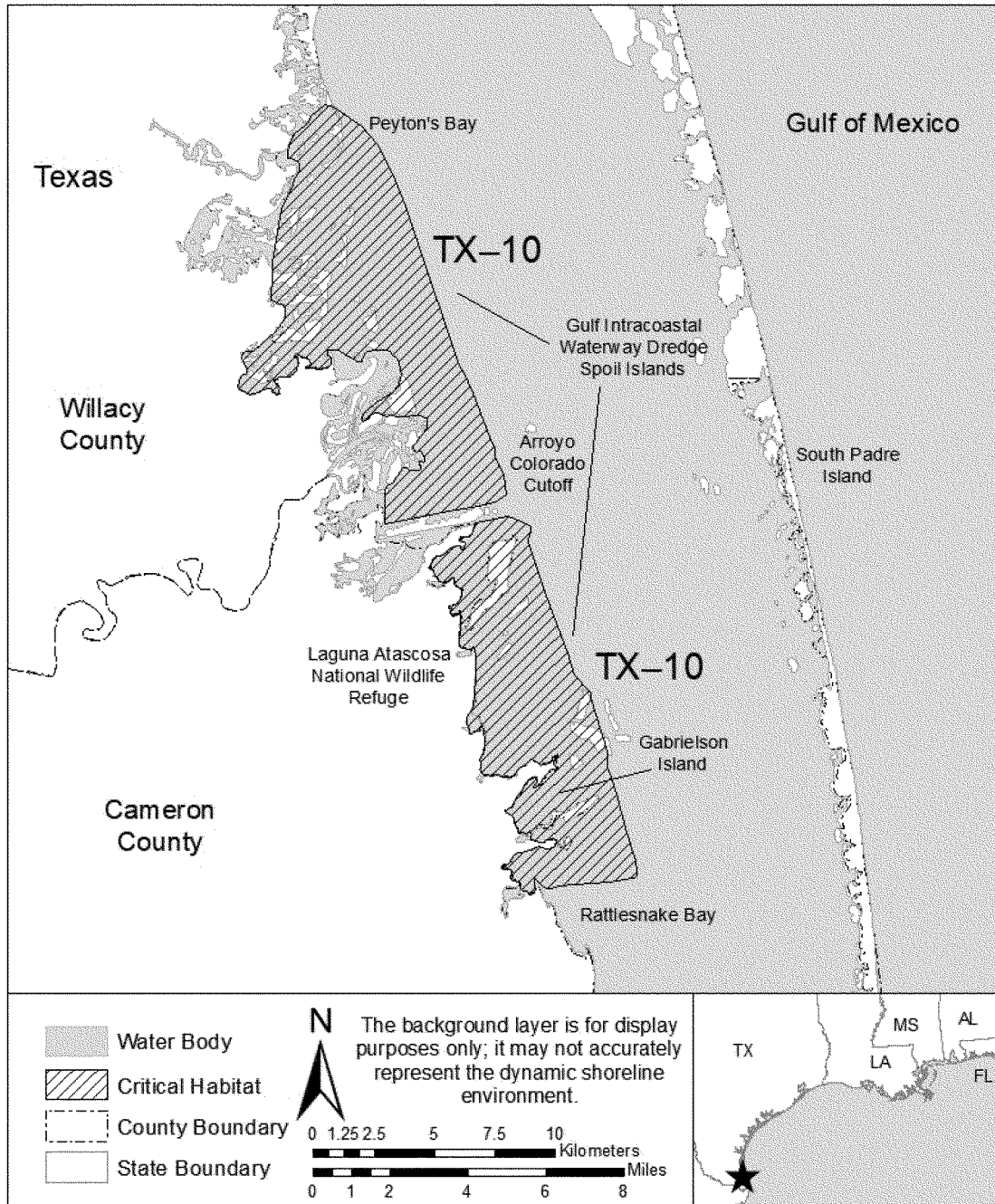
Colorado Cutoff and encompasses Peyton's Bay (north being Chubby Island), and the southern boundary is approximately 9 mi (14 km) south of the Arroyo Colorado Cutoff encompassing Rattlesnake Bay (south edge near Gabrielson Island). The eastern boundary is the western side of the Gulf Intracoastal Waterway dredge spoil islands, and the western boundary is where dense vegetation begins. The unit includes bayside flats and seagrass beds that are exposed during low tide regimes and wind tidal flats that are infrequently inundated, and does not include densely vegetated habitat

