

## DEPARTMENT OF THE INTERIOR

### Fish and Wildlife Service

#### 50 CFR Part 17

[Docket No. FWS-R4-ES-2022-0164;  
FF09E21000 FXES1111090FEDR 234]

RIN 1018-BG81

#### Endangered and Threatened Wildlife and Plants; Designation of Critical Habitat for Green Sea Turtle

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

**ACTION:** Proposed rule; announcement of public hearings.

**SUMMARY:** We, the U.S. Fish and Wildlife Service (Service or USFWS), propose to designate critical habitat for five distinct population segments (DPSs) of the green sea turtle (*Chelonia mydas*) under the Endangered Species Act of 1973, as amended (ESA or Act). The five DPSs include the federally threatened North Atlantic, South Atlantic, and Central North Pacific DPSs and the federally endangered Central South Pacific and Central West Pacific DPSs. In total, approximately 8,870 acres (ac) (3,590 hectares (ha)) are proposed across 101 units in the States of Florida and Hawai'i; the territories of the U.S. Virgin Islands, American Samoa, and Guam; the commonwealths of Puerto Rico and the Northern Mariana Islands, and two USFWS-managed areas (Midway Islands and Palmyra Atoll). We also announce five public informational meetings and public hearings and the availability of a draft economic analysis of the proposed critical habitat designation for the terrestrial areas included in this proposed rule. Elsewhere in today's **Federal Register**, the National Marine Fisheries Service (NMFS) is also proposing to designate specific areas in the marine environment as critical habitat for DPSs of the green sea turtle.

#### DATES:

*Public informational meetings and public hearings:* We will hold five public informational meetings followed by public hearings on:

- (1) Central North Pacific DPS—Hawai'i: August 10, 2023, from 6 p.m. to 8 p.m., Hawai'i-Aleutian time;
- (2) Central South Pacific DPS—Tutuila: August 16, 2023, from 6 p.m. to 8 p.m., Samoan time;
- (3) Central West Pacific DPS—Guam: August 21, 2023, from 6 p.m. to 8 p.m., Chamorro time;
- (4) Central West Pacific DPS—Saipan: August 23, 2023, from 6 p.m. to 8 p.m., Chamorro time;
- (5) North and South Atlantic DPSs—Florida, Puerto Rico and U.S. Virgin

Islands: August 29, 2023, from 6 p.m. to 8 p.m., eastern time.

*Comment submission:* We will accept comments received or postmarked on or before October 17, 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:

*Public informational meetings and public hearings:*

- For the Central North Pacific DPS, the North Atlantic DPS, and the South Atlantic DPS: We are holding public informational meetings and public hearings via the Zoom online video platform and via teleconference so that participants can attend remotely.

- For the Central South Pacific DPS and Central West Pacific DPS: We are holding public informational meetings and public hearings in-person on Tutuila (Central South Pacific DPS), Guam (Central West Pacific DPS), and Saipan (Central West Pacific DPS).

For additional information, see *Public Hearings*, below, under **SUPPLEMENTARY INFORMATION**.

*Comment submission:* You may submit comments by one of the following methods:

(1) *Electronically:* Go to the Federal eRulemaking Portal: <https://www.regulations.gov>. In the Search box, enter FWS-R4-ES-2022-0164, which is the docket number for this rulemaking. 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-R4-ES-2022-0164, 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 Information Requested, below, for more information).

*Availability of supporting materials:* Supporting materials (such as the draft economic analysis and supporting Methodology document) are available on the USFWS's website at <https://www.fws.gov/office/florida-ecological-services/library/green-sea-turtle>, at <https://www.regulations.gov> at Docket No. FWS-R4-ES-2022-0164, or both.

For the proposed critical habitat designation, the coordinates or plot points or both from which the maps are generated are included in the decision file for this proposed critical habitat designation and are available at <https://www.regulations.gov> at Docket No. FWS-R4-ES-2022-0164 and on the USFWS's website at <https://www.fws.gov/office/florida-ecological-services/library/green-sea-turtle>.

**FOR FURTHER INFORMATION CONTACT:** For the Central North Pacific, Central South Pacific, and Central West Pacific DPSs: Earl W. Campbell, Project Leader, U.S. Fish and Wildlife Service, Pacific Islands Fish and Wildlife Office, 300 Ala Moana Boulevard, Room 3-122, Honolulu, HI 96850; by telephone 808-792-9400. For the North Atlantic and South Atlantic DPSs: Lourdes Mena, Classification and Recovery Division Manager, U.S. Fish and Wildlife Service, Florida Ecological Services Field Office, 7915 Baymeadows Way, Suite 200, Jacksonville, FL 32256; by telephone 904-731-3134. 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:

##### Executive Summary

*Why we need to publish a rule.* Under the Act, when we determine that any species warrants listing as an endangered or threatened species, we are required to designate critical habitat, to the maximum extent prudent and determinable. Designations of critical habitat can be completed only by issuing a rule through the Administrative Procedure Act rulemaking process (5 U.S.C. 551 *et seq.*).

*What this document does.* This document proposes specific areas in the terrestrial environment as critical habitat for five DPSs of green sea turtle (hereafter referred to as "green turtle"), which is a circumglobal reptile that is listed as a threatened species in the North Atlantic, South Atlantic, and Central North Pacific DPSs, and listed as an endangered species in the Central South Pacific and Central West Pacific DPSs. The proposed critical habitat areas occur in portions of two States (Florida and Hawai'i), three U.S. territories (U.S. Virgin Islands, American Samoa, and Guam), two U.S.

commonwealths (Puerto Rico and Northern Mariana Islands), and two areas (Midway Islands and Palmyra Atoll) administered by the Department of the Interior's USFWS Refuge System.

*The basis for our action.* Section 4(a)(3) of the Act requires the Secretary of the Interior (Secretary), to the maximum extent prudent and determinable, to designate critical habitat concurrent with listing. Section 3(5)(A) of the Act defines critical habitat as (i) the specific areas within the geographical area occupied by the species, at the time it is listed, on which are found those physical or biological features (I) essential to the conservation of the species and (II) which may require special management considerations or protections; and (ii) specific areas outside the geographical area occupied by the species at the time it is listed, upon a determination by the Secretary that such areas are essential for the conservation of the species. Section 4(b)(2) of the Act states that the Secretary must make the designation on the basis of the best scientific data available and after taking into consideration the economic impact, the impact on national security, and any other relevant impacts of specifying any particular area as critical habitat.

#### Acronyms and Abbreviations Used in This Proposed Rule

For the convenience of the reader, listed below are some of the acronyms and abbreviations used in this proposed rule:

Act = Endangered Species Act  
BAFS = Bellows Air Force Station  
CNMI = Commonwealth of the Northern Mariana Islands  
Corps = U.S. Army Corps of Engineers  
DEA = draft economic analysis  
DHS = Department of Homeland Security  
DLNR = Department of Land and Natural Resources  
DNER = Department of Natural and Environmental Resources  
DoD = Department of Defense  
DPS = distinct population segment  
FDEP = Florida Department of Environmental Protection  
GDoAg = Guam Department of Agriculture  
GIS = geographic information system  
GTM = Guana Tolomato Matanzas  
HCP = habitat conservation plan  
HDLNR = Hawai'i Department of Land and Natural Resources  
HDOFAW = Hawai'i Division of Forestry and Wildlife  
HDSP = Hawai'i Division of State Parks  
IEM = incremental effects memorandum  
INRMP = integrated natural resources management plan  
IPCC = Intergovernmental Panel on Climate Change  
MHWL = mean high-water line  
NMFS = National Marine Fisheries Service

NOAA = National Oceanic and Atmospheric Administration  
NPS = U.S. National Park Service  
NWR = National Wildlife Refuge  
PBF = physical or biological features  
Service and USFWS = U.S. Fish and Wildlife Service  
SSA = species status assessment  
TNC = The Nature Conservancy  
USCCSP = U.S. Climate Change Science Program  
STXEEMP = St. Croix East End Marine Park  
USGS = U.S. Geological Survey  
UXO = unexploded ordnance

#### Information Requested

We intend that any final action resulting from this proposed rule will be based on the best scientific and commercial data available and be as accurate and as effective as possible. Therefore, we request comments or information from other governmental agencies, Native American Tribes, the scientific community, industry, or any other interested parties concerning this proposed rule. We particularly seek comments concerning:

- (1) Specific information on:
  - (a) The amount and distribution of green turtle basking habitat in the Central North Pacific DPS and nesting habitat in all five DPSs;
  - (b) Any additional areas occurring within the range of the five DPSs of green turtles that should be included in the designation because they (i) are occupied at the time of listing and contain the physical or biological features (PBFs) that are essential to the conservation of the species and that may require special management considerations, or (ii) are unoccupied at the time of listing and are essential for the conservation of the species;
  - (c) The boundaries of specific areas and proposed critical habitat units;
  - (d) 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
  - (e) Whether occupied areas are adequate for the conservation of the species, as this will help us evaluate the potential to include areas not occupied at the time of listing. Additionally, please provide specific information regarding whether or not unoccupied areas would, with reasonable certainty, contribute to the conservation of the species and contain at least one PBF essential to the conservation of the species. We also seek comments or information regarding whether areas not occupied at the time of listing qualify as habitat for the species.

- (2) Land use designations and current or planned activities in the subject areas and their possible impacts on proposed

critical habitat, including information regarding the types of Federal actions that may trigger an ESA section 7 consultation and potential conservation measures to avoid and minimize impacts to the critical habitat designation that are different from those to avoid and minimize impacts to the species.

- (3) Information on the projected impacts of climate change on the green turtle's proposed critical habitat.

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

- (5) Information on the extent to which the description of probable economic impacts in the draft economic analysis (DEA) is a reasonable estimate of the likely economic impacts, including:

- (a) Whether any data used in the economic analysis needs to be updated;
- (b) Additional costs arising specifically from the designation of critical habitat that have not been identified in the DEA or improved cost estimates for activities that are included in the DEA;

- (c) Information on the potential for incremental costs to occur outside of the section 7 consultation process. These types of costs may include triggering additional requirements or project modifications under other laws or regulations, and perceptual effects on markets; and,

- (d) Information on non-Federal entities that receive Federal funding, assistance, or permits, or that otherwise require approval or authorization from a Federal agency for an action, that may be indirectly impacted by the designation of critical habitat.

- (6) 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 Tribal, State/Territory/Commonwealth, 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. If you think we should exclude any additional areas, please provide information supporting a



benefit of exclusion. 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 green turtle and its habitat.

(7) Information on any specific areas that we have identified as “uncategorized” land ownership in the three Pacific DPSs, or any information on possible private lands ownership in the South Atlantic DPS or within Puerto Rico in the North Atlantic DPS that may currently be included within territory ownership.

(8) Whether the benefits of exclusion outweigh the benefits of inclusion as critical habitat for lands within the Indian River County Habitat Conservation Plan (HCP) that are considered for exclusion under section 4(b)(2) of the Act in this proposed rule.

(9) Whether we could improve 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.

Please include sufficient information with your submission (such as scientific journal articles or other publications) to allow us to verify any scientific or commercial information you include.

Please note that submissions merely stating support for, or opposition to, the action under consideration without providing supporting information, although noted, do not provide substantial information necessary to support a determination. Section 4(b)(2) of the Act directs that the Secretary shall designate critical habitat on the basis of the best scientific data available.

You may submit your comments and materials concerning this proposed rule by one of the methods listed in **ADDRESSES**. We request that you send comments only by the methods described in **ADDRESSES**. Please note that we will address, in the USFWS’s final rule, only those comments directly related to the terrestrial areas (*i.e.*, basking habitat in the Central North Pacific DPS, and nesting habitat in the Central North Pacific, Central South Pacific, Central West Pacific, North Atlantic, and South Atlantic DPSs) that

are described in this proposed critical habitat designation. Any comments related to NMFS’s proposed critical habitat designation of the green turtle’s marine environment, which published elsewhere in today’s **Federal Register**, should be provided to NMFS (available on the internet at <https://www.regulations.gov>, NOAA–NMFS–2023–0087).

If you submit information via <https://www.regulations.gov>, your entire submission—including any personal identifying information—will be posted on the website. If your submission is made via a hardcopy 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. We will post all hardcopy submissions on <https://www.regulations.gov>.

Comments and materials we receive, as well as supporting documentation we used in preparing this proposed rule, will be available for public inspection on <https://www.regulations.gov>.

Our final determination may differ from this proposal because we will consider all comments we receive during the comment period related to the proposed critical habitat designation in the terrestrial environment as well as any information that may become available after this proposal. Based on the new information we receive (and any comments on that new information), our final designation may not include all areas proposed, may include some additional areas that meet the definition of critical habitat, or may exclude some areas if we find the benefits of exclusion outweigh the benefits of inclusion and exclusion will not result in the extinction of the species. In our final rule, we will clearly explain our rationale and the basis for our final decision, including why we made changes, if any, that differ from this proposal.

#### Public Hearings

Section 4(b)(5) of the Act provides for a public hearing on this proposal, if requested. At this time, we have preemptively scheduled five public informational meetings and public hearings on this proposed rule. Each of these meetings will include both USFWS and NMFS, providing opportunities for participation regarding both our proposed critical habitat in the terrestrial environment (as described in this document) and the corresponding proposed critical habitat in the marine environment that NMFS has published elsewhere in today’s **Federal Register** (see <https://www.regulations.gov>,

NOAA–NMFS–2023–0087). We will hold the public informational meetings and public hearings on the dates and at the times listed above under *Public informational meetings and public hearings* in **DATES**.

• For the Central North Pacific DPS, the North Atlantic DPS, and the South Atlantic DPS: We are holding public informational meetings and public hearings via the Zoom online video platform and via teleconference so that participants can attend remotely. For security purposes, registration is required. You must register in order to listen and view a hearing via Zoom, listen to the hearing by telephone, or provide oral public comments at a public hearing by Zoom or telephone. For information on how to register, or if remote participants encounter problems joining Zoom the day of the hearing(s), visit <https://www.fws.gov/office/florida-ecological-services/library/green-sea-turtle>. Registrants will receive the Zoom link and the telephone number for the public hearing that they request to attend. If applicable, interested members of the public not familiar with the Zoom platform should view the Zoom video tutorials (<https://learn-zoom.us/show-me>) prior to the public hearing.

• For the Central South Pacific DPS and Central West Pacific DPS: We are holding public informational meetings and public hearings in-person on Tutuila (Central South Pacific DPS), Guam (Central West Pacific DPS), and Saipan (Central West Pacific DPS). For information on meeting locations, visit <https://www.fws.gov/office/florida-ecological-services/library/green-sea-turtle>.

The public hearings will provide interested parties an opportunity to present verbal testimony (formal, oral comments) regarding this proposed rule to designate critical habitat within basking habitat areas (only within the Central North Pacific DPS) and nesting habitat areas in all the DPSs (*i.e.*, only the terrestrial environment used by green turtles). Informational meetings will be held prior to each public hearing for each of the DPSs. While public informational meetings will be opportunities for dialogue with the USFWS and NMFS, the public hearings are not. Rather, a public hearing is a forum for accepting formal verbal testimony. In the event there is a large attendance, the time allotted for oral statements may be limited. Therefore, anyone wishing to make an oral statement at a public hearing for the record is encouraged to provide a prepared written copy of their statement to us through the Federal eRulemaking

Portal, or U.S. mail (see **ADDRESSES**, above). There are no limits on the length of written comments submitted to us. Anyone wishing to make an oral statement at a public hearing must register before the hearing at <https://www.fws.gov/office/florida-ecological-services/library/green-sea-turtle>. The use of virtual public hearings is consistent with our regulations at 50 CFR 424.16(c)(3).

#### *Reasonable Accommodation*

The USFWS is committed to providing access to the public informational meetings and public hearings for all participants. The virtual public informational meetings and public hearings held for the Central North Pacific DPS, the North Atlantic DPS, and the South Atlantic DPS will make closed captioning available during the meetings and hearings, and a full audio and video recording and transcript will be posted online at <https://www.fws.gov/office/florida-ecological-services/library/green-sea-turtle>. Additionally, participants will also have access to live audio during these public informational meetings and public hearings via their telephone or computer speakers. For the in-person public informational meetings and public hearings held for the Central South Pacific DPS and the Central West Pacific DPS, we will provide a transcript to be posted online at <https://www.fws.gov/office/florida-ecological-services/library/green-sea-turtle>. Persons with disabilities requiring reasonable accommodations to participate in the meetings and/or public hearings should contact the relevant person listed under **FOR FURTHER INFORMATION CONTACT** at least 5 business days prior to the date of the hearing they wish to attend to help ensure availability. An accessible version of the USFWS's public informational presentations provided at the beginning of the public informational meetings (prior to the public hearings) will also be posted online at <https://www.fws.gov/office/florida-ecological-services/library/green-sea-turtle> (see **DATES**, above). See <https://www.fws.gov/office/florida-ecological-services/library/green-sea-turtle> for more information about reasonable accommodation.

#### **Previous Federal Actions**

It is our intent to discuss only those topics directly relevant to the designation of critical habitat for the terrestrial environment used by green turtles within the associated DPSs in this document. For more information on the taxonomy, biology, and ecology of

the green turtle or its habitat, refer to the final listing rule for the 11 green turtle DPSs published in the **Federal Register** on April 6, 2016 (81 FR 20058), available online at <https://www.regulations.gov> (at Docket No. 120425024–6232–06). Additionally, for more information on the green turtle's habitat in the marine environment, refer to NMFS's proposed critical habitat designation for the marine environment that is published elsewhere in today's **Federal Register** at <https://www.regulations.gov> (NOAA–NMFS–2023–0087).

On January 8, 2020, the Center for Biological Diversity, Sea Turtle Oversight Protection, and Turtle Island Restoration Network (Plaintiffs) filed a complaint (Case 1:20–cv–00036) alleging that the USFWS and NMFS violated the Act by failing to comply with the statutory deadline for designating critical habitat for six DPSs listed on April 6, 2016 (81 FR 20058). On August 20, 2020, the parties entered into a stipulated settlement agreement, which was subsequently approved by the Court, whereby the USFWS and NMFS agreed to submit to the **Federal Register** proposed critical habitat designations for the six DPSs at issue in the complaint on or before June 30, 2023. In compliance with the settlement agreement, this document constitutes the proposed critical habitat designation for the five DPSs of green turtle where the USFWS has jurisdiction to designate critical habitat.

#### **Peer Review**

In accordance with our joint policy on peer review published in the **Federal Register** on July 1, 1994 (59 FR 34270), and our August 22, 2016, memorandum updating and clarifying the role of peer review of listing actions under the Act, we are soliciting independent scientific review of this proposed critical habitat designation (including the supplemental “Methodology” document (USFWS 2023, entire) available on the internet at <https://www.regulations.gov> under Docket No. FWS–R4–ES–2022–0164 and at <https://www.fws.gov/office/florida-ecological-services/library/green-sea-turtle>) to ensure that this proposal is based on scientifically sound data and analysis. We have invited peer reviewers to comment on our specific assumptions, methodology, and science used in this proposed rule, and we will consider any comments received, as appropriate, before a final agency determination.

#### **Background**

Critical habitat is defined in section 3 of the Act as:

(1) The specific areas within the geographical area occupied by the species, at the time it is listed in accordance with the Act, on which are found those physical or biological features

(a) Essential to the conservation of the species, and

(b) Which may require special management considerations or protection; and

(2) Specific areas outside the geographical area occupied by the species at the time it is listed, upon a determination that such areas are essential to the conservation of the species.

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).

Conservation, as defined under section 3 of the Act, means to use and the use of all methods and procedures that are necessary to bring an endangered or threatened species to the point at which the measures provided pursuant to the Act are no longer necessary. Such methods and procedures include, but are not limited to, all activities associated with scientific resources management such as research, census, law enforcement, habitat acquisition and maintenance, propagation, live trapping, and transplantation, and, in the extraordinary case where population pressures within a given ecosystem cannot be otherwise relieved, may include regulated taking.

Critical habitat receives protection under section 7 of the Act through the requirement that each Federal action agency ensure, in consultation with the USFWS, that any action they authorize, fund, or carry out is not likely to result in the destruction or adverse modification of designated critical habitat. The designation of critical habitat does not affect land ownership or establish a refuge, wilderness, reserve, preserve, or other conservation area. Such designation also does not allow the government or public to access private lands. Such designation does not require implementation of restoration, recovery, or enhancement measures by non-Federal landowners. Rather, designation requires that, where a landowner requests Federal agency funding or authorization for an action



that may affect an area designated as critical habitat, the Federal agency consult with the USFWS under section 7(a)(2) of the Act. If the action may affect the listed species itself (such as for occupied critical habitat), the Federal agency would have already been required to consult with the Service even absent the designation because of the requirement to ensure that the action is not likely to jeopardize the continued existence of the species. Even if the USFWS were to conclude after consultation that the proposed activity is likely to result in destruction or adverse modification of the critical habitat, the Federal action agency and the landowner are not required to abandon the proposed activity, or to restore or recover the species; instead, they must implement “reasonable and prudent alternatives” to avoid destruction or adverse modification of critical habitat.

Under the first prong of the Act’s definition of critical habitat, areas within the geographical area occupied by the species at the time it was listed are included in a critical habitat designation if they contain PBFs (1) which are essential to the conservation of the species and (2) which may require special management considerations or protection. For these areas, critical habitat designations identify, to the extent known using the best scientific and commercial data available, those PBFs that are essential to the conservation of the species (such as space, food, cover, and protected habitat).

Under the second prong of the Act’s definition of critical habitat, we can designate critical habitat in areas outside the geographical area occupied by the species at the time it is listed, upon a determination that such areas are essential for the conservation of the species.

Section 4 of the Act requires that we designate critical habitat on the basis of the best scientific data available. Further, our Policy on Information Standards Under the Endangered Species Act (published in the **Federal Register** on July 1, 1994 (59 FR 34271)), the Information Quality Act (section 515 of the Treasury and General Government Appropriations Act for Fiscal Year 2001 (Pub. L. 106–554; H.R. 5658)), and our associated Information Quality Guidelines provide criteria, establish procedures, and provide guidance to ensure that our decisions are based on the best scientific data available. They require our biologists, to the extent consistent with the Act and with the use of the best scientific data available, to use primary and original

sources of information as the basis for recommendations to designate critical habitat.

Our primary sources of information are described in the 2016 final listing rule for the 11 DPSs, new information available since that time as referenced in this document, as well as our supporting “Methodology” document available on the internet at <https://www.regulations.gov> at Docket No. FWS–R4–ES–2022–0164 and on the USFWS’s website at <https://www.fws.gov/office/florida-ecological-services/library/green-sea-turtle>. Additional information sources may include any generalized conservation strategy, criteria, or outline that may have been developed for the species; the recovery plan(s) for the species; articles in peer-reviewed journals; conservation plans developed by States and counties; scientific status surveys and studies; biological assessments; other unpublished materials; or experts’ opinions or personal knowledge.

Habitat is dynamic, and species may move from one area to another over time. We recognize that critical habitat designated at a particular point in time may not include all of the habitat areas that we may later determine are necessary for the recovery of the species. For these reasons, a critical habitat designation does not signal that habitat outside the designated area is unimportant or may not be needed for recovery of the species. Areas that are important to the conservation of the species, both inside and outside the critical habitat designation, will continue to be subject to: (1) Conservation actions implemented under section 7(a)(1) of the Act; (2) regulatory protections afforded by the requirement in section 7(a)(2) of the Act for Federal agencies to ensure their actions are not likely to jeopardize the continued existence of any endangered or threatened species; and (3) the prohibitions found in section 9 of the Act. Federally funded or permitted projects affecting listed species outside their designated critical habitat areas may still result in jeopardy findings in some cases. These protections and conservation tools will continue to contribute to recovery of the species. Similarly, critical habitat designations made on the basis of the best available information at the time of designation will not control the direction and substance of future recovery plans, HCPs, or other species conservation planning efforts if new information available at the time of those planning efforts calls for a different outcome.

## Prudency and Determinability

Section 4(a)(3) of the Act, as amended, and implementing regulations (50 CFR 424.12) require that, to the maximum extent prudent and determinable, the Secretary shall designate critical habitat at the time the species is determined to be an endangered or threatened species. Our regulations (50 CFR 424.12(a)(1)) state that the Secretary may, but is not required to, determine that a designation would not be prudent in the following circumstances:

(i) 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;

(ii) 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;

(iii) 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;

(iv) No areas meet the definition of critical habitat; or

(v) The Secretary otherwise determines that designation of critical habitat would not be prudent based on the best scientific data available.

As discussed in the final listing rule published in **Federal Register** (81 FR 20058, April 6, 2016) and reaffirmed here, identification and mapping of critical habitat is not expected to initiate or increase the threat of collection or vandalism (Factor B) of green turtles in the terrestrial environment. The present or threatened destruction, modification, or curtailment of habitat or range is a threat to green turtles, and those threats in some way can be addressed by section 7(a)(2) consultation measures. Additionally, although the species is circumglobal and thus occurs outside of the United States, the areas within the jurisdiction of the United States serve a significant conservation value to the species for each of the five DPSs. Our analysis of the best available scientific and commercial information indicates there are areas within the range of each of the five DPSs in the United States that meet the definition of critical habitat. Therefore, because none of the circumstances enumerated in our regulations at 50 CFR 424.12(a)(1) have been met and because the Secretary has not identified other circumstances for

which this designation of critical habitat would be not prudent, we have determined that the designation of critical habitat is prudent for the green turtle. This document addresses the designation of critical habitat within the green turtle's terrestrial environment for the five DPSs.

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

In accordance with section 3(5)(A)(i) of the Act and regulations at 50 CFR 424.12(b), in determining which areas we will designate as critical habitat from within the geographical area occupied by the species at the time of listing, we consider the PBFs that are essential to the conservation of the species and which may require special management considerations or protection. The regulations at 50 CFR 424.02 define “physical or biological features essential to the conservation of the species” as the features that occur in specific areas and that are essential to support the life-history needs of the species, including, but not limited to, water characteristics, soil type, geological features, sites, prey, vegetation, symbiotic species, or other features. A feature may be a single habitat characteristic or a more complex combination of habitat characteristics. Features may include habitat characteristics that support ephemeral or dynamic habitat conditions. Features may also be expressed in terms relating to principles of conservation biology, such as patch size, distribution distances, and connectivity. For example, physical features essential to the conservation of the species might include gravel of a particular size required for spawning, alkaline soil for seed germination, protective cover for migration, or susceptibility to flooding or fire that maintains necessary early-successional habitat characteristics. Biological features might include prey species, forage grasses, specific kinds or ages of trees for roosting or nesting, symbiotic fungi, or absence of a particular level of nonnative species consistent with conservation needs of the listed species. The features may also be combinations of habitat characteristics and may encompass the relationship between characteristics or the necessary amount of a characteristic essential to support the life history of the species.

In considering whether features are essential to the conservation of the species, we may consider an appropriate quality, quantity, and spatial and temporal arrangement of habitat characteristics in the context of the life-history needs, condition, and status of

the species. These characteristics include, but are not limited to, space for individual and population growth and for normal behavior; food, water, air, light, minerals, or other nutritional or physiological requirements; cover or shelter; sites for breeding, reproduction, or rearing (or development) of offspring; and habitats that are protected from disturbance.

We derive specific PBFs essential for the green turtle's terrestrial environment from studies of this species' habitat, ecology, and life history as described below. Additional information is in the final listing rule published in the **Federal Register** on April 6, 2016 (81 FR 20058), and the Status Review of the Green Turtle (*Chelonia mydas*) Under the Endangered Species Act (Seminoff et al. 2015, entire).

Based on recovery criteria described in the Recovery Plan for U.S. Population of Atlantic Green Turtle (NMFS and USFWS 1991, entire), the Recovery Plan for U.S. Pacific Populations of the Green Turtle (NMFS and USFWS 1998, entire), and the Status Review of the Green Turtle (*Chelonia mydas*) Under the Endangered Species Act (Seminoff et al. 2015, entire), we have determined that it is important to conserve the following terrestrial environments for green turtles:

(1) Beaches that have the greatest aggregation, numerically, considering number of crawls (turtle tracks) counted on a beach, or clumping of nests, tracks, crawl occurrences, or numbers of basking green turtles determined from a GIS analysis of the best available scientific data, or USFWS consideration of records documenting turtle nesting and basking activities (the latter only in the Central North Pacific DPS) in each of the five DPSs, or the beaches serve as interesting habitats with the greatest aggregation of nesting for the DPSs, and they are well distributed within each DPS and representative of total nesting within the DPS. Additionally, these areas include “important nesting” areas for all DPSs and “important basking areas” for the Central North Pacific DPS as determined by a review of recovery plans, 5-year reviews, and best available science. See also our detailed methodology document (USFWS 2023, entire) available as supporting material at <https://www.regulations.gov> at Docket No. FWS-R4-ES-2022-0164).

(2) Beaches with the most basking turtles when compared with other available beaches in the Central North Pacific DPS.

(3) Beaches that have a geographic spatial distribution of nesting to ensure protection of genetic diversity.

(4) Beaches that can serve as expansion areas and provide sufficient habitat for internesting (*i.e.*, areas that support placement of multiple nests by individual turtles along an undefined stretch of beach during a nesting season), and basking turtles as populations recover.

Generally, for areas where the greatest nesting occurs (Florida), we determined the average nest density (nests/year/kilometer (km)) per surveyed beach using a 10-year nesting dataset (2011–2020). Any surveyed beach with zero total nests was removed from further analysis. Within each management unit, average beach densities were separated into quartiles—four parts, each containing a quarter of the density values—to develop density classifications. For other areas outside of Florida with less available data or infrequent surveys (*i.e.*, all DPSs except the Florida portion of the North Atlantic DPS), we conducted extensive literature reviews, and obtained and used available survey data from states, territories, commonwealths, and other organizations. We made determinations based on review of this best available science of where the green turtles are aggregating in abundance for nesting and basking, designating critical habitat segments along those important areas.

### Sites for Breeding, Reproduction, or Rearing (or Development) of Offspring

A successful reproductive season for green turtles relies on synergism of (1) effects of foraging area ecological conditions on the energetics of females (they have gained sufficient nutrition, including internal fat stores, to migrate and mobilize fats into eggs), and (2) beach environmental conditions facilitating female turtle emergence onto and travel across the beach to an area above the high tidelines for nest placement. These beaches must be able to support development of embryos, hatching of eggs, hatchling emergence from eggs and sand substrate, and hatchlings traversing across sand to sea. Female green turtles migrate to nesting beaches if the quality and quantity of food in foraging areas are sufficient to provide nutritional resources needed for resource build-up within individual turtles over time required for their reproductive cycle, including migration (Georges et al. 1993, p. 2). Foraging likely contributes to increases of neutral, or storage sub-carapacial fat, fueling energetically costly migration and egg production (Kwan 1994, p. 257). Suitable beach structure for digging (Georges et al. 1993, p. 2) and nearby terrestrial internesting habitat (*i.e.*, sufficient availability of habitat to



support turtles nesting multiple times in a season and across different select areas of the beach landscape) is also required. Environmental surface and subsurface conditions of nesting beaches must favor embryonic development and survival (*i.e.*, modest temperature fluctuation to allow for temperature-dependent sex determination, adequate humidity so eggs are not desiccated, and exchange of water, oxygen, and carbon dioxide with other eggs in the clutch and surrounding environment (Ackerman 1997, entire; Mrosovsky and Yntema 1980, p. 276; Mortimer 1982, p. 49; Mortimer 1990, pp. 809 and 811). Additionally, hatchlings must emerge to onshore and offshore conditions that enhance their chances of survival (*e.g.*, less than 100 percent depredation, appropriate offshore currents for dispersal) (Georges et al. 1993, p. 2).

Terrestrial nesting habitat is the supralittoral zone, or area above the spring high tide line of beaches (West 2004, p. 572), where oviposition (egg laying), embryonic development, hatching, hatchling emergence through sand substrate to the beach surface, and the initial hatchling transit across the sand to sea occur. For instance, in Raudal, Mexico, low-sloped beaches including vegetated dunes where the distance between the ocean and the supralittoral zone is no greater than 66 feet (ft) (20 meters (m)) are most frequently chosen for nesting by green turtles (Zavaleta-Lizárraga et al. 2013, p. 934). On beaches from Patrick Space Force Base southward through the Archie Carr National Wildlife Refuge (NWR) in Brevard County, Florida, sea turtle nests occur in the sand within a swath greater than 3.3 ft (1 m) seaward from the dune line (generally defined where primarily sea oat (*Uniola paniculata*) vegetation is most seaward) and inland over 10 ft (3 m) from this dune line. Green turtles occasionally will nest on dunes. During a 3-year study conducted between 2014–2016, within two different study sections of natural beach in Archie Carr NWR, 11.7 percent and 17.9 percent of the nesting occurrences were on the dune, respectively, with the remaining nests placed seaward of the dunes (University of Central Florida Marine Turtle Research Group 2016, unpublished data; Mansfield 2022, pers. comm.). In an additional study during 2016, 30.2 percent of marked green turtle study nests were placed landward of the dune line (University of Central Florida Marine Turtle Research Group 2016, unpublished data; Mansfield 2022, pers. comm.).

For a beach to serve as nesting habitat, a nesting turtle must be able to access

it; however, anthropogenic structures (*e.g.*, groins, jetties, breakwaters, retaining walls, hardened embankments), as well as natural features (*e.g.*, offshore sand bars, hardened shorelines) can act as barriers or deterrents to adult females attempting to access a beach (Seminoff et al. 2015, p. 93). Adult females approaching nesting beaches may encounter these structures and either crawl around them, abort nesting for that night, or move to another section of beach to nest. Plastic marine debris washed up on highly polluted green turtle nesting beaches is a suspected barrier for turtle nesting success (the proportion of nesting attempts that result in a nest) and hatchling access to the sea and has potential to cause threats including entanglement and entrapment (Gündoğdu et al. 2019, p. 143). Increasingly abundant, large mats of sargasso macroalgae washed onto beaches have been barriers, impeding nesting turtle access on some areas of Mexico, Barbados, and Puerto Rico (Chávez et al. 2020, p. 2; Langin 2018, p. 1,157). While not a significant concern on other beaches (Rodríguez-Martínez et al. 2021, pp. 1–7), this is an issue requiring further study on effects to green turtles.

Both nesting and hatchling sea turtles are adversely affected by presence of artificial lighting on or near beaches (Witherington and Martin 2000, pp. 2–5 and 12–13). Artificial lighting deters adult female green turtles from emerging from the ocean to nest, and green turtles emerging onto a beach abort nesting attempts at a greater frequency in lighted areas (Witherington 1992, pp. 34–37). Because adult females rely on visual brightness cues to find their way back to the ocean after nesting, those turtles that nest on artificially lighted beaches may become disoriented by artificial lighting and have difficulty finding their way back to the ocean (Witherington 1992, p. 38). Hatchling sea turtles have a robust seafinding behavior guided by visual cues (*e.g.*, Mrosovsky and Carr 1967, pp. 228–230; Dickerson and Nelson 1989, pp. 41–43; Salmon et al. 1992, pp. 72–75; Lohmann et al. 1997, pp. 110–116; Lohmann and Lohmann 2003, pp. 45–47). Hatchlings unable to find the ocean, or delayed in reaching it, due to turtles' strong attraction to artificial beachfront lighting visible on the nesting beach, are likely to incur high mortality from dehydration, exhaustion, or predation (Carr and Ogren 1960, pp. 33–46; Ehrhart and Witherington 1987, pp. 97–98; Witherington and Martin 2000, pp. 12–13). In general, any artificial light

that can be seen from the beach could affect sea turtles, particularly if they are directly pointing to the nesting area; if the light fixture is not shaded to a certain degree; or if the light bulb emits a light below wavelengths that are generally amber, orange, or red. Therefore, green turtles need habitat that is dark and free from artificial lighting.

#### *Habitats Protected From Disturbance or Representative of the Historical, Geographic, and Ecological Distributions of the Species*

Sea turtle nesting habitat is part of the highly dynamic and continually shifting coastal system, which includes oceanfront beaches, barrier islands, and inlets. These geologically dynamic coastal regions are controlled by natural coastal processes, including littoral or longshore drift (processes by which sediments move along shorelines), onshore and offshore sand transport (natural erosion or accretion cycle), and tides and storm surge. These physical processes benefit sea turtles by maintaining nesting beaches through repeated cycles of destruction, alteration, and recovery of beaches and adjacent dune habitats. Coastal processes happen over a wide range of spatial and temporal scales. Wind, waves, tides, storms, and stream discharges are important driving forces in coastal zones (Dingler 2005, p. 163). Thus, it is important that, where it can be allowed, natural processes be maintained.

Coastal dynamic processes will be affected by accelerated sea level rise and an increase in intensity of coastal storms resulting from climate change. Rates of sea level rise have increased beyond those that have occurred over recent millennia and continue to accelerate (Intergovernmental Panel on Climate Change (IPCC) 2021, p. 77). Over the period 1901 to 2018, global mean sea level rose by 0.7 ft (0.2 m) (likely range of 0.5 to 0.8 ft (0.15 to 0.25 m)) (IPCC 2021, p. 77). This rate of sea level rise is faster than during any century over the previous three millennia (high confidence) (IPCC 2021, p. 77). Expected sea level rise will increase the frequency and height of high-water events, such as storm surge and high tide flooding, which contributes to coastal erosion (Sweet et al. 2022, p. 28). Nationally, the frequency of moderate high tide flooding events (approximately 2.8 ft (0.85 m) above current mean higher high water) in 2050 is expected to be 10 times greater than in 2020 (Sweet et al. 2022, pp. 41–42). Sea level rise also contributes to increased wave heights during storm

events (Sweet et al. 2022, p. 41) risking erosion of exposed beaches. Extreme wave heights have increased in the North Atlantic by around 0.3 inch (in) (0.8 centimeter (cm)) per year over the period 1985 to 2018 (medium confidence) (IPCC 2019, p. 67).