within these boundaries. Specific habitat types within this unit include: estuarine (bayside) seagrass mud or sand flats that are subtidal and are nearly flat areas with rooted vascular plants (seagrass) growing below the water surface in subtidal mud or sand substrate; estuarine (bayside) algal mud or sand flats regularly inundated by tides and that are nearly flat areas with a layer of algae growing on a moist mud or sand substrate and are otherwise devoid of vegetation; estuarine (bayside) algal mud or sand flats irregularly inundated by tides; estuarine (bayside) sandy shore (beach/sandbar) rarely

exposed due to tidal fluctuation; estuarine (bayside) sandy shore (beach/sandbar) areas that are irregularly or regularly inundated by tides, depending upon the location; and estuarine (bayside) sandy shore (beach/sandbar), to include spoils irregularly inundated by tides. Lands within this unit include approximately 8,145 ac (3,296 ha) in Federal ownership (Laguna Atascosa NWR), 25,316 ac (10,245 ha) in State ownership, and 2,190 ac (886 ha) in private/other ownership.

(ii) Map of Unit TX-10 follows: Figure 109 to Rufa Red Knot paragraph (131)(ii)

**Critical Habitat for Rufa Red Knot**  
**TX-10 Peyton's Bay–Arroyo Colorado–Three Islands–Gabrielson Island;**  
**Willacy and Cameron Counties, Texas**



(132) Unit TX-11: South Bay–Boca Chica.

(i) Unit TX-11 consists of approximately 15,400 ac (6,236 ha) of occupied habitat in Cameron County. The Boca Chica gulf shoreline portion of this unit begins south of the Brownsville Ship Channel and extends approximately 6.5 mi (10 km) to the south. Within the South Bay, the northern boundary is south of

Brownsville Ship Channel dredge spoil placement areas, and the southern boundary is north of the Rio Grande River. The eastern boundary is the bayside of the Boca Chica Beach (Gulf of Mexico) up to where dense vegetation begins, and the western boundary is west of the Loma islands up to where dense vegetation begins along the wind tidal flats. The unit includes wind tidal flats and all seagrass beds that are

infrequently inundated and/or exposed at low tides, and the tidal flats within the area known as South Bay. Specific habitat types within this unit include: estuarine (bayside) seagrass mud or sand flats that are subtidal and are nearly flat areas with rooted vascular plants (seagrass) growing below the water surface in subtidal mud or sand substrate; estuarine (bayside) algal mud or sand flats regularly inundated by