Green sea turtles are vulnerable to inundation and erosion of sandy beaches, which is typically caused or accelerated by climate-driven sea level rise (Fish et al. 2005, entire; Hawkes et al. 2009, entire; Poloczanska et al. 2009, p. 167; Seminoff et al. 2015, p. 325; Vousdoukas et al. 2020, entire). Shorelines are expected to undergo dramatic reconfigurations over the next century because of accelerating sea level rise (U.S. Climate Change Science Program (USCCSP) 2009, pp. 13, 44, 50). Sandy beaches serving as habitat for green turtles will likely be locally or regionally inundated or eroded, but replacement habitats are likely to reform along the shoreline in its new position (Scavia et al. 2002, p. 152; USCCSP 2009, p. 186). However, if shorelines experience a decades-long period of high instability and landward migration (*i.e.*, under higher rates of sea level rise), the formation rate of new beach habitats may be slower than the rate of loss of existing habitats (Iwamura et al. 2013, p. 6). Additionally, low-lying and narrow islands, such as those along the U.S. Gulf and Atlantic coasts, may disintegrate rather than migrate (Titus 1990, p. 67; IPCC 2014, p. 15), representing a net loss of green turtle habitat.

Sea turtles evolved in a dynamic ecosystem, and they are dependent upon the ever-changing beach features for their continued survival and recovery. Sea turtles require nesting beaches where natural coastal processes, or activities that mimic these natural processes, will be able to continue well into the future to allow formation of suitable beaches for nesting. However, climate-driven change that may be accelerated, or result in permanent habitat loss, may present a challenge beyond evolutionary adaptations of green turtles and other species reliant on these dynamic coastal habitats.

As climate change is occurring and affecting shorelines, additional types of green turtle habitat to consider as important nesting areas are artificially created or maintained habitat, including beach renourishment and dune restorations, that mimic natural conditions. Artificial habitat types mimic natural conditions described above for nesting beach access, nest site selection, nest construction, egg deposition and incubation, hatchling emergence through the sand substrate to

the beach surface and movement across the beach to sea. Habitat modification and loss occurs with beach stabilization activities that prevent natural transfer, erosion, and accretion of sediments along ocean shorelines. Beach stabilization efforts that may impact green turtle nesting include beach renourishment and dune restoration, sediment dredging and disposal, inlet channelization, and construction of jetties and other hard structures. However, when sand placement activities result in beach habitat that mimics natural beach habitat conditions, impacts to sea turtle nesting habitat are minimized. Also, any projects that address erosion or shoreline protection should contain measures to reduce negative effects or be temporary in nature, so they may have fewer impacts on green turtles. Therefore, green turtles need habitat that is dynamic by nature and facilitates sand movement, allowing for successful nesting within natural habitats or, if necessary, artificially created habitats that mimic natural beaches and support successful sea turtle nesting.

#### *Sites for Basking (Central North Pacific DPS)*

Basking, where green turtles emerge from the water onto exposed land, is an overall rare green turtle behavior but one that is observed in the Hawaiian archipelago (Central North Pacific DPS), Galapagos Islands, and Australia. It is possible that basking is an adaptive response to cooler thermal environments by raising core body temperatures and escaping ocean predation pressure in those regions (Whittow and Balazs 1982, pp. 133–138; Green 1998, p. 64; Limpus 2008, p. 15). This behavior has been anecdotally linked to escaping tiger shark predation in French Frigate Shoals (Lalo) (Whittow and Balazs 1982, p. 138).

Green turtles in the Central North Pacific DPS use terrestrial habitats such as gradually sloping beaches (sandy, corally, or gravel substrate), emergent sandy lands, sand spits, low shelving reef rocks, or sand supplemented restoration areas that are accessible from the ocean. These basking areas are free of obstacles that impede green turtles from coming ashore. Although many areas may be accessible for basking, certain areas of coastline are more often used by green turtles in the Central North Pacific DPS for this activity. These areas may be located close to preferred foraging and internesting areas to allow for relatively undisturbed periods. For the Central North Pacific DPS, basking areas are defined as natural and artificial coastlines that are

accessible to green turtles and used regularly or intermittently. Basking areas are essential to the Central North Pacific DPS of green turtles because these areas provide space that supports natural behaviors important to health and development, such as resting and thermoregulation. Therefore, green turtles in the Central North Pacific DPS need unobstructed access to land out of the water to emerge onto.

#### *Summary of Essential Physical or Biological Features (PBFs)*

We derive the specific PBFs essential to the conservation of green turtle within its terrestrial environment from studies of the species' habitat, ecology, and life history as described below. We have determined that green turtles need terrestrial habitat areas where natural coastal processes will be able to continue well into the future to allow for the landward migration of coastlines in response to sea level rise. Therefore, based on the information above, we identify terrestrial areas that support natural coastal processes, as well as localized areas where artificially created, maintained, or enhanced habitat supports important green turtle nesting or basking areas, as PBFs for the species. These features are as follows:

(1) Extra-tidal or dry sandy beaches from the mean high water line—the line on a chart or map that represents the intersection of the land with the water surface at the elevation of mean high water line—to areas of beach landward of the mean high water line and which contain the characteristics described herein. These beaches include:

(a) Habitat for green turtles to transit across beaches and for nest placement that includes: (i) relatively unimpeded wet and dry sand or nearshore access areas from the ocean to the beach for nesting females and from the beach to the ocean for both post-nesting females and hatchlings and (ii) drier sand areas located above mean high water in the supralittoral zone to avoid being inundated frequently by high tides.

(b) Sand substrate that (i) allows for suitable nest construction, (ii) is suitable for facilitating gas diffusion conducive to embryo development, (iii) can develop and maintain temperatures and a moisture content conducive to embryo development, and (iv) allows for emergence of hatchlings from eggshells, through sand substrate to the beach surface.

(2) Nesting beach habitat with sufficient darkness such that nesting turtles are not deterred from emerging onto the beach and hatchlings and post-nesting females can orient to the sea.



(3) Natural coastal processes or artificially created or maintained habitat mimicking natural conditions. This includes artificial habitat types that mimic natural conditions described in PBFs 1 and 2 above for beach access, nest site selection, nest construction, egg deposition and incubation, and hatchling emergence and movement to the sea.

(4) Within the range of the Central North Pacific DPS, basking habitat that includes access to natural and artificial coastlines with gradually sloping beaches (sandy, corally, or gravel substrate), emergent sandy lands, sand spits, low shelving reef rocks, as well as relatively unimpeded nearshore access from the ocean to the beach.

### Special Management Considerations or Protection

When designating critical habitat, we assess whether the specific areas within the geographical area occupied by the species at the time of listing contain features which are essential to the conservation of the species and which may require special management considerations or protection. The features essential to the conservation of green turtles may require special management considerations or protection to reduce the threats to the species. Threats to the green turtle are described in the final listing rule for each of the five DPSs (81 FR 20058, April 6, 2016; pp. 20077–20079, 20081–20083), noting that some information/descriptions/references used herein are new since the final listing determination. The threats and associated special management considerations or protection addressed in this document are specific to the PBFs. For green turtle habitat in the terrestrial environment, we grouped primary threats to the PBFs that may require special management considerations or protection into the following 12 threat categories. Each of these threats and associated special management considerations or protection are summarized below.

(1) *Climate change, including sea level rise, changes in sand temperature, and increase in storm frequency.* Potential impacts of climate change to the five DPSs include loss of habitat and nests due to beach erosion and repeated inundation caused by rising sea levels and more frequent, intense storm events; and skewed hatchling sex ratios from rising incubation temperatures (Fish et al. 2005, pp. 489–490; Fish et al. 2008, p. 336; Fuentes et al. 2010, entire; Fuentes et al. 2020, entire; Grose et al. 2020, pp. 547–548; Hawkes et al. 2009, pp. 139–141; Poloczanska et al.

2009, pp. 164–175). Examples of special management considerations or protection that could mitigate for threats of changing climate, including sea level rise, changes in sand temperature, and increase in storm frequency may include (but not be limited to): conducting coastal sand placement to retain sand on beaches for turtle nesting, hatchling and hatchling emergence, and traversing the sand; and conducting restoration and debris cleanup after storms.

(2) *Recreational beach use, including human presence (e.g., beaches allowing dogs and special events), mechanized beach cleaning, and beach driving, the latter including essential and nonessential off-road vehicles, all-terrain vehicles, and recreational access and use.* Human presence on beaches at night during green turtle nesting seasons can reduce the quality of nesting habitat by deterring or disturbing nesting turtles and causing them to avoid otherwise suitable habitat. Mechanical beach cleaning with vehicles and associated equipment reduces natural sand-trapping abilities of beaches and contributes to their destabilization (Defeo et al. 2009, p. 3), as well as displaces sand that turtles rely on, including lowering the substrate and changing beach topography (Nelson Sella and Fuentes 2019, p. 186). Beach driving reduces green turtle nesting habitat quality by creating vehicle ruts, increased sand compaction, and increased erosion (Hosier et al. 1981, p. 160; Cox et al. 1994, p. 27; Hughes and Caine 1994, p. 237; Mann 1977, p. 96), and nighttime driving can deter females from nesting, disorient hatchlings, and can cause direct mortality by vehicle encounters. Examples of special management considerations or protection that could reduce the threat of recreational beach use may include (but not be limited to): implementing and enforcing policies that restrict unleashed pets during nesting season, conducting cleaning activities seaward of the high tide line and only during the day, and reducing vehicular beach access hours during the sea turtle nesting season.

In the North Atlantic DPS, mechanized beach cleaning is common along the Florida coast but uncommon in Puerto Rico. Large-scale mechanized beach cleaning has occurred in Puerto Rico associated with hurricane debris management such as after Hurricane María in 2017 and Hurricane Fiona in 2022; the same is true for the South Atlantic DPS regarding mechanized beach cleaning. However, this practice does not occur in the Pacific DPSs.

(3) *Nonnative vegetation.* Nonnative vegetation may alter the canopy cover percentage, resulting in various incubation temperatures (Wheeler et al. 2011, p. 488), which impacts hatchling sex ratios. Roots, live trees or plants, or deadfall of nonnative vegetation can also create impediments to adult and hatchling turtles, as well as interfere with nest digging (Wheeler et al. 2011, p. 488). Examples of special management considerations or protection that could reduce the threat of nonnative vegetation may include (but not be limited to): conducting habitat restoration or management and enforcing rules to prevent invasive plants from being transported into the unit.

(4) *Terrestrial source debris on beaches and marine debris that washes ashore (e.g., recreational beach equipment, plastics, and recreational or industrial fishing gear).* Terrestrial debris from beaches and marine debris that washes ashore (e.g., recreational beach equipment, plastics, derelict fishing gear) can deter green turtles from coming shore and also cause entanglement and entrapment of both adults and hatchlings. Examples of special management considerations or protection that could reduce the threat of terrestrial debris may include (but not be limited to): installing and maintaining fishing line recycling containers at fishing piers and beach entrances and conducting beach cleanups that remove potentially entangling debris.

(5) *Beach sand placement activities, including beach nourishment with associated beach, dune, or berm restoration, inlet sand bypassing, dredge material disposal, dune or berm construction, or emergency sand placement after natural disasters.* Beach sand placement activities can include beach nourishment, beach restoration, inlet sand bypassing, dredge material disposal, dune construction, emergency sand placement after natural disaster, berm construction, and dune and berm planting. These types of activities can result in less suitable or unsuitable habitat for nesting turtles, such as sand compaction, and result in abandoned nesting attempts on nourished beaches (Trindell et al. 1998, p. 82; Ernest and Martin 1999, pp. 47–49; Herren 1999, p. 44). Examples of special management considerations or protection that could reduce the threat of beach sand placement activities may include (but not be limited to): restricting sand placement activities to occur outside of the nesting season and using beach quality sand suitable for sea turtle

nesting, successful incubation, and hatchling emergence.

While threats to the terrestrial PBFs are similar in the Atlantic and the Pacific, some differences exist. For example, in the North Atlantic DPS, large-scale beach renourishment projects occur frequently on most beaches along the Florida coast, although they are conducted infrequently in Puerto Rico (with no activities occurring in Puerto Rico's proposed green turtle critical habitat segments). However, beach renourishment projects occur infrequently in the South Atlantic DPS and the three Pacific DPSs.

(6) *Shoreline alterations and stabilization measures (e.g., erosion control structures, such as groins, breakwaters, or jetties; inlet relocation; inlet dredging; nearshore dredging; dredging and deepening channels; and sand mining).* These in-water structures have profound effects on adjacent beaches (Kaufman and Pilkey 1979, p. 194). For example, following construction, the presence of jetties and groins may interfere with nesting turtle access to the beach, result in a change in beach profile and width (downdrift erosion, loss of sandy berms, and escarpment formation), trap hatchlings, and concentrate predatory fishes (Wilson et al. 2019, p. 577), resulting in higher probabilities of hatchling predation (although jetties and groins are known also to provide some benefits to beach habitat in some instances). Examples of special management considerations or protection that could reduce the threat of shoreline alterations and stabilization measures may include (but not be limited to): conducting dune restoration/enhancement and conducting beach renourishment.

(7) *Coastal development, including residential development, commercial development, and associated activities such as coastal armoring (e.g., seawalls, geotextile tubes, rock revetments, sandbags, emergency temporary armoring); and activities associated with construction, repair, and maintenance of upland structures, stormwater outfalls, and piers.* Coastal development not only causes loss and degradation of suitable green turtle nesting habitat, but it also disrupts powerful coastal processes by accelerating erosion and interrupting the natural shoreline migration. This may in turn cause the need to protect upland structures and infrastructure by armoring (*i.e.*, any rigid structure placed parallel to the shoreline on the upper beach to prevent both landward retreat of the shoreline and inundation or loss of upland property by flooding and wave action

(Kraus and McDougal 1996, p. 692)). Armoring is known to cause changes in, additional loss of, or adverse impacts to the remaining sea turtle habitat (National Research Council 1990, p. 77; USFWS 2015, p. 51). Examples of special management considerations or protection that could reduce the threat of coastal development may include (but not be limited to): considering alternatives to coastal armoring, such as living shorelines, dune restoration/enhancement, or beach renourishment; and encouraging State and local governments to adopt policies that support less coastal development and to employ full-time enforcement officers that can educate the public about coastal regulations and have the power to prosecute violations of local codes and laws.

(8) *Artificial lighting, including direct and indirect lighting, skyglow, and bonfires.* Both nesting and hatchling sea turtles are adversely affected by the presence of artificial lighting on or near the beach (Windle et al. 2018, entire; Salmon 2003, entire; Witherington and Martin 2000, pp. 2–5). Because adult females rely on visual brightness cues to find their way back to the ocean after nesting, those turtles that nest on lighted beaches may become disoriented by artificial lighting and have difficulty finding their way back to the ocean (Brei et al. 2020, p. 302; Silva et al. 2017, entire). Although sea turtles prefer dark beaches for nesting, many do nest in lighted areas (Colman et al. 2020, pp. 1,146–1,147). In doing so, they place the lives of their offspring at risk as artificial lighting can impair the ability of hatchlings to properly orient to the ocean once they leave their nests (Witherington and Martin 2000, pp. 7–13). Examples of special management considerations or protection that could reduce the threat of artificial lighting may include (but not be limited to): conducting work (construction or associated staging area for coastal or in-water work) during daylight hours to reduce turtle disturbance and prevent turtle attraction to artificial lights, and encouraging use of wildlife-friendly lighting in coastal areas for new construction or replacing existing lighting to reduce the direct and ambient lighting on the beach and reduce disorientation to nesting females and hatchlings.

(9) *Beach erosion, including erosion due to aperiodic, short-term weather-related erosion events, such as atmospheric fronts, northeasters, tropical storms, and hurricanes.* Storm events and tsunamis can result in the direct loss of sea turtle nests, either by erosion or washing away of the nests by

wave action and inundation or “drowning” of the eggs or preemergent hatchlings within the nest, or indirectly affect sea turtles by causing the loss of nesting habitat. Depending on their frequency, storms can affect sea turtles on either a short-term basis (nests lost for one season and temporary loss of nesting habitat) or a long-term basis (habitat unable to recover due to frequent storm events). Examples of special management considerations or protection that could reduce the threat of beach erosion may include (but not be limited to): implementing dune restoration projects to help contain sediment during storms and planting native vegetation to stabilize beach habitat.

(10) *Natural disasters such as cyclones, hurricanes, typhoons, and tsunamis and responses to disasters, such as debris removal and berm construction.* These natural events have also been shown to cause severe beach erosion and likely have negatively affected hatching success at many green turtle nesting beaches, especially in areas already prone to erosion (Van Houtan and Bass 2007, entire). Any significant storm event that may develop could disrupt green turtle nesting activity and hatchling production (Van Houtan and Bass 2007, entire), but would be unlikely to result in whole-scale losses over multiple nesting seasons. However, when combined with the effects of sea level rise, there may be increased cumulative impacts from future storms (Baker et al. 2006, pp. 7–9). Examples of special management considerations or protection that could reduce the threat of naturally caused disasters may include (but not be limited to): conducting beach and dune restoration, conducting emergency berm construction and repair actions, including using beach quality sand suitable for nesting sea turtles during berm construction, and ensuring placement and design of berms that mimic the natural dune system.

(11) *Human-caused disasters and response to disasters, such as oil spills and oil cleanup activities.* Oil spills in the vicinity of nesting beaches just prior to or during the nesting season place nesting females, incubating egg clutches, and hatchlings at significant risk of direct exposure to contaminants (Fritts and McGehee 1982, p. 38; Lutcavage et al. 1997, p. 395; Witherington 1999, p. 183) and result in negative effects to nesting habitat. Oil cleanup activities can also be harmful. For example, earth-moving equipment can dissuade females from nesting and destroy nests, containment booms can



entrap hatchlings, and lighting from nighttime activities can misdirect turtles (Witherington 1999, p. 183). Examples of special management considerations or protection that could reduce the threat of human-caused disasters and response to disasters may include (but not be limited to): prohibiting placement of oil or fuel transfer stations near green turtle nesting beaches and ensuring communication with external partners on preferred response methodologies in areas where there are risks of oil spills in green turtle habitat.

(12) *Military testing and training activities, including troop presence, pyrotechnics and nighttime lighting, vehicles and amphibious watercraft usage on the beach, helicopter drops and extractions, live-fire exercises, placement and removal of objects on the beach, unexploded ordnance management, and space launch activities with associated artificial lighting infrastructure.* The presence of soldiers and other personnel on the beach, particularly at night during nesting and hatching season, could result in harm or death to individual nesting turtles or hatchlings, as well as deter females from nesting. Basking green turtles could also be deterred from basking. Additionally, unexploded ordnances are still present from the military using these areas for bombing training in the past, and search and removal efforts in green turtle nesting and basking habitat can have impacts to the habitat through the removal of vegetation and creation of holes. Examples of special management considerations or protection that could reduce the threat of military testing and training activities and unexploded ordnance management may include (but not be limited to): timing training and missions outside nesting season or shifting the physical extent of activities to resolve location conflicts and filling in holes and restoring beach profiles to suitable conditions after ordnance removal or mission completion.

#### Criteria Used To Identify Critical Habitat

As required by section 4(b)(2) of the Act, we use the best scientific data available to designate critical habitat. In accordance with the Act and our implementing regulations at 50 CFR 424.12(b), we review available information pertaining to the habitat requirements of the species and identify specific areas within the geographical area occupied by the species at the time of listing and any specific areas outside the geographical area occupied by the species to be considered for designation as critical habitat. Within areas of the

species' range under U.S. jurisdiction, and following our evaluation of all suitable green turtle habitat within each of the five DPSs, we are not currently proposing to designate any areas outside the geographical area occupied by the species. We have not identified any unoccupied areas that meet the definition of critical habitat, and we have determined that the occupied areas are sufficient to promote the conservation of the species.

A detailed step-down methodology was developed for identifying proposed critical habitat areas (see the supplemental "Methodology" document (USFWS 2023, entire) available on the internet at <https://www.regulations.gov> under Docket No. FWS-R4-ES-2022-0164). In summary, for areas within the geographical area occupied by the species at the time of listing, specifically referring to May 6, 2016, which is the effective date for the April 6, 2016, final listing rule (81 FR 20058), we delineated critical habitat unit boundaries within the terrestrial environment and under U.S. jurisdiction where nesting has been documented annually (or documented regularly but not necessarily annually due to some outlying islands that are difficult to access), since the time the DPSs were listed in 2016 (81 FR 20058, April 6, 2016). This time-period represents the most recent and consistent data sets of nest or track (crawl) count surveys available from within the ranges of each DPS. Green turtles are a circumglobal species (NMFS and USFWS 1998, p. 1) that nest on sandy beaches, and in the Central North Pacific DPS also bask on sandy beaches and low-lying reef and rocks. Thus, sandy beaches and low-lying reef and rocks (the latter specifically in the Central North Pacific DPS) within the latitudinal range of the species, particularly in tropical or subtropical regions, could potentially host green turtles. Some of these areas are logistically remote and have never or rarely been surveyed; however, they were assumed to host green turtles at the time of listing because islands with similar geomorphology at similar latitudes have documented green turtle nesting and basking activity.

For the three Pacific DPSs, we also relied on additional information to determine occupancy at the time of listing in remote areas and islands where surveys have not regularly occurred, both prior to and after the time of listing in 2016. Essentially, the strategy to designate critical habitat for the three Pacific DPSs differs from the two Atlantic DPSs due to: (1) limited data availability and quality; (2) the population size, site distribution, and

potential effects of lost habitat; and (3) the potential for habitat destruction or modification (e.g., development pressures, climate change, limited local support for green turtle conservation practices) (USFWS 2023, pp. 14–18). Overall, we used the following summarized criteria for determining proposed critical habitat for green turtle within the terrestrial environment:

(1) We evaluated the two green turtle recovery plans that address the Central North Pacific, Central South Pacific, Central West Pacific, North Atlantic, and South Atlantic DPSs and considered those areas described in the plans as source beaches, primary nesting areas, important nesting beaches, and key nesting beaches (hereafter referred to as "important nesting beaches" (NMFS and USFWS 1998, entire; NMFS and USFWS 1991, entire)). Given these recovery plans are 25 and 32 years old, respectively, we also considered available new information and expert knowledge regarding these or other important areas within each of the DPSs. Designating these important nesting beaches supports the overarching conservation strategies described in the recovery plans for each of the DPSs.

(2) We evaluated the best available information (e.g., literature, survey reports, information from partners and experts) to identify the extent of nesting beaches as the area from the mean high-water line (MHWL) to its deepest extent inland, including all beach crest vegetation and area behind the primary dune (if present) for features that provide for nesting, incubation, hatching, hatchling emergence from eggshells and through the sand substrate, and traversal across beaches. We also considered dry and wet sands leading back to the ocean to support hatchling transit to the sea in addition to allowing for post-nesting and basking turtles to return to the ocean.

(3) Using Geographic Information Systems (GIS) software, satellite imagery, and existing land cover and shoreline products, we identified nesting habitat in the Atlantic from the MHWL to the toe of the secondary dune, any human-made structure, natural obstructions (e.g., cliffs, rock outcrops) or to 33 ft (10 m) inland of vegetation. We identified nesting habitat in the Pacific from the MHWL to any human-made structure or 50 ft (15 m) inland of the MHWL (a larger distance than the Atlantic to account for beaches that stretch inland on remote islands with little to no vegetation). Additionally, within the Pacific DPSs on small, predominantly sand islands, whole islands may have been designated in

instances where no physical obstructions were present. If applicable, we also examined aerial imagery to ensure that areas included as proposed critical habitat are not currently inundated, as compared to areas that may be underwater decades from now.

(4) Where physical features to be used as critical habitat unit boundaries were highly dynamic (*i.e.*, inlets, sandy shoals, barrier islands, and oceanfront beaches that are controlled by natural coastal processes and may shift over time), unit boundaries were distinguished using records of green turtles nesting in that specific area.

(5) Where natural, artificial, or geopolitical features or land ownership could not be used for unit boundaries, boundaries were delineated by geographic means (latitude and longitude, decimal degree points).

(6) We evaluated and included as proposed critical habitat beaches located adjacent to important or high-density beaches (containing PBFs essential to the conservation of green turtles); these adjacent areas are occupied by the species and also currently support green turtle nesting. This adjacent beach habitat serves as expansion area should the current important nesting beach area become significantly degraded, or temporarily or permanently lost, through natural processes or upland development, as well as supports the green turtle's interesting behavior (*i.e.*, turtles nesting multiple times in a season and across different select areas of the beach landscape).

(7) We applied other DPS-specific methodology (as described in our supplemental "Methodology" document (USFWS 2023, entire) available on the internet at <https://www.regulations.gov> under Docket No. FWS-R4-ES-2022-0164) based on specific factors within each DPS, such as (but not limited to):

(a) For the three Pacific DPSs, and in the absence of available nesting surveys, beaches were selected using the best available nesting records over a 15-year period between 2005 to 2020. Given the lifespan of the green turtle, we found it reasonable to assume the areas were occupied at the time of listing based on these data. We identified beaches throughout each island, islet, and oceanic atoll with relatively high nesting activity. In some cases, additional nesting beaches with lower nesting activity or beaches with historical reports of green turtle nesting were selected (*i.e.*, expansion areas) to support resiliency, representation, and redundancy within a DPS. Additionally, for undeveloped or uninhabited islands or areas, the amount of land inward of

the MHWL increased from 50 ft (15 m; as noted in criteria (3), above) to include the entire island if the PBFs were present or natural or human-made structures obstructed inward progress (noting there are some areas that are currently uninhabited by humans but were previously occupied by Department of Defense (DoD) personnel who had constructed manmade structures, some of which remain today and may obstruct inward progress by turtles).

(b) For the Central North Pacific DPS, we identified basking habitat information independent from nesting area information, including information provided by local technical experts and records from 2005 to 2021. Given the lifespan of the green turtle, we found it reasonable to assume the areas were occupied at the time of listing based on these data. Our strategy for selecting shoreline areas for basking also considered shoreline areas throughout each island with relatively high basking activity, and some beaches that can serve as both expansion areas while also providing sufficient habitat to accommodate basking green turtles as the populations recover. Where physical features to be used as critical habitat unit boundaries were highly dynamic (*i.e.*, sandy shoals, emergent sandy lands, oceanfront beaches, and low shelving reef or rock that are controlled by natural coastal processes and may shift over time), unit boundaries were distinguished using records of green turtles basking in that specific area.

(c) For the Central South Pacific DPS, we took into account that the green turtle population in this portion of its range is characterized by geographically widespread nesting at low levels of abundance, mostly in remote low-lying oceanic atolls. We examined the best available information within this DPS to ensure spatial distribution of important nesting beaches within the DPS. Although some of these areas do not include regular or extensive green turtle survey information, the best available information indicates these areas were occupied at the time of listing (and are still occupied) by green turtles based on documented nesting activity at adjacent or nearby beaches, islands, or atolls.

(d) For the Central West Pacific DPS, we took into account that the green turtle population in this DPS is dominated by insular nesting (*i.e.*, nesting on a long chain of islands), resulting in a relatively small nesting population spread across an expansive area that is roughly 2,500 mile (mi) (4,023 kilometer (km)) wide (Palau to the Marshall Islands) and 2,500 mi (4,023 km) long (Ogasawara, Japan to

the Solomon Islands) (Seminoff et al. 2015, p. 259). We examined the best available information within this DPS to ensure spatial distribution of important nesting beaches within the DPS. Similar to the Central South Pacific DPS, although some of these areas do not include regular or extensive green turtle survey information, the best available information indicates these areas were occupied at the time of listing (and are still occupied) by green turtles based on documented nesting activity at adjacent or nearby beaches, islands, or atolls.

(e) For the North Atlantic DPS, we used available nest count abundance/density data (including information associated with the Florida Fish and Wildlife Research Institute's recognized green turtle management units and preliminary unpublished analysis of genetics information (Shamblin et al. 2022, entire)) to determine adequate geographic spatial distribution of high-density nesting areas, including genetics and geographical features that can influence turtle behavior.

(f) For the South Atlantic DPS, nest crawl counts were used depending on regionally available data and applied to the main geographic nesting distribution within the DPS (*i.e.*, the U.S. Virgin Islands). Nesting beaches were identified based on 25–100 nesting crawls per year category or larger (Dow et al. 2007, p. 13; Eckert and Eckert 2019, p. 13).

Once this methodology was applied and evaluated across the ranges of each DPS where green turtles nest, or where they bask in the Central North Pacific DPS, units were drawn based on the most recent available aerial or satellite imagery. We propose to designate as critical habitat lands that we have determined were occupied at the time of listing that contain one or more of the PBFs that are essential to support life-history processes of the species, and that may require special management considerations or protection.

We propose to designate as critical habitat 101 units (31 in the Central North Pacific DPS, 6 in the Central South Pacific DPS, 23 in the Central West Pacific DPS, 33 in the North Atlantic DPS, and 8 in the South Atlantic DPS) based on one or more of the PBFs within the terrestrial environment being present to support the green turtle's life-history processes. Some units contain all of the identified PBFs and support multiple life-history processes, while other units contain only some of the PBFs necessary to support the green turtle's particular use of that habitat.

For green turtles, most of the units contain highly dynamic barrier beaches

and extratidal seashore areas that have the potential to vary over time. In other words, the precise location of the PBFs may shift because of the intrinsically dynamic nature of shorelines and due to sea level rise. In general, the PBFs we describe are the extratidal areas and sandy beaches from the MHWL to inland areas of beach that do not contain the PBFs.

The 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. We include more detailed information on the boundaries of the terrestrial proposed critical habitat designation in the discussion of individual units, below. We will make the coordinates or plot points or both on which each map is based available to the public at <https://www.regulations.gov> at Docket No. FWS-R4-ES-2022-0164, and on the USFWS's website at <https://www.fws.gov/office/florida-ecological-services/library/green-sea-turtle>.

When determining proposed critical habitat boundaries, we made every effort to avoid including developed areas such as lands covered by buildings, pavement, and other structures (e.g., docks, maintained rights-of-way, work yards, stormwater facilities, and hardened shorelines) because such lands lack PBFs necessary for the green turtle. The scale of the maps we prepared under the parameters for publication within the Code of Federal Regulations may not reflect the exclusion of such developed lands. Any such lands inadvertently left inside critical habitat boundaries shown on the maps of this proposed rule have been excluded by text in the proposed rule and are not proposed for designation as critical habitat. Therefore, if the critical

habitat is finalized as proposed, a Federal action involving these lands would not trigger section 7 consultation under the Act with respect to critical habitat and the requirement of no adverse modification unless the specific action would affect the PBFs in the adjacent critical habitat. Additionally, it is important to note that the best available GIS base layers used for the proposed designation do not perfectly match the actual coastlines of the islands. For consistency, accountability, and transparency reasons, we did not alter the layers. We have attempted to vary the scale in our maps to minimize discrepancies, although there remain some instances where a polygon boundary does not perfectly align with an island/atoll coastline (e.g., the MHWL edge of a proposed critical habitat polygon appears inland or within the water, to a small extent, from the island border). In these instances, it is important to evaluate and use the maps in conjunction with the textual descriptions to best understand the unit placement on the coastline.

#### Proposed Critical Habitat Designation

We are proposing 101 units as critical habitat for the green turtle's terrestrial (nesting and basking) areas, all of which were occupied at the time of listing and totaling approximately 8,870 ac (3,590 ha). All of these areas are occupied by the species, and we are not proposing any unoccupied areas. Table 1, below, shows the proposed units separated by DPS, including unit names, land ownership, and approximate acreage. The land ownership values in many (but not all) of the proposed critical habitat units within the three Pacific DPSs also include a category called "uncategorized lands." For the purposes of this analysis and proposed critical habitat designation, this category refers

to lands where we were unable to determine local government or private ownership.

The specific terrestrial areas we propose as critical habitat for the green turtle are presented below, totaling 31 units and 2,233 ac (904 ha) in the Central North Pacific DPS, 6 units and 242 ac (98 ha) in the Central South Pacific DPS, 23 units and 304 ac (123 ha) in the Central West Pacific DPS, 33 units and 5,974 ac (2,418 ha) in the North Atlantic DPS, and 8 units and 117 ac (47 ha) in the South Atlantic DPS. Brief descriptions of all units are presented, including the reasons why they meet the definition of critical habitat for the green turtle. All units are occupied by the species and contain one or more of the physical and biological features essential to the conservation of the species and that may require special management considerations or protection. Also, many of the proposed units overlap in part or whole with existing critical habitat designated for other federally listed species, as specified below (table 2).

Most of the units contain highly dynamic barrier beaches and intertidal seashore. This area has the potential to vary year-to-year. In other words, the precise location of the PBFs in some locations may shift over time somewhat because of the intrinsically dynamic nature of shorelines and due to sea level rise.

*Of note:* we include diacritical marks to many location names, particularly in the Pacific DPSs, although these marks only appear within the preamble of this proposed rule due to **Federal Register** printing format constraints. Therefore, diacritical marks are removed from location names within the text and maps that appear in Proposed Regulation Promulgation, below.

TABLE 1—PROPOSED CRITICAL HABITAT LAND OWNERSHIP AND UNIT SIZE (VALUES ROUNDED TO THE NEAREST WHOLE NUMBER) FOR THE GREEN TURTLE

[All units are occupied by the species.]

Critical habitat unit no. and name	Land Ownership by type <sup>1</sup>	Approximate, acres	Approximate, hectares
<b>Central North Pacific DPS—Northwestern Hawaiian Islands</b>			
HI-01, Kure Atoll .....	Federal .....	0	0
	State .....	106	43
	Local Gov't .....	0	0
	Private/Other .....	0	0
	Uncategorized .....	0	0
	Total .....	106	43
HI-02, Midway Islands .....	Federal .....	88	35
	State .....	0	0
	Local Gov't .....	0	0
	Private/Other .....	0	0



TABLE 1—PROPOSED CRITICAL HABITAT LAND OWNERSHIP AND UNIT SIZE (VALUES ROUNDED TO THE NEAREST WHOLE NUMBER) FOR THE GREEN TURTLE—Continued

[All units are occupied by the species.]

Critical habitat unit no. and name	Land Ownership by type <sup>1</sup>	Approximate, acres	Approximate, hectares
	Uncategorized .....	0	0
	Total .....	88	35
HI-03, Pearl and Hermes Atoll .....	Federal .....	207	84
	State .....	0	0
	Local Gov't .....	0	0
	Private/Other .....	0	0
	Uncategorized .....	0	0
	Total .....	207	84
HI-04, Lisianski Island .....	Federal .....	295	119
	State .....	0	0
	Local Gov't .....	0	0
	Private/Other .....	0	0
	Uncategorized .....	0	0
	Total .....	295	119
HI-05, Laysan Island .....	Federal .....	171	69
	State .....	0	0
	Local Gov't .....	0	0
	Private/Other .....	0	0
	Uncategorized .....	0	0
	Total .....	171	69
HI-06, French Frigate Shoals .....	Federal .....	95	38
	State .....	0	0
	Local Gov't .....	0	0
	Private/Other .....	0	0
	Uncategorized .....	0	0
	Total .....	95	38
<b>Central North Pacific DPS—Main Hawaiian Islands</b>			
HI-07, Halelea and Ko'olau Moku .....	Federal .....	2	1
	State .....	<1	<1
	Local Gov't .....	<1	<1
	Private/Other .....	9	3
	Uncategorized .....	59	24
	Total .....	69	28
HI-08, Nā Pali Coast and Mānā Plains .....	Federal .....	0	0
	State .....	228	92
	Local Gov't .....	0	0
	Private/Other .....	0	0
	Uncategorized .....	26	11
	Total .....	254	103
HI-09, Puna Moku on Kaua'i .....	Federal .....	0	0
	State .....	3	1
	Local Gov't .....	2	1
	Private/Other .....	13	5
	Uncategorized .....	14	6
	Total .....	33	13
HI-10, Kona Moku on Kaua'i .....	Federal .....	0	0
	State .....	4	2
	Local Gov't .....	3	1
	Private/Other .....	6	3
	Uncategorized .....	1	<1
	Total .....	14	6

TABLE 1—PROPOSED CRITICAL HABITAT LAND OWNERSHIP AND UNIT SIZE (VALUES ROUNDED TO THE NEAREST WHOLE NUMBER) FOR THE GREEN TURTLE—Continued

[All units are occupied by the species.]

Critical habitat unit no. and name	Land Ownership by type <sup>1</sup>	Approximate, acres	Approximate, hectares
HI-11, Northern Koʻolauloa Moku .....	Federal .....	24	10
	State .....	26	10
	Local Gov't .....	<1	<1
	Private/Other .....	30	12
	Uncategorized .....	53	21
	Total .....	132	54
HI-12, Waialua Moku .....	Federal .....	<1	<1
	State .....	7	3
	Local Gov't .....	5	2
	Private/Other .....	29	12
	Uncategorized .....	41	17
	Total .....	82	33
HI-13, Waiʻanae Moku .....	Federal .....	<1	<1
	State .....	13	5
	Local Gov't .....	0	0
	Private/Other .....	0	0
	Uncategorized .....	<1	<1
	Total .....	13	5
HI-14, Koʻolaupoko Moku .....	Federal .....	0	0
	State .....	7	3
	Local Gov't .....	3	1
	Private/Other .....	<1	<1
	Uncategorized .....	42	17
	Total .....	53	22
HI-15, ʻEwa Moku .....	Federal .....	0	0
	State .....	0	0
	Local Gov't .....	<1	<1
	Private/Other .....	2	1
	Uncategorized .....	7	3
	Total .....	9	4
HI-16, Molokaʻi Island .....	Federal .....	0	0
	State .....	15	6
	Local Gov't .....	0	0
	Private/Other .....	104	42
	Uncategorized .....	40	16
	Total .....	160	65
HI-17, Kāʻanapali Moku .....	Federal .....	0	0
	State .....	<1	<1
	Local Gov't .....	0	0
	Private/Other .....	10	4
	Uncategorized .....	23	9
	Total .....	34	14
HI-18, Pūʻali Komohana and Hāmākuapoko Moku .....	Federal .....	0	0
	State .....	17	7
	Local Gov't .....	6	2
	Private/Other .....	30	12
	Uncategorized .....	19	8
	Total .....	73	29
HI-19, Lāhainā Moku .....	Federal .....	0	0
	State .....	<1	<1
	Local Gov't .....	3	1
	Private/Other .....	7	3
	Uncategorized .....	23	9

TABLE 1—PROPOSED CRITICAL HABITAT LAND OWNERSHIP AND UNIT SIZE (VALUES ROUNDED TO THE NEAREST WHOLE NUMBER) FOR THE GREEN TURTLE—Continued

[All units are occupied by the species.]