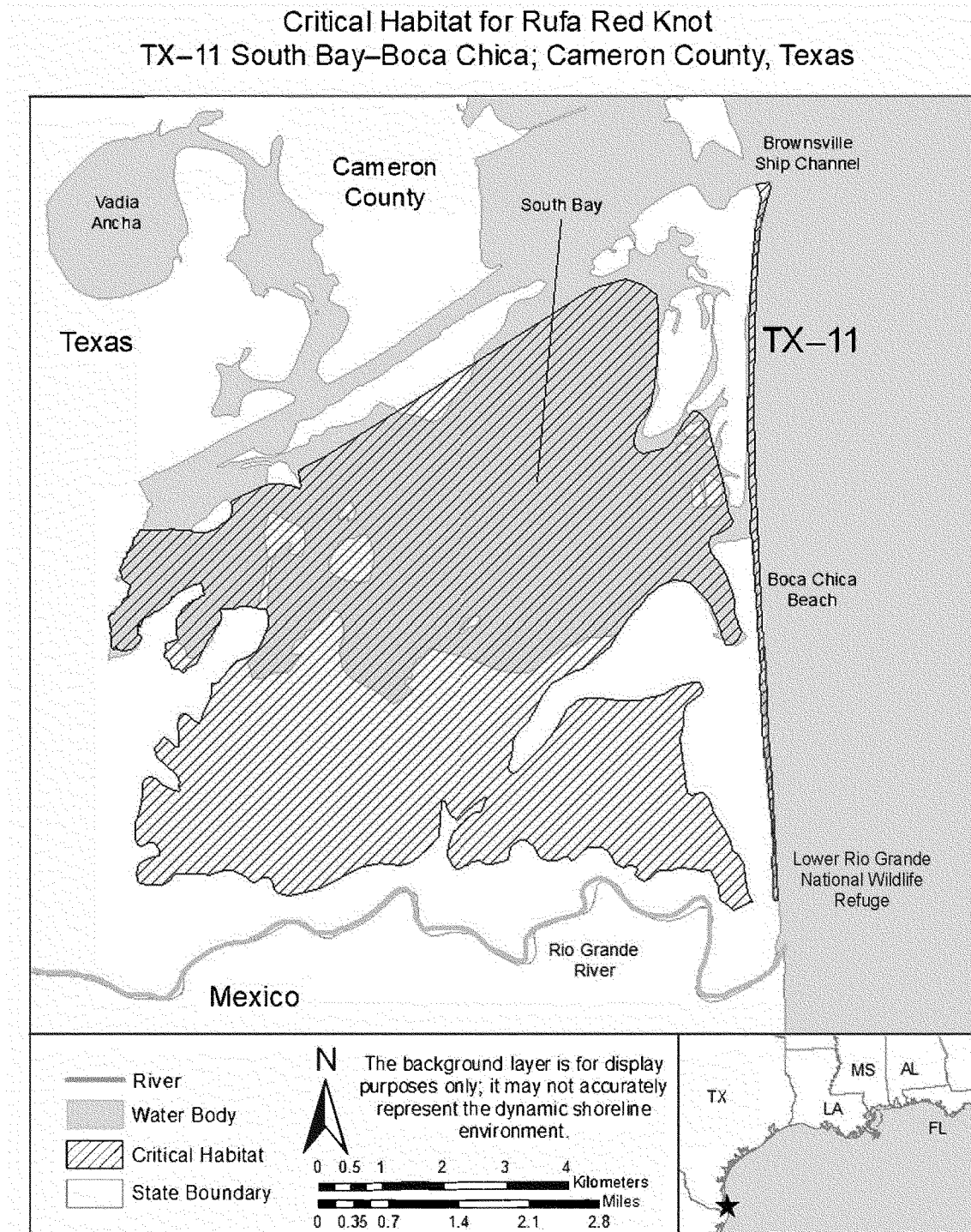
tides and that are nearly flat areas with a layer of algae growing on a moist mud or sand substrate and are otherwise devoid of vegetation; estuarine (bayside) algal mud or sand flats irregularly inundated by tides; estuarine (bayside) sandy shore (beach/sandbar) rarely exposed due to tidal fluctuation; estuarine (bayside) sandy shore (beach/

sandbar) irregularly or regularly inundated by tides, depending upon the location; estuarine (bayside) sandy shore (beach/sandbar) spoils irregularly inundated by tides; and marine sandy coastline (beach) irregularly or regularly inundated by tides, depending upon the location. Lands within this unit include approximately 5,536 ac (2,242 ha) in

Federal ownership (Lower Rio Grande Valley NWR), 4,080 ac (1,652 ha) in State ownership, and 5,784 ac (2,342 ha) in private/other ownership.

(ii) Map of Unit TX-11 follows:

Figure 110 to Rufa Red Knot paragraph (132)(ii)



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**Martha Williams,**

*Director, U.S. Fish and Wildlife Service.*

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