Critical habitat unit no. and name	Land Ownership by type <sup>1</sup>	Approximate, acres	Approximate, hectares
	Total .....	32	13
HI-20, South Pū'ali Komohana and Kula Moku .....	Federal .....	<1	<1
	State .....	<1	<1
	Local Gov't .....	4	2
	Private/Other .....	<1	<1
	Uncategorized .....	12	5
	Total .....	17	7
HI-21, Hāna Moku .....	Federal .....	0	0
	State .....	0	0
	Local Gov't .....	0	0
	Private/Other .....	2	1
	Uncategorized .....	1	<1
	Total .....	3	1
HI-22, Honua'ula Moku .....	Federal .....	0	0
	State .....	<1	<1
	Local Gov't .....	0	0
	Private/Other .....	<1	<1
	Uncategorized .....	0	0
	Total .....	<1	<1
HI-23, Lāna'i Island .....	Federal .....	0	0
	State .....	0	0
	Local Gov't .....	0	0
	Private/Other .....	145	59
	Uncategorized .....	17	7
	Total .....	161	65
HI-24, Kaho'olawe Island .....	Federal .....	0	0
	State .....	3	1
	Local Gov't .....	0	0
	Private/Other .....	0	0
	Uncategorized .....	0	0
	Total .....	3	1
HI-25, South Kohala .....	Federal .....	0	0
	State .....	18	7
	Local Gov't .....	0	0
	Private/Other .....	9	3
	Uncategorized .....	7	3
	Total .....	33	13
HI-26, Kona Moku on Hawai'i Island .....	Federal .....	12	5
	State .....	15	6
	Local Gov't .....	1	<1
	Private/Other .....	10	4
	Uncategorized .....	13	5
	Total .....	50	20
HI-27, Hilo Moku .....	Federal .....	0	0
	State .....	1	<1
	Local Gov't .....	<1	<1
	Private/Other .....	0	0
	Uncategorized .....	1	<1
	Total .....	2	1
HI-28, Kea'au .....	Federal .....	0	0
	State .....	0	0
	Local Gov't .....	0	0
	Private/Other .....	<1	<1



TABLE 1—PROPOSED CRITICAL HABITAT LAND OWNERSHIP AND UNIT SIZE (VALUES ROUNDED TO THE NEAREST WHOLE NUMBER) FOR THE GREEN TURTLE—Continued

[All units are occupied by the species.]

Critical habitat unit no. and name	Land Ownership by type <sup>1</sup>	Approximate, acres	Approximate, hectares
	Uncategorized .....	<1	<1
	Total .....	1	<1
HI-29, Pohoiki Beach .....	Federal .....	0	0
	State .....	<1	<1
	Local Gov't .....	4	1
	Private/Other .....	<1	<1
	Uncategorized .....	6	2
	Total .....	9	4
HI-30, Keauhou .....	Federal .....	9	4
	State .....	0	0
	Local Gov't .....	0	0
	Private/Other .....	0	0
	Uncategorized .....	7	3
	Total .....	16	7
HI-31, Ka'ū Moku .....	Federal .....	5	2
	State .....	3	1
	Local Gov't .....	4	2
	Private/Other .....	4	1
	Uncategorized .....	2	1
	Total .....	17	7
** Central North Pacific DPS Totals .....	Federal .....	907	367
	State .....	466	189
	Local Gov't .....	35	14
	Private/Other .....	411	166
	Uncategorized .....	415	168
	Total .....	2,233	904
<b>Central South Pacific DPS—American Samoa</b>			
AS-01, Palmyra Atoll .....	Federal .....	7	3
	Territory .....	0	0
	Local Gov't .....	0	0
	Private/Other .....	15	6
	Uncategorized .....	0	0
	Total .....	22	9
AS-02, Swains Island .....	Federal .....	0	0
	Territory .....	0	0
	Local Gov't .....	0	0
	Private/Other .....	0	0
	Uncategorized .....	125	50
	Total .....	125	50
AS-03, Ofu and Olosega Islands .....	Federal .....	0	0
	Territory .....	0	0
	Local Gov't .....	0	0
	Private/Other .....	0	0
	Uncategorized .....	49	20
	Total .....	49	20
AS-04, Ta'u Island .....	Federal .....	0	0
	Territory .....	0	0
	Local Gov't .....	0	0
	Private/Other .....	0	0
	Uncategorized .....	34	14
	Total .....	34	14
AS-05, Aunu'u Island .....	Federal .....	0	0

TABLE 1—PROPOSED CRITICAL HABITAT LAND OWNERSHIP AND UNIT SIZE (VALUES ROUNDED TO THE NEAREST WHOLE NUMBER) FOR THE GREEN TURTLE—Continued

[All units are occupied by the species.]

Critical habitat unit no. and name	Land Ownership by type <sup>1</sup>	Approximate, acres	Approximate, hectares
	Territory .....	0	0
	Local Gov't .....	0	0
	Private/Other .....	0	0
	Uncategorized .....	4	1
	Total .....	4	1
AS-06, Rose Atoll .....	Federal .....	10	4
	Territory .....	0	0
	Local Gov't .....	0	0
	Private/Other .....	0	0
	Uncategorized .....	0	0
	Total .....	10	4
** Central South Pacific DPS Totals .....	Federal .....	17	7
	Territory .....	0	0
	Local Gov't .....	0	0
	Private/Other .....	15	6
	Uncategorized .....	211	85
	Total .....	242	98
<b>Central West Uacific DPS—Guam</b>			
GU-01, Ritidian Point and Uruno Beach .....	Federal .....	18	7
	Territory .....	<1	<1
	Local Gov't .....	0	0
	Private/Other .....	13	5
	Uncategorized .....	6	2
	Total .....	37	15
GU-02, Jinapsan Beach .....	Federal .....	4	1
	Territory .....	0	0
	Local Gov't .....	0	0
	Private/Other .....	3	1
	Uncategorized .....	8	3
	Total .....	14	6
GU-03, Tanguisson .....	Federal .....	0	0
	Territory .....	6	2
	Local Gov't .....	0	0
	Private/Other .....	0	0
	Uncategorized .....	6	2
	Total .....	12	5
GU-04, Tumon Bay .....	Federal .....	0	0
	Territory .....	0	0
	Local Gov't .....	0	0
	Private/Other .....	10	4
	Uncategorized .....	4	1
	Total .....	14	6
GU-05, Hagåtña Bay .....	Federal .....	0	0
	Territory .....	0	0
	Local Gov't .....	0	0
	Private/Other .....	1	<1
	Uncategorized .....	6	3
	Total .....	7	3
GU-06, Cabras Island .....	Federal .....	0	0
	Territory .....	0	0
	Local Gov't .....	0	0
	Private/Other .....	<1	<1

TABLE 1—PROPOSED CRITICAL HABITAT LAND OWNERSHIP AND UNIT SIZE (VALUES ROUNDED TO THE NEAREST WHOLE NUMBER) FOR THE GREEN TURTLE—Continued

[All units are occupied by the species.]

Critical habitat unit no. and name	Land Ownership by type <sup>1</sup>	Approximate, acres	Approximate, hectares
	Uncategorized .....	8	3
	Total .....	8	3
GU-07, Agat Bay .....	Federal .....	<1	<1
	Territory .....	0	0
	Local Gov't .....	0	0
	Private/Other .....	0	0
	Uncategorized .....	1	<1
	Total .....	1	<1
GU-08, Pago (a.k.a. Pāgu) Point to Ylig Bay .....	Federal .....	0	0
	Territory .....	0	0
	Local Gov't .....	0	0
	Private/Other .....	2	1
	Uncategorized .....	<1	<1
	Total .....	2	1
GU-09, Talo'fo'fo Village .....	Federal .....	0	0
	Territory .....	0	0
	Local Gov't .....	0	0
	Private/Other .....	2	1
	Uncategorized .....	3	1
	Total .....	4	2
GU-10, Humātak Village .....	Federal .....	0	0
	Territory .....	0	0
	Local Gov't .....	0	0
	Private/Other .....	1	<1
	Uncategorized .....	6	3
	Total .....	7	3
GU-11, Nomna Bay .....	Federal .....	0	0
	Territory .....	0	0
	Local Gov't .....	0	0
	Private/Other .....	0	0
	Uncategorized .....	2	1
	Total .....	2	1
GU-12, Inarajan Bay .....	Federal .....	0	0
	Territory .....	0	0
	Local Gov't .....	0	0
	Private/Other .....	1	<1
	Uncategorized .....	3	1
	Total .....	4	1
GU-13, Agfayan Point to Aga Point .....	Federal .....	0	0
	Territory .....	0	0
	Local Gov't .....	0	0
	Private/Other .....	2	1
	Uncategorized .....	4	1
	Total .....	5	2
GU-14, Cocos Island .....	Federal .....	0	0
	Territory .....	0	0
	Local Gov't .....	0	0
	Private/Other .....	1	<1
	Uncategorized .....	7	3
	Total .....	8	3



TABLE 1—PROPOSED CRITICAL HABITAT LAND OWNERSHIP AND UNIT SIZE (VALUES ROUNDED TO THE NEAREST WHOLE NUMBER) FOR THE GREEN TURTLE—Continued

[All units are occupied by the species.]

Critical habitat unit no. and name	Land Ownership by type <sup>1</sup>	Approximate, acres	Approximate, hectares
<b>Central West Pacific DPS—Northern Mariana Islands</b>			
MP-01, Agrihan Island .....	Federal .....	0	0
	Commonwealth .....	0	0
	Local Gov't .....	0	0
	Private/Other .....	0	0
	Uncategorized .....	44	18
	Total .....	44	18
MP-02, Pagan Island .....	Federal .....	0	0
	Commonwealth .....	0	0
	Local Gov't .....	0	0
	Private/Other .....	0	0
	Uncategorized .....	12	5
	Total .....	12	5
MP-03, Wing Beach and Bird Island .....	Federal .....	0	0
	Commonwealth .....	4	2
	Local Gov't .....	0	0
	Private/Other .....	0	0
	Uncategorized .....	3	1
	Total .....	7	3
MP-04, Managaha Island and Unai Makaka .....	Federal .....	0	0
	Commonwealth .....	5	2
	Local Gov't .....	0	0
	Private/Other .....	<1	<1
	Uncategorized .....	16	6
	Total .....	21	9
MP-05, Eastern Saipan .....	Federal .....	0	0
	Commonwealth .....	9	4
	Local Gov't .....	0	0
	Private/Other .....	1	<1
	Uncategorized .....	8	3
	Total .....	18	7
MP-06, Southern Saipan .....	Federal .....	0	0
	Commonwealth .....	1	<1
	Local Gov't .....	0	0
	Private/Other .....	0	0
	Uncategorized .....	7	3
	Total .....	8	3
MP-07, Western Tinian .....	Federal .....	0	0
	Commonwealth .....	3	1
	Local Gov't .....	0	0
	Private/Other .....	0	0
	Uncategorized .....	4	1
	Total .....	6	3
MP-08, Northern Rota .....	Federal .....	0	0
	Commonwealth .....	44	18
	Local Gov't .....	0	0
	Private/Other .....	2	1
	Uncategorized .....	9	4
	Total .....	54	22
MP-09, Southern Rota .....	Federal .....	0	0
	Commonwealth .....	8	3
	Local Gov't .....	0	0
	Private/Other .....	<1	<1

TABLE 1—PROPOSED CRITICAL HABITAT LAND OWNERSHIP AND UNIT SIZE (VALUES ROUNDED TO THE NEAREST WHOLE NUMBER) FOR THE GREEN TURTLE—Continued

[All units are occupied by the species.]

Critical habitat unit no. and name	Land Ownership by type <sup>1</sup>	Approximate, acres	Approximate, hectares
	Uncategorized .....	1	<1
	Total .....	9	4
** Central West Pacific DPS, Totals .....	Federal .....	22	9
	Territory/Commonwealth .....	79	32
	Local Gov't .....	0	0
	Private/Other .....	37	15
	Uncategorized .....	166	67
	Total .....	304	123
<b>North Atlantic DPS—Florida</b>			
FL-01, Guana Tolomato Matanzas National Estuarine Research Reserve—Guana River Site.	Federal .....	0	0
	State .....	112	45
	Local Gov't .....	0	0
	Private/Other .....	0	0
	Uncategorized .....	0	0
	Total .....	112	45
FL-02, Washington Oaks Gardens State Park to North Peninsula State Park.	Federal .....	0	0
	State .....	77	31
	Local Gov't .....	61	25
	Private/Other .....	169	68
	Uncategorized .....	0	0
	Total .....	307	124
FL-03, Canaveral National Seashore to Merritt Island National Wildlife Refuge.	Federal .....	558	226
	State .....	0	0
	Local Gov't .....	0	0
	Private/Other .....	0	0
	Uncategorized .....	0	0
	Total .....	558	226
FL-04, Satellite Beach to Indian River Shores .....	Federal .....	52	21
	State .....	72	29
	Local Gov't .....	120	48
	Private/Other .....	400	163
	Uncategorized .....	0	0
	Total .....	644	261
FL-05, Hutchinson Island .....	Federal .....	0	0
	State .....	0	0
	Local Gov't .....	119	48
	Private/Other .....	217	88
	Uncategorized .....	0	0
	Total .....	336	136
FL-06, St. Lucie Inlet to Jupiter Inlet .....	Federal .....	69	28
	State .....	49	20
	Local Gov't .....	11	5
	Private/Other .....	195	78
	Uncategorized .....	0	0
	Total .....	324	131
FL-07, Jupiter Inlet to Lake Worth Inlet .....	Federal .....	0	0
	State .....	25	10
	Local Gov't .....	85	35
	Private/Other .....	104	42

TABLE 1—PROPOSED CRITICAL HABITAT LAND OWNERSHIP AND UNIT SIZE (VALUES ROUNDED TO THE NEAREST WHOLE NUMBER) FOR THE GREEN TURTLE—Continued

[All units are occupied by the species.]

Critical habitat unit no. and name	Land Ownership by type <sup>1</sup>	Approximate, acres	Approximate, hectares
	Uncategorized .....	0	0
	Total .....	214	87
FL-08, Palm Beach to Boynton Inlet .....	Federal .....	0	0
	State .....	0	0
	Local Gov't .....	1	<1
	Private/Other .....	41	17
	Uncategorized .....	0	0
	Total .....	42	17
FL-09, Boynton Inlet to Boca Raton Inlet .....	Federal .....	0	0
	State .....	0	0
	Local Gov't .....	66	27
	Private/Other .....	148	60
	Uncategorized .....	0	0
	Total .....	214	87
FL-10, Boca Raton Inlet to Hillsboro Inlet .....	Federal .....	1	<1
	State .....	0	0
	Local Gov't .....	16	7
	Private/Other .....	65	26
	Uncategorized .....	0	0
	Total .....	82	34
FL-11, Sawyer Key .....	Federal .....	6	3
	State .....	0	0
	Local Gov't .....	0	0
	Private/Other .....	0	0
	Uncategorized .....	0	0
	Total .....	6	3
FL-12, Boca Grande and Marquesas Keys .....	Federal .....	28	12
	State .....	0	0
	Local Gov't .....	0	0
	Private/Other .....	0	0
	Uncategorized .....	0	0
	Total .....	28	12
FL-13, Dry Tortugas .....	Federal .....	21	8
	State .....	0	0
	Local Gov't .....	0	0
	Private/Other .....	0	0
	Uncategorized .....	0	0
	Total .....	21	8
FL-14, Sanibel Island West .....	Federal .....	0	0
	State .....	0	0
	Local Gov't .....	76	31
	Private/Other .....	113	45
	Uncategorized .....	0	0
	Total .....	189	76
FL-15, Gasparilla Island .....	Federal .....	5	2
	State .....	25	10
	Local Gov't .....	0	0
	Private/Other .....	125	51
	Uncategorized .....	0	0
	Total .....	155	63
FL-16, Don Pedro and Little Gasparilla Islands .....	Federal .....	0	0
	State .....	20	8



TABLE 1—PROPOSED CRITICAL HABITAT LAND OWNERSHIP AND UNIT SIZE (VALUES ROUNDED TO THE NEAREST WHOLE NUMBER) FOR THE GREEN TURTLE—Continued

[All units are occupied by the species.]

Critical habitat unit no. and name	Land Ownership by type <sup>1</sup>	Approximate, acres	Approximate, hectares
	Local Gov't .....	0	0
	Private/Other .....	166	67
	Uncategorized .....	0	0
	Total .....	186	75
FL-17, Manasota Key .....	Federal .....	0	0
	State .....	25	10
	Local Gov't .....	46	19
	Private/Other .....	93	37
	Uncategorized .....	0	0
	Total .....	164	66
FL-18, Casey and Siesta Keys .....	Federal .....	0	0
	State .....	0	0
	Local Gov't .....	30	12
	Private/Other .....	84	34
	Uncategorized .....	0	0
	Total .....	114	46
FL-19, Cape St. George and St. George Island .....	Federal .....	0	0
	State .....	545	221
	Local Gov't .....	0	0
	Private/Other .....	270	109
	Uncategorized .....	0	0
	Total .....	815	330
FL-20, St. Joseph Peninsula .....	Federal .....	0	0
	State .....	466	189
	Local Gov't .....	2	1
	Private/Other .....	154	62
	Uncategorized .....	0	0
	Total .....	622	252
FL-21, Inlet Beach .....	Federal .....	0	0
	State .....	0	0
	Local Gov't .....	7	3
	Private/Other .....	86	34
	Uncategorized .....	0	0
	Total .....	93	37
FL-22, Topsail Hill Preserve State Park .....	Federal .....	0	0
	State .....	165	67
	Local Gov't .....	0	0
	Private/Other .....	0	0
	Uncategorized .....	0	0
	Total .....	165	67
FL-23, Gulf Islands National Seashore .....	Federal .....	316	128
	State .....	17	7
	Local Gov't .....	0	0
	Private/Other .....	0	0
	Uncategorized .....	0	0
	Total .....	334	135
<b>North Atlantic DPS—Puerto Rico</b>			
PR-01, Mona Island .....	Federal .....	0	0
	Commonwealth .....	66	27
	Local Gov't .....	0	0
	Private/Other .....	0	0
	Uncategorized .....	0	0

TABLE 1—PROPOSED CRITICAL HABITAT LAND OWNERSHIP AND UNIT SIZE (VALUES ROUNDED TO THE NEAREST WHOLE NUMBER) FOR THE GREEN TURTLE—Continued

[All units are occupied by the species.]

Critical habitat unit no. and name	Land Ownership by type <sup>1</sup>	Approximate, acres	Approximate, hectares
	Total .....	66	27
PR-02, Guayama .....	Federal .....	0	0
	Commonwealth .....	23	9
	Local Gov't .....	0	0
	Private/Other .....	0	0
	Uncategorized .....	0	0
	Total .....	23	9
PR-03, Maunabo .....	Federal .....	0	0
	Commonwealth .....	24	10
	Local Gov't .....	0	0
	Private/Other .....	0	0
	Uncategorized .....	0	0
	Total .....	24	10
VPR-01, Campaña .....	Federal .....	11	4
	Commonwealth .....	0	0
	Local Gov't .....	0	0
	Private/Other .....	0	0
	Uncategorized .....	0	0
	Total .....	11	4
VPR-02, Puerto Diablo .....	Federal .....	15	6
	Commonwealth .....	0	0
	Local Gov't .....	0	0
	Private/Other .....	0	0
	Uncategorized .....	0	0
	Total .....	15	6
VPR-03, Vieques East .....	Federal .....	17	7
	Commonwealth .....	0	0
	Local Gov't .....	0	0
	Private/Other .....	0	0
	Uncategorized .....	0	0
	Total .....	17	7
VPR-04, Fanduca to Conejo .....	Federal .....	23	9
	Commonwealth .....	0	0
	Local Gov't .....	0	0
	Private/Other .....	0	0
	Uncategorized .....	0	0
	Total .....	23	9
VPR-05, La Chiva .....	Federal .....	10	4
	Commonwealth .....	0	0
	Local Gov't .....	0	0
	Private/Other .....	0	0
	Uncategorized .....	0	0
	Total .....	10	4
VPR-06, Sun Bay .....	Federal .....	0	0
	Commonwealth .....	13	5
	Local Gov't .....	0	0
	Private/Other .....	0	0
	Uncategorized .....	0	0
	Total .....	13	5
VPR-07, Vieques Southwest .....	Federal .....	44	18
	Commonwealth .....	4	1
	Local Gov't .....	0	0
	Private/Other .....	0	0

TABLE 1—PROPOSED CRITICAL HABITAT LAND OWNERSHIP AND UNIT SIZE (VALUES ROUNDED TO THE NEAREST WHOLE NUMBER) FOR THE GREEN TURTLE—Continued

[All units are occupied by the species.]

Critical habitat unit no. and name	Land Ownership by type <sup>1</sup>	Approximate, acres	Approximate, hectares
	Uncategorized .....	0	0
	Total .....	48	19
** North Atlantic DPS Totals .....	Federal .....	1,177	475
	State/Commonwealth .....	1,727	699
	Local Gov't .....	640	261
	Private/Other .....	2,430	981
Uncategorized	0 .....	0	
	Total .....	5,974	2,418
<b>South Atlantic DPS—Vieques, U.S. Virgin Islands.</b>			
USVI-01, Sandy Point National Wildlife Refuge .....	Federal .....	35	14
	Territory .....	2	1
	Local Gov't .....	0	0
	Private/Other .....	0	0
	Uncategorized .....	0	0
	Total .....	37	15
USVI-02, Long Point Bay .....	Federal .....	0	0
	Territory .....	9	4
	Local Gov't .....	0	0
	Private/Other .....	0	0
	Uncategorized .....	0	0
	Total .....	9	4
USVI-03, St. Croix South .....	Federal .....	0	0
	Territory .....	20	8
	Local Gov't .....	0	0
	Private/Other .....	0	0
	Uncategorized .....	0	0
	Total .....	20	8
USVI-04, East End .....	Federal .....	0	0
	Territory .....	16	6
	Local Gov't .....	0	0
	Private/Other .....	0	0
	Uncategorized .....	0	0
	Total .....	16	6
USVI-05, Chenay to Coakley .....	Federal .....	0	0
	Territory .....	15	6
	Local Gov't .....	0	0
	Private/Other .....	0	0
	Uncategorized .....	0	0
	Total .....	15	6
USVI-06, Buccaneer .....	Federal .....	0	0
	Territory .....	6	2
	Local Gov't .....	0	0
	Private/Other .....	0	0
	Uncategorized .....	0	0
	Total .....	6	2
USVI-07, Judith's Fancy .....	Federal .....	0	0
	Territory .....	3	1
	Local Gov't .....	0	0
	Private/Other .....	0	0
	Uncategorized .....	0	0
	Total .....	3	1

TABLE 1—PROPOSED CRITICAL HABITAT LAND OWNERSHIP AND UNIT SIZE (VALUES ROUNDED TO THE NEAREST WHOLE NUMBER) FOR THE GREEN TURTLE—Continued

[All units are occupied by the species.]

Critical habitat unit no. and name	Land Ownership by type <sup>1</sup>	Approximate, acres	Approximate, hectares
USVI—08, Buck Island Reef National Monument .....	Federal .....	12	5
	Territory .....	0	0
	Local Gov't .....	0	0
	Private/Other .....	0	0
	Uncategorized .....	0	0
	Total .....	12	5
** South Atlantic DPS Totals .....	Federal .....	47	19
	Territory .....	71	28
	Local Gov't .....	0	0
	Private/Other .....	0	0
	Uncategorized .....	0	0
	Total .....	117	47

**Note:** Total numbers for individual units and totals for each DPS may not sum due to rounding (to the nearest whole number).<sup>1</sup>Local government ownership may include counties, cities, or municipalities. Private/Other ownership includes nonprofit preserve/reserve areas. Uncategorized ownership type occurs only within some units in the three Pacific DPSs.

TABLE 2—CO-OCCURRING CRITICAL HABITAT DESIGNATIONS THAT OVERLAP PROPOSED CRITICAL HABITAT FOR GREEN TURTLES

Species	Area of overlap with designated critical habitat <sup>1</sup> in acres (ac) (hectares (ha)) [# of proposed green turtle units overlapping]				
	Central North Pacific DPS	Central South Pacific DPS	Central West Pacific DPS	North Atlantic DPS	South Atlantic DPS
loggerhead sea turtle ( <i>Caretta caretta</i> ) .....	N/A	N/A	N/A	4,649 ac (1,881 ha) [18]	N/A
hawksbill sea turtle ( <i>Eretmochelys imbricata</i> ) .....	N/A	N/A	N/A	66 ac (27 ha) [1]	N/A
leatherback sea turtle ( <i>Dermochelys coriacea</i> ) .....	N/A	N/A	N/A	N/A	27 ac (11 ha) [1]
Mona boa ( <i>Epicrates monensis</i> ) .....	N/A	N/A	N/A	66 ac (27 ha) [1]	N/A
Mona ground iguana ( <i>Cyclura cornuta stejnegeri</i> ) .....	N/A	N/A	N/A	66 ac (27 ha) [1]	N/A
piping plover ( <i>Charadrius melodus</i> ) .....	N/A	N/A	N/A	385 ac (155 ha) [4]	N/A
yellow-shouldered blackbird ( <i>Agelaius xanthomus</i> ) .....	N/A	N/A	N/A	66 ac (27 ha) [1]	N/A
Guam Micronesian kingfisher ( <i>Todiramphus cinnamominus cinnamominus</i> ) .....	N/A	N/A	21 ac (9 ha) [2]	N/A	N/A
Mariana crow ( <i>Corvus kubaryi</i> ) .....	N/A	N/A	25 ac (10 ha) [4]	N/A	N/A
St. Andrew's beach mouse ( <i>Peromyscus polionotus peninsularis</i> ) .....	N/A	N/A	N/A	426 ac (172 ha) [1]	N/A
Choctawhatchee beach mouse ( <i>Peromyscus polionotus</i> ) ..	N/A	N/A	N/A	134 ac (54 ha) [2]	N/A
Mariana fruit bat ( <i>Pteropus mariannus</i> ) .....	N/A	N/A	21 ac (9 ha) [2]	N/A	N/A
Blackburn's sphinx moth ( <i>Manduca blackburni</i> ) .....	7 ac (3 ha) [2]	N/A	N/A	N/A	N/A
Cape Sable thoroughwort ( <i>Chromolaena frustrata</i> ) .....	N/A	N/A	N/A	4 ac (2 ha) [1]	N/A
Aboriginal prickly-apple ( <i>Harrisia aboriginum</i> ) .....	N/A	N/A	N/A	114 ac (46 ha) [4]	N/A
no common name ( <i>Agave eggersiana</i> ) .....	N/A	N/A	N/A	N/A	4 ac (2 ha) [2]
coastal flatsedge ( <i>Cyperus pennatifolius</i> ) and Loulu ( <i>Pritchardia remota</i> ) .....	171 ac 69 ha) [1]	N/A	N/A	N/A	N/A
Hilo ischaemum ( <i>Ischaemum byrone</i> ) .....	4 ac (2 ha) [2]	N/A	N/A	N/A	N/A
'Ohai ( <i>Sesbania tomentosa</i> ) .....	197 ac (81 ha) [5]	N/A	N/A	N/A	N/A
no common name ( <i>Vigna o-wahuensis</i> ) .....	5 ac (2 ha) [3]	N/A	N/A	N/A	N/A
Kohe malama o kanaola ( <i>Kanaloa kahoowawensis</i> ) .....	3 ac (1 ha) [1]	N/A	N/A	N/A	N/A



TABLE 2—CO-OCCURRING CRITICAL HABITAT DESIGNATIONS THAT OVERLAP PROPOSED CRITICAL HABITAT FOR GREEN TURTLES—Continued

Species	Area of overlap with designated critical habitat <sup>1</sup> in acres (ac) (hectares (ha)) [# of proposed green turtle units overlapping]				
	Central North Pacific DPS	Central South Pacific DPS	Central West Pacific DPS	North Atlantic DPS	South Atlantic DPS
6 plant species of the Hawaiian Islands <sup>2</sup> .....	191 ac (77 ha) [1] <sup>3</sup>	N/A	N/A	N/A	N/A
22 plant species of the Hawaiian Islands <sup>4</sup> .....	<1 ac (<1 ha) [1] <sup>2</sup>	N/A	N/A	N/A	N/A
Total Overlap (Combined) for Each DPS .....	375 ac (152 ha) [17%]	N/A	25 ac (10 ha) [8%]	4,849 ac (1,962 ha) [81%]	31 ac (13 ha) [27%]

\* Totals may not sum due to rounding.

<sup>1</sup> Values presented in this table are for federally threatened or endangered species for which critical habitat designations are in place. Additional species with proposed critical habitat may be added to this table if finalized prior to publication of the green turtle final critical habitat designation.

<sup>2</sup> 'Ōlulu (*Brighamia insignis*), 'Āwiwi (*Schenkia sebaeoides*), Ka'a (*Cyperus trachysanthos*), no common name (*Kadua stjohnii*), Lau'ehu (*Panicum niihauense*), and Ma'oli'oli (*Schiedea apokremnos*).

<sup>3</sup> Critical habitat for each of these species overlaps only one green turtle proposed critical habitat unit, where existing critical habitat for some of these plants overlap the same green turtle proposed unit and one or more of the other plants overlap other units. However, total overlap with green turtle proposed critical habitat does not exceed <1 ac (<1 ha) in all instances for each plant species.

<sup>4</sup> Round-leaved chaff-flower (*Achyranthes splendens* var. *rotundata*), Ki'oko'olau (*Bidens amplexans*), no common name (*Bonamia menziesii*), Ko'oko'olau (*Bidens micrantha* ssp. *kalealaha*), Āwikiwiki (*Canavalia pubescens*), Kāmanomano (*Cenchrus agrimonoides*), Kokolameli (*Chamaesyce kuwaleana*), Kauila (*Colubrina oppositifolia*), Pauoa (*Ctenitis squamigera*), 'Akoko (*Euphorbia celastroides* var. *kaenana*), Mēhamehame (*Flueggea neowawraea*), Ma'o hau hele (*Hibiscus brackenridgei*), Nehe (*Melanthera kamolensis*), Alani (*Melicope mucronulata*), no common name (*Neraudia sericea*), Kulu'i (*Nototrichium humile*), 'Iliahi (*Santalum haleakalae* var. *lanaiense*), 'Āwiwi (*Schenkia sebaeoides*), Pōpolo kū mai (*Solanum incompletum*), no common name (*Spermolepis hawaiiensis*), and A'e (*Zanthoxylum hawaiiensis*).

We present brief descriptions of all proposed units within each DPS, and reasons why they meet the definition of critical habitat for the green turtle, below.

#### Central North Pacific DPS

##### Unit HI-01: Kure Atoll

Unit HI-01 consists of 106 ac (43 ha) on Kure Atoll (a.k.a. Hōlanikū or Mokupāpapa), Honolulu County, the northernmost island in the Hawaiian archipelago. This unit is located approximately 57 to 60 mi (92 to 96 km) northwest of Midway Islands (a.k.a. Kuaihelani or Pihemanu) and includes beach, sandy shoals, coastal vegetation, and emergent sandy lands from the MHWL. The landward boundary is the line indicating the beginning of dense vegetation. This unit includes two segments: 55 ac (22 ha) on Kure Sand Island and 51 ac (21 ha) on Green Island. All lands within this unit are in State ownership. General land use within this unit is natural resource conservation. There are no permanent inhabitants on Kure Atoll.

Unit HI-01 is occupied by the species and contains one or more of the PBFs essential to the conservation of the species. This unit contains green turtle nesting habitat at the northernmost part of the Central North Pacific DPS, serving as an important managed nesting area. This unit also contains internesting beach area to support placement of multiple nests by individual turtles

within a single season and area for the nesting population of green turtles to expand and recover. Additionally, this unit contains basking male and female green turtles year-round, providing important basking habitat throughout the year. The remoteness of Kure Atoll provides overall limited disturbance to green turtle eggs, hatchlings, and adults compared to other areas within the DPS.

Threats to the PBFs identified within Unit HI-01 include habitat loss, modification, and degradation of nesting and basking beach habitat, naturally caused disasters (i.e., hurricanes and tsunamis), invasive nonnative vegetation, and presence of terrestrial and marine debris. Special management considerations or protection measures to reduce or alleviate the threats may include conducting habitat restoration or management and removing terrestrial debris from the beaches and marine debris that washes ashore. All lands within this unit are managed by the Hawai'i Division of Forestry and Wildlife (HDOFAW) for conservation purposes as part of the State's wildlife sanctuary (HDOFAW 2022, entire) and the Papahānaumokuākea Marine National Monument, which provides additional management guidance and protection of the nesting and basking grounds for green turtles (Papahānaumokuākea Marine National Monument 2008, entire).

##### Unit HI-02: Midway Islands

Unit HI-02 consists of 88 ac (35 ha) on Midway Islands (a.k.a. Kuaihelani or Pihemanu), part of the United States Minor Outlying Islands, the second northernmost island in the Hawaiian archipelago. This unit is located approximately 57 to 60 mi (92 to 96 km) east of Kure Atoll (a.k.a. Hōlanikū or Mokupāpapa) and includes beach, coastal vegetation, sandy shoals, and emergent sandy lands from the MHWL. The landward boundary is the line indicating the beginning of dense vegetation or hardened or developed structures (e.g., abandoned historical military structures). This unit includes two segments in two areas: (1) 8 ac (3 ha) along the northeastern shore of Sand Island, and (2) 80 ac (32 ha) on Spit and Eastern Islands. All lands within this unit are in Federal ownership. General land use within this unit is historical preservation and natural resource conservation. There are no permanent inhabitants on Spit and Eastern Islands.

Unit HI-02 is occupied by the species and contains one or more of the PBFs essential to the conservation of the species. This unit contains green turtle nesting habitat at the northernmost part of the Central North Pacific DPS, serving as an important managed nesting area. This unit also contains internesting beach area to support placement of multiple nests by individual turtles within a single season and area for the nesting population of green turtles to

expand and recover. Additionally, this unit contains basking male and female green turtles year-round, providing important basking habitat throughout the year. Finally, the remoteness of Midway Islands provides overall limited disturbance to green turtle eggs, hatchlings, and adults compared to other areas within the DPS.

Threats to the PBFs identified within Unit HI-02 include habitat loss, modification, and degradation of nesting beach habitat, naturally caused or human-caused disasters (*i.e.*, hurricanes, tsunamis, oil spills), invasive nonnative vegetation, human activities (*i.e.*, shoreline stabilization and response to oil spills), and presence of terrestrial and marine debris. Special management considerations or protection measures to reduce or alleviate the threats may include conducting habitat restoration or management, enforcing rules to prevent invasive plants from being transported into the unit, and removing terrestrial debris from the beaches and marine debris that washes ashore. All lands within this unit are managed by the USFWS for wildlife conservation purposes as the Midway Atoll NWR and the Papahānaumokuākea Marine National Monument, which provides additional management guidance and protection of the nesting and basking grounds for green turtles (Papahānaumokuākea Marine National Monument 2008, entire).

#### Unit HI-03: Pearl and Hermes Atoll

Unit HI-03 consists of 207 ac (84 ha) on Pearl and Hermes (a.k.a. Manawai or Holoikauaua), Honolulu County, the third northernmost island in the Hawaiian archipelago. This unit is located approximately 97 mi (156 km) southeast of Midway Islands (a.k.a. Kuaihelani or Pihemanu) and includes beach, coastal vegetation, sandy shoals, and emergent sandy lands from the MHWL. The landward boundary is the line indicating the beginning of dense vegetation. This unit includes seven segments: 74 ac (30 ha) on North Island, 34 ac (14 ha) on Little North Island, 34 ac (14 ha) on Southeast Island, 3 ac (1 ha) on Bird Island, 14 ac (6 ha) and 3 ac (1 ha) on Green Island, and 46 ac (19 ha) on Kittery Island (a.k.a. Seal Kittery Island). All lands within this unit are in Federal ownership. General land use within this unit is natural resource conservation. There are no permanent inhabitants on Pearl and Hermes Atoll.

Unit HI-03 is occupied by the species and contains one or more of the PBFs essential to the conservation of the species. This unit contains green turtle nesting habitat at the northernmost part

of the Central North Pacific DPS, serving as an important nesting area. This unit also contains internesting beach area to support placement of multiple nests by individual turtles within a single season and area for the nesting population of green turtles to expand and recover. Additionally, this unit contains basking male and female green turtles year-round, providing important basking habitat throughout the year. Finally, the remoteness of Pearl and Hermes Atoll provides overall limited disturbance to green turtle eggs, hatchlings, and adults compared to other areas within the DPS.

Threats to the PBFs identified within Unit HI-03 include habitat loss, modification, and degradation of nesting and basking beach habitat, naturally caused disasters (*i.e.*, hurricanes and tsunamis), invasive nonnative vegetation, and presence of terrestrial and marine debris. Special management considerations or protection measures to reduce or alleviate the threats may include conducting habitat restoration or management, enforcing rules to prevent invasive plants from being transported into the unit, and removing terrestrial debris from the beaches and marine debris that washes ashore. All lands within this unit are managed by the USFWS for wildlife conservation purposes as the Hawaiian Islands NWR and the Papahānaumokuākea Marine National Monument, which provides additional management guidance and protection of the nesting and basking grounds for green turtles (Papahānaumokuākea Marine National Monument 2008, entire).

#### Unit HI-04: Lisianski Island

Unit HI-04 consists of 295 ac (119 ha) on Lisianski Island (a.k.a. Kapou or Papa'āpoho), Honolulu County, the fourth northernmost island in the Hawaiian archipelago. This island unit is located approximately 256 mi (412 km) southeast of Midway Islands (a.k.a. Kuaihelani or Pihemanu) and includes beach, coastal vegetation, sandy shoals, and emergent sandy lands from the MHWL. The landward boundary is the line indicating the beginning of dense vegetation. All lands within this unit are in Federal ownership. General land use within this unit is natural resource conservation. There are no permanent inhabitants on Lisianski Island.

Unit HI-04 is occupied by the species and contains one or more of the PBFs essential to the conservation of the species. This unit contains green turtle nesting habitat at the northernmost part of the Central North Pacific DPS, serving as an important nesting area. This unit also contains internesting beach area to support placement of multiple nests by

individual turtles within a single season and area for the nesting population of green turtles to expand and recover. Additionally, this unit contains basking male and female green turtles throughout the year, providing important basking habitat during non-reproductive periods. The remoteness of Lisianski Island provides overall limited disturbance to green turtle eggs, hatchlings, and adults compared to other areas within the DPS.

Threats to the PBFs identified within Unit HI-04 include habitat loss, modification, and degradation of nesting and basking beach habitat, naturally caused disasters (*i.e.*, hurricanes and tsunamis), invasive nonnative vegetation, and presence of terrestrial and marine debris. Special management considerations or protection measures to reduce or alleviate the threats may include conducting habitat restoration or management, controlling and removing invasive plant species, enforcing rules to prevent invasive plants from being transported into the unit, and removing terrestrial debris from the beaches and marine debris that washes ashore. All lands within this unit are managed by the USFWS for wildlife conservation purposes as the Hawaiian Islands NWR and the Papahānaumokuākea Marine National Monument, which provides additional management guidance and protection of the nesting and basking grounds for green turtles (Papahānaumokuākea Marine National Monument 2008, entire).

#### Unit HI-05: Laysan Island

Unit HI-05 consists of 171 ac (69 ha) on Laysan Island (a.k.a. Kamole or Kauō), Honolulu County, and is the fifth northernmost island in the Hawaiian archipelago. This island unit is located approximately 386 mi (621 km) southeast of Midway Islands (a.k.a. Kuaihelani or Pihemanu) and includes beach, coastal vegetation, sandy shoals, emergent sandy lands from the MHWL. The landward boundary is the line indicating the beginning of dense vegetation. All lands within this unit are in Federal ownership. General land use within this unit is natural resource conservation. There are no permanent inhabitants on Laysan Island.

Unit HI-05 is occupied by the species and contains one or more of the PBFs essential to the conservation of the species. This unit contains green turtle nesting habitat at the northernmost part of the Central North Pacific DPS, serving as an important nesting area. This unit also contains internesting beach area to support placement of multiple nests by individual turtles within a single season

and area for the nesting population of green turtles to expand and recover. Additionally, this unit contains basking male and female green turtles throughout the year, providing important basking habitat during non-reproductive periods. The remoteness of Laysan Island provides overall limited disturbance to green turtle eggs, hatchlings, and adults compared to other areas within the DPS. Approximately 171 ac (69 ha; 100 percent) of the unit overlap with currently designated critical habitat for the following Hawaiian plants (68 FR 28054, May 22, 2003): coastal flatsedge (*Cyperus pennatifolius*) and loulou (*Pritchardia remota*).

Threats to the PBFs identified within Unit HI-05 include habitat loss, modification, and degradation of nesting and basking beach habitat, naturally caused disasters (i.e., hurricanes and tsunamis), invasive nonnative vegetation, and presence of terrestrial and marine debris. Special management considerations or protection measures to reduce or alleviate the threats may include conducting habitat restoration or management, controlling and removing invasive plant species, enforcing rules to prevent invasive plants from being transported into the unit, and removing terrestrial debris from the beaches and marine debris that washes ashore. All lands within this unit are managed by the USFWS for wildlife and plant conservation purposes as the Hawaiian Islands NWR and the Papahānaumokuākea Marine National Monument, which provides additional management guidance and protection of the nesting and basking grounds for green turtles (Papahānaumokuākea Marine National Monument 2008, entire).

#### Unit HI-06: French Frigate Shoals

Unit HI-06 consists of 95 ac (38 ha) in French Frigate Shoals (a.k.a. Lalo or Kānemiloha'i), Honolulu County, the sixth northernmost island in the Hawaiian archipelago. This unit is located approximately 557 to 761 mi (896 to 1,226 km) southeast of Midway Islands (a.k.a. Kuaihelani or Pihemanu) and includes beach, coastal vegetation, sandy shoals, and emergent sandy lands from the MHWL. The landward boundary is the line indicating the beginning of dense vegetation or hardened or developed structures (e.g., abandoned military structures). This unit includes seven segments: 6 ac (3 ha) on Shark Island, 17 ac (7 ha) on Tern Island, 3 ac (1 ha) on Trig Island, 1 ac (less than 1 ha) on Round Island, 27 ac (11 ha) on East Island, 20 ac (8 ha) on Little Gin Island, and 22 ac (9 ha) on

Gin Island. All lands within this unit are in Federal ownership. General land use within this unit is natural resource conservation. There are no permanent inhabitants on French Frigate Shoals.

Unit HI-06 is occupied by the species and contains one or more of the PBFs essential to the conservation of the species. This unit contains an elevated concentration of nesting green turtles during the nesting season, serving as an important nesting area while also providing internesting beach area to support placement of multiple nests by individual turtles within a single season and area for the nesting population of green turtles to expand and recover. This unit also contains basking male and female green turtles throughout the year, providing important basking habitat during non-reproductive periods. The remoteness of French Frigate Shoals provides overall limited disturbance to green turtle eggs, hatchlings, and adults compared to other areas within the DPS.

Threats to the PBFs identified within Unit HI-06 include habitat loss, modification, and degradation of nesting and basking beach habitat, naturally caused disasters (i.e., hurricanes and tsunamis), invasive nonnative vegetation, and presence of terrestrial and marine debris. Special management considerations or protection measures to reduce or alleviate the threats may include conducting habitat restoration or management, controlling and removing invasive plant species, enforcing rules to prevent invasive plants from being transported into the unit, and removing terrestrial debris from the beaches and marine debris that washes ashore. All lands within this unit are managed by the USFWS for wildlife and plant conservation purposes as the Hawaiian Islands NWR and the Papahānaumokuākea Marine National Monument, which provides additional management guidance and protection of the nesting and basking grounds for green turtles (Papahānaumokuākea Marine National Monument 2008, entire).

#### Unit HI-07: Halelea and Ko'olau Moku

Unit HI-07 consists of 69 ac (28 ha) along the north shore of the island of Kaua'i, Kaua'i County. This unit is located approximately 2 mi (4 km) to the west and 11 mi (18 km) to the east of community of Princeville, Kaua'i and includes beach, coastal vegetation, sandy shoals, and emergent sandy lands from the MHWL. The landward boundary is the line indicating the beginning of dense vegetation, cliff, or hardened or developed structures (e.g., retaining wall). This unit comprises 22

segments in 10 areas on the northeast side of the island:

(1) 4 segments within Hanalei Bay (west to east, 2 of which are less than 1 ac (less than 1 ha), 1 segment that is 4 ac (2 ha), and 1 segment that is 19 ac (8 ha));

(2) 1 segment on Sea Lodge Beach (less than 1 ac (less than 1 ha));

(3) 1 segment on 'Anini Beach (1 ac (less than 1 ha));

(4) 3 segments on Kalihiwai Beach (west to east, 1 ac (less than 1 ha), 3 ac (1 ha), and less than 1 ac (less than 1 ha));

(5) 6 segments at Kauapea Beach (west to east, less than 1 ac (less than 1 ha), less than 1 ac (less than 1 ha), 8 ac (3 ha), less than 1 ac (less than 1 ha), 6 ac (2 ha), and 7 ac (3 ha));

(6) 1 segment north of Crater Hill at Makapili Beach (4 ac (2 ha));

(7) 1 segment along the southwest shore of Kilauea Bay at Wailapa Beach (7 ac (3 ha));

(8) 1 segment on Pila'a Beach (2 ac (1 ha));

(9) 1 segment on Ka'aka'aniu Beach (a.k.a. Larsen's Beach or Lepeuli Beach) (3 ac (1 ha));

(10) 2 segments along Moloa'a Bay (from west to east, 3 ac (1 ha) and 1 ac (less than 1 ha)); and

(11) 1 segment on Pāpa'a Beach (1 ac (less than 1 ha)).

Lands within this unit include approximately 2 ac (1 ha; 2 percent) in Federal ownership, less than 1 ac (less than 1 ha; 1 percent) in State ownership, less than 1 ac (less than 1 ha, 1 percent) in local government ownership, 9 ac (3 ha; 12 percent) in private/other ownership, and 59 ac (24 ha; 85 percent) that are uncategorized. General land use within this unit is natural resource conservation, recreational activities (e.g., fishing, snorkeling, swimming, surfing, picnicking, camping, beachcombing, kayaking, paddle boarding, and body boarding), and tourism.

Unit HI-07 is occupied by the species and contains one or more of the PBFs essential to the conservation of the species. This unit has an elevated concentration of documented nesting green turtles as compared to other beaches in the same geographic area, indicating that it serves as an important nesting site. This unit also has basking green turtles year-round, demonstrating that it serves as important basking habitat throughout the year. Additionally, this unit contains internesting beach area to support placement of multiple nests by individual turtles within a single season and area for the nesting and basking population to expand and recover. The



segments of this unit at Makapili Beach, Wailapa Beach, Pīla'a Beach, Lepeuli Beach, Moloa'a Stream, Moloa'a Bay, and Papa'a Beach are surrounded by undeveloped forested lands, and many are also at the bottom of steep cliffs; therefore, these areas provide overall limited disturbance to green turtle eggs, hatchlings, and adults during the nesting season and throughout the year for basking green turtles. Approximately 1 ac (less than 1 ha; 2 percent) of the unit overlaps with currently designated critical habitat for a Hawaiian plant, *Ischaemum byrone* (68 FR 9116, February 27, 2003), at Kauapea Beach 5 and 6.

Threats to the PBFs identified within Unit HI-07 include habitat loss, modification, and degradation of nesting or basking beach habitat, naturally caused disasters (*i.e.*, hurricanes and tsunamis), invasive nonnative vegetation, shoreline stabilization and sand renourishment, recreation, coastal development and construction, artificial lights, and presence of terrestrial and marine debris. Special management considerations or protection measures to reduce or alleviate the threats may include conducting habitat restoration or management, including removal of invasive vegetation; conducting an outreach program on respectful viewing of wildlife; minimizing human access and activities during the nesting season; minimizing artificial lighting near nesting beaches; and removing terrestrial debris from the beaches and marine debris that washes ashore. Less than 1 ac (less than 1 ha) of the Federal lands within this unit are managed by the USFWS for plant and wildlife conservation as part of the Kīlauea Point NWR's Comprehensive Conservation Plan (USFWS 2016, entire).

#### Unit HI-08: Nā Pali Coast and Mānā Plains

Unit HI-08 consists of 254 ac (103 ha) along the western coast of the island of Kaua'i, Kaua'i County. This unit is located in and to the west of the community of Kekaha and includes beach, coastal vegetation, sandy shoals, and emergent sandy lands from the MHWL. The landward boundary is the line indicating the beginning of dense vegetation, cliff, or hardened or developed structures (*e.g.*, shoreline stabilization measures). This unit comprises four segments in two areas, from north to south: (1) two 7-ac (3-ha) segments along the Nā Pali Coast at Nu'alolo Kai Beach and Miloli'i Beach, respectively; and (2) two adjacent segments totaling 178 ac (72 ha) and 64 ac (26 ha) along the coast of Mānā Plains at Barking Sands to Polihale Beach and

Kekaha Beach, respectively. Lands within this unit include approximately 228 ac (92 ha; 90 percent) in State ownership and 26 ac (11 ha; 10 percent) that are uncategorized. General land use in this unit is natural resource conservation and recreational activities (*e.g.*, swimming, picnicking, fishing, camping, hiking, and sightseeing).

Unit HI-08 is occupied by the species and contains one or more of the PBFs essential to the conservation of the species. This unit has an elevated concentration of documented nesting green turtles as compared to other beaches in the area, demonstrating that it serves as an important nesting site. This unit also has basking green turtles year-round, which shows that it serves as important basking habitat throughout the year. Additionally, this unit contains internesting beach area to support placement of multiple nests by individual turtles within a single season and area for the nesting and basking population to expand and recover. Nu'alolo Kai and Miloli'i Beaches are in a remote part of Kaua'i, surrounded by undeveloped forested lands, and reside at the bottom of steep cliffs; therefore, these areas provide overall limited disturbance to green turtle eggs, hatchlings, and adults during the nesting season and throughout the year for basking green turtles. Approximately 191 ac (77 ha; 75 percent) of the unit overlaps with currently designated critical habitat for the following Hawaiian plants (68 FR 9116, February 27, 2003): *Brighamia insignis*, *Schenkia sebaeoides*, *Cyperus trachysanthos*, *Kadua stjohnii*, *Schiedea apokremnos*, *Panicum niihauense*, and *Sesbania tomentosa* at Miloli'i Beach, Nu'alolo Kai, Kekaha Beach, and Barking Sands-Polihale Beach.

Threats to the PBFs identified within Unit HI-08 include habitat loss, modification, and degradation of nesting or basking beach habitat, naturally caused disasters (*i.e.*, hurricanes and tsunamis), invasive nonnative vegetation, human activities (*i.e.*, shoreline stabilization, sand renourishment, transportation), recreation, artificial lights, and presence of terrestrial and marine debris. Special management considerations or protection measures to reduce or alleviate the threats may include conducting habitat restoration or management, including removal of invasive vegetation; conducting an outreach program on respectful viewing of wildlife; minimizing human access and activities during the nesting season; minimizing artificial lighting near nesting beaches; and removing terrestrial debris from the beaches and

marine debris that washes ashore. The State lands within this unit are managed by the Hawai'i Division of State Parks and the Hawai'i Division of Forestry and Wildlife for plant and wildlife conservation as part of the Nā Pali Coast State Wilderness Park, the Polihale State Park, and the Pu'u Ka Pele Forest Reserve (Hawai'i Division of State Parks (HDSP) 2022a, no page numbers; HDSP 2022b, no page numbers; HDOFAW 2022, entire).

#### Unit HI-09: Puna Moku on Kaua'i

Unit HI-09 consists of 33 ac (13 ha) along the eastern coast of the island of Kaua'i, Kaua'i County. This unit is located approximately 9 mi (15 km) to the northeast and 5 mi (8 km) to the southwest of the town of Lihue, Kaua'i and includes beach, coastal vegetation, sandy shoals, and emergent sandy lands from the MHWL. The landward boundary is the line indicating the beginning of dense vegetation, cliff, or hardened or developed structures (*e.g.*, shoreline stabilization measures or roadway or parking lot barriers). This unit comprises five segments in three areas: (1) three segments from north to south on Keālia Beach, Wailuā Beach, and Nukoli'i Beach (14 ac (6 ha), 5 ac (2 ha), and 6 ac (2 ha), respectively); (2) one segment less than 1 ac (less than 1 ha) on the northeast shoreline of Nāwiliwili Harbor at Ninini Beach; and (3) one segment on Kīpū Kai Beach (8 ac (3 ha)). Lands within this unit include approximately 3 ac (1 ha; 10 percent) in State ownership, 2 ac (1 ha, 7 percent) in local government ownership, 13 ac (5 ha; 41 percent) in private/other ownership, and 14 ac (6 ha; 42 percent) that are uncategorized. General land use within this unit is cultural resource preservation, recreational activities (*e.g.*, fishing, swimming, picnicking, and camping), tourism, and film production.

Unit HI-09 is occupied by the species and contains one or more of the PBFs essential to the conservation of the species. This unit has an elevated concentration of documented nesting green turtles as compared to other beaches in the area, demonstrating that it serves as an important nesting site. This unit also has basking green turtles year-round, which shows that it serves as important basking habitat throughout the year. Additionally, this unit contains internesting beach area to support placement of multiple nests by individual turtles within a single season and area for the nesting and basking population to expand and recover. The area at the Kīpū Kai Beach is only accessible through private land or by water, thereby providing overall limited



disturbance to green turtle eggs, hatchlings, and adults at this location during the nesting season and throughout the year for basking green turtles.

Threats to the PBFs identified within Unit HI-09 include habitat loss, modification, and degradation of nesting or basking beach habitat, naturally caused or human-caused disasters (*i.e.*, hurricanes, tsunamis, and oil spills), invasive nonnative vegetation, human activities (*i.e.*, shoreline stabilization, sand renourishment; dredging, and transportation), recreation, coastal development and construction, artificial lights, and presence of terrestrial and marine debris. Special management considerations or protection measures to reduce or alleviate the threats may include conducting habitat restoration or management, conducting an outreach program on respectful viewing of wildlife, minimizing human access and activities during the green turtle nesting season, minimizing artificial lighting near nesting beaches, and removing terrestrial debris on the beaches and marine debris that washes ashore.

#### Unit HI-10: Kona Moku on Kaua'i

Unit HI-10 consists of 14 ac (6 ha) in the communities of Hanapēpē, Lāwai, and Po'ipu, Kaua'i County on the island of Kaua'i. This unit is located approximately 6 mi (9 km) to the southwest and 7 mi (11 km) to the southeast of the community of Kalāheo, Kaua'i, and includes beach, coastal vegetation, sandy shoals, and emergent sandy lands from the MHWL. The landward boundary is the line indicating the beginning of dense vegetation, cliff, or hardened or developed structures. This unit comprises five segments in four areas: (1) one segment each on Hanapēpē Salt Pond Beach (4 ac (2 ha)) and Wahiawa Beach (1 ac (less than 1 ha)); (2) one segment on Lāwai Kai Beach (2 ac (1 ha)); (3) one segment along Poipu Beaches (3 ac (1 ha)); and (4) one segment along Keoniloa Bay at Shipwreck Beach (4 ac (1 ha)). Lands within this unit include approximately 4 ac (2 ha; 27 percent) in State ownership, 3 ac (1 ha; 18 percent) in local government ownership, 6 ac (3 ha; 45 percent) in private/other ownership, and 1 ac (1 ha; 10 percent) that is uncategorized. General land use within this unit is cultural preservation, recreational activities (*e.g.*, fishing, surfing, swimming, and picnicking), and tourism.

Unit HI-10 is occupied by the species and contains one or more of the PBFs essential to the conservation of the species. This unit has an elevated

concentration of documented nesting green turtles as compared to other beaches in the area, which demonstrates that it serves as an important nesting site. This unit also has basking green turtles throughout the year, which shows that it serves as important basking habitat during the year. In addition, this unit also contains interesting beach area to support placement of multiple nests by individual turtles within a single season and area for the nesting and basking population to expand and recover. This unit also has existing outreach efforts at Poipu Beaches to provide guidance on respectful wildlife viewing to reduce the harassment of basking and nesting turtles, thereby affording nesting and basking turtles in these areas limited disturbance compared to other beaches in the same geographic areas.

Threats to the PBFs identified within Unit HI-10 include habitat loss, modification, and degradation of nesting beach habitat, naturally caused and human-caused disasters (*i.e.*, hurricanes, tsunamis, and oil spills), invasive nonnative vegetation, shoreline stabilization and sand renourishment, recreation and tourism, coastal development and construction, artificial lights, and presence of terrestrial and marine debris. Special management considerations or protection measures to reduce or alleviate the threats may include conducting habitat restoration or management, including removal of invasive vegetation; conducting an outreach program on respectful viewing of wildlife; minimizing human access and activities during the green turtle nesting season; minimizing artificial lighting near nesting beaches; and removing terrestrial debris on the beaches and marine debris that washes ashore.

#### Unit HI-11: Northern Ko'olauloa Moku

Unit HI-11 consists of 132 ac (54 ha) in the communities of Hale'iwa, Kahuku, Lā'ie, and Hau'ula, Honolulu County. This unit is located less than 1 mi (1 km) north and 11 mi (17 km) east of the community of Pūpūkea, O'ahu, and includes beach, coastal vegetation, sandy shoals, and emergent sandy lands from the MHWL. The landward boundary is the line indicating the beginning of dense vegetation, cliff, or hardened or developed structures. This unit comprises 12 segments in 5 areas: (1) one segment on 'Ehukai Beach (37 ac (15 ha)); (2) two segments within Kawela Bay (west to east, 2 ac (1 ha) and 2 ac (1 ha)); (3) one segment each at Turtle Bay, Kaihalulu Beach, and Kahuku North Beach (5 ac (2 ha), 4 ac (1 ha), 19 ac (8 ha)); (4) two segments

along the shoreline of James Campbell NWR (north to south, 9 ac (3 ha) and 20 ac (8 ha)); and (5) one segment each on Kahuku Golf Course Beach, Malāekahana Beach, Hau'ula Beach, and Māka'o Beach (21 ac (8 ha), 11 ac (5 ha), 2 ac (1 ha), and less than 1 ac (less than 1 ha)). Lands within this unit include approximately 24 ac (10 ha; 18 percent) in Federal ownership, 26 ac (10 ha; 19 percent) in State ownership, less than 1 ac (less than 1 ha; less than 1 percent) in local government ownership, 30 ac (12 ha; 22 percent) in private/other ownership, and 53 ac (21 ha; 40 percent) that are uncategorized. General land use in this unit is natural resource conservation, recreational activities (*e.g.*, fishing, swimming, picnicking, and camping), flood control, tourism, and film production.

Unit HI-11 is occupied by the species and contains one or more of the PBFs essential to the conservation of the species. This unit has an elevated concentration of documented nesting green turtles as compared to other beaches in the area, demonstrating that it serves as an important nesting site. This unit also has basking green turtles year-round, which shows that it serves as important basking habitat throughout the year. Additionally, this unit contains interesting beach area to support placement of multiple nests by individual turtles within a single season and area for the nesting and basking population to expand and recover. Land managers within this unit also conduct outreach efforts for beach users regarding respectful wildlife viewing, thereby limiting disturbance to basking juveniles and adults, nesting females, and emerging green turtle hatchlings.

Threats to the PBFs identified within Unit HI-11 include habitat loss, modification, and degradation of nesting beach habitat from climate change, naturally caused disasters (*i.e.*, hurricanes and tsunamis), invasive nonnative vegetation, human activities (*i.e.*, shoreline stabilization, sand renourishment, and transportation), recreation and tourism, coastal development and construction, artificial lights, and presence of terrestrial and marine debris. Special management considerations or protection measures to reduce or alleviate the threats may include conducting habitat restoration or management, including removal of invasive vegetation; conducting an outreach program on respectful viewing of wildlife; minimizing human access and activities during the green turtle nesting season; minimizing artificial lighting near nesting beaches; and removing terrestrial debris on the beaches and marine debris that washes

ashore. Federal lands within this unit are managed by the USFWS for plant and wildlife conservation as part of the James Campbell NWR's Comprehensive Conservation Plan (USFWS 2011, entire). State lands are managed by the Hawai'i Department of Land and Natural Resources for recreation as part of the Malāekahana State Recreation Area (Kahuku Sec.) and Malāekahana State Recreation Area (Laie Sec.) (HDSP 2022c, no page numbers).

#### Unit HI-12: Waialua Moku

Unit HI-12 consists of 82 ac (33 ha) in the communities of Mokulē'ia, Waialua, and Haleiwa, Honolulu County. This unit is located approximately 26 to 30 mi (42 to 49 km) northwest of the city of Honolulu, O'ahu, and includes beach, sandy shoals, coastal vegetation, and emergent sandy lands from the MHWL. The landward boundary is the line indicating the beginning of dense vegetation, cliff, or hardened or developed structures (e.g., retaining walls, hardened shoreline, or abandoned military structures). This unit comprises 12 segments in 5 areas: (1) 2 segments along Mokulē'ia Beach (from west to east, 19 ac (8 ha) and 9 ac (3 ha)); (2) 1 segment that runs parallel to Croizer Drive (10 ac (4 ha)); (3) 2 segments within Ali'i Beach Park (from west to east, 6 ac (2 ha) and 3 ac (1 ha)); (4) 4 segments within Hale'iwa Beach Park and Pua'ena Beach (from west to east, 1 segment that is 3 ac (1 ha), and 3 segments each of which are less than 1 ac (less than 1 ha); and (5) 3 segments east of Pua'ena Point at Pua'ena Point to Papailoa Beach, and Chun's Reef (from west to east, 22 ac (9 ha), 5 ac (2 ha), and 7 ac (3 ha)). Lands within this unit include approximately less than 1 ac (less than 1 ha; less than 1 percent) in Federal ownership, 7 ac (3 ha; 9 percent) in State ownership, 5 ac (2 ha; 6 percent) in local government ownership, 29 ac (12 ha; 35 percent) in private/other ownership, and 41 ac (17 ha; 44 percent) that are uncategorized. General land use within this unit is natural resource conservation, recreational activities (e.g., swimming, snorkeling, scuba diving, surfing, picnicking, camping, fishing, hiking, and sky diving), tourism, and film production.

Unit HI-12 is occupied by the species and contains one or more of the PBFs essential to the conservation of the species. This unit contains an elevated concentration of nesting green turtles along the western coast of the north shore of O'ahu. It serves as an important nesting area while also providing interesting beach area to support

placement of multiple nests by individual turtles within a single season and area for the nesting population of green turtles to expand and recover. This unit also contains basking male and female green turtles year-round, serving as important basking habitat throughout the year. This unit has existing outreach efforts at beaches for beach users on respectful wildlife viewing guidance, thereby affording nesting and basking turtles in these areas limited disturbance compared to other beaches in the same geographic areas. Approximately less than 1 ac (less than 1 ha; 0 percent) of the unit overlaps with currently designated critical habitat for the following Hawaiian plants (77 FR 57647, September 18, 2012): *Achyranthes splendens* var. *rotundata* *Bidens amplexens*, *Euphorbia celastroides* var. *kaenana*, *Schenkia sebaeoides*, *Sesbania tomentosa*, and *Vigna o-wahuensis* in Mokulē'ia Beach.

Threats to the PBFs identified within Unit HI-12 include habitat loss, modification, and degradation of nesting or basking beach habitat, naturally caused disasters (i.e., hurricanes and tsunamis), invasive nonnative vegetation, human activities (i.e., shoreline stabilization, sand renourishment, transportation, and dredging), recreation and tourism, coastal development and construction, artificial lights, and presence of terrestrial and marine debris. Special management considerations or protection measures to reduce or alleviate the threats may include conducting habitat restoration or management, including removal of invasive vegetation; conducting an outreach program on respectful viewing of wildlife; minimizing human access and activities during the green turtle nesting season; minimizing artificial lighting near nesting beaches; and removing terrestrial debris on the beaches and marine debris that washes ashore. State lands are managed by the State of Hawai'i Division of State Parks for plant and wildlife conservation as the Ka'ena Point State Park (Hawai'i Department of Land and Natural Resources (HDLNR) 2011, entire).

#### Unit HI-13: Wai'anae Moku

Unit HI-13 consists of 13 ac (5 ha) along the west coast of O'ahu, Honolulu County. This unit is located approximately 26 to 30 mi (41 to 49 km) northwest of the city of Honolulu, O'ahu, and includes beach, sandy shoals, coastal vegetation, and emergent sandy lands from the MHWL. The landward boundary is the line indicating the beginning of dense

vegetation. This unit comprises two segments: 13 ac (5 ha) and less than 1 ac (less than 1 ha)) south of Ka'ena Point at Puau Beach and Laukīnui (a.k.a. Aki's Cove). Lands within this unit include approximately 13 ac (5 ha; 98 percent) in State ownership, less than 1 ac (less than 1 ha; 1 percent) in private ownership, and less than 1 ac (less than 1 ha; 1 percent) that is uncategorized. General land use within this unit is recreational activities (e.g., fishing, snorkeling, swimming, surfing, kayaking, paddle boarding, body boarding, picnicking, camping, beachcombing, and hiking).

Unit HI-13 is occupied by the species and contains one or more of the PBFs essential to the conservation of the species. This unit is the only unit that contains documented nesting green turtles along the western coast of O'ahu, serving as an important nesting area while also providing interesting beach area to support placement of multiple nests by individual turtles within a single season and area for the nesting population of green turtles to expand and recover. This unit also contains basking male and female green turtles year-round, demonstrating that it serves as an important basking habitat throughout the year. Additionally, the remoteness of Puau Beach and Mākua Beach, which are surrounded by undeveloped lands, reduces artificial lighting impacts that occur in other beach areas of the DPS during the nesting season.

Threats to the PBFs identified within Unit HI-13 include habitat loss, modification, and degradation of nesting beach habitat, naturally caused disasters (i.e., hurricanes and tsunamis), invasive nonnative vegetation, recreation and tourism, coastal development and construction, artificial lights, and presence of terrestrial and marine debris. Special management considerations or protection measures to reduce or alleviate the threats may include conducting habitat restoration or management, including removal of invasive vegetation; conducting an outreach program on respectful viewing of wildlife; minimizing human access and activities during the green turtle nesting season; minimizing artificial lighting near nesting beaches; and removing terrestrial debris on the beaches and marine debris that washes ashore. State-owned lands within this unit are managed by HDSP for plant and wildlife conservation as part of the Ka'ena Point State Park (HDLNR 2011, entire).

## Unit HI-14: Ko'olaupoko Moku

Unit HI-14 consists of 53 ac (22 ha) along the east coast of O'ahu, Honolulu County. This unit is located approximately 12 to 14 mi (20 to 22 km) north and east of the city of Honolulu, O'ahu, and includes beach, sandy shoals, coastal vegetation, and emergent sandy lands from the MHWL. The landward boundary is the line indicating the beginning of dense vegetation, cliff, or hardened or developed structures (e.g., retaining walls, hardened shoreline, or abandoned military structures). This unit comprises seven segments in four areas: (1) one segment along the shores of Kāne'ohe Bay at Mōli'i Beach (4 ac (1 ha)); (2) four segments along the east coast of O'ahu on Kailua Beach, Bagley Beach (a.k.a. Sherwoods Beach), Kalapueo Beach, and Makapu'u Beach (29 ac (12 ha), 10 ac (4 ha), 2 ac (1 ha), and 3 ac (1 ha)); (3) one segment at Mānana Island (a.k.a. Rabbit Island) (1 ac (less than 1 ha)); and (4) one segment along the southeast shore of O'ahu at Sandy Beach (4 ac (2 ha)). Lands within this unit include approximately 7 ac (3 ha; 14 percent) in State ownership, 3 ac (1 ha; 6 percent) in local government ownership, less than 1 ac (less than 1 ha; 1 percent) in private/other ownership, and 42 ac (17 ha; 79 percent) that are uncategorized. General land use within this unit is natural resource conservation, recreational activities (e.g., fishing, snorkeling, swimming, surfing, picnicking, camping, beachcombing, kayaking, paddle boarding, and body boarding), and tourism.

Unit HI-14 is occupied by the species and contains one or more of the PBFs essential to the conservation of the species. This unit has an elevated concentration of documented nesting green turtles as compared to other beaches in the area, demonstrating that it serves as an important nesting site. This unit also has basking green turtles year-round, which shows that it serves as important basking habitat throughout the year. Additionally, this unit contains internesting beach area to support placement of multiple nests by individual turtles within a single season and area for the nesting and basking population to expand and recover. Some areas in this unit have existing outreach efforts at beaches for beach users on respectful wildlife viewing guidance, thereby affording nesting and basking turtles in these areas limited disturbance compared to other beaches in the same geographic areas. Approximately 1 ac (less than 1 ha; 2 percent) of the unit overlaps with

currently designated critical habitat for the following Hawaiian plants (77 FR 57648, September 18, 2012): *Chamaesyce kuwaleana*, *Sesbania tomentosa*, and *Vigna o-wahuensis* at Mānana Island.

Threats to the PBFs identified within Unit HI-14 include habitat loss, modification, and degradation of nesting beach habitat, naturally caused disasters (i.e., hurricanes and tsunamis), invasive nonnative vegetation, human activities (i.e., shoreline stabilization, sand renourishment, transportation, dredging, and flood control), recreation and tourism, coastal development and construction, artificial lights, and presence of terrestrial and marine debris. Special management considerations or protection measures to reduce or alleviate the threats may include conducting habitat restoration or management, including removal of invasive vegetation; conducting an outreach program on respectful viewing of wildlife; minimizing human access and activities during the green turtle nesting season; minimizing artificial lighting near nesting beaches; and removing terrestrial debris on the beaches and marine debris that washes ashore. State-owned lands within this unit are managed by HDSP and HDOFAW for plant and wildlife conservation as part of the Kaiwi Scenic Shoreline and Mānana Island Seabird Sanctuary (HDSP 2022d, no page numbers; HDSP 2002e, no page numbers; HDOFAW 2022, no page numbers).

## Unit HI-15: 'Ewa Moku

Unit HI-15 consists of 9 ac (4 ha) in the community of 'Ewa Beach, Honolulu County, on the island of O'ahu. This unit is located approximately 9 to 17 mi (14 to 28 km) west of the city of Honolulu, O'ahu, and includes beach, sandy shoals, coastal vegetation, and emergent sandy lands from the MHWL. The landward boundary is the line indicating the beginning of dense vegetation, or hardened or developed structures (e.g., retaining walls or hardened shoreline). This unit comprises three segments in two areas west of Pearl Harbor: (1) one segment on the southwest coast of O'ahu at Lanikūhonua Beach (1 ac (less than 1 ha)); and (2) two segments along 'Ewa Beach (from west to east, less than 1 ac (less than 1 ha) and 8 ac (3 ha)). Lands within this unit include approximately less than 1 ac (less than 1 ha; 3 percent) in local government ownership, 2 ac (1 ha; 25 percent) in private/other ownership, and 7 ac (3 ha; 72 percent) that are uncategorized. General land use within this unit is natural resource

conservation, recreational activities (e.g., fishing, snorkeling, swimming, surfing, picnicking, camping, and beachcombing), and tourism.

Unit HI-15 is occupied by the species and contains one or more of the PBFs essential to the conservation of the species. This unit has an elevated concentration of documented nesting green turtles as compared to other beaches in the area, demonstrating that it serves as an important nesting site. This unit also has basking green turtles year-round, which shows that it serves as important basking habitat throughout the year. Additionally, this unit contains internesting beach area to support placement of multiple nests by individual turtles within a single season and area for the nesting and basking population to expand and recover.

Threats to the PBFs identified within Unit HI-15 include habitat loss, modification, and degradation of nesting beach habitat, naturally caused disasters (i.e., hurricanes and tsunamis), invasive nonnative vegetation, shoreline stabilization and sand renourishment, recreation and tourism, coastal development and construction, artificial lights, and presence of terrestrial and marine debris. Special management considerations or protection measures to reduce or alleviate the threats may include conducting habitat restoration or management, conducting an outreach program on respectful viewing of wildlife, minimizing human access and activities during the green turtle nesting season, minimizing artificial lighting near nesting beaches, and removing terrestrial debris on the beaches and marine debris that washes ashore.

## Unit HI-16: Moloka'i Island

Unit HI-16 consists of 160 ac (65 ha) along the eastern and northern coasts of Moloka'i, Maui County, and Kalawao County (Kalaupapa National Historical Park). This unit is located approximately 7 to 17 mi (11 to 27 km) northwest to north of the town of Kaunakakai, Moloka'i, and includes beach, sandy shoals, coastal vegetation, and emergent sandy lands from the MHWL. The landward boundary is the line indicating the beginning of dense vegetation or cliff. This unit comprises eight segments in five areas: (1) two segments on Kawākiu Gulch Beach (3 ac (1 ha) and less than 1 ac (less than 1 ha)); (2) two segments on Pāpōhakumāuliuli Beach (3 ac (1 ha) and 2 ac (1 ha)); (3) one segment each at Kepuhi Beach (12 ac (5 ha)) and Pāpōhaku Beach (66 ac (27 ha)); (4) one segment at Kawa'aloa Beach (48 ac (19 ha)); and (5) 26 ac (10 ha) at 'Awahua Beach. Lands within this unit include



approximately 15 ac (6 ha; 10 percent) in State ownership, 104 ac (42 ha; 65 percent) in private ownership, and 40 ac (16 ha; 25 percent) that are uncategorized. General land use within this unit is cultural resource preservation, natural resource conservation, recreational activities (e.g., fishing, snorkeling, swimming, surfing, picnicking, camping, beachcombing, kayaking, paddle boarding, body boarding), and tourism.

Unit HI-16 is occupied by the species and contains one or more of the PBFs essential to the conservation of the species. This unit has an elevated concentration of documented nesting green turtles as compared to other beaches in the area, demonstrating that it serves as an important nesting site. This unit also has basking green turtles year-round, which shows that it serves as important basking habitat throughout the year. Additionally, this unit contains interesting beach area to support placement of multiple nests by individual turtles within a single season and area for the nesting and basking population to expand and recover. The island of Moloka'i is mainly vast tracts of undeveloped natural coastal and forest habitat that surround the beach nesting areas, thereby providing limited disturbance from human activities during the nesting season as compared to other areas within the DPS. The small human population on the island also limits the amount of disturbance to basking green turtles (compared to other areas within the DPS).

Threats to the PBFs identified within Unit HI-16 include habitat loss, modification, and degradation of nesting and basking beach habitat, naturally caused disasters (i.e., hurricanes and tsunamis), invasive nonnative vegetation, recreation and tourism, and presence of terrestrial and marine debris. Special management considerations or protection measures to reduce or alleviate the threats may include conducting habitat restoration or management, including removal of invasive vegetation; conducting an outreach program on respectful viewing of wildlife; minimizing human access and activities during the green turtle nesting season; and removing terrestrial debris on the beaches and marine debris that washes ashore. Federal lands within this unit are leased from the State and managed by the National Park Service (NPS) for cultural and historical preservation and plant and wildlife conservation as part of the Kalaupapa National Historical Park (NPS 2021a, entire). Privately owned lands within this unit are managed by The Nature Conservancy (TNC) as the Mo'omomi

Preserve for plant and wildlife conservation (TNC 2011, entire).

#### Unit HI-17: Kā'anapali Moku

Unit HI-17 consists of 34 ac (14 ha) along the northeast coast of Maui, Maui County. This unit is located approximately 1 to 5 mi (2 to 8 km) northeast and southwest of the community of Kapalua, including beach, sandy shoals, coastal vegetation, and emergent sandy lands from the MHWL. The landward boundary is the line indicating the beginning of dense vegetation or hardened or developed structures (e.g., retaining walls, hardened shoreline, or buildings). This unit includes five segments in three areas: (1) one segment on D.T. Fleming Beach Park (4 ac (2 ha)); (2) one segment less than 1 ac (less than 1 ha) on 'Alaeloa Beach; and (3) one segment each on Pōhakuanapali Beach (5 ac (2 ha)), Honokōwai Beach (3 ac (1 ha)), and Kā'anapali Beach 1 (21 ac (9 ha)). Lands within this unit include approximately 1 ac (less than 1 ha; 2 percent) in State ownership, 10 ac (4 ha; 30 percent) in private ownership, and 23 ac (9 ha; 68 percent) that are uncategorized. General land use within this unit is recreational activities (e.g., fishing, snorkeling, swimming, surfing, picnicking, camping, beachcombing, kayaking, paddle boarding, and body boarding) and tourism.

Unit HI-17 is occupied by the species and contains one or more of the PBFs essential to the conservation of the species. This unit has an elevated concentration of documented nesting green turtles as compared to other beaches in the area, demonstrating that it serves as an important nesting site. This unit also has basking green turtles year-round, which shows that it serves as important basking habitat throughout the year. Additionally, this unit contains interesting beach area to support placement of multiple nests by individual turtles within a single season and area for the nesting and basking population to expand and recover.

Threats to the PBFs identified within Unit HI-17 include habitat loss, modification, and degradation of nesting and basking beach habitat, naturally caused disasters (i.e., hurricanes and tsunamis), invasive nonnative vegetation, human activities (i.e., shoreline stabilization, sand renourishment, and transportation), recreation and tourism, coastal development and construction, artificial lights, and presence of terrestrial and marine debris. Special management considerations or protection measures to reduce or alleviate the threats may include conducting habitat restoration

or management, conducting an outreach program on respectful viewing of wildlife, minimizing human access and activities during the green turtle nesting season, minimizing artificial lighting near nesting beaches, and removing terrestrial debris on the beaches and marine debris that washes ashore.

#### Unit HI-18: Pū'ali Komohana and Hāmākuapoko Moku

Unit HI-18 consists of 73 ac (29 ha) on the northeast coastline of West Maui and the northwest coastline of East Maui, Maui County, on the island of Maui. This unit is located approximately 5 to 8 mi (7 to 13 km) northwest to east of the community of Kahului and includes beach, sandy shoals, coastal vegetation, and emergent sandy lands from the MHWL. The landward boundary is the line indicating the beginning of dense vegetation, cliff, or hardened or developed structures (e.g., retaining walls, hardened shoreline, or a building). This unit comprises 16 segments in 6 areas: (1) northwest of Kahului Harbor, 1 segment each on Kalaeli'i'i'i Beach, Waihee Beach, and Kā'ehu Beach (7 ac (3 ha), 6 ac (3 ha), and 7 ac (3 ha)); (2) 4 segments by the Kahului International Airport along Kanahā Beach (from west to east, 1 ac (less than 1 ha), less than 1 ac (less than 1 ha), 4 ac (2 ha), and 10 ac (4 ha)); (3) 1 segment along Papa'ula Point (7 ac (3 ha)); (4) 3 segments east of the Kahului International Airport along Spreckelsville Beach (from west to east, 2 ac (1 ha), and 2 segments each of which are 1 ac (less than 1 ha)); (5) 1 segment on Kapukaulua Beach (17 ac (7 ha)); (3) 2 segments along Pā'ia Bay (from west to east, 2 ac (1 ha) and 3 ac (1 ha)); and (6) 2 segments along Hāmākuapoko-Ho'okipa Beach (from west to east, 2 ac (1 ha) and 2 ac (1 ha)). Lands within this unit include approximately 17 ac (7 ha; 23 percent) in State ownership, 6 ac (2 ha; 8 percent) in local government ownership, 30 ac (12 ha; 42 percent) in private/other ownership, and 19 ac (8 ha; 27 percent) that are uncategorized. General land use within this unit is archeological and cultural preservation, natural resource conservation, recreational activities (e.g., fishing, snorkeling, swimming, surfing, picnicking, camping, beachcombing, kayaking, paddle boarding, body boarding), and tourism.

Unit HI-18 is occupied by the species and contains one or more of the PBFs essential to the conservation of the species. This unit has an elevated concentration of documented nesting green turtles as compared to other



beaches in the area, demonstrating that it serves as an important nesting site. This unit also has basking green turtles year-round, which shows that it serves as important basking habitat throughout the year. Additionally, this unit contains interesting beach area to support placement of multiple nests by individual turtles within a single season and area for the nesting and basking population to expand and recover. The majority of the beach areas in this unit are adjacent to parks, airports, golf courses, or forested areas, thereby providing reduced levels of impacts compared to other areas within the DPS. This unit has existing outreach efforts at some beaches for beach users on respectful wildlife viewing guidance, thereby affording nesting and basking turtles in these areas limited disturbance compared to other beaches in the same geographic areas. Approximately 6 ac (2 ha; 8 percent) of the unit overlap with designated critical habitat for Blackburn's sphinx moth (68 FR 34710, June 10, 2003) at Kanahā Beach.

Threats to the PBFs identified within Unit HI-18 include habitat loss, modification, and degradation of nesting beach habitat, naturally caused disasters (*i.e.*, hurricanes and tsunamis), invasive nonnative vegetation, recreation and tourism, coastal development and construction, artificial lights, and presence of terrestrial and marine debris. Special management considerations or protection measures to reduce or alleviate the threats may include conducting habitat restoration or management, conducting an outreach program on respectful viewing of wildlife, minimizing human access and activities during the green turtle nesting season, minimizing artificial lighting near nesting beaches; and removing terrestrial debris on the beaches and marine debris that washes ashore. The privately owned lands within this unit are managed by Hawai'i Land Trust as part of the Waihe'e Coastal Dunes and Wetlands Refuge for archeological and cultural preservation, plant and wildlife conservation, and recreation (Hawai'i Land Trust 2022, no page numbers).

#### Unit HI-19: Lāhainā Moku

Unit HI-19 consists of 32 ac (13 ha) from the communities of Kā'anapali to Lāhainā, Maui County. This unit is located approximately 1 to 3 mi (2 to 5 km) northwest and southeast of the town of Lāhainā and includes beach, sandy shoals, coastal vegetation, and emergent sandy lands from the MHWL. The landward boundary is the line indicating the beginning of dense vegetation, or hardened or developed

structures (*e.g.*, retaining walls, hardened shoreline, or buildings). This unit comprises three segments: (24 ac (10 ha), 2 ac (1 ha), and 6 ac (2 ha)) at Kā'anapali Beach, Wahikuli Beach, and Lāhainā Beach. Lands within this unit include approximately less than 1 ac (less than 1 ha; less than 1 percent) in State ownership, 3 ac (1 ha; 9 percent) in local government ownership, 7 ac (3 ha; 21 percent) in private/other ownership, and 23 ac (9 ha; 70 percent) that are uncategorized. General land use within this unit is recreational activities (*e.g.*, fishing, snorkeling, swimming, surfing, picnicking, camping, beachcombing, kayaking, paddle boarding, and body boarding) and tourism.

Unit HI-19 is occupied by the species and contains one or more of the PBFs essential to the conservation of the species. This unit has an elevated concentration of documented nesting green turtles as compared to other beaches in the area, demonstrating that it serves as an important nesting site. This unit also has basking green turtles year-round, which shows that it serves as important basking habitat throughout the year. Additionally, this unit contains interesting beach area to support placement of multiple nests by individual turtles within a single season and area for the nesting and basking population to expand and recover.

Threats to the PBFs identified within Unit HI-19 include habitat loss, modification, and degradation of nesting and basking beach habitat, naturally caused disasters (*i.e.*, hurricanes and tsunamis), invasive nonnative vegetation, shoreline stabilization and sand renourishment, recreation and tourism, coastal development and construction, artificial lights, and presence of terrestrial and marine debris. Special management considerations or protection measures to reduce or alleviate the threats may include conducting habitat restoration or management, conducting an outreach program on respectful viewing of wildlife, minimizing human access and activities during the green turtle nesting season, minimizing artificial lighting near nesting beaches, and removing terrestrial debris on the beaches and marine debris that washes ashore.

#### Unit HI-20: South Pū'ali Komohana and Kula Moku

Unit HI-20 consists of 17 ac (7 ha) along the shores of Mā'alaea Bay in Kīhei, Maui County. This unit is located approximately 13 to 17 mi (21 to 27 km) south of the town of Lāhainā and includes beach, sandy shoals, coastal vegetation, and emergent sandy lands

from the MHWL. The landward boundary is the line indicating the beginning of dense vegetation, cliff, or hardened or developed structures (*e.g.*, retaining walls, hardened shoreline, or buildings). This unit comprises three segments, one each on Mā'alaea Beach (less than 1 ac (less than 1 ha)), Kalepolepo Beach (4 ac (1 ha)), and Kawillipoa Beach (13 ac (5 ha)). Lands within this unit include approximately less than 1 ac (less than 1 ha; less than 1 percent) in Federal ownership, less than 1 ac (less than 1 ha; 1 percent) in State ownership, 4 ac (2 ha; 26 percent) in local government ownership, less than 1 ac (less than 1 ha; 1 percent) in private/other ownership, and 12 ac (5 ha; 73 percent) that are uncategorized. General land use in this unit is recreational activities (*e.g.*, fishing, snorkeling, swimming, surfing, picnicking, camping, beachcombing, kayaking, paddle boarding, and body boarding) and tourism.

Unit HI-20 is occupied by the species and contains one or more of the PBFs essential to the conservation of the species. This unit has an elevated concentration of documented nesting green turtles as compared to other beaches in the area, demonstrating that it serves as an important nesting site. This unit also has basking green turtles year-round, which shows that it serves as important basking habitat throughout the year. Additionally, this unit contains interesting beach area to support placement of multiple nests by individual turtles within a single season and area for the nesting and basking population to expand and recover. This unit has existing outreach efforts at some beaches for beach users on respectful wildlife viewing guidance, thereby affording nesting and basking turtles in these areas limited disturbance compared to other beaches in the same geographic areas.

Threats to the PBFs identified within Unit HI-20 include habitat loss, modification, and degradation of nesting and basking beach habitat, naturally caused disasters (*i.e.*, hurricanes and tsunamis), invasive nonnative vegetation, shoreline stabilization and sand renourishment, recreation and tourism, coastal development and construction, artificial lights, and presence of terrestrial and marine debris. Special management considerations or protection measures to reduce or alleviate the threats may include conducting habitat restoration or management, including removal of invasive vegetation; conducting an outreach program on respectful viewing of wildlife; minimizing human access and activities during the green turtle

nesting season; minimizing artificial lighting near nesting beaches; and removing terrestrial debris on the beaches and marine debris that washes ashore. The Federal land within this unit is the NOAA Hawaiian Islands Humpback Whale National Marine Sanctuary Visitor Center, which provides outreach and stewardship for the protection of marine species and their habitats, including the green turtle nesting and basking beaches.

#### Unit HI-21: Hāna Moku

Unit HI-21 consists of 3 ac (1 ha) in the small rural community of Hāna, Maui County. This unit is located approximately 46 mi (74 km) southeast of the town of Lāhainā and includes beach, sandy shoals, coastal vegetation, emergent sandy lands, and low shelving reef or rock above the MHWL. The landward boundary is the line indicating the beginning of dense vegetation or cliff. This unit comprises three segments in two areas: (1) two segments on Hāmoa Beach (from north to south, 2 ac (1 ha) and less than 1 ac (less than 1 ha)), and (2) 1 ac (less than 1 ha) on Hāna Beach. Lands within this unit include approximately 2 ac (1 ha; 63 percent) in private ownership and 1 ac (less than 1 ha; 37 percent) that is uncategorized. General land use in this unit is recreational activities (e.g., fishing, snorkeling, swimming, surfing, picnicking, camping, beachcombing, kayaking, paddle boarding, and body boarding) and tourism.

Unit HI-21 is occupied by the species and contains one or more of the PBFs essential to the conservation of the species. This unit has an elevated concentration of documented nesting green turtles as compared to other beaches in the area, demonstrating that it serves as an important nesting site. This unit also has basking green turtles year-round, which shows that it serves as important basking habitat throughout the year. Additionally, this unit contains interesting beach area to support placement of multiple nests by individual turtles within a single season and area for the nesting and basking population to expand and recover. The segments of the unit near the concentrated residential area (and small population) of Hana contains a significant amount of tall vegetation that buffers the nesting beach from artificial lights, and all the areas in this unit are surrounded by large tracts of abandoned agricultural fields, with the segment near Hana being at the bottom of a steep cliff; therefore, these areas provide overall limited disturbance to nesting and basking green turtles compared to other areas within the DPS.

Threats to the PBFs identified within Unit HI-21 include habitat loss, modification, and degradation of nesting beach habitat, naturally caused disasters (i.e., hurricanes and tsunamis), invasive nonnative vegetation, recreation and tourism, and presence of terrestrial and marine debris. Special management considerations or protection measures to reduce or alleviate the threats may include conducting habitat restoration or management, including removal of invasive vegetation; conducting an outreach program on respectful viewing of wildlife; minimizing human access and activities during the green turtle nesting season; and removing terrestrial debris on the beaches and marine debris that washes ashore.

#### Unit HI-22: Honuaʻula Moku

Unit HI-22 consists of less than 1 ac (less than 1 ha) along the south coast of Maui, Maui County. This unit is located approximately 22 to 25 mi (35 to 40 km) southeast of the town of Lāhainā and includes beach, emergent sandy lands, and low shelving reef or rock from the MHWL. The landward boundary is the line indicating the beginning of dense vegetation, a lava rock, or hardened or developed structures (e.g., hardened shoreline). This unit comprises two segments, both of which are less than 1 ac (less than 1 ha) each at Mākena Landing Beach and Mokuha Beach. Lands within this unit include approximately less than 1 ac (less than 1 ha; 83 percent) in State ownership and less than 1 ac (less than 1 ha; 11 percent) in private ownership. General land use in this unit is natural resource conservation and recreational activities (e.g., fishing, snorkeling, swimming, and picnicking).

Unit HI-22 is occupied by the species and contains one or more of the PBFs essential to the conservation of the species. This unit has an elevated concentration of documented nesting green turtles as compared to other beaches in the area, demonstrating that it serves as an important nesting site. This unit also has basking green turtles year-round, which shows that it serves as important basking habitat throughout the year. Additionally, this unit contains interesting beach area to support placement of multiple nests by individual turtles within a single season and area for the nesting and basking population to expand and recover.

The segment at Mokuha Beach is along the undeveloped south coast of East Maui, surrounded by approximately 1,238 ac (501 ha) of inhospitable coastal lava flow within the ʻĀhihi-Kīnaʻu Natural Area Reserve. Additionally, there is limited access to

this beach compared to other areas within the DPS, further limiting impacts to green turtles during the nesting season and basking turtles year-round. Approximately less than 1 ac (less than 1 ha; 78 percent) of the unit overlaps with designated critical habitat for Blackburn's sphinx moth (68 FR 34710, June 10, 2003), as well as the following Hawaiian plants (81 FR 17790, March 30, 2016): *Bidens micrantha* ssp. *kalealaha*, *Bonamia menziesii*, *Canavalia pubescens*, *Cenchrus agrimonoides*, *Colubrina oppositifolia*, *Ctenitis squamigera*, *Flueggea neowawraea*, *Hibiscus brackenridgei*, *Melanthera kamolensis*, *Melicope mucronulata*, *Neraudia sericea*, *Nototrichium humile*, *Santalum haleakalae* var. *lanaiense*, *Sesbania tomentosa*, *Solanum incompletum*, *Spermolepis hawaiiensis*, and *Zanthoxylum hawaiiensis* at Mokuha Beach.

Threats to the PBFs identified within Unit HI-22 include habitat loss, modification, and degradation of nesting and basking beach habitat, naturally caused disasters (i.e., hurricanes and tsunamis), invasive nonnative vegetation, shoreline stabilization, recreation and tourism, artificial lights, and presence of terrestrial and marine debris. Special management considerations or protection measures to reduce or alleviate the threats may include conducting habitat restoration or management, including removal of invasive vegetation; conducting an outreach program on respectful viewing of wildlife; minimizing human access and activities during the green turtle nesting season; minimizing artificial lighting near nesting beaches; and removing terrestrial debris on the beaches and marine debris that washes ashore. The State lands within this unit are managed by HDOWFAW for wildlife conservation as part of the ʻĀhihi-Kīnaʻu Natural Area Reserve (HDOWFAW 2012, entire).

#### Unit HI-23: Lānaʻi Island

Unit HI-23 consists of 161 ac (65 ha) along the north and northeast coast of Lānaʻi, Maui County. This unit is located approximately 6 to 10 mi (10 to 16 km) northwest to northeast of Lānaʻi City and includes beach, sandy shoals, coastal vegetation, and emergent sandy lands from the MHWL. The landward boundary is the line indicating the beginning of dense vegetation. This unit comprises six segments in two areas: (1) 86 ac (35 ha) at Polihua Beach; and (2) five segments in Koʻolau Moku (west to east, 9 ac (4 ha), 1 ac (less than 1 ha), 16 ac (7 ha), 7 ac (3 ha), and 43 ac (17 ha)). Lands within this unit include

approximately 145 ac (59 ha; 90 percent) in private ownership and 17 ac (7 ha; 10 percent) that are uncategorized. General land use in this unit is recreational activities (e.g., fishing, snorkeling, swimming, surfing, picnicking, camping, and hunting).

Unit HI-23 is occupied by the species and contains one or more of the PBFs essential to the conservation of the species. This unit has an elevated concentration of documented nesting green turtles as compared to other beaches in the area, demonstrating that it serves as an important nesting site. This unit also has basking green turtles year-round, which shows that it serves as important basking habitat throughout the year. Additionally, this unit contains interesting beach area to support placement of multiple nests by individual turtles within a single season and area for the nesting and basking population to expand and recover. The areas in this unit are also not near the developed areas and access to the unit is over rough terrain, further limiting disturbance to green turtles that are nesting and basking.

Threats to the PBFs identified within Unit HI-23 include habitat loss, modification, and degradation of nesting and basking beach habitat, naturally caused disasters (i.e., hurricanes and tsunamis), invasive nonnative vegetation, recreation and tourism, and presence of terrestrial and marine debris. Special management considerations or protection measures to reduce or alleviate the threats may include conducting habitat restoration or management, including removal of invasive vegetation; conducting an outreach program on respectful viewing of wildlife; minimizing human access and activities during the green turtle nesting season; and removing terrestrial debris on the beaches and marine debris that washes ashore. All lands within this unit are managed by HDOWFAW as part of the Lānaʻi Cooperative Game Management Area (HDOWFAW 2022, no page numbers).

#### Unit HI-24: Kahoʻolawe Island

Unit HI-24 consists of 3 ac (1 ha) along the west coast of the island of Kahoʻolawe, Maui County. This unit is located approximately 25 mi (41 km) southeast of Lānaʻi City and includes beach and coastal vegetation from the MHWL. The landward boundary is the line indicating the beginning of dense vegetation. All lands within this unit are in State ownership. General land use within this unit is cultural resource preservation and natural resource conservation.

Unit HI-24 is occupied by the species and contains one or more of the PBFs essential to the conservation of the species. This unit has an elevated concentration of documented nesting green turtles as compared to other beaches in the area, demonstrating that it serves as an important nesting site. This unit also has basking green turtles year-round, which shows that it serves as important basking habitat throughout the year. Additionally, this unit contains interesting beach area to support placement of multiple nests by individual turtles within a single season and area for the nesting and basking population to expand and recover. Access to the island of Kahoʻolawe is restricted to boat or helicopter, which is strictly coordinated by the Kahoʻolawe Island Reserve Commission and a nonprofit organization, and much of the land is off limits due to unexploded ordnance remaining in the ground after being used in the past by the U.S. military for bombing training. Therefore, this area provides overall limited disturbance to nesting and basking green turtles compared to other areas within the DPS. Most of the unit (just under 3 ac (1 ha; 94 percent)) overlaps with designated critical habitat for three Hawaiian plants (81 FR 17790, March 30, 2016): *Kanaloa kahoʻolawensis*, *Sesbania tomentosa*, and *Vigna o-wahuensis*.

Threats to the PBFs identified within Unit HI-24 include habitat loss, modification, and degradation of nesting and basking beach habitat, naturally caused disasters (i.e., hurricanes and tsunamis), invasive nonnative vegetation, human activities associated with cleanup of unexploded ordnance, and presence of terrestrial and marine debris. Special management considerations or protection measures to reduce or alleviate the threats may include conducting habitat restoration or management, including removal of invasive vegetation; minimizing human access and activities during the green turtle nesting season; and removing terrestrial debris on the beaches and marine debris that washes ashore. All lands within this unit are managed by the Kahoʻolawe Island Reserve Commission for archeology and cultural preservation and plant and animal conservation (Kanaloa 2026 Working Group 2014, entire).

#### Unit HI-25: South Kohala

Unit HI-25 consists of 33 ac (13 ha) in the community of Puakō, Hawaiʻi County. This unit is located approximately 52 to 55 mi (83 to 88 km) northwest of the town of Hilo and includes beach, sandy shoals, coastal

vegetation, emergent sandy lands, and low shelving reef or rock from the MHWL. The landward boundary is the line indicating the beginning of dense vegetation or hardened or developed structures (e.g., retaining walls, hardened shoreline, or buildings). This unit comprises 11 segments in 3 areas: (1) 1 segment each on Puakō Bay (5 ac (2 ha)), Waimā Point (7 ac (3 ha)), Kapuniau Point (2 ac (1 ha)), Puakō Beach Drive (4 ac (2 ha)), Holoholokai Beach (2 ac (1 ha)), Pauoa Bay Beach (1 ac (less than 1 ha)), Papakonani Boat Landing (less than 1 ac (less than 1 ha)), and Nanuku Cove (2 ac (1 ha)); (2) 2 segments along Makaīwa Bay, each of which are 1 ac (less than 1 ha); and (3) 1 segment along Waikoloa Bay (7 ac (3 ha)). Lands within this unit include approximately 18 ac (7 ha; 54 percent) in State ownership, 9 ac (3 ha; 26 percent) in private ownership, and 7 ac (3 ha; 20 percent) that are uncategorized. General land use within this unit is recreational activities (e.g., fishing, snorkeling, swimming, surfing, picnicking, camping, beachcombing, kayaking, paddle boarding, and body boarding) and tourism.

Unit HI-25 is occupied by the species and contains one or more of the PBFs essential to the conservation of the species. This unit has an elevated concentration of documented basking green turtles year-round, demonstrating that it serves as important basking habitat throughout the year. Additionally, there are efforts by Federal and State agencies, nonprofit and for-profit organizations and businesses to provide outreach on green turtle biology and respectful viewing guidance, thereby providing the turtles limited disturbance compared to other areas within the DPS.

Threats to the PBFs identified within Unit HI-25 include habitat loss, modification, and degradation of basking beach habitat, naturally caused disasters (i.e., hurricanes and tsunamis), invasive nonnative vegetation, shoreline stabilization and sand renourishment, recreation and tourism, artificial lights, and presence of terrestrial and marine debris. Special management considerations or protection measures to reduce or alleviate the threats may include conducting habitat restoration or management, including removal of invasive vegetation; conducting an outreach program on respectful viewing of wildlife; minimizing artificial lighting near nesting beaches; and removing terrestrial debris on the beaches and marine debris that washes ashore.



#### Unit HI-26: Kona Moku on Hawai'i Island

Unit HI-26 consists of 50 ac (20 ha) in the communities of Kūki'o and Kailua-Kona, Hawai'i County. This unit is located approximately 55 to 58 mi (89 to 93 km) west of the town of Hilo and includes beach, sandy shoals, and emergent sandy lands, and low shelving reef or rock from the MHWL. The landward boundary is the line indicating the beginning of dense vegetation, lava flow, cliff, or hardened or developed structures (e.g., retaining walls, hardened shoreline, or buildings). This unit comprises 15 segments in 4 areas: (1) 5 segments along Kīholo Beach (from north to south, 1 ac (1 ha), 1 ac (less than 1 ha), 8 ac (3 ha), 1 ac (less than 1 ha), and less than 1 ac (less than 1 ha)); (2) 1 segment each along Ka'ūpūlehu Beach (1 ac (less than 1 ha)), Ka'ūpūlehu Coast (5 ac (2 ha)), Kūki'o Bay (4 ac (2 ha)), and Kikaua Beach (6 ac (2 ha)); (3) 1 segment each along Kaloko Point and Honokōhau Bay (7 ac (3 ha)), Wai'aha Bay (1 ac (less than 1 ha)), and Kahalu'u Beach (less than 1 ac (less than 1 ha)), all south of the Kona International Airport; and (4) 3 segments along Hōnaunau Bay (from north to south, 2 each of which are less than 1 ac (less than 1 ha) and one segment that is 9 ac (3 ha)). Lands within this unit include approximately 12 ac (5 ha; 24 percent) in Federal ownership, 15 ac (6 ha; 30 percent) in State ownership, less than 1 ac (less than 1 ha; 1 percent) in local government ownership, 10 ac (4 ha; 19 percent) in private/other ownership, and 13 ac (5 ha; 27 percent) that are uncategorized. General land use within this unit is cultural resource preservation, natural resource conservation, recreational activities (e.g., fishing, snorkeling, swimming, surfing, picnicking, camping, beachcombing, kayaking, paddle boarding, and body boarding), and tourism.

Unit HI-26 is occupied by the species and contains one or more of the PBFs essential to the conservation of the species. This unit has an elevated concentration of documented green turtles basking year-round, demonstrating that it serves as important basking habitat throughout the year. Additionally, this unit contains habitat for the basking population to expand, and there are ongoing efforts by Federal and State agencies, as well as nonprofit and for-profit organizations and businesses providing outreach on green turtle biology and respectful viewing guidance, thereby providing overall

limited disturbance to green turtles compared to other areas in the DPS.

Threats identified within Unit HI-26 include habitat loss, modification, and degradation of basking beach habitat, naturally caused disasters (i.e., hurricanes and tsunamis), invasive nonnative vegetation, shoreline stabilization and sand renourishment, recreation and tourism, coastal development and construction, and presence of terrestrial and marine debris. Special management considerations or protection measures to reduce or alleviate the threats may include conducting habitat restoration or management, including removal of invasive vegetation; conducting an outreach program on respectful viewing of wildlife; and removing terrestrial debris on the beaches and marine debris that washes ashore. Federal lands within this unit are managed by the NPS for cultural preservation and plant and wildlife conservation as part of the Kaloko-Honokōhau National Historical Park (NPS 1994, entire), Kīholo State Park Reserve (HDSP 2022e, no page numbers), and Pu'u Honau O Hōnaunau National Historical Park (NPS 2020a, p. 40).

#### Unit HI-27: Hilo Moku

Unit HI-27 consists of 2 ac (1 ha) in the town of Hilo, Hawai'i County. This unit is located approximately 4 to 5 mi (6 to 8 km) northeast of the Hilo International Airport and includes beach, emergent sandy lands, and low shelving reef or rock from the MHWL. The landward boundary is the line indicating the beginning of dense vegetation, cliff, or lava flow. This unit comprises two segments: 1 ac (less than 1 ha) and 1 ac (less than 1 ha) at Carl Smith Park and Leleiwi Park, respectively. Lands within this unit include approximately 1 ac (less than 1 ha; 36 percent) in State ownership, less than 1 ac (less than 1 ha; 10 percent) in local government ownership, and 1 ac (less than 1 ha; 54 percent) that is uncategorized. General land use in this unit is recreational activities (e.g., fishing, snorkeling, swimming, and picnicking) and tourism.

Unit HI-27 is occupied by the species and contains one or more of the PBFs essential to the conservation of the species. This unit has an elevated concentration of documented green turtles basking year-round, indicating that it serves as important basking habitat throughout the year. Additionally, this unit contains habitat for the basking population to expand.

Threats to the PBFs identified within Unit HI-27 include habitat loss, modification, and degradation of

basking beach habitat, naturally caused disasters (i.e., hurricanes and tsunamis), invasive nonnative vegetation, recreation and tourism, coastal development and construction, and presence of terrestrial and marine debris. Special management considerations or protection measures to reduce or alleviate the threats may include conducting habitat restoration or management, including removal of invasive vegetation; conducting an outreach program on respectful viewing of wildlife; and removing terrestrial debris on the beaches and marine debris that washes ashore.

#### Unit HI-28: Kea'au

Unit HI-28 consists of 1 ac (less than 1 ha) in the community of Kea'au, Hawai'i County. This unit is located approximately 9 mi (14 km) southeast of the town of Hilo and includes beach, emergent sandy lands, and low shelving reef or rock from the MHWL. The landward boundary is the line indicating the beginning of dense vegetation. Lands within this unit include approximately less than 1 ac (less than 1 ha; 62 percent) in private ownership and less than 1 ac (less than 1 ha; 41 percent) that is uncategorized. General land use within this unit is recreational activities (e.g., fishing, snorkeling, swimming, and picnicking).

Unit HI-28 is occupied by the species and contains one or more of the PBFs essential to the conservation of the species. This unit has an elevated concentration of documented green turtles basking year-round, indicating that it serves as important basking habitat throughout the year. Additionally, this unit contains habitat for the basking population to expand. Access by vehicle to this beach is limited because it is on private property, thereby limiting disturbance to nesting and basking green turtles as compared to other areas within the DPS.

Threats to the PBFs identified within Unit HI-28 include habitat loss, modification, and degradation of basking beach habitat, naturally caused disasters (i.e., hurricanes, tsunamis, and volcanic eruption), invasive nonnative vegetation, recreation, and presence of terrestrial and marine debris. Special management considerations or protection measures to reduce or alleviate the threats may include conducting habitat restoration or management, including removal of invasive vegetation; conducting an outreach program on respectful viewing of wildlife; and removing terrestrial debris on the beaches and marine debris that washes ashore.



## Unit HI-29: Pohoiki Beach

Unit HI-29 consists of 9 ac (4 ha) in the community of Pahoia, Hawai'i County. This unit is located approximately 24 mi (39 km) southeast of the town of Hilo and includes beach, sandy shoals, emergent sandy lands, and low shelving reef or rock from the MHWL. The landward boundary is the line indicating the beginning of dense vegetation or lava flow. Lands within this unit include approximately less than 1 ac (less than 1 ha; 1 percent) in State ownership, 4 ac (1 ha; 38 percent) in local government ownership, less than 1 ac (less than 1 ha; 1 percent) in private/other ownership, and 6 ac (2 ha; 60 percent) that are uncategorized. General land use within this unit is recreational activities (e.g., fishing, snorkeling, swimming, surfing, and picnicking).

Unit HI-29 is occupied by the species and contains one or more of the PBFs essential to the conservation of the species. This unit has an elevated concentration of documented green turtles basking year-round, demonstrating that it serves as important basking habitat throughout the year. Additionally, this unit contains habitat for the basking population to expand.

Threats to the PBFs identified within Unit HI-29 include habitat loss, modification, and degradation of basking beach habitat, naturally caused disasters (i.e., hurricanes, tsunamis, and volcanic eruptions), invasive nonnative vegetation, recreation and tourism, and presence of terrestrial and marine debris. Special management considerations or protection measures to reduce or alleviate the threats may include conducting habitat restoration or management, including removal of invasive vegetation; conducting an outreach program on respectful viewing of wildlife; and removing terrestrial debris on the beaches and marine debris that washes ashore.

## Unit HI-30: Keauhou

Unit HI-30 consists of 16 ac (7 ha) in the community of Volcano, Hawai'i County. This unit is located approximately 33 mi (53 km) southwest of the town of Hilo and includes black sand beach, sandy shoals, emergent sandy lands, and low shelving reef or rock from the MHWL. The landward boundary is the line indicating the beginning of dense vegetation or lava flow. This unit comprises four segments in two areas: (1) two segments along Halapē Iki Beach (1 ac (less than 1 ha) and 3 ac (1 ha)); and (2) one segment each along Keauhou Point (4.5 ac (2 ha))

and 'Āpua Point (8 ac (3 ha)). Lands within this unit include approximately 9 ac (4 ha; 56 percent) in Federal ownership and 7 ac (3 ha; 44 percent) that are uncategorized. General land use within this unit is cultural resource preservation, natural resource conservation, recreational activities (e.g., hiking, birdwatching, and camping), and tourism.

Unit HI-30 is occupied by the species and contains one or more of the PBFs essential to the conservation of the species. This unit has an elevated concentration of documented green turtles basking year-round, demonstrating that it serves as important basking habitat throughout the year. This unit also contains habitat for the basking population to expand. Human access in this unit is primarily by foot, with little to no access by vehicles, and the surrounding lands are undeveloped lava flows, thereby providing overall limited disturbance to nesting and basking green turtles as compared to other areas within the DPS. Additionally, Hawai'i Volcanoes National Park provides outreach on green turtle biology and respectful viewing guidance, thereby affording nesting and basking turtles in these areas limited disturbance compared to other beaches in the same geographic areas. Approximately 3 ac (1 ha; 19 percent) of the unit overlap with designated critical habitat for one Hawaiian plant: *Ischaemum byrhone* (68 FR 39624, July 2, 2003) at Keauhou and 'Āpua Points.

Threats to the PBFs identified within Unit HI-30 include habitat loss, modification, and degradation of basking beach habitat, naturally caused disasters (i.e., hurricanes, tsunamis, and volcanic eruption), invasive nonnative vegetation, recreation and tourism, and presence of terrestrial and marine debris. Special management considerations or protection measures to reduce or alleviate the threats may include conducting habitat restoration or management, including removal of invasive vegetation; conducting an outreach program on respectful viewing of wildlife; and removing terrestrial debris on the beaches and marine debris that washes ashore. Federal lands within this unit are managed by the NPS for cultural preservation and plant and wildlife conservation as part of the Hawai'i Volcanoes National Park (NPS 2016, entire).

## Unit HI-31: Ka'ū Moku

Unit HI-31 consists of 17 ac (7 ha) along the southeast and southern coast of the island of Hawai'i, Hawai'i County. This unit is located approximately 47 to

69 mi (75 to 111 km) southwest of the town of Hilo and includes black sand beach, sandy shoals, coastal vegetation, emergent sandy lands, and low shelving reef or rock from the MHWL. The landward boundary is the line indicating the beginning of dense vegetation, cliff, or lava flow. This unit comprises 10 segments in 4 areas: (1) 1 segment along the southwest coast of Hawai'i Island on 'Āwili Shoreline (2 ac (1 ha)); (2) 2 segments along Humuhumu Point (1.4 ac (1 ha) and 2 ac (1 ha)); (3) 1 segment each on Pōhue Beach (1 ac (less than 1 ha)) and Kahakahakea Beach (4 ac (2 ha)); (4) 1 segment each along the southeast shore coast of Hawai'i Island on Kamehame Beach (1 ac (less than 1 ha)), Punalu'u Beach (3 ac (1 ha)), Pu'u Moa Point (less than 1 ac (less than 1 ha)), Kapukini Shoreline (1 ac (less than 1 ha)), and Ninole Cove (2 ac (1 ha)). Lands within this unit include approximately 5 ac (2 ha; 27 percent) in Federal ownership, 3 ac (1 ha; 16 percent) in State ownership, 4 ac (2 ha; 24 percent) in local government ownership, 4 ac (1 ha; 21 percent) in private/other ownership, and 2 ac (1 ha; 12 percent) that are uncategorized. General land use within this unit is natural resource conservation and recreational activities (e.g., fishing, snorkeling, swimming, surfing, picnicking, and camping).

Unit HI-31 is occupied by the species and contains one or more of the PBFs essential to the conservation of the species. This unit has an elevated concentration of documented green turtles basking year-round, demonstrating that it serves as important basking habitat throughout the year. Additionally, this unit contains habitat for the basking population to expand. Access to this unit is primarily by foot, with very little to no access by vehicle, thereby providing limited disturbance to nesting and basking green turtles as compared to other areas within the DPS. Additionally, this unit contains habitat for the basking population to expand, and there are ongoing efforts by Federal and State agencies providing outreach on green turtle biology and respectful viewing guidance, thereby providing overall limited disturbance to green turtles compared to other areas in the DPS.

Threats to the PBFs identified within Unit HI-31 include habitat loss, modification, and degradation of nesting and basking beach habitat, naturally caused disasters (i.e., hurricanes and tsunamis), invasive nonnative vegetation, recreation, artificial lights, and presence of terrestrial and marine debris. Special management

considerations or protection measures to reduce or alleviate the threats may include conducting habitat restoration or management, including removal of invasive vegetation; conducting an outreach program on respectful viewing of wildlife; minimizing human access and activities during the green turtle nesting season; minimizing artificial lighting near nesting beaches; and removing terrestrial debris on the beaches and marine debris that washes ashore. State lands within this unit are managed by the HDLNR for wildlife conservation as part of the Manukā Natural Area Reserves (HDOFAW 1992, entire), and private lands within this unit are managed by TNC for wildlife conservation as part of the Kamehame Preserve (TNC 2022, no page numbers).

#### *Central South Pacific DPS*

##### Unit AS–01: Palmyra Atoll

Unit AS–01 consists of 22 ac (9 ha) on Palmyra Atoll, the second northernmost atoll in the Northern Line Islands, is an incorporated unorganized territory of the United States. This unit is located approximately 1,512 mi (2,434 km) north of Pago Pago, the territorial capital village of American Samoa on Tutuila Island, American Samoa (a.k.a. Amerika Samoa), and includes beach, coastal vegetation, and sandy shoals from the MHWL. The landward boundary is the line indicating the beginning of dense vegetation or now abandoned structures. This unit comprises three segments that are 3 ac (1 ha), 16 ac (7 ha), and 3 ac (1 ha) on Strawn, Cooper, and Aviation Islands, respectively. Lands within this unit include approximately 7 ac (3 ha; 32 percent) in Federal ownership and 15 ac (6 ha; 68 percent) in private ownership. General land use within this unit is natural resource conservation, scientific research, and tourism. There are no permanent inhabitants on Palmyra Atoll.

Unit AS–01 is occupied by the species and contains one or more of the PBFs essential to the conservation of the species. This unit contains green turtle nesting habitat at the northernmost part of the Central South Pacific DPS that is under U.S. jurisdiction, serving as an important protected nesting area. Additionally, this unit contains interesting beach area to support placement of multiple nests by individual turtles within a single season and area for the nesting population of green turtles to expand and recover. The Federal and private lands support protected nesting beach area with restricted human access.

Threats to the PBFs identified within Unit AS–01 include habitat loss,

modification, and degradation of nesting beach habitat, naturally caused disasters (*i.e.*, cyclones and tsunamis), recreation, and presence of terrestrial and marine debris. Special management considerations or protection measures to reduce or alleviate the threats may include conducting habitat restoration or management, conducting an outreach program on respectful viewing of wildlife, and removing terrestrial debris on the beaches and marine debris that washes ashore. The Federal lands (Strawn and Aviation Islands) in this unit are managed by the USFWS as the Palmyra Atoll NWR (USFWS 2021, entire) and the Pacific Remote Islands National Marine Monument (NOAA and USFWS 2021, entire (86 FR 72214, December 21, 2021)). The private lands (Cooper Island) in this unit are managed by TNC as the Palmyra Atoll Reserve (U.S. Geological Survey (USGS) 2011, entire).

##### Unit AS–02: Swains Island

Unit AS–02 consists of 125 ac (50 ha) on Swains Island, Territory of American Samoa. This unit and island are located approximately 224 mi (360 km) north of Pago Pago, the territorial capital village of American Samoa on Tutuila Island, American Samoa, and includes beach, coastal vegetation, and sandy shoals from the MHWL. The landward boundary is the line indicating the beginning of dense vegetation or hardened or developed structures. All lands within this unit are uncategorized ownership. General land use within this unit is agriculture (*e.g.*, coconut plantation). The last settlement, Taulaga Village, does not have permanent inhabitants.

Unit AS–02 is occupied by the species and contains one or more of the PBFs essential to the conservation of the species. This unit is the only U.S. jurisdiction in the northwestern area of this DPS, serving as an important nesting area. This unit also contains interesting beach area to support placement of multiple nests by individual turtles within a single season and area for the nesting population of green turtles to expand and recover. The uncategorized land area includes natural beaches on an island that is remote and to which human access is restricted.

Threats to the PBFs identified within Unit AS–02 include habitat loss, modification, and degradation of nesting beach habitat, naturally caused disasters (*i.e.*, cyclones and tsunamis), and presence of terrestrial and marine debris. Special management considerations or protection measures to reduce or alleviate the threats may

include conducting habitat restoration or management and removing terrestrial debris on the beaches and marine debris that washes ashore.

##### Unit AS–03: Ofu and Olosega Islands

Unit AS–03 consists of 49 ac (20 ha) on Ofu and Olosega Islands, the westernmost islands in the Manua Island Group. This unit is located approximately 69 to 72 mi (111 to 116 km) slightly northeast of Pago Pago, the territorial capital village of American Samoa on Tutuila Island, American Samoa, and includes beach, coastal vegetation, and sandy shoals from the MHWL. The landward boundary is the line indicating the beginning of dense vegetation, cliff, or hardened or developed structures (*e.g.*, retaining walls or hardened embankments). This unit comprises 12 segments in 9 areas: (1) 2 segments along the northeast coast of Ofu Island at Tuafanua and Mafafa (2 ac (1 ha) and 5 ac (2 ha)); (2) 2 segments along Asagatai (from north to south, 2 ac (1 ha) and 1 ac (less than 1 ha)); (4) 3 segments along the southeast coastline of Ofu at Toaga (from west to east, 1 ac (less than 1 ha), 2 ac (1 ha), and 5 ac (2 ha)); (5) 1 segment northeast of Ofu Airport at Fatauana (1 ac (less than 1 ha)); (6) 1 segment surrounding the Ofu Airport at Vaoto (6 ac (2 ha)); (7) 1 segment northwest of the Ofu Airport at Matasina (2 ac (1 ha)); (8) 1 segment along the north coast of Olosega Island within the village of Sili and the settlements of Faiava and Lalomoana (10 ac (4 ha)); and (9) 1 segment along the south coast of Olosega Island within the village of Olosega (13 ac (5 ha)). All lands within this unit are uncategorized ownership. General land use within this unit is cultural resource preservation, natural resource conservation, recreational activities (*e.g.*, swimming, picnicking, and fishing), sand mining, and uninhabited areas.

Unit AS–03 is occupied by the species and contains one or more of the PBFs essential to the conservation of the species. This unit contains an elevated concentration of nesting green turtles as compared to other beaches in the area, residing on islands that do not have a large human population. Three proposed critical habitat segments (*i.e.*, Tuaganua, Mafafa, and Northern Olosega) are primarily uninhabited and have limited to no vehicle or pedestrian access, providing important nesting areas with limited disturbance to green turtle eggs, hatchlings, and adults during nesting season. This unit also contains interesting beach area to support placement of multiple nests by individual turtles within a single season

and area for the nesting population of green turtles to expand and recover.

Threats to the PBFs identified within Unit AS-03 include habitat loss, modification, and degradation of nesting beach habitat, naturally caused disasters (*i.e.*, cyclones and tsunamis), human activities (*i.e.*, shoreline stabilization, transportation, and sand mining), recreation and tourism, artificial lights, coastal development and construction, and presence of terrestrial and marine debris. Special management considerations or protection measures to reduce or alleviate the threats may include conducting habitat restoration or management, minimizing human access and activities during green turtle nesting season, minimizing artificial lighting near nesting beaches, and removing terrestrial debris on the beaches and marine debris that washes ashore. Approximately 8 ac (3 ha; 16 percent) of the uncategorized lands are leased and managed by the NPS as the National Park of American Samoa (NPS 1997, entire).

#### Unit AS-04: Ta'u Island

Unit AS-04 consists of 34 ac (14 ha) on Tau Island, the easternmost island in the Manua Island Group. This unit is located approximately 80 to 85 mi (129 to 137 km) east of Pago Pago, the territorial capital village of American Samoa on Tutuila Island, American Samoa, and includes beach, coastal vegetation, and sandy shoals from the MHWL. The landward boundary is the line indicating the beginning of dense vegetation, cliff, or hardened or developed structures. This unit comprises six segments in three areas: (1) one segment along the east coast of Tau Island at Luamaa-Saua Beach (13 ac (5 ha)); (2) one segment each along the south coast at Maefu Beach (4 ac (1 ha)) and Lepisi Beach (6 ac (2 ha)); and (3) three segments along the western coast of Tau at the old Amouli Village (Amouli Beach) (7 ac (3 ha)), Afuli Cove Beach (3 ac (1 ha)), and Fagamolo Cove Beach (1 ac (less than 1 ha)). All lands within this unit are uncategorized ownership. General land use within this unit is cultural resource preservation, natural resource conservation, recreational activities (*e.g.*, swimming, picnicking, and fishing), sand mining, and uninhabited areas.

Unit AS-04 is occupied by the species and contains one or more of the PBFs essential to the conservation of the species. This unit contains an elevated concentration of nesting green turtles as compared to other beaches in the area, indicating that it serves as an important nesting area in this U.S. jurisdiction of the DPS. All the areas within this unit

are remote with no direct vehicle access, limited pedestrian access, or are uninhabited, which provides overall limited disturbance to green turtle eggs, hatchlings, or adults during nesting season. This unit also contains interesting beach area to support placement of multiple nests by individual turtles within a single season and area for the nesting population to expand and recover.

Threats to the PBFs identified within Unit AS-04 include habitat loss, modification, and degradation of nesting beach habitat, naturally caused disasters (*i.e.*, cyclones and tsunamis), recreation, and presence of terrestrial and marine debris. Special management considerations or protection measures to reduce or alleviate the threats may include conducting habitat restoration or management, conducting an outreach program on respective viewing of wildlife, and removing terrestrial debris on the beaches and marine debris that washes ashore. Approximately 22 ac (9 ha; 64 percent) of the uncategorized ownership lands are leased and managed by the NPS as the National Park of American Samoa (NPS 1997, entire).

#### Unit AS-05: Aunu'u Island

Unit AS-05 consists of 3 ac (1 ha) on Aunu'u Island, American Samoa. This unit is located approximately 10 mi (15 km) east of Pago Pago, the territorial capital village of American Samoa on Tutuila Island, American Samoa, and includes beach, coastal vegetation, and sandy shoals from the MHWL. The landward boundary is the line indicating the beginning of dense vegetation and hardened or developed structures. All lands within this unit are uncategorized ownership. General land use within this unit is recreation and tourism (*e.g.*, swimming, picnicking, and fishing).

Unit AS-05 is occupied by the species and contains one or more of the PBFs essential to the conservation of the species. This unit contains an elevated concentration of nesting green turtles that may also internest on the nearby island of Tutuila (which currently harbors turtle nesting activity by an unidentified turtle species). This unit also contains habitat to support nesting in addition to interesting beach area to support placement of multiple nests by individual turtles within a single season, and area for the nesting population to expand and recover.

Threats to the PBFs identified within Unit AS-05 include habitat loss, modification, and degradation of nesting beach habitat, naturally caused disasters (*i.e.*, cyclones and tsunamis), human

activities (*i.e.*, sand mining, coastal development, and construction), recreation and tourism, artificial lights, and presence of terrestrial and marine debris. Special management considerations or protection measures to reduce or alleviate the threats may include conducting habitat restoration or management, minimizing human access and activities during the green turtle nesting season, minimizing artificial lighting near nesting beaches, and removing terrestrial debris on the beaches and marine debris that washes ashore.

#### Unit AS-06: Rose Atoll

Unit AS-06 consists of 10 ac (4 ha) on Rose Atoll (a.k.a. Motu o Manu), American Samoa. This unit is located approximately 260 mi (418 km) east of Pago Pago, the territorial capital village of American Samoa on Tutuila Island, American Samoa, and includes beach, coastal vegetation, and sandy shoals from the MHWL. The landward boundary is the line indicating the beginning of dense vegetation or hardened or developed structures. This unit comprises two segments: 5 ac (2 ha) and 4 ac (2 ha) on Sand Island and Rose Island, respectively. All lands within this unit are in Federal ownership. General land use within this unit is natural resource conservation.

Unit AS-06 is occupied by the species and contains one or more of the PBFs essential to the conservation of the species. This unit contains an elevated concentration of nesting green turtles during the nesting season, serving as an important nesting area in this DPS. This unit also contains interesting beach area to support placement of multiple nests by individual turtles within a single season and area for the nesting population to expand and recover. These Federal lands support protected, natural habitat with restricted human access.

Threats to the PBFs identified within Unit AS-06 include habitat loss, modification, and degradation of nesting beach habitat, naturally caused disasters (*i.e.*, cyclones and tsunamis), and presence of terrestrial and marine debris. Special management considerations or protection measures to reduce or alleviate the threats may include conducting habitat restoration or management, implementing biological quarantine of field crews conducting surveys or resource conservation (*e.g.*, quarantining materials to keep out unwanted seeds, arthropods, and other biological material that can degrade or alter a biologically sensitive area), and removing terrestrial debris on the



beaches and marine debris that washes ashore. All lands within this unit are managed by the USFWS as the Rose Atoll NWR and Rose Atoll National Marine Monument for wildlife conservation purposes under the Rose Atoll's Comprehensive Conservation Plan (USFWS 2014, entire; USFWS 2022, entire).

#### *Central West Pacific DPS*

##### Unit GU-01: Ritidian Point and Uruno Beach

Unit GU-01 consists of 37 ac (15 ha) in Dededo (a.k.a. Dedidu) and Yigo (a.k.a. Yigu) Villages, northern Guam, part of the Territory of Guam. This unit is located approximately 12 mi (19 km) northeast of the Capital Village of Hagåtña, and includes beach, coastal vegetation, and atoll forest from the MHWL. The landward boundary is the line indicating the beginning of dense vegetation, cliff, or hardened or developed structures. This unit comprises six segments in two areas (from north to south): (1) 20 ac (8 ha) of beach, coastal vegetation, and atoll forest at Ritidian Beach (a.k.a. Litekyan Village, Guam NWR and Ritidian Point); and (2) five segments comprising beach and coastal vegetation along Uruno Beach (a.k.a. Urunao Beach) (13 ac (5 ha) and 3 ac (1 ha)) and Falcona Beach (2 ac (1 ha), less than 1 ac (less than 1 ha), and less than 1 ac (less than 1 ha)). Lands within this unit include approximately 18 ac (7 ha; 49 percent) in Federal ownership, less than 1 ac (less than 1 ha; 1 percent) in Territorial ownership, 13 ac (5 ha; 34 percent) in private ownership, and 6 ac (2 ha; 16 percent) that are uncategorized. General land use within this unit is natural and cultural resource conservation, recreation (e.g., fishing, swimming, and picnicking), and tourism.

Unit GU-01 is occupied by the species and contains one or more of the PBFs essential to the conservation of the species. This unit has an elevated concentration of nesting green turtles serving as an important nesting area in northern Guam. This unit also contains internesting beach area to support placement of multiple nests by individual turtles within a single season and area for the nesting population to expand and recover. The undeveloped lands and steep limestone karst cliffs surrounding the areas in this unit provide overall limited disturbance to green turtles during the nesting season as compared to other areas within this DPS. Approximately 18 ac (7 ha; 47 percent) of the unit overlap with currently designated critical habitat for the following Mariana wildlife: Mariana

fruit bat, Guam Micronesian kingfisher, and Mariana crow (69 FR 62944, October 28, 2004) at Ritidian Beach.

Threats to the PBFs identified within Unit GU-01 include habitat loss, modification, and degradation of nesting beach habitat, naturally caused disasters (i.e., typhoons and tsunamis), recreation and tourism (including increased pedestrian traffic and general disturbance), and presence of terrestrial and marine debris. Special management considerations or protection measures to reduce or alleviate the threats may include conducting habitat restoration or management, conducting an outreach program on respectful viewing of wildlife, and removing terrestrial debris from the beaches and marine debris that washes ashore. Federal lands within this unit are managed by the USFWS as the Guam NWR for plant and wildlife conservation purposes under the Guam NWR's Comprehensive Conservation Plan (USFWS 2009a, entire).

##### Unit GU-02: Jinapsan Beach

Unit GU-02 consists of 14 ac (6 ha) at Jinapsan (a.k.a. Hinapsan) Beach in Yigo (a.k.a. Yigu) Village, northern Guam, part of the Territory of Guam. This unit is located approximately 14 mi (23 km) northeast of the Capital Village of Hagåtña, and includes beach, coastal vegetation, and atoll forest from the MHWL. The landward boundary is the line indicating the beginning of dense vegetation, cliff, or hardened or developed structures. Lands within this unit include approximately 4 ac (1 ha; 26 percent) in Federal ownership, 3 ac (1 ha; 18 percent) in private ownership, and 8 ac (3 ha; 55 percent) that are uncategorized. General land use within this unit is natural resource conservation, national security, and recreation (e.g., fishing, swimming, and picnicking).

Unit GU-02 is occupied by the species and contains one or more of the PBFs essential to the conservation of the species. This unit has an elevated concentration of nesting green turtles serving as an important nesting area in Northern Guam. This unit also contains internesting beach area to support placement of multiple nests by individual turtles within a single season and area for the nesting population to expand and recover. The undeveloped lands and steep limestone karst cliffs surrounding the areas in this unit provide overall limited disturbance to green turtles during the nesting season as compared to other areas within this DPS. Approximately 4 ac (2 ha) of the unit overlaps with designated critical habitat for the following Mariana wildlife: Mariana fruit bat, Guam

Micronesian kingfisher, and Mariana crow (69 FR 62944, October 28, 2004) at Jinapsan Beach.

Threats to the PBFs identified within Unit GU-02 include habitat loss, modification, and degradation of nesting beach habitat, naturally caused disasters (i.e., typhoons, and tsunamis), recreation and tourism, and presence of terrestrial and marine debris. Special management considerations or protection measures to reduce or alleviate the threats may include conducting habitat restoration or management, conducting an outreach program on respectful viewing of wildlife, minimizing human access and activities during green turtle nesting season, and removing terrestrial debris from the beaches and marine debris that washes ashore. Federal lands within this unit are managed by the USFWS as the Guam NWR for plant and wildlife conservation purposes under the Guam NWR's Comprehensive Conservation Plan (USFWS 2009a, entire).

##### Unit GU-03: Tanguisson

Unit GU-03 consists of 12 ac (5 ha) in Dededo (a.k.a. Dedidu) Village on the west side of northern Guam, part of the Territory of Guam. This unit is located approximately 7 mi (11 km) northeast of the Capital Village of Hagåtña, and includes beach, coastal vegetation, and atoll forest from the MHWL. The landward boundary is the line indicating the beginning of dense vegetation, cliff, or hardened or developed structures. This unit comprises seven segments in two areas: (1) one segment at Shark's Cove (4 ac (1 ha)); and (2) six segments (north to south) along Tanguisson Beach (2 segments each of which are 2 ac (1 ha), 1 ac (less than 1 ha), less than 1 ac (less than 1 ha), 1 ac (1 ha), and 2 ac (1 ha)). Lands within this unit include approximately 6 ac (2 ha; 50 percent) in Territorial ownership and 6 ac (2 ha; 50 percent) that are uncategorized. General land use within this unit is recreation (e.g., fishing, swimming, and picnicking).

Unit GU-03 is occupied by the species and contains one or more of the PBFs essential to the conservation of the species. This unit has an elevated concentration of nesting green turtles serving as an important nesting area in Northern Guam. This unit also contains internesting beach area to support placement of multiple nests by individual turtles within a single season and area for the nesting population to expand and recover. All areas within this unit are surrounded by steep limestone karst cliffs that provide overall limited disturbance to green



turtles during the nesting season as compared to other areas within this DPS. Additionally, there is no direct vehicle or foot trail to access Shark's Cove or the northernmost segment on Tanguisson Beach, nor is there significant human presence at the two southernmost areas along Tanguisson Beach, further limiting disturbance to nesting turtles in this area compared to other beaches on Guam.

Threats to the PBFs identified within Unit GU-03 include habitat loss, modification, and degradation of nesting beach habitat, naturally caused disasters (*i.e.*, typhoons, and tsunamis), recreation and tourism, and presence of terrestrial and marine debris. Special management considerations or protection measures to reduce or alleviate the threats may include conducting habitat restoration or management, minimizing human access and activities during green turtle nesting season, conducting an outreach program on respectful viewing of wildlife, and removing terrestrial debris on the beaches and marine debris that washes ashore.

#### Unit GU-04: Tumon Bay

Unit GU-04 consists of 14 ac (6 ha) in Tamuning-Tumon (a.k.a. Tamuneng-Tomhom) and Dededo (a.k.a. Dedidu) Villages, northern Guam, part of the Territory of Guam. This unit is located approximately 3 mi (5 km) northeast of the Capital Village of Hagåtña, and includes beach, coastal vegetation, and atoll forest from the MHWL. The landward boundary is the line indicating the beginning of dense vegetation, cliff, or hardened or developed structures. This unit comprises four segments in four areas: (1) one segment on Amantes Beach (3 ac (1 ha)); (2) one segment on Fafai Beach (a.k.a. Gun Beach) (2 ac (1 ha)); and (3) two segments each of which are 1 ac (less than 1 ha) and (9 ac (4 ha) on Gongga Beach and Tumon Bay South, respectively. Lands within this unit include approximately 10 ac (4 ha; 74 percent) in private ownership and 4 ac (1 ha; 26 percent) that are uncategorized. General land use within this unit is natural resource conservation, recreation (*e.g.*, fishing, snorkeling, swimming, unpowered watercraft, and picnicking), and tourism.

Unit GU-04 is occupied by the species and contains one or more of the PBFs essential to the conservation of the species. This unit serves as important interesting beach area to support placement of multiple nests by individual turtles within a single season and area for the nesting population to

expand and recover, given it is also adjacent to other units with documented nesting beach for green turtle.

Additionally, the Fai Beach segment sits at the bottom of a limestone karst cliff and is only accessible by a foot path, providing limited disturbance to green turtles during the nesting season as compared to other areas within this DPS.

Threats to the PBFs identified within Unit GU-04 include habitat loss, modification, and degradation of nesting beach habitat, naturally caused disasters (*i.e.*, typhoons and tsunamis); recreation and tourism, coastal development and construction, artificial lights, and presence of terrestrial and marine debris. Special management considerations or protection measures to reduce or alleviate the threats may include conducting habitat restoration or management, conducting an outreach program on respectful viewing of wildlife, minimizing human access and activities during the green turtle nesting season, minimizing artificial lighting near nesting beaches, and removing terrestrial debris on the beaches and marine debris that washes ashore. Approximately 1 ac (less than 1 ha; 8 percent) of the lands within this unit are managed by the Territory of Guam, Department of Agriculture as the Tumon Bay Marine Preserve (Guam Visitors Bureau 2004, pp. 4–5).

#### Unit GU-05: Hagåtña Bay

Unit GU-05 consists of 7 ac (3 ha) in East Agaña Bay, Tamuning-Tumon (a.k.a. Tamuneng-Tomhom) Village, west coast of northern Guam, part of the Territory of Guam. This unit is located approximately 1 mi (less than 1 km) northeast of the Capital Village of Hagåtña and includes beach and sandy shoals from the MHWL. The landward boundary is the line indicating the beginning of dense vegetation, cliff, or hardened or developed structures. This unit comprises three segments in two areas: (1) two segments (north to south) on Dungcas Beach (2 ac (1 ha) and 3 ac (1 ha)); and (2) one segment on Trinchera Beach (2 ac (1 ha)). Lands within this unit include approximately 1 ac (less than 1 ha; 11 percent) in private ownership and 6 ac (3 ha; 89 percent) that are uncategorized. General land use within this unit is recreational activities (*e.g.*, fishing, swimming, jet skiing, and picnicking).

Unit GU-05 is occupied by the species and contains one or more of the PBFs essential to the conservation of the species. This unit serves as important interesting beach area to support placement of multiple nests by individual turtles within a single season

and area for the nesting green turtle population to expand and recover due to its presence adjacent to other units in this geographic area with documented nesting beach for green turtle.

Threats to the PBFs identified within Unit GU-05 include habitat loss, modification, and degradation of nesting beach habitat, naturally caused disasters (*i.e.*, typhoons and tsunamis), shoreline stabilization, transportation, recreation and tourism, artificial lights, and presence of terrestrial and marine debris. Special management considerations or protection measures to reduce or alleviate the threats may include conducting habitat restoration or management, conducting an outreach program on respectful viewing of wildlife, minimizing human access and activities during the nesting season, minimizing artificial lighting near nesting beaches, and removing terrestrial debris from the beaches and marine debris that washes ashore.

#### Unit GU-06: Cabras Island

Unit GU-06 consists of 8 ac (3 ha) in Piti Village, east coast of central Guam, part of the Territory of Guam. This unit is located approximately 8 mi (13 km) west of the Capital Village of Hagåtña and includes beach and coastal vegetation from the MHWL. The landward boundary is the line indicating the beginning of dense vegetation or hardened or developed structures. This unit comprises five segments in two areas (west to east): (1) two segments at Sea Plane Ramp, including 1 ac (less than 1 ha) along Apra harbor and less than 1 ac (less than 1 ha) along the Philippine Sea; and (2) three segments on Cabras Beach (less than 1 ac (less than 1 ha), 7 ac (3 ha), and less than 1 ac (less than 1 ha)). Lands within this unit include approximately less than 1 ac (less than 1 ha; 1 percent) in private ownership and 8 ac (3 ha; 99 percent) that are uncategorized ownership. General land use within this unit is natural resource conservation, recreation (*e.g.*, fishing, snorkeling, scuba diving, swimming, and picnicking), and tourism.

Unit GU-06 is occupied by the species and contains one or more of the PBFs essential to the conservation of the species. This unit serves as important interesting beach area to support placement of multiple nests by individual turtles within a single season and area for the nesting green turtle population to expand and recover due to its presence adjacent to other units in this geographic area with documented nesting beach for green turtle.

Threats to the PBFs identified within Unit GU-06 include habitat loss,

modification, and degradation of nesting beach habitat, naturally caused or human-caused disasters (*i.e.*, sea level rise, changes in sand temperature, storms, typhoons, tsunamis, oil spills), shoreline stabilization, transportation, recreation and tourism, coastal development and construction, artificial lights, and presence of terrestrial and marine debris. Special management considerations or protection measures to reduce or alleviate the threats may include conducting habitat restoration or management, conducting an outreach program on respectful viewing of wildlife, minimizing human access and activities during the nesting season, minimizing artificial lighting near nesting beaches; and removing terrestrial debris from the beaches and marine debris that washes ashore. Approximately less than 1 ac (less than 1 ha; 4 percent) of the lands within this unit are managed by the Territory of Guam, Department of Agriculture as the Piti Bomb Holes Marine Preserve (Guam Coastal Management Program 2016, *entire*).

#### Unit GU-07: Agat Bay

Unit GU-07 consists of 1 ac (less than 1 ha) in Agat Bay (a.k.a. Hågat Bay) in Aagat Village (a.k.a. Hagåt Village), west coast of central Guam, part of the Territory of Guam. This unit is located approximately 9 mi (14 km) southwest of the Capital Village of Hagåtña and includes beach and coastal vegetation from the MHWL. The landward boundary is the line indicating the beginning of dense vegetation, cliff, or hardened or developed structures. Lands within this unit include approximately less than 1 ac (less than 1 ha; 17 percent) in Federal ownership and 1 ac (less than 1 ha; 81 percent) that is uncategorized. General land use within this unit is natural resource conservation, cultural resource preservation, and recreation (*e.g.*, fishing, swimming, and picnicking).

Unit GU-07 is occupied by the species and contains one or more of the PBFs essential to the conservation of the species. This unit serves as important internesting beach area to support placement of multiple nests by individual turtles within a single season and area for the nesting green turtle population to expand and recover due to its presence on the eastern coast of central Guam and its location within the DPS.

Threats to the PBFs identified within Unit GU-07 include habitat loss, modification, and degradation of nesting beach habitat, naturally caused disasters (*i.e.*, sea level rise, changes in sand temperature, storms, typhoons, and

tsunamis), recreation and tourism, and presence of terrestrial and marine debris. Special management considerations or protection measures to reduce or alleviate the threats may include conducting habitat restoration or management, conducting an outreach program on respectful viewing of wildlife, minimizing human access and activities during the green turtle nesting season, and removing terrestrial debris on the beaches and marine debris that washes ashore. Federal lands within this unit are managed by the NPS as the War in the Pacific National Historical Park to conserve natural, scenic, and historic values and objects under the Agat Unit National Historic Park Management Plan (NPS 1983, *entire*).

#### Unit GU-08: Pago (a.k.a. Pāgu) Point to Ylig Bay

Unit GU-08 consists of 2 ac (1 ha) Yona (a.k.a. Yo'ña) Village, central Guam, part of the Territory of Guam. This unit is located approximately 5 mi (8 km) southeast of the Capital Village of Hagåtña, and includes beach, coastal vegetation, and atoll forest from the MHWL. The landward boundary is the line indicating the beginning of dense vegetation, cliff, or hardened or developed structures. This unit comprises four small segments in three areas: (1) one segment less than 1 ac (less than 1 ha) on Nasgon Beach; (2) two segments from north to south on Tagachan Beach (less than 1 ac (less than 1 ha) and 1 ac (less than 1 ha)); and (3) one segment less than 1 ac (less than 1 ha) in Ylig Bay (a.k.a. Ilig Bay) at Turtle Beach. Lands within this unit include approximately 2 ac (1 ha; 88 percent) in private ownership and less than 1 ac (less than 1 ha; 12 percent) that is uncategorized. General land use within this unit is recreational activities (*e.g.*, fishing, swimming, and picnicking).

Unit GU-08 is occupied by the species and contains one or more of the PBFs essential to the conservation of the species. This unit serves as important internesting beach area to support placement of multiple nests by individual turtles within a single season and area for the nesting green turtle population to expand and recover based on its location along the eastern coast of central Guam and its location within the DPS. Additionally, the unit contains natural pocket beaches at the base of steep limestone karst cliffs with a thick forest growth, limiting public access to Tagachan Beach, as well as no direct vehicle access and limited foot trail access to two of the segments and, therefore, providing limited disturbance to green turtles during the nesting

season as compared to other areas within this DPS.

Threats to the PBFs identified within Unit GU-08 include habitat loss, modification, and degradation of nesting beach habitat, naturally caused disasters (*i.e.*, sea level rise, changes in sand temperature, storms, typhoons, and tsunamis), recreation, artificial lights, and presence of terrestrial and marine debris. Special management considerations or protection measures to reduce or alleviate the threats may include conducting habitat restoration or management, conducting an outreach program on respectful viewing of wildlife, minimizing human access and activities during the green turtle nesting season, minimizing artificial lighting near nesting beaches, and removing terrestrial debris on the beaches and marine debris that washes ashore.

#### Unit GU-09: Talo'fo'fo Village

Unit GU-09 consists of 4 ac (2 ha) in Talo'fo'fo Village, eastern coast of southern Guam, part of the Territory of Guam. This unit is located approximately 8 mi (14 km) south of the Capital Village of Hagåtña and includes beach, coastal vegetation, and atoll forest from the MHWL. The landward boundary is the line indicating the beginning of dense vegetation, cliff, or hardened or developed structures. This unit comprises four segments: (1) two segments each of which are less than 1 ac (less than 1 ha) at Togcha Beach; (2) one segment on Ipan Beach (4 ac (2 ha)); and (3) one segment with less than 1 ac (less than 1 ha) in Inarajan Bay at Gayloup Cove. Lands within this unit include approximately 2 ac (1 ha; 34 percent) in private ownership and 3 ac (1 ha; 66 percent) that are uncategorized. General land use within this unit is recreational activities (*e.g.*, fishing, swimming, and picnicking) and tourism.

Unit GU-09 is occupied by the species and contains one or more of the PBFs essential to the conservation of the species. This unit includes the longest contiguous beach for nesting green turtles on the eastern side of central Guam, serving as an important nesting site on the eastern side of the island. Additionally, this unit contains internesting beach area to support placement of multiple nests by individual turtles within a single season and area for the nesting population to expand and recover.

Threats to the PBFs identified within Unit GU-09 include habitat loss, modification, and degradation of nesting beach habitat, naturally caused disasters (*i.e.*, sea level rise, changes in sand temperature, storms, typhoons, and

tsunamis), shoreline stabilization, recreation, artificial lights, and presence of terrestrial and marine debris. Special management considerations or protection measures to reduce or alleviate the threats may include conducting habitat restoration or management, conducting an outreach program on respectful viewing of wildlife, minimizing human access and activities during the green turtle nesting season, minimizing artificial lighting near nesting beaches, and removing terrestrial debris on the beaches and marine debris that washes ashore.

#### Unit GU-10: Humatak Village

Unit GU-10 consists of 7 ac (3 ha) in Humatak Village along the western coast of southern Guam, part of the Territory of Guam. This unit is located approximately 13 mi (20 km) southwest of the Capital Village of Hagåtña and includes beach habitat from the MHWL. The landward boundary is the line indicating the beginning of dense vegetation, cliff, or hardened or developed structures. This unit comprises four segments in four areas from north to south: (1) one segment on Sagua Beach (2 ac (1 ha)); (2) one segment on Achuga Valley Beach (2 ac (1 ha)); (3) one segment on Sella Bay (1 ac (less than 1 ha)); and (4) one segment on Cetti Bay (3 ac (1 ha)). Lands within this unit include approximately 1 ac (1 ha; 17 percent) in private ownership and 6 ac (3 ha; 83 percent) that are uncategorized. General land use within this unit is natural resource conservation.

Unit GU-10 is occupied by the species and contains one or more of the PBFs essential to the conservation of the species. This unit contains limited access natural beaches in southwest Guam, representing the only unit on the southwest coast for nesting green turtles and thus serving as an important nesting habitat on the southernmost island within the U.S. jurisdiction of this DPS. This unit also contains internesting beach area to support placement of multiple nests by individual turtles within a single season and area for the nesting population to expand and recover.

Threats to the PBFs identified within Unit GU-10 include habitat loss, modification, and degradation of nesting beach habitat, naturally caused disasters (*i.e.*, typhoons and tsunamis), and presence of terrestrial and marine debris. Special management considerations or protection measures to reduce or alleviate the threats may include conducting habitat restoration or management and removing terrestrial debris on the beaches and marine debris

that washes ashore. The private and uncategorized lands within this unit are managed by the Guam Department of Agriculture (GDoAg) as part of the Guam Territorial Seashore Park (Guam 1978, entire; GDoAg 2013, entire).

#### Unit GU-11: Nomna Bay

Unit GU-11 consists of less than 1 ac (less than 1 ha) in Talo'fo'fo Village, the eastern coast of southern Guam, part of the Territory of Guam. This unit is located approximately 10 mi (15 km) southeast of the Capital Village of Hagåtña and includes beach from the MHWL. The landward boundary is the line indicating the beginning of dense vegetation, cliff, or hardened or developed structures. This unit comprises two segments from north to south, each of which are 1 ac (less than 1 ha) in Nomna Bay (a.k.a. Nomnia Bay) at Perez Beach. All land within this unit is uncategorized ownership. General land use within this unit is recreational activities (*e.g.*, fishing, swimming, surfing, and picnicking).

Unit GU-11 is occupied by the species and contains one or more of the PBFs essential to the conservation of the species. This unit serves as important nesting areas on the eastern coast of southern Guam and as the southernmost island within the U.S. jurisdiction of this DPS. The beaches in this area have direct access by humans, although they are remote and surrounded by steep limestone karst cliffs that provide limited disturbance to green turtles during the nesting season as compared to other areas within this DPS. This unit also contains habitat for internesting beach area to support placement of multiple nests by individual turtles within a single season and area for the nesting population to expand and recover.

Threats to the PBFs identified within Unit GU-11 include habitat loss, modification, and degradation of nesting beach habitat, naturally caused disasters (*i.e.*, typhoons, and tsunamis), recreation, and presence of terrestrial and marine debris. Special management considerations or protection measures to reduce or alleviate the threats may include conducting habitat restoration or management, conducting an outreach program on respectful viewing of wildlife, minimizing human access and activities during the green turtle nesting season, minimizing artificial lighting near nesting beaches, and removing terrestrial debris on the beaches and marine debris that washes ashore.

#### Unit GU-12: Inarajan Bay

Unit GU-12 consists of 4 ac (1 ha) in Inarajan Village (a.k.a. Inalåhan Village)

on the east coast of southern Guam, part of the Territory of Guam. This unit is located approximately 13 mi (22 km) southeast of the Capital Village of Hagåtña and includes beach and coastal vegetation from the MHWL. The landward boundary is the line indicating the beginning of dense vegetation, cliff, or hardened or developed structures. This unit comprises two segments on Guaifan shoreline (1 ac (less than 1 ha)) and along Inarajan Bay (a.k.a. Inalåhan Beach; 3 ac (1 ha)). Lands within this unit include approximately 1 ac (less than 1 ha; 16 percent) in private ownership and 3 ac (1 ha; 84 percent) that are uncategorized. General land use within this unit is recreational activities (*e.g.*, fishing, surfing, swimming, and picnicking).

Unit GU-12 is occupied by the species and contains one or more of the PBFs essential to the conservation of the species. This unit serves as important nesting areas along the eastern coast of southern Guam and also on the southernmost island within the U.S. jurisdiction of this DPS. Additionally, this unit also contains internesting beach area to support placement of multiple nests by individual turtles within a single season and area for the nesting population to expand and recover. Although Inarajan Bay and Guaifan shoreline are near developed areas or roads, they are primarily surrounded by forest or cliffs that provide limited disturbance, including reduced artificial lights on the beaches during green turtle nesting season, as compared to other areas within this DPS.

Threats to the PBFs identified within Unit GU-12 include habitat loss, modification, and degradation of nesting beach habitat, naturally caused disasters (*i.e.*, sea level rise, changes in sand temperature, storms, typhoons, and tsunamis), recreation, and presence of terrestrial and marine debris. Special management considerations or protection measures to reduce or alleviate the threats may include conducting habitat restoration or management, conducting an outreach program on respectful viewing of wildlife, minimizing human access and activities during the green turtle nesting season, and removing terrestrial debris on the beaches and marine debris that washes ashore.

#### Unit GU-13: Agfayan Point to Aga Point

Unit GU-13 consists of 5 ac (2 ha) in Inarajan Village (a.k.a. Inalåhan Village) between Agfayan Point (a.k.a. Akfayan Point) and Aga Point on the south coast of Guam, part of the Territory of Guam.



This unit is located approximately 16 mi (25 km) southeast of the Capital Village of Hagåtña and includes beach and coastal vegetation from the MHWL. The landward boundary is the line indicating the beginning of dense vegetation, cliff, or hardened or developed structures. This unit comprises four segments in three areas: (1) one segment on Lada Beach (1 ac (less than 1 ha)), (2) two segments each of which are less than 1 ac (less than 1 ha) on Acho and Atao Beaches, and (3) one segment on Tonan Beach (4 ac (2 ha)). Lands within this unit include less than 2 ac (1 ha; 33 percent) in private ownership and less than 4 ac (1 ha; 68 percent) that are uncategorized. General land use within this unit is recreational activities (e.g., fishing, swimming, and picnicking).

Unit GU-13 is occupied by the species and contains one or more of the PBFs essential to the conservation of the species. This unit serves as important nesting areas for turtles along the eastern coast of southern Guam and on the southernmost island within the U.S. jurisdiction of this DPS. This unit also contains interinteresting beach area to support placement of multiple nests by individual turtles within a single season and area for the nesting population to expand and recover. The lands surrounding and adjacent to the beaches in this unit are interspersed residential and forested lands, with limited direct access to the beaches through forested areas, resulting in reducing artificial lights on the beaches and limited disturbance to nesting green turtles as compared to other areas within this DPS.

Threats to the PBFs identified within Unit GU-13 include habitat loss, modification, and degradation of nesting beach habitat, naturally caused disasters (i.e., sea level rise, changes in sand temperature, storms, typhoons, and tsunamis), shoreline stabilization, recreation, and presence of terrestrial and marine debris. Special management considerations or protection measures to reduce or alleviate the threats may include conducting habitat restoration or management, conducting an outreach program on respectful viewing of wildlife, minimizing human access and activities during the green turtle nesting season, and removing terrestrial debris on the beaches and marine debris that washes ashore.

#### Unit GU-14: Cocos Island

Unit GU-14 consists of 8 ac (3 ha) in Cocos Island (a.k.a. Dano Village), an island off the south coast of Guam, part of the Territory of Guam. This island unit is located approximately 17 mi (27

km) southwest of the Capital Village of Hagåtña that occurs on the main island. The unit includes beach, coastal vegetation, and atoll forest from the MHWL, and the landward boundary is the line indicating the beginning of dense vegetation or hardened or developed structures. This unit comprises two segments totaling 5 ac (2 ha) and 3 ac (1 ha) along Cocos Island Beach. Lands within this unit include approximately 1 ac (less than 1 ha; 10 percent) in private ownership and 7 ac (3 ha; 90 percent) that are uncategorized. General land use within this unit is natural resource conservation, recreational activities (e.g., fishing, swimming, and picnicking), and tourism.

Unit GU-14 is occupied by the species and contains one or more of the PBFs essential to the conservation of the species. This unit has an elevated concentration of nesting green turtles and serves as an important nesting area in Southern Guam, the southernmost area within U.S. jurisdiction of this DPS. This unit also contains interinteresting beach area to support placement of multiple nests by individual turtles within a single season and area for the nesting population to expand and recover. Additionally, this unit is accessible only by boat, thereby limiting disturbance to nesting green turtles in this area as compared to other areas within this DPS.

Threats to the PBFs identified within Unit GU-14 include habitat loss, modification, and degradation of nesting beach habitat, naturally caused disasters (i.e., typhoons and tsunamis), recreation, coastal development and construction, artificial lights, and presence of terrestrial and marine debris. Special management considerations or protection measures to reduce or alleviate the threats may include conducting habitat restoration or management, conducting an outreach program on respectful viewing of wildlife, minimizing human access and activities during the green turtle nesting season, minimizing artificial lighting near nesting beaches, and removing terrestrial debris on the beaches and marine debris that washes ashore. The private and uncategorized lands within this unit are managed by GDoAg as part of the Guam Territorial Seashore Park (Guam 1978, entire; GDoAg 2013, entire).

#### Unit MP-01: Agrihan Island

Unit MP-01 consists of 44 ac (18 ha) along the southwest coast of Agrihan (a.k.a. Agrigran) Island in the northern part of the Mariana Archipelago, part of the CNMI (a.k.a. Sankattan Siha Na Islas

Mariānas, Commonwealth Téél Falúw kka Efáng Ilól Marianas). This unit is located approximately 199 mi (320 km) north of Capitol Hill, Saipan (a.k.a. Sa'ipan, Seipél), and includes beach and coastal vegetation from the MHWL. The landward boundary is the line indicating the beginning of dense vegetation, cliff, or hardened or developed structures. This unit comprises five segments from north to south (13 ac (5 ha), 27 ac (11 ha), 1 ac (less than 1 ha), 2 ac (1 ha), and less than 1 ac (less than 1 ha)) along the southwest side of Agrihan Island on Agrihan Beach. All lands within this unit are uncategorized ownership. General land use within this unit is residential, subsistence agriculture, and fishing. Agrihan Island has been primarily uninhabited since 1990 when the threat of volcanic eruption forced residents to evacuate. Resettlement and development plans were instituted, and there are currently a small number of permanent residents on island.

Unit MP-01 is occupied by the species and contains one or more of the PBFs essential to the conservation of the species. This unit serves as an important nesting area at this northernmost part of the Central West Pacific DPS that is under U.S. jurisdiction. Additionally, this unit contains interinteresting beach area to support placement of multiple nests by individual turtles within a single season and area for the nesting population to expand and recover. Agrihan Island is primarily uninhabited due to the risk of volcanic eruption and lack of the availability of basic survival needs, thereby providing overall limited disturbance to green turtle eggs, hatchlings, and adults during the nesting season.

Threats to the PBFs identified within Unit MP-01 include habitat loss, modification, and degradation of nesting beach habitat, naturally caused disasters (i.e., typhoons, tsunamis, and volcanic eruption), and presence of terrestrial and marine debris. Special management considerations or protection measures to reduce or alleviate the threats may include conducting habitat restoration or management and removing terrestrial debris from the beaches and marine debris that washes ashore.

#### Unit MP-02: Pagan Island

Unit MP-02 consists of 12 ac (5 ha) along the western coast on Pagan Island in the northern part of the Mariana Archipelago, part of the CNMI. This unit is located approximately 203 mi (326 km) north of Capitol Hill, Saipan, and includes beach and coastal vegetation from the MHWL. The landward boundary is the line indicating the



beginning of dense vegetation or cliff. This unit comprises three segments in two areas: (1) 6 ac (2 ha) and 2 ac (1 ha) along Shomushon Bay (a.k.a. Red Beach) and Apa'an Bay (a.k.a. Green Beach), respectively, and (2) 4 ac (2 ha) along the west side of Mount Togari. All lands within this unit are uncategorized ownership. General land use within this unit is residential and subsistence agriculture and fishing. Pagan Island has been primarily uninhabited since 1981 when Mt. Pagan erupted, and all residents were evacuated. Resettlement and development plans were instituted, but there are no permanent residents.

Unit MP-02 is occupied by the species and contains one or more of the PBFs essential to the conservation of the species. This unit serves as an important green turtle nesting area within this DPS along the west coast of Pagan Island during the nesting season. Additionally, this unit contains interesting beach area to support placement of multiple nests by individual turtles within a single season and area for the nesting population to expand and recover. Pagan Island is largely uninhabited due to risk of volcanic eruption and lack of the availability of basic survival needs, thereby providing overall limited disturbance to green turtle eggs, hatchlings, and adults during the nesting season as compared to other areas within the DPS.

Threats to the PBFs identified within Unit MP-02 include habitat loss, modification, and degradation of nesting beach habitat, naturally caused disasters (*i.e.*, typhoons, tsunamis, and volcanic eruption), and presence of terrestrial and marine debris. Special management considerations or protection measures to reduce or alleviate the threats may include conducting habitat restoration or management and removing terrestrial debris from the beaches and marine debris that washes ashore.

#### Unit MP-03: Wing Beach and Bird Island

Unit MP-03 consists of 7 ac (3 ha) in Marpi Village, northwestern and northeastern coast of Saipan, part of the CNMI. This unit is located approximately 4 mi (7 km) northeast of Capitol Hill, Saipan, and includes beach, coastal vegetation, and atoll forest from the MHWL. The landward boundary is the line indicating the beginning of dense vegetation, cliff, or hardened or developed structures. This unit comprises three segments including 4 ac (1 ha) on Wing Beach (a.k.a. Unai Makpe) on the northwestern coast, and two adjacent segments (2 ac (1 ha) and 3 ac (1 ha)) at Bird Island (a.k.a. Unai Fanonchuluyan). Lands within this unit

include approximately 4 ac (2 ha; 56 percent) in Commonwealth ownership and 3 ac (1 ha; 44 percent) that are uncategorized. General land use within this unit is natural resource conservation, recreational activities (*e.g.*, fishing, snorkeling, scuba diving, swimming, hiking, nature viewing, and picnicking), and tourism.

Unit MP-03 is occupied by the species and contains one or more of the PBFs essential to the conservation of the species. This unit serves as an important nesting area along the northwestern and northeastern coasts of Saipan, and in the northernmost of the main islands in the CNMI. Additionally, this unit contains interesting beach area to support placement of multiple nests by individual turtles within a single season and area for the nesting population to expand and recover. The undeveloped and steep terrain surrounding the Bird Island segments of this unit has limited to no direct access by roads or trails to the beach, thereby providing overall limited disturbance to green turtle eggs, hatchlings, and adults during the nesting season.

Threats to the PBFs identified within unit MP-03 include habitat loss, modification, and degradation of nesting beach habitat, naturally caused disasters (*i.e.*, typhoons and tsunamis), recreation, artificial lights, and presence of terrestrial and marine debris. Special management considerations or protection measures to reduce or alleviate the threats may include conducting habitat restoration or management, conducting an outreach program on respectful viewing of wildlife, minimizing human access and activities during the nesting season, minimizing artificial lighting near nesting beaches, and removing terrestrial debris from the beaches and marine debris that washes ashore. The commonwealth lands in this unit are managed by CNMI's DLNR (Division of Fish and Wildlife) as the Bird Island Conservation Area for wildlife conservation under the Management Plan for the Bird Island Wildlife Conservation Area and Bird Island Marine Sanctuary (CNMI 2007a, entire). The CNMI Division of Coastal Resources Management has produced a "Public Shoreline Access Guide for Saipan, Tinian, and Rota" to provide outreach guidance on protecting nesting grounds for green turtles (CNMI 2015, p. vi).

#### Unit MP-04: Managaha Island and Unai Makaka

Unit MP-04 consists of 21 ac (9 ha) on the western coast of Saipan, part of the CNMI. This unit is located approximately 3 mi (5 km) northwest of

Capitol Hill, Saipan, and includes beach, coastal vegetation, and atoll forest from the MHWL. The landward boundary is the line indicating the beginning of dense vegetation, cliff, or hardened or developed structures. This unit includes two segments in two areas: 9 ac (4 ha) on the beach surrounding Managaha Island (directly north of Unai Makaka) and 12 ac (5 ha) in Lagunan Garapan on Unai Makaka. Lands within this unit include approximately 5 ac (2 ha; 25 percent) in Commonwealth ownership, less than 1 ac (less than 1 ha; 1 percent) in private ownership, and 16 ac (6 ha; 74 percent) that are uncategorized. General land use within this unit is historical preservation, natural resource conservation, recreational activities (*e.g.*, fishing, snorkeling, swimming, marine motor sports, beach sports, walking, hiking, sightseeing, nature study, and picnicking), and tourism.

Unit MP-04 is occupied by the species and contains one or more of the PBFs essential to the conservation of the species. This unit serves as an important nesting area along the western coast of Saipan and within this DPS. Additionally, this unit contains interesting beach area to support placement of multiple nests by individual turtles within a single season and area for the nesting population to expand and recover. Separate from the main island of Saipan, access to Managaha Island is limited by boat, thereby providing overall limited disturbance to green turtle eggs, hatchlings, and adults during the nesting season.

Threats to the PBFs identified within unit MP-04 include habitat loss, modification, and degradation of nesting beach habitat, naturally caused disasters (*i.e.*, typhoons and tsunamis), shoreline stabilization, recreation and tourism, coastal development and construction, artificial lights, and presence of terrestrial and marine debris. Special management considerations or protection measures to reduce or alleviate the threats may include conducting habitat restoration or management, conducting an outreach program on respectful viewing of wildlife, minimizing human access and activities during the green turtle nesting season, minimizing artificial lighting near nesting beaches, and removing terrestrial debris on the beaches and marine debris that washes ashore. The uncategorized lands within this unit are managed by the Commonwealth as the Managaha Marine Conservation Area for the purposes of wildlife conservation under the Management Plan for the Managaha Marine Conservation Area

(CNMI 2005, entire). Additionally, the NPS leases and manages Commonwealth lands as the American Memorial Park Northern Mariana Islands (NPS 2019, pp. 45–47). The CNMI Division of Coastal Resources Management has produced a “Public Shoreline Access Guide for Saipan, Tinian, and Rota” to provide outreach guidance on protecting nesting grounds for green turtles (CNMI 2015, p. vi).

#### Unit MP–05: Eastern Saipan

Unit MP–05 consists of 18 ac (7 ha) along the east coast of Saipan, part of the CNMI. This unit is located approximately 2 mi (3 km) southeast of Capitol Hill, Saipan, and includes beach and coastal vegetation from the MHWL. The landward boundary is the line indicating the beginning of dense vegetation, cliff, or hardened or developed structures. This unit comprises nine segments in two areas: (1) 2 ac (1 ha) at Old Man by the Sea Beach, 3 ac (1 ha) on Unai Halaihai (a.k.a. Marine Beach), 4 ac (2 ha) on Unai Laolao Kattan (a.k.a. Tank Beach), and two segments south of Tank Beach, each less than 1 ac (less than 1 ha) on Tank Pocket Beach; and (2) four segments (west to east) in Laolao Bay totaling 4 ac (2 ha), 2 ac (1 ha), less than 1 ac (less than 1 ha) at Unai Laolao, and 3 ac (1 ha) at Unai Baput. Lands within this unit include approximately 9 ac (4 ha; 52 percent) in Commonwealth ownership, 1 ac (less than 1 ha; 4 percent) in private ownership, and 8 ac (3 ha; 44 percent) that are uncategorized. General land use within this unit is cultural resource preservation, natural resource conservation, and recreational activities (e.g., fishing, snorkeling, scuba diving, swimming, walking, hiking, sightseeing, nature viewing and study, and picnicking).

Unit MP–05 is occupied by the species and contains one or more of the PBFs essential to the conservation of the species. This unit serves as an important nesting area in this DPS along the east coast of Saipan. Additionally, this unit contains interesting beach area to support placement of multiple nests by individual turtles within a single season and area for the nesting population to expand and recover. The areas of this unit are all adjacent to undeveloped areas (although there is direct vehicle access to all units), thereby providing overall limited disturbance to green turtle eggs, hatchlings, and adults during the nesting season.

Threats to the PBFs identified within unit MP–05 include habitat loss, modification, and degradation of nesting beach habitat, naturally caused disasters

(i.e., typhoons and tsunamis), recreation (including increased pedestrian and general disturbance), artificial lights, and presence of terrestrial and marine debris. Special management considerations or protection measures to reduce or alleviate the threats may include conducting habitat restoration or management, conducting an outreach program on respectful viewing of wildlife, minimizing human access and activities during the green turtle nesting season, minimizing artificial lighting near nesting beaches, and removing terrestrial debris on the beaches and marine debris that washes ashore. Commonwealth lands within this unit are managed by CNMI’s DLNR (Division of Fish and Wildlife) as the Kagman Wildlife Conservation Area and Forbidden Island Marine Sanctuary under the Management Plan Kagman Wildlife Conservation Area and Forbidden Island Marine Sanctuary (CNMI 2007b, entire) and by the Division of Environmental Quality as the Laolao Bay Sea Cucumber Sanctuary under the Laolao Bay Conservation Action Plan (CNMI 2009, entire). The CNMI Division of Coastal Resources Management has produced a “Public Shoreline Access Guide for Saipan, Tinian, and Rota” to provide outreach guidance on protecting nesting grounds for green turtles (CNMI 2015, p. vi).

#### Unit MP–06: Southern Saipan

Unit MP–06 consists of 8 ac (3 ha) along the southern coast of Saipan, part of the CNMI. This unit is located approximately 8 mi (13 km) northeast of Capitol Hill, Saipan, and includes beach and coastal vegetation from the MHWL. The landward boundary is the line indicating the beginning of dense vegetation, cliff, or hardened or developed structures. This unit comprises five segments in three areas: (1) less than 1 ac (less than 1 ha) and 3 ac (1 ha) near the west end of the Saipan Airport runway at Unai Denikuio Agingan (a.k.a. Coral Ocean Point); (2) 1 ac (less than 1 ha) and 3 ac (1 ha) along the south coast of Saipan at Unai Peo (a.k.a. Ladder Beach) and Unai Obyan, respectively; and (3) 1 ac (less than 1 ha) at Boy Scout Beach along the west coast of the Naftan Peninsula. Lands within this unit include approximately 1 ac (less than 1 ha; 8 percent) in Commonwealth ownership and 7 ac (3 ha; 92 percent) that are uncategorized. General land use within this unit is recreational activities (e.g., fishing, snorkeling, scuba diving, swimming, nature viewing, sightseeing, and picnicking).

Unit MP–06 is occupied by the species and contains one or more of the

PBFs essential to the conservation of the species. This unit serves as an important nesting area in this DPS along the southwest coast of Saipan. Additionally, this unit contains interesting beach area to support placement of multiple nests by individual turtles within a single season and area for the nesting population to expand and recover. The Unai Obyan and Boy Scout Beach are two areas on Saipan that are undeveloped with limited direct access by roads and trails to the beach, thereby providing overall limited disturbance to green turtle eggs, hatchlings, and adults during the nesting season.

Threats to the PBFs identified within unit MP–06 include habitat loss, modification, and degradation of nesting beach habitat, naturally caused disasters (i.e., typhoons and tsunamis), recreation, artificial lights, and presence of terrestrial and marine debris. Special management considerations or protection measures to reduce or alleviate the threats may include conducting habitat restoration or management, conducting an outreach program on respectful viewing of wildlife, minimizing human access and activities during the green turtle nesting season, minimizing artificial lighting near nesting beaches, and removing terrestrial debris on the beaches and marine debris that washes ashore. The CNMI Division of Coastal Resources Management has produced a “Public Shoreline Access Guide for Saipan, Tinian, and Rota” to provide outreach guidance on protecting nesting grounds for green turtles (CNMI 2015, p. vi).

#### Unit MP–07: Western Tinian

Unit MP–07 consists of 6 ac (3 ha) along the western coast of Tinian Island, part of the CNMI. This unit is located approximately 2 mi (2 km) northwest of San Jose Village and includes beach and coastal vegetation from the MHWL. The landward boundary is the line indicating the beginning of dense vegetation, cliff, or hardened or developed structures. This unit includes six segments, including: less than 1 ac (less than 1 ha) at Barcinas Cove, less than 1 ac (less than 1 ha) at Turtle Beach, 1 ac (less than 1 ha) on Leprosarium Beach, 1 ac (less than 1 ha) on Red Beach, and 2 ac (1 ha) on Kammer Beach, and 2 ac (less than 1 ha) on Tachogna Beach. Lands within this unit include approximately 3 ac (1 ha; 44 percent) in Commonwealth ownership and 4 ac (1 ha; 56 percent) that are uncategorized. General land use within this unit is recreational activities (e.g., fishing, snorkeling, swimming, nature viewing and study, and picnicking).

Unit MP-07 is occupied by the species and contains one or more of the PBFs essential to the conservation of the species. This unit serves as an important nesting area in this DPS along the central west coast of Tinian. Additionally, this unit contains internesting beach area to support placement of multiple nests by individual turtles within a single season and area for the nesting population to expand and recover. The majority of Tinian is undeveloped with limited to no direct access by roads or trails to the beaches, thereby providing overall limited disturbance to green turtle eggs, hatchlings, and adults during the nesting season.

Threats to the PBFs identified within unit MP-07 include habitat loss, modification, and degradation of nesting beach habitat, naturally caused disasters (*i.e.*, typhoons and tsunamis), shoreline stabilization and transportation, recreation, coastal development and construction, artificial lights, and presence of terrestrial and marine debris. Special management considerations or protection measures to reduce or alleviate the threats may include conducting habitat restoration or management, conducting an outreach program on respectful viewing of wildlife, minimizing human access and activities during the green turtle nesting season, minimizing artificial lighting near nesting beaches, and removing terrestrial debris on the beaches and marine debris that washes ashore. The CNMI Division of Coastal Resources Management has produced a “Public Shoreline Access Guide for Saipan, Tinian, and Rota (CNMI 2015, entire) to provide information on recreational opportunities along the shoreline that are safe to access and also outreach guidance to protect nesting grounds for green turtles.

#### Unit MP-08: Northern Rota

Unit MP-08 consists of 54 ac (22 ha) on northern Rota Island, the second most southern island in the Mariana archipelago, and part of the CNMI. This unit is located approximately 3 mi (5 km) to 7 mi (11 km) northeast of Songsong Village and includes beach and coastal vegetation from the MHWL. The landward boundary is the line indicating the beginning of dense vegetation, cliff, or hardened or developed structures. This unit comprises six segments in two areas: (1) 43 ac (17 ha) north of Rota International Airport along Mochong Beach; and (2) five segments west of Rota International Airport (1 ac (1 ha) and 1 ac (less than 1 ha) along Tatgua Beach, 6 ac (2 ha) along Teteto Beach, 3 ac (1 ha) along

Uyulan Beach, and 1 ac (less than 1 ha) along Songton Beach). Lands within this unit include approximately 44 ac (18 ha; 81 percent) in Commonwealth ownership, 2 ac (1 ha; 3 percent) in private ownership, and 9 ac (4 ha; 17 percent) that are uncategorized. General land uses within this unit are natural resource conservation, recreational activities (*e.g.*, fishing, swimming, and diving), and tourism.

Unit MP-08 is occupied by the species and contains one or more of the PBFs essential to the conservation of the species. This unit serves as an important nesting area in this DPS along the north coast of Rota Island. Additionally, this unit contains internesting beach area to support placement of multiple nests by individual turtles within a single season and area for the nesting population to expand and recover. The majority of the green turtle nesting beaches within this unit are surrounded by undeveloped lands with limited direct access by roads and trails to the beaches, thereby providing overall limited disturbance to green turtle eggs, hatchlings, and adults during the nesting season. Approximately 4 ac (1 ha; 22 percent) of the unit overlap with designated critical habitat for the federally endangered Mariana crow (69 FR 62944, October 28, 2004).

Threats to the PBFs identified within unit MP-08 include habitat loss, modification, and degradation of nesting beach habitat, naturally caused disasters (*i.e.*, typhoons and tsunamis), recreation and tourism, coastal development and construction, artificial lights, and presence of terrestrial and marine debris. Special management considerations or protection measures to reduce or alleviate the threats may include conducting habitat restoration or management, conducting an outreach program on respectful viewing of wildlife, minimizing human access and activities during the green turtle nesting season, minimizing artificial lighting near nesting beaches, and removing terrestrial debris on the beaches and marine debris that washes ashore. The CNMI Division of Coastal Resources Management has produced a “Public Shoreline Access Guide for Saipan, Tinian, and Rota (CNMI 2015, entire) to provide information on recreational opportunities along the shoreline that are safe to access and also outreach guidance to protect nesting grounds for green turtles.

#### Unit MP-09: Southern Rota

Unit MP-09 consists of 9 ac (4 ha) on southern Rota Island, part of the CNMI. This unit is located approximately 2 mi (3 km) southeast of Songsong Village

and includes beach, coastal vegetation, and atoll forest from the MHWL. The landward boundary is the line indicating the beginning of dense vegetation, cliff, or hardened or developed structures. This unit includes nine segments in four areas (from west to east): (1) four segments, each less than 1 ac (less than 1 ha), southeast of Teneto Village along Tatka Beach in Sasanhaya Bay; (2) 1 ac (less than 1 ha) at Coral Garden Beach; (3) two 1-ac (less than 1-ha) segments on Okgok Beach and 3 ac (1 ha) on Apanon Beach; and (4) 3 ac (1 ha) on Malilok Beach. Lands within this unit include approximately 8 ac (3 ha; 89 percent) in Commonwealth ownership, less than 1 ac (less than 1 ha; less than 1 percent) in private ownership, and 1 ac (1 ha; 11 percent) that is uncategorized. General land use within this unit is natural resource conservation, recreational activities (*e.g.*, fishing, snorkeling, swimming, and picnicking), and tourism.

Unit MP-09 is occupied by the species and contains one or more of the PBFs essential to the conservation of the species. This unit serves as an important nesting area in this DPS along the southwest coast of Rota Island. Additionally, this unit contains internesting beach area to support placement of multiple nests by individual turtles within a single season and area for the nesting population to expand and recover. The majority of Rota Island and the nesting areas within this unit are undeveloped and reside at the base of or surrounded by steep terrain that limits direct access by roads and trails, thereby providing overall limited disturbance to green turtle eggs, hatchlings, and adults during the nesting season.

Threats to the PBFs identified within unit MP-09 include habitat loss, modification, and degradation of nesting beach habitat, naturally caused disasters (*i.e.*, typhoons and tsunamis), recreation and tourism, coastal development and construction, artificial lights, and presence of terrestrial and marine debris. Special management considerations or protection measures to reduce or alleviate the threats may include conducting habitat restoration or management, conducting an outreach program on respectful viewing of wildlife, minimizing human access and activities during the green turtle nesting season, minimizing artificial lighting near nesting beaches, and removing terrestrial debris on the beaches and marine debris that washes ashore. The CNMI Division of Coastal Resources Management has produced a “Public Shoreline Access Guide for Saipan,



Tinian, and Rota (CNMI 2015, entire) to provide information on recreational opportunities along the shoreline that are safe to access and also outreach guidance to protect nesting grounds for green turtles.

#### *North Atlantic DPS*

Unit FL–01: Guana Tolomato Matanzas National Estuarine Research Reserve—Guana River Site

Unit FL–01 consists of 112 ac (45 ha) of beach, dune, and coastal vegetation along the Atlantic Ocean shoreline in St. Johns County, Florida, within the boundaries of the Guana Tolomato Matanzas National Estuarine Research Reserve (GTM Reserve)—Guana River Site. The unit includes lands from the MHWL to the toe of the secondary dune or developed structures. This unit is entirely within State ownership and managed by the FDEP. General land use within this unit includes natural resource conservation, wildlife management, and general recreational activities (*e.g.*, swimming, walking, fishing, and boating).

Unit FL–01 is occupied by the species and contains one or more of the PBFs essential to the conservation of the species. This unit has high-density green turtle nesting. It also contains internesting beach area to support placement of multiple nests by individual turtles within a single season and area for the nesting population to expand and recover within the State's Northeast Management Unit (Ceriani 2022, pers. comm.). In addition, this unit provides a protected, natural beach and dune complex with limited disturbance from human activity.

Threats to the PBFs identified within Unit FL–01 include habitat loss, modification, and degradation of nesting beach habitat, naturally caused or human-caused disasters (*e.g.*, hurricanes, oil spills) and responses to disasters, beach erosion, beach sand placement activities, recreational activities, and presence of terrestrial and marine debris. Special management considerations or protection measures to reduce or alleviate threats to the PBFs may include conducting beach and dune restoration, installing signage at parking lots and beach access areas to educate the recreating public about presence of nesting turtles on beaches, and removing terrestrial debris on beaches and marine debris that washes ashore. State lands within this unit are managed under the GTM Reserve's Management Plan (FDEP 2009, entire).

Unit FL–02: Washington Oaks Gardens State Park to North Peninsula State Park

Unit FL–02 consists of 307 ac (124 ha) of beach, dune, and coastal vegetation along the Atlantic Ocean shoreline in Flagler and Volusia Counties, Florida. The unit extends from the northern boundary of Washington Oaks Gardens State Park in Flagler County to the southern boundary of North Peninsula State Park in Volusia County. The unit includes lands from the MHWL to the toe of the secondary dune or developed structures. Lands within this unit include approximately 77 ac (31 ha; 25 percent) in State ownership, 61 ac (25 ha; 20 percent) in local government ownership, and 169 ac (68 ha; 55 percent) in private/other ownership. State-owned lands in this unit include Washington Oaks Gardens State Park, Gamble Rogers Memorial State Recreation Area, and North Peninsula State Park. General land use within this unit includes State and local parks, recreational activities (*e.g.*, swimming, walking, fishing, and boating), beach driving, wildlife management, and natural resource conservation. The unit also adjoins areas of residential development.

Unit FL–02 is occupied by the species and contains one or more of the PBFs essential to the conservation of the species. This unit has high-density green turtle nesting. It also contains internesting beach area to support placement of multiple nests by individual turtles within a single season and area for the nesting population to expand and recover within the State's Northeast Management Unit (Ceriani 2022, pers. comm.). In addition, this unit provides a protected, natural beach and dune complex with limited disturbance from human activity. The entire unit overlaps designated critical habitat for the federally threatened loggerhead sea turtle (79 FR 39756, July 10, 2014).

Threats to the PBFs identified within Unit FL–02 include habitat loss, modification, and degradation of nesting beach habitat, naturally caused or human-caused disasters (*e.g.*, hurricanes, oil spills) and responses to disasters, beach erosion, beach sand placement activities, recreational activities, coastal development and associated artificial lighting, beach driving by emergency vehicles, and presence of terrestrial and marine debris. Special management considerations or protection measures to reduce or alleviate threats may include conducting beach and dune restoration, ensuring renourishment sand mimics natural sand characteristics, installing

signage at parking lots and beach access areas to educate the recreating public about presence of nesting turtles on beaches, enforcing local lighting ordinances, and removing terrestrial debris on the beaches and marine debris that washes ashore. State lands within this unit are managed under the Washington Oaks Gardens State Park Management Plan (FDEP 2017, entire), Gamble Rogers Memorial State Recreation Area at Flagler Beach Management Plan (FDEP 2018a, entire), and the North Peninsula State Park Management Plan (FDEP 2018b, entire).

Unit FL–03: Canaveral National Seashore to Merritt Island National Wildlife Refuge

Unit FL–03 consists of 558 ac (226 ha) of beach, dune, and coastal vegetation along the Atlantic Ocean shoreline in Volusia and Brevard Counties, Florida. The unit extends from the northern boundary of Canaveral National Seashore to the southern boundary of Merritt Island NWR—Kennedy Space Center and includes lands from the MHWL to the toe of the secondary dune or developed structures. Lands within this unit are entirely within Federal ownership including Canaveral National Seashore (managed by the NPS) and Merritt Island NWR—Kennedy Space Center (managed by the USFWS). General land use within this unit includes space launch activities, natural resource conservation, wildlife management, and recreational activities (*e.g.*, walking, swimming, fishing, boating, and wildlife viewing).

Unit FL–03 is occupied by the species and contains one or more of the PBFs essential to the conservation of the species. This unit has high-density green turtle nesting. It also contains internesting beach area to support placement of multiple nests by individual turtles within a single season and area for the nesting population to expand and recover within the State's Central Eastern Management Unit (Shamblin et al. 2015, p. 680) in a protected, natural beach and dune complex with limited disturbance from human activity. This entire unit overlaps designated critical habitat for the federally threatened loggerhead sea turtle (79 FR 39756, July 10, 2014) and overlaps approximately 495 ac (200 ha) of proposed critical habitat for the federally threatened rufa red knot (88 FR 22530, April 13, 2023).

Threats to the PBFs identified within Unit FL–03 include habitat loss, modification, and degradation of nesting beach habitat, naturally caused or human-caused disasters (*e.g.*, hurricanes, oil spills) and responses to



disasters, beach erosion, beach sand placement activities, recreational activities, coastal development, artificial lighting associated with space launches, and presence of terrestrial and marine debris. Special management considerations or protection measures to reduce or alleviate threats may include conducting beach and dune restoration, ensuring renourishment sand mimics natural sand characteristics, implementing lighting control measures at Kennedy Space Center, installing signage at parking lots and beach access areas to educate the recreating public about presence of nesting turtles on beaches; and removing terrestrial debris on beaches and marine debris that washes ashore. Federal lands within this unit are managed under Canaveral National Seashore's General Management Plan (NPS 2014a, entire) and Merritt Island NWR's Comprehensive Conservation Plan (USFWS 2008a, entire).

#### Unit FL-04: Satellite Beach to Indian River Shores

Unit FL-04 consists of 644 ac (261 ha) of beach, dune, and coastal vegetation along the Atlantic Ocean shoreline in Brevard and Indian River Counties, Florida, from the Pineda Causeway in Satellite Beach to the southern boundary of Indian River Shores city limits. The unit is divided into two segments split by Sebastian Inlet. The northern segment is 424 ac (172 ha) and begins at the southern boundary of Patrick Space Force Base in Brevard County near the Pineda Causeway and extends to the northern side of the Sebastian Inlet in Indian River County. The southern segment is 220 ac (89 ha) and begins on the southern side of the Sebastian Inlet and extends to the Indian River Shores-Vero Beach city limits line. The unit includes lands from the MHWL to the toe of the secondary dune or developed structures. Lands within this unit include approximately 52 ac (21 ha; 8 percent) in Federal ownership, 72 ac (29 ha; 11 percent) in State ownership, 120 ac (48 ha; 19 percent) in local government ownership, and 400 ac (163 ha; 62 percent) in private/other ownership. The unit encompasses portions of the Archie Carr NWR (managed by the USFWS) and Sebastian Inlet State Park (managed by FDEP). General land use within this unit includes natural resource conservation, wildlife management, recreational activities (e.g., swimming, walking, fishing, and boating), and residential development.

Unit FL-04 (*i.e.*, both segments that represent this unit) is occupied by the species and contains one or more of the

PBFs essential to the conservation of the species. This unit has high-density green turtle nesting. It also supports interesting beach area to support placement of multiple nests by individual turtles within a single season and area for the nesting population to expand and recover within the State's Central Eastern Management Unit (Shamblin et al. 2015, p. 680). State, local, and Federal lands support a protected, natural beach and dune complex with limited human disturbance. Approximately 482 ac (195 ha) of this unit overlap designated critical habitat for the federally threatened loggerhead sea turtle (79 FR 39756, July 10, 2014).

Threats to the PBFs identified within Unit FL-04 include habitat loss, modification, and degradation of nesting beach habitat, naturally caused or human-caused disasters (e.g., hurricanes, oil spills) and responses to disasters, beach erosion, beach sand placement activities, recreational activities, coastal development and associated artificial lighting, and presence of terrestrial and marine debris. Special management considerations or protection measures to reduce or alleviate threats may include conducting beach and dune restoration, ensuring renourishment sand mimics natural sand characteristics, installing signage at parking lots and beach access areas to educate the recreating public about presence of nesting turtles on beaches, implementing and enforcing local lighting ordinances, and removing terrestrial debris on beaches and marine debris that washes ashore. Federal lands in this unit are managed under Archie Carr NWR's Comprehensive Conservation Plan (USFWS 2008b, entire). State lands within this unit are managed under the Sebastian Inlet State Park Management Plan (FDEP 2008, entire). Additionally, 139 ac (56 ha) of lands within this unit (from Sebastian Inlet to Indian River Shores) receive beneficial green turtle management under the Indian River County HCP for sea turtles and eroding beaches (Ecological Associates, Inc. 2017, entire); these lands are considered for exclusion under Section 4(b)(2) of the Act (see Consideration of Impacts under Section 4(b)(2) of the Act, below).

#### Unit FL-05: Hutchinson Island

Unit FL-05 consists of 336 ac (136 ha) of beach, dune, and coastal vegetation on Hutchinson Island along the Atlantic Ocean shoreline in St. Lucie County, Florida, from the southern side of the Ft. Pierce Inlet to the northern side of the St. Lucie Inlet. The unit includes lands from the MHWL to the toe of the

secondary dune or developed structures. Lands within this unit include 119 ac (48 ha; 35 percent) in local government ownership and 217 ac (88 ha; 65 percent) in private/other ownership. General land use within this unit includes natural resource conservation, recreational activities (e.g., swimming, walking, fishing, and boating), and residential development.

Unit FL-05 is occupied by the species and contains one or more of the PBFs essential to the conservation of the species. This unit has high-density nesting by green turtles and supports expansion and recovery in the State's Central East Management Unit (Shamblin et al. 2015, p. 680). Local parks within the unit provide a natural beach and dune complex that supports important nesting habitat. This entire unit overlaps designated critical habitat for the federally threatened loggerhead sea turtle (79 FR 39756, July 10, 2014).

Threats to the PBFs identified within Unit FL-05 include habitat loss, modification, and degradation of nesting beach habitat, naturally-caused or human-caused disasters (e.g., hurricanes, oil spills) and responses to disasters, beach erosion, beach sand placement activities, coastal development and associated artificial lighting, recreational activities, and presence of terrestrial and marine debris. Special management considerations or protection measures to reduce or alleviate threats may include conducting beach and dune restoration, ensuring renourishment sand mimics natural sand characteristics, installing signage at parking lots and beach access areas to educate the recreating public about presence of nesting turtles on beaches, enforcing local lighting ordinances, and removing terrestrial debris on beaches and marine debris that washes ashore.

#### Unit FL-06: St. Lucie Inlet to Jupiter Inlet

Unit FL-06 consists of 324 ac (131 ha) of beach, dune, and coastal vegetation along the Atlantic Ocean shoreline in Martin and Palm Beach Counties, Florida, from the southern side of the St. Lucie Inlet in Martin County to the northern side of the Jupiter Inlet in Palm Beach County. The unit includes lands from the MHWL to the toe of the secondary dune or developed structures. Lands within this unit include approximately 69 ac (28 ha; 21 percent) in Federal ownership, 49 ac (20 ha; 15 percent) in State ownership, 11 ac (5 ha; 3 percent) in local government ownership, and 195 ac (78 ha; 60 percent) in private/other ownership. Federal lands include the Hobe Sound

NWR (managed by the USFWS) and State lands include the St. Lucie Inlet Preserve State Park (managed by FDEP). General land use within this unit includes natural resource conservation, wildlife management, recreational activities (*e.g.*, swimming, walking, boating, and fishing), and residential development.

Unit FL-06 is occupied by the species and contains one or more of the PBFs essential to the conservation of the species. This unit has high-density nesting by green turtles. It also contains interesting beach area to support placement of multiple nests by individual turtles within a single season and area for the nesting population to expand and recover within the State's Southeast Management Unit (Shamblin et al. 2015, p. 680; Ceriani 2022, pers comm.). The State and Federal lands support a protected, natural beach and dune complex with limited human disturbance. This entire unit overlaps designated critical habitat for the federally threatened loggerhead sea turtle (79 FR 39756, July 10, 2014), and approximately 33 ac (13 ha) of the unit overlap designated critical habitat for the federally threatened piping plover (66 FR 36038, July 10, 2001).

Threats identified within Unit FL-06 include habitat loss, modification, and degradation of nesting beach habitat, naturally caused or human-caused disasters (*e.g.*, hurricanes, oil spills) and responses to disasters, beach erosion, coastal development and associated artificial lighting, beach sand placement activities, recreational activities, and presence of terrestrial and marine debris. Special management considerations or protection measures to reduce or alleviate threats may include conducting beach and dune restoration, ensuring renourishment sand mimics natural sand characteristics, installing signage at parking lots and beach access areas to educate the recreating public about presence of nesting turtles on beaches, enforcing local lighting ordinances, and removing terrestrial debris on beaches and marine debris that washes ashore. Federal lands within this unit are managed under the Hobe Sound NWR's Comprehensive Conservation Plan (USFWS 2006, entire). State lands within this unit are managed under the St. Lucie Inlet Preserve State Park Management Plan (FDEP 2014a, entire).

Unit FL-07: Jupiter Inlet to Lake Worth Inlet

Unit FL-07 consists of 214 ac (87 ha) of beach, dune, and coastal vegetation along the Atlantic Ocean shoreline in Palm Beach County, Florida, from the

southern side of the Jupiter Inlet to the northern side of the Lake Worth Inlet. The unit includes lands from the MHWL to the toe of the secondary dune or developed structures. Lands within this unit include approximately 25 ac (10 ha; 12 percent) in State ownership, 85 ac (35 ha) in local government ownership, and 104 ac (42 ha; 49 percent) in private/other ownership. The State-owned lands encompass John D. MacArthur Beach State Park (managed by the FDEP). General land use within this unit includes natural resource conservation, wildlife management, recreational activities (*e.g.*, swimming, walking, fishing, and boating), and residential development.

Unit FL-07 is occupied by the species and contains one or more of the PBFs essential to the conservation of the species. This unit has high-density nesting by green turtles. It also contains interesting beach area to support placement of multiple nests by individual turtles within a single season and area for the nesting population to expand and recover within the State's Southeast Management Unit (Shamblin et al. 2015, p. 680; Ceriani 2022, pers comm.). The local parks and natural areas, as well as the State Park, provide a natural dune complex important for nesting habitat. This entire unit overlaps designated critical habitat for the federally threatened loggerhead sea turtle (79 FR 39756, July 10, 2014).

Threats to the PBFs identified within Unit FL-07 include habitat loss, modification, and degradation of nesting beach habitat, naturally caused or human-caused disasters (*e.g.*, hurricanes, oil spills) and responses to disasters, beach erosion, beach sand placement activities, coastal development and associated artificial lighting, recreational activities, and presence of terrestrial and marine debris. Special management considerations or protection measures to reduce or alleviate threats may include conducting beach and dune restoration, ensuring renourishment sand mimics natural sand characteristics, installing signage at parking lots and beach access areas to educate the recreating public about presence of nesting turtles on beaches, enforcing local lighting ordinances, and removing terrestrial debris on beaches and marine debris that washes ashore. State lands within this unit are managed under the John D. MacArthur Beach State Park Management Plan (FDEP 2020, entire).

Unit FL-08: Palm Beach to Boynton Inlet

Unit FL-08 consists of 42 ac (17 ha) of beach, dune, and coastal vegetation

along the Atlantic Ocean shoreline in Palm Beach County, Florida, from the southern boundary of the Lake Worth Municipal Beach-Barton Park to the northern side of the Boynton Inlet. The unit includes lands from the MHWL to the toe of the secondary dune or developed structures. Lands within this unit include approximately 1 ac (0.4 ha; 2 percent) in local government ownership and 41 ac (17 ha; 98 percent) in private/other ownership. General land use within this unit includes recreational activities (*e.g.*, swimming, fishing, walking, boating) and residential development.

Unit FL-08 is occupied by the species and contains one or more of the PBFs essential to the conservation of the species. This unit has high-density nesting by green turtles. It also contains interesting beach area to support placement of multiple nests by individual turtles within a single season and area for the nesting population to expand and recover within the State's Southeast Management Unit (Shamblin et al. 2015, p. 680; Ceriani 2022, pers comm.). This entire unit overlaps designated critical habitat for the federally threatened loggerhead sea turtle (79 FR 39756, July 10, 2014).

Threats to the PBFs identified within Unit FL-08 include habitat loss, modification, and degradation of nesting beach habitat, naturally caused or human-caused disasters (*e.g.*, hurricanes, oil spills) and responses to disasters, beach erosion, coastal development and associated artificial lighting, beach sand placement activities, recreational activities, and presence of terrestrial and marine debris. Special management considerations or protection measures to reduce or alleviate the threats may include conducting beach and dune restoration, ensuring renourishment sand mimics natural sand characteristics, installing signage at parking lots and beach access areas to educate the recreating public about presence of nesting turtles on beaches, enforcing local lighting ordinances, and removing terrestrial debris on beaches and marine debris that washes ashore.

Unit FL-09: Boynton Inlet to Boca Raton Inlet

Unit FL-09 consists of 214 ac (87 ha) of beach, dune, and coastal vegetation along the Atlantic Ocean shoreline in Palm Beach County, Florida, from the southern side of the Boynton Inlet to the northern side of Boca Raton Inlet. The unit includes lands from the MHWL to the toe of the secondary dune or developed structures. Lands within this unit include approximately 66 ac (27 ha;

31 percent) in local government ownership and 148 ac (60 ha; 69 percent) in private/other ownership. General land use within this unit includes multiple county and local parks, recreational activities (e.g., swimming, walking, fishing, and boating), and residential development.

Unit FL-09 is occupied by the species and contains one or more of the PBFs essential to the conservation of the species. This unit has high-density nesting by green turtles. It also contains internesting beach area to support placement of multiple nests by individual turtles within a single season and area for the nesting population to expand and recover within the State's Southeast Management Unit (Shamblin et al. 2015, p. 680; Ceriani 2022, pers comm.). Local parks provide a protected, natural dune complex important for nesting habitat. This entire unit overlaps designated critical habitat for the federally threatened loggerhead sea turtle (79 FR 39756, July 10, 2014).

Threats to the PBFs identified within Unit FL-09 include habitat loss, modification, and degradation of nesting beach habitat, naturally caused or human-caused disasters (e.g., hurricanes, oil spills) and responses to disasters, beach erosion, coastal development and associated artificial lighting, beach sand placement activities, recreational activities, and presence of terrestrial and marine debris. Special management considerations or protection measures to reduce or alleviate the threats may include conducting beach and dune restoration, ensuring renourishment sand mimics natural sand characteristics, installing signage at parking lots and beach access areas to educate the recreating public about presence of nesting turtles on beaches, enforcing local lighting ordinances, and removing terrestrial debris on beaches and marine debris that washes ashore.

#### Unit FL-10: Boca Raton Inlet to Hillsboro Inlet

Unit FL-10 consists of 82 ac (34 ha) of beach, dune, and coastal vegetation along the Atlantic Ocean shoreline in Palm Beach and Broward Counties, Florida, from the southern side of Boca Raton Inlet in Palm Beach County to the northern side of the Hillsboro Inlet in Broward County. The unit includes lands from the MHWL to the toe of the secondary dune or developed structures. Lands within this unit include approximately 1 ac (less than 1 ha; 1 percent) in Federal ownership, 16 ac (7 ha; 20 percent) in local government ownership, and 65 ac (26 ha; 79 percent)

in private/other ownership. Federal lands are owned by the U.S. Coast Guard and managed by a private preservation group. General land use within this unit includes recreational activities (e.g., swimming, walking, fishing, and boating), and residential development.

Unit FL-10 is occupied by the species and contains one or more of the PBFs essential to the conservation of the species. This unit supports high-density nesting. It also contains internesting beach area to support placement of multiple nests by individual turtles within a single season and area for the nesting population to expand and recover within the State's Southeast Management Unit (Shamblin et al. 2015, p. 680; Ceriani 2022, pers comm.). This entire unit overlaps designated critical habitat for the federally threatened loggerhead sea turtle (79 FR 39756, July 10, 2014).

Threats to the PBFs identified within Unit FL-10 include habitat loss, modification, and degradation of nesting beach habitat, naturally caused or human-caused disasters (e.g., hurricanes, oil spills) and responses to disasters, beach erosion, coastal development and associated artificial lighting, beach sand placement activities, recreational activities, and presence of terrestrial and marine debris. Special management considerations or protection measures to reduce or alleviate the threats may include conducting beach and dune restoration, ensuring renourishment sand mimics natural sand characteristics, installing signage at parking lots and beach access areas to educate the recreating public about presence of nesting turtles on beaches, enforcing local lighting ordinances, and removing terrestrial debris on beaches and marine debris that washes ashore.

#### Unit FL-11: Sawyer Key

Unit FL-11 consists of 6 ac (3 ha) of beach, dune, and coastal vegetation along the Gulf of Mexico on the northeasternmost portion of Sawyer Key in Monroe County, Florida. Sawyer Key is a multi-island complex between the Johnston Key and Cudjoe Channel, entirely within the federally owned Great White Heron NWR (managed by the USFWS). The unit includes lands from the MHWL to the toe of the secondary dune. General land use within this unit includes natural resource conservation, wildlife management, and recreational activities (e.g., swimming, walking, fishing, and boating).

Unit FL-11 is occupied by the species and contains one or more of the PBFs

essential to the conservation of the species. This unit has a high density of green turtle nesting within the State's Monroe Management Unit (Shamblin et al. 2022, entire; Ceriani 2022, pers. comm.) and provides a protected, natural beach and dune complex important for green turtle nesting. This is the only proposed critical habitat unit within the Florida Keys between the State's Southeast and Marquesas Management Units, thereby providing an important link between the two green turtle management areas (Shamblin et al. 2022, entire; Ceriani 2022, pers. comm.).

Threats to the PBFs identified within Unit FL-11 include habitat loss, modification, and degradation of nesting beach habitat, naturally caused or human-caused disasters (e.g., hurricanes, oil spills) and responses to disasters, beach erosion, recreational activities, and presence of terrestrial and marine debris. Special management considerations or protection measures to reduce or alleviate the threats may include conducting beach and dune restoration, installing signage at beach access areas to educate the recreating public about presence of nesting turtles on beaches, and removing terrestrial debris on beaches and marine debris that washes ashore. Federal lands within this unit are managed by the Great Heron NWR under the Lower Florida Keys NWR Comprehensive Conservation Plan (USFWS 2009b, entire).

#### Unit FL-12: Boca Grande and Marquesas Keys

Unit FL-12 consists of 28 ac (11 ha) of beach, dune, and coastal vegetation along the Gulf of Mexico shoreline on Boca Grande Key and Marquesas Keys in Monroe County, Florida. Boca Grande Key is one of the outlying islands of the Florida Keys and is located about 12 mi (19 km) west of Key West. The unit includes the western shore of the Key (5 ac (2 ha)). The Marquesas Keys are a group of eight uninhabited islands located at the end of the Florida Keys about 18 mi (29 km) west of Key West. The unit includes three beach segments along the largest northernmost key (1 ac (0.5 ha), 11 ac (5 ha), and 2 ac (1 ha)) and three unnamed keys to the southwest of the largest key (2 ac (1 ha), 4 ac (2 ha), and 2 ac (1 ha)). The unit includes lands from the MHWL to the toe of the secondary dune or developed structures. Lands within this unit are part of the federally owned Key West NWR (managed by the USFWS). General land use within this unit is primarily for wildlife conservation, and public access to the beaches is limited.



Unit FL-12 (*i.e.*, all segments represented in this unit) is occupied by the species and contains one or more of the PBFs essential to the conservation of the species. This unit provides a natural, protected beach and dune complex that supports regular nesting for green turtles in the State's Marquesas Management Unit (Shamblin et al. 2020, p. 166). This entire unit overlaps designated critical habitat for the federally threatened loggerhead sea turtle (79 FR 39756, July 10, 2014) and the federally threatened piping plover (66 FR 36038, July 10, 2001). Additionally, approximately 4 ac (2 ha) of this unit overlap designated critical habitat for the federally endangered Cape Sable thoroughwort (79 FR 1552, January 8, 2014).

Threats to the PBFs identified within Unit FL-12 include habitat loss, modification, and degradation of nesting beach habitat, naturally caused or human-caused disasters (*e.g.*, hurricanes, oil spills) and responses to disasters, beach erosion, recreational activities, and presence of terrestrial and marine debris. Special management considerations or protection measures to reduce or alleviate the threats may include conducting beach and dune restoration, installing signage at beach access areas to educate the recreating public about presence of nesting turtles on beaches, and removing terrestrial debris that washes ashore. Federal lands within this unit are managed by the Key West NWR under the Lower Florida Keys NWR Comprehensive Conservation Plan (USFWS 2009b, entire).

#### Unit FL-13: Dry Tortugas

Unit FL-13 consists of 21 ac (8 ha) of beach, dune, and coastal vegetation along the Gulf of Mexico on East, Middle, and Loggerhead Keys of the Dry Tortugas in Monroe County, Florida. The Dry Tortugas are a group of seven islands located at the end of the Florida Keys about 67 mi (108 km) west of Key West. The unit includes three segments: (1) all of East and Middle Keys (3 ac (1 ha) and less than 1 ac (less than 1 ha)) from the MHWL, and (2) 17 ac (7 ha) of lands from the MHWL to the toe of the secondary dune or developed structures on Loggerhead Key. East Key is located 1.4 mi (2.2 km) east of Middle Key. Loggerhead Key, the largest island in the chain, is approximately 5.6 mi (9 km) west of Middle Key. The islands are part of the federally owned Dry Tortugas National Park (managed by the NPS). General land use within this unit is primarily wildlife conservation with limited public access to beaches.

Unit FL-13 (*i.e.*, all segments that represent this unit) is occupied by the species and contains one or more of the PBFs essential to the conservation of the species. These islands provide a natural, protected beach and dune complex that supports high-density nesting habitat for green turtles in the State's Dry Tortugas Management Unit (Shamblin et al. 2020, p. 166). This entire unit overlaps designated critical habitat for the federally threatened loggerhead sea turtle (79 FR 39756, July 10, 2014).

Threats identified within Unit FL-13 include habitat loss, modification, and degradation of nesting beach habitat, naturally caused or human-caused disasters (*e.g.*, hurricanes, oil spills) and responses to disasters, beach erosion, recreational activities, and presence of terrestrial and marine debris. Special management considerations or protection measures to reduce or alleviate the threats may include conducting beach and dune restoration, installing signage at beach access areas to educate the recreating public about presence of nesting turtles on beaches, and removing terrestrial debris on beaches and marine debris that washes ashore. Federal lands within this unit are managed by the NPS as Dry Tortugas National Park under the Final General Management Plan Amendment (NPS 2000, entire).

#### Unit FL-14: Sanibel Island West

Unit FL-14 consists of 189 ac (76 ha) of beach, dune, and coastal vegetation along the Gulf of Mexico shoreline on Sanibel Island in Lee County, Florida, from the southern side of Blind Pass to Tarpon Bay Road. This unit includes lands from the MHWL to the toe of the secondary dune or developed structures. Lands within this unit include approximately 76 ac (31 ha; 40 percent) in local government ownership and 113 ac (45 ha; 60 percent) in private/other ownership. General land use within this unit includes recreational activities (*e.g.*, swimming, walking, fishing, and boating) and residential development.

Unit FL-14 is occupied by the species and contains one or more of the PBFs essential to the conservation of the species. This unit has high-density nesting by green turtles in the State's West Management Unit (Shamblin et al. 2022, entire; Ceriani 2022, pers. comm.; Witherington et al. 2009, p. 32). A portion of this unit contains a protected, natural beach and dune complex within a local park. In other areas, the development is set back further from the beach with extensive frontal beach and dunes, which provides less-disturbed nesting habitat. This entire unit overlaps designated critical habitat for the

federally threatened loggerhead sea turtle (79 FR 39756, July 10, 2014). Approximately 49 ac (20 ha) of the unit overlap designated critical habitat for the federally endangered aboriginal prickly-apple (81 FR 3866, January 22, 2016), and 158 ac (64 ha) of this unit overlap proposed critical habitat for the federally threatened rufa red knot (88 FR 22530, April 13, 2023).

Threats to the PBFs identified within Unit FL-14 include habitat loss, modification, and degradation of nesting beach habitat, naturally caused or human-caused disasters (*e.g.*, hurricanes, oil spills) and responses to disasters, beach erosion, coastal development and associated artificial lighting, beach sand placement activities, recreational activities, and presence of terrestrial and marine debris. Special management considerations or protection measures to reduce or alleviate the threats may include conducting beach and dune restoration, ensuring renourishment sand mimics natural sand characteristics, installing signage at parking lots and beach access areas to educate the recreating public about presence of nesting turtles on beaches, enforcing local lighting ordinances, and removing terrestrial debris on beaches and marine debris that washes ashore.

#### Unit FL-15: Gasparilla Island

Unit FL-15 consists of 155 ac (63 ha) of beach, dune, and coastal vegetation along the Gulf of Mexico shoreline on Gasparilla Island in Lee and Charlotte Counties, Florida, from the southern side of Gasparilla Pass to the northern side of Boca Grande Pass. This unit includes lands from the MHWL to the toe of the secondary dune or developed structures. Lands within this unit include approximately 5 ac (2 ha; 3 percent) in Federal ownership, 25 ac (10 ha; 16 percent) in State ownership, and 125 ac (51 ha; 81 percent) in private/other ownership. Federal lands are owned by the U.S. Coast Guard and managed by a private preservation society. State lands comprise Gasparilla Island State Park (managed by the FDEP). General land use within this unit includes natural resource conservation, wildlife management, recreational activities (*e.g.*, swimming, walking, fishing, and boating), and residential development.

Unit FL-15 is occupied by the species and contains one or more of the PBFs essential to the conservation of the species. The northern portion of this unit (Charlotte County) has high-density nesting by green turtles, and the southern portion (Lee County) contains internesting beach area to support



placement of multiple nests by individual turtles within a single season and area for the nesting population to expand and recover within in the State's West Management Unit (Shamblin et al. 2022, entire; Ceriani 2022, pers. comm.; Witherington et al. 2009, p. 32). This entire unit overlaps designated critical habitat for the federally threatened loggerhead sea turtle (79 FR 39756, July 10, 2014), and approximately 6 ac (2 ha) of the unit overlap designated critical habitat for the federally endangered aboriginal prickly-apple (81 FR 3866, January 22, 2016).

Threats to the PBFs identified within Unit FL-15 include habitat loss, modification, and degradation of nesting beach habitat, naturally caused or human-caused disasters (e.g., hurricanes, oil spills) and responses to disasters, beach erosion, coastal development and associated artificial lighting, beach sand placement activities, and presence of terrestrial and marine debris. Special management considerations or protection measures to reduce or alleviate the threats may include conducting beach and dune restoration, ensuring renourishment sand mimics natural sand characteristics, installing signage at parking lots and beach access areas to educate the recreating public about presence of nesting turtles on beaches, enforcing local lighting ordinances, and removing terrestrial debris on beaches and marine debris that washes ashore. State lands within this unit are managed under the Gasparilla Island State Park Management Plan (FDEP 2014b, entire).

#### Unit FL-16: Don Pedro and Little Gasparilla Islands

Unit FL-16 consists of 186 ac (75 ha) of beach, dune, and coastal vegetation along the Gulf of Mexico shoreline on Don Pedro and Little Gasparilla Islands in Charlotte County, Florida, from the southern side of Stump Pass to the northern side of Gasparilla Pass. This unit includes lands from the MHWL to the toe of the secondary dune or developed structures. Lands within this unit include approximately 20 ac (8 ha; 11 percent) in State ownership and 166 ac (67 ha; 89 percent) in private/other ownership. State-owned lands comprise Don Pedro Island State Park (managed by the FDEP). General land use within this unit includes natural resource conservation, wildlife management, recreational activities (e.g., swimming, walking, fishing, and boating), and residential development.

Unit FL-16 is occupied by the species and contains one or more of the PBFs essential to the conservation of the species. This unit has high-density

nesting by green turtles in the State's West Management Unit (Shamblin et al. 2022, entire; Ceriani 2022, pers. comm.; Witherington et al. 2009, p. 32). A portion of this unit contains a protected, natural beach and dune complex within the State Park. In other areas, the development is set back further from the beach with extensive frontal beach and dunes that provide relatively undisturbed nesting habitat. This entire unit overlaps designated critical habitat for the federally threatened loggerhead sea turtle (79 FR 39756, July 10, 2014), and approximately 104 ac (42 ha) of the unit overlap proposed critical habitat for the federally threatened rufa red knot (88 FR 22530, April 13, 2023).

Threats to the PBFs identified within Unit FL-16 include habitat loss, modification, and degradation of nesting beach habitat, naturally caused or human-caused disasters (e.g., hurricanes, oil spills) and responses to disasters, beach erosion, beach sand placement activities, recreational activities, coastal development and associated artificial lighting, and presence of terrestrial and marine debris. Special management considerations or protection measures to reduce or alleviate the threats may include conducting beach and dune restoration, ensuring renourishment sand mimics natural sand characteristics, installing signage at parking lots and beach access areas to educate the recreating public about presence of nesting turtles on beaches, enforcing local lighting ordinances, and removing terrestrial debris on beaches and marine debris that washes ashore. State lands within this unit are managed under the Don Pedro Island State Park Management Plan (FDEP 2013a, entire).

#### Unit FL-17: Manasota Key

Unit FL-17 consists of 164 ac (66 ha) of beach, dune, and coastal vegetation along the Gulf of Mexico shoreline on Manasota Key in Charlotte and Sarasota Counties, Florida, from approximately 0.1 mi (0.2 km) south of Harbor Drive South to the northern side of Stump Pass. The unit is divided into three segments to exclude intervening areas with primarily hardened structures that lack sand features. The northern segment is 85 ac (34 ha) and extends from approximately 0.1 mi (0.2 km) south of Harbor Drive South to approximately 6.4 mi (10.3 km) south. The middle segment is 27 ac (11 ha) and begins approximately 0.5 mi (0.8 km) north of the parking area at Blind Pass Park and extends south to approximately 170 ft (52 m) south of the Charlotte-Sarasota County boundary. The southern segment is 51 ac (21 ha)

and begins approximately 2.9 mi (4.7 km) north of Stump Pass and extends south to the northern side of Stump Pass. This unit includes lands from the MHWL to the toe of the secondary dune or developed structures. Lands within this unit include approximately 25 ac (10 ha; 15 percent) in State ownership, 46 ac (19 ha; 28 percent) in local government ownership, and 93 ac (37 ha; 57 percent) in private/other ownership. State-owned lands comprise Stump Pass Beach State Park (managed by the FDEP). General land use within this unit includes natural resource conservation, wildlife management, recreational activities (e.g., swimming, walking, fishing, and boating), and residential development.

Unit FL-17 (i.e., all segments represented in this unit) is occupied by the species and contains one or more of the PBFs essential to the conservation of the species. This unit has high-density nesting by green turtles. It also contains internesting beach area to support placement of multiple nests by individual turtles within a single season and area for the nesting population to expand and recover within the State's West Management Unit (Shamblin et al. 2022, entire; Ceriani 2022, pers. comm.; Witherington et al. 2009, p. 32). Within the State and local parks are protected, natural beach and dune complexes that are important nesting habitat. This entire unit overlaps designated critical habitat for the federally threatened loggerhead sea turtle (79 FR 39756, July 10, 2014). Additionally, approximately 57 ac (23 ha) of the unit overlap designated critical habitat for the federally endangered aboriginal prickly-apple (81 FR 3866, January 22, 2016), and approximately 9 ac (4 ha) of the unit overlap proposed critical habitat for the federally threatened rufa red knot (88 FR 22530, April 13, 2023).

Threats to the PBFs identified within Unit FL-17 include habitat loss, modification, and degradation of nesting beach habitat, naturally caused or human-caused disasters (e.g., hurricanes, oil spills) and responses to disasters, beach erosion, coastal development and associated artificial lighting, beach sand placement activities, recreational activities, and presence of terrestrial and marine debris. Special management considerations or protection measures to reduce or alleviate the threats may include conducting beach and dune restoration, ensuring renourishment sand mimics natural sand characteristics, installing signage at parking lots and beach access areas to educate the recreating public about presence of nesting turtles on beaches,

enforcing local lighting ordinances, and removing terrestrial debris on beaches and marine debris that washes ashore. State lands within this unit are managed under the Stump Pass Beach State Park Management Plan (FDEP 2013b, entire).

#### Unit FL–18: Casey and Siesta Keys

Unit FL–18 consists of 114 ac (46 ha) of beach, dune, and coastal vegetation along the Gulf of Mexico shoreline on Casey and Siesta Keys in Sarasota County, Florida, from approximately 0.9 mi (1.4 km) south of the Point O’Rocks southward to the northern side of Venice Inlet. The unit is divided into three segments to exclude areas with primarily hardened structures that lack sand features. The northern segment is 44 ac (18 ha) and extends south for approximately 3.8 mi (6.1 km). The middle segment is 5 ac (2 ha) and begins approximately 0.35 mi (0.56 km) north of Blackburn Point Road and extends south for 0.15 mi (0.24 km). The southern segment is 64 ac (26 ha) and begins approximately 0.3 mi (0.5 km) south of Blackburn Point Road and extends southward to the northern side of Venice Inlet. This unit includes lands from the MHWL to the toe of the secondary dune or developed structures. Lands within this unit include approximately 30 ac (12 ha; 26 percent) in local government ownership and 84 ac (34 ha; 74 percent) in private/other ownership. General land use within this unit includes recreational activities (e.g., swimming, walking, fishing, and boating), and residential development.

Unit FL–18 (*i.e.*, all segments represented in this unit) is occupied by the species and contains one or more of the PBFs essential to the conservation of the species. This unit has high-density nesting by green turtles. It also contains internesting beach area to support placement of multiple nests by individual turtles within a single season and area for the nesting population to expand and recover within the State’s West Management Unit (Shamblin et al. 2022, entire; Ceriani 2022, pers. comm.; Witherington et al. 2009, p. 32). This entire unit overlaps designated critical habitat for the federally threatened loggerhead sea turtle (79 FR 39756, July 10, 2014), and approximately 2 ac (1 ha) of the unit overlap designated critical habitat for the federally endangered aboriginal prickly-apple (81 FR 3866, January 22, 2016).

Threats to the PBFs identified within Unit FL–18 include habitat loss, modification, and degradation of nesting beach habitat, naturally caused or human-caused disasters (e.g., hurricanes, oil spills) and responses to disasters, beach erosion, coastal

development and associated artificial lighting, beach sand placement activities, recreational activities, and presence of terrestrial and marine debris. Special management considerations or protection measures to reduce or alleviate the threats may include conducting beach and dune restoration, ensuring renourishment sand mimics natural sand characteristics, installing signage at parking lots and beach access areas to educate the recreating public about presence of nesting turtles on beaches, enforcing local lighting ordinances, and removing terrestrial debris on beaches and marine debris that washes ashore.

#### Unit FL–19: Cape St. George and St. George Island

Unit FL–19 consists of 815 ac (330 ha) of beach, dune, and coastal vegetation along the Gulf of Mexico shoreline on Cape St. George and St. George Island in Franklin County, Florida, from the eastern side of West Pass to the western boundary of Dr. Julian G. Bruce St. George Island State Park. This unit includes lands from the MHWL to the toe of the secondary dune or developed structures. Lands within this unit include approximately 545 ac (221 ha; 67 percent) in State ownership and 270 ac (109 ha; 33 percent) in private/other ownership. State-owned lands comprise Cape St. George State Reserve of the Apalachicola National Estuarine Research Reserve (managed by the FDEP). General land use within this unit includes natural resource conservation, wildlife management, recreational activities (e.g., swimming, walking, fishing, and boating), and residential development.

Unit FL–19 is occupied by the species and contains one or more of the PBFs essential to the conservation of the species. This unit has high-density nesting by green turtles in the State’s Northwest Management Unit (Ceriani 2022, pers. comm.). The State reserve provides a protected, natural beach and dune complex with limited human disturbance. This entire unit overlaps designated critical habitat for the federally threatened loggerhead sea turtle (79 FR 39756, July 10, 2014). Additionally, approximately 55 ac (22 ha) overlap designated critical habitat for the federally threatened piping plover (66 FR 36038, July 10, 2001), and approximately 243 ac (98 ha) of the unit overlap proposed critical habitat for the federally threatened rufa red knot (88 FR 22530, April 13, 2023).

Threats to the PBFs identified within Unit FL–19 include habitat loss, modification, and degradation of nesting beach habitat, naturally caused or

human-caused disasters (e.g., hurricanes, oil spills) and responses to disasters, beach erosion, beach sand placement activities, recreational activities, coastal development and associated artificial lighting, recreational activities, and presence of terrestrial and marine debris. Special management considerations or protection measures to reduce or alleviate the threats may include conducting beach and dune restoration, ensuring renourishment sand mimics natural sand characteristics, installing signage at beach access areas to educate the recreating public about presence of nesting turtles on beaches, enforcing local lighting ordinances, and removing terrestrial debris on beaches and marine debris that washes ashore. State lands within this unit are managed under the Apalachicola National Estuarine Research Reserve Management Plan (FDEP 2014c, entire).

#### Unit FL–20: St. Joseph Peninsula

Unit FL–20 consists of 622 ac (252 ha) of beach, dune, and coastal vegetation along the Gulf of Mexico shoreline on St. Joseph Peninsula in Gulf County, Florida, from the northern end of the island at St. Joe Point south to the boundary of Eglin Air Force Base on Cape San Blas. This unit includes lands from the MHWL to the toe of the secondary dune or developed structures. Lands within this unit include approximately 466 ac (189 ha; 75 percent) in State ownership, 2 ac (1 ha; 0.3 percent) in local government ownership, and 154 ac (62 ha; 25 percent) in private/other ownership. State-owned lands comprise T.H. Stone Memorial St. Joseph Peninsula State Park (managed by the FDEP). General land use within this unit includes natural resource conservation, wildlife management, recreational activities (e.g., swimming, walking, fishing, and boating), and residential development.

Unit FL–20 is occupied by the species and contains one or more of the PBFs essential to the conservation of the species. This unit has high-density green turtle nesting. It also contains internesting beach area to support placement of multiple nests by individual turtles within a single season and area for the nesting population to expand and recover within the State’s Northwest Management Unit (Ceriani 2022, pers. comm.). The State Park portion of the unit supports a natural, protected beach and dune complex with limited human disturbance.

Approximately 418 ac (169 ha) of the unit overlap designated critical habitat for the federally threatened loggerhead sea turtle (79 FR 39756, July 10, 2014),

approximately 426 ac (172 ha) of the unit overlap designated critical habitat for the federally endangered St. Andrew's beach mouse (71 FR 60238, October 12, 2006), and approximately 269 ac (109 ha) overlap designated critical habitat for the federally threatened piping plover (66 FR 36038, July 10, 2001).

Threats to the PBFs identified within Unit FL–20 include habitat loss, modification, and degradation of nesting beach habitat, naturally caused or human-caused disasters (*e.g.*, hurricanes, oil spills) and responses to disasters, beach erosion, beach sand placement activities, recreational activities, coastal development and associated artificial lighting, and presence of terrestrial and marine debris. Special management considerations or protection measures to reduce or alleviate the threats may include conducting beach and dune restoration, ensuring renourishment sand mimics natural sand characteristics, installing signage at parking lots and beach access areas to educate the recreating public about presence of nesting turtles on beaches, enforcing local lighting ordinances, restricting beach driving and horseback riding locations and timing, and removing terrestrial debris on beaches and marine debris that washes ashore. State lands within this unit are managed under the T.H. Stone Memorial St. Joseph Peninsula State Park Management Plan (FDEP 2014d, entire).

#### Unit FL–21: Inlet Beach

Unit FL–21 consists of 93 ac (37 ha) of beach, dune, and coastal vegetation along the Gulf of Mexico shoreline of Inlet Beach in Walton County, Florida, from the eastern boundary of Deer Lake State Park to the western boundary of Camp Helen State Park. This unit includes lands from the MHWL to the toe of the secondary dune or developed structures. Lands in this unit include 7 ac (3 ha; 8 percent) in local government ownership and 86 ac (34 ha; 92 percent) in private/other ownership. General land use within this unit includes recreational activities (*e.g.*, swimming, walking, fishing, and boating), and residential development.

Unit FL–21 is occupied by the species and contains one or more of the PBFs essential to the conservation of the species. This unit has high-density nesting by green turtles within the State's Northwest Management Unit (Ceriani 2022, pers. comm.). Approximately 2 ac (1 ha) of the unit overlap designated critical habitat for the federally endangered

Choctawhatchee beach mouse (71 FR 60238, October 12, 2006).

Threats to the PBFs identified within Unit FL–21 include habitat loss, modification, and degradation of nesting beach habitat, naturally caused or human-caused disasters (*e.g.*, hurricanes, oil spills) and responses to disasters, beach erosion, beach sand placement activities, recreational activities, coastal development and associated artificial lighting, and presence of terrestrial and marine debris. Special management considerations or protection measures to reduce or alleviate the threats may include conducting beach and dune restoration, ensuring renourishment sand mimics natural sand characteristics, installing signage at parking lots and beach access areas to educate the recreating public about presence of nesting turtles on beaches, enforcing local lighting ordinances, restricting beach driving locations and timing, and removing terrestrial debris on beaches and marine debris that washes ashore.

#### Unit FL–22: Topsail Hill Preserve State Park

Unit FL–22 consists of 165 ac (67 ha) of beach, dune, and coastal vegetation along the Gulf of Mexico shoreline in Walton County, Florida, within the boundaries of Topsail Hill Preserve State Park. This unit includes lands from the MHWL to the toe of the secondary dune or developed structures. Lands within this unit are entirely in State ownership managed by the FDEP. General land use within this unit includes natural resource conservation, wildlife management, and recreational activities (*e.g.*, swimming, walking, fishing, and boating).

Unit FL–22 is occupied by the species and contains one or more of the PBFs essential to the conservation of the species. This unit has high-density nesting by green turtles within the State's Northwest Management Unit (Ceriani 2022, pers. comm.). The State Park supports a natural, protected beach and dune complex with limited human disturbance. Approximately 132 ac (53 ha) of the unit overlaps designated critical habitat for the federally endangered Choctawhatchee beach mouse (71 FR 60238, October 12, 2006).

Threats to the PBFs identified within Unit FL–22 include habitat loss, modification, and degradation of nesting beach habitat, naturally caused or human-caused disasters (*e.g.*, hurricanes, oil spills) and responses to disasters, beach erosion, beach sand placement activities, recreational activities, and presence of terrestrial and

marine debris. Special management considerations or protection measures to reduce or alleviate threats may include conducting beach and dune restoration, ensuring renourishment sand mimics natural sand characteristics, installing signage at parking lots and beach access areas to educate recreating public about presence of nesting turtles on beaches, and removing terrestrial debris on beaches and marine debris that washes ashore. State lands within this unit are managed under Topsail Hill Preserve State Park's Management Plan (FDEP 2019, entire).

#### Unit FL–23: Gulf Islands National Seashore

Unit FL–23 consists of 334 ac (135 ha) of beach, dune, and coastal vegetation along the Gulf of Mexico shoreline in Escambia County, Florida, from the western boundary of the University of West Florida beach property to the eastern boundary of the Gulf Islands National Seashore at the Escambia–Santa Rosa County boundaries. This unit includes lands from the MHWL to the toe of the secondary dune or developed structures. Lands within this unit include approximately 316 ac (128 ha; 95 percent) in Federal ownership and 17 ac (7 ha; 5 percent) in State ownership. Federal lands in this unit include the Gulf Islands National Seashore (managed by NPS), and State lands are University of West Florida property (managed by the State of Florida). General land use within this unit includes natural resource conservation, wildlife management, and recreational activities (*e.g.*, swimming, walking, fishing, and boating).

Unit FL–23 is occupied by the species and contains one or more of the PBFs essential to the conservation of the species. This unit has high-density nesting by green turtles within the State's Northwest Management Unit (Ceriani 2022, pers. comm.). The unit is composed of a natural, protected beach and dune complex with limited human disturbance.

Threats to the PBFs identified within Unit FL–23 include habitat loss, modification, and degradation of nesting beach habitat, naturally caused or human-caused disasters (*e.g.*, hurricanes, oil spills) and responses to disasters, beach erosion, beach sand placement activities, recreational activities, and presence of terrestrial and marine debris. Special management considerations or protection measures to reduce or alleviate threats may include conducting beach and dune restoration, ensuring renourishment sand mimics natural sand characteristics, modifying hiking trail routes during the nesting



season, installing signage at parking lots and beach access areas to educate the recreating public about presence of nesting turtles on beaches, and removing terrestrial debris on beaches and marine debris that washes ashore. Federal lands within this area are managed under the Gulf Islands National Seashore Final Management Plan and Environmental Impact Statement (NPS 2014b, entire).

#### Unit PR-01: Mona Island

Unit PR-01 consists of 66 ac (27 ha) of beach and coastal vegetation along the southern half shoreline of Mona Island, located about 31 mi (50 km) from the west coast of Puerto Rico in the Caribbean Sea. The unit includes lands from the MHWL to the toe of the secondary dune or developed structures. This unit includes all beaches on Mona Island used by green turtles for nesting starting from the Playa Sardineria camp area in the west, moving south and then east to Playa Pajaros, just south of the Mona Island Lighthouse. Lands within this unit are entirely commonwealth-owned and managed by the Puerto Rico Department of Natural and Environmental Resources (DNER) as the Mona Island Nature Reserve. Mona Island has two camping areas and is managed for conservation and recreation, including hiking trails, picnic areas, and seasonal hunting of pigs and goats. Additionally, scientific research and monitoring of natural resources may occur year-round, particularly monitoring of sea turtle activity that the DNER has been implementing since the early 1990s (Diez and van Dam 2022, entire).

Unit PR-01 is occupied by the species and contains one or more of the PBFs essential to the conservation of the species. This unit provides an undeveloped coastline with limited disturbance from human activity and has had consistent green turtle nesting for at least the past 10 years (Diez 2021, pers. comm.). This unit also provides the only known green turtle nesting area on the west side of Puerto Rico, ensuring good spatial representation for this portion of the DPS, and it contains internesting beach area to support placement of multiple nests by individual turtles within a single season. The entire unit overlaps with designated critical habitat for the federally endangered hawksbill sea turtle (47 FR 27295, June 24, 1982) and other terrestrial species in which the entire Mona Island is designated critical habitat: the threatened Mona boa and Mona ground iguana (43 FR 4618, February 3, 1978), and the federally endangered yellow-shouldered

blackbird (41 FR 51019, November 19, 1976).

Threats to the PBFs identified within Unit PR-01 include habitat loss, modification, and degradation of nesting beach habitat, naturally caused or human-caused disasters (*e.g.*, hurricanes and oil spills) and responses to disasters, beach erosion, and presence of terrestrial and marine debris. Special management considerations or protection measures to reduce or alleviate the threats may include conducting specific research to better understand erosion patterns and removing terrestrial debris from the beaches and marine debris that washes ashore. Commonwealth lands within this unit are managed under the Puerto Rico State Wildlife Action Plan (DNER 2015, entire).

#### Unit PR-02: Guayama

Unit PR-02 consists of 23 ac (9 ha) of beach and coastal vegetation along the southern coastline in the Guayama Municipality, Puerto Rico on the Caribbean Sea. This unit includes three separate beach segments (from east to west)—Las Mareas (6 ac (2 ha)), Los Limones (10 ac (4 ha)), and Pozuelo (7 ac (3 ha))—along the shoreline of Punta Ola Grande (*i.e.*, Las Mareas) and moving west towards Punto Pozuelo Point along the coast. The unit includes lands from the MHWL to the toe of the secondary dune or developed structures. All lands within this unit are under commonwealth ownership, although a small amount of the upland area may be under private ownership (noting that the best available information does not indicate how much area is within private ownership). General land use within this unit includes passive recreational activities for the public, and there is ongoing yearly sea turtle monitoring. Pozuelo Beach also has a parking area with gazebos adjacent to the beach for recreational day use.

Unit PR-02 is occupied by the species and contains one or more of the PBFs essential to the conservation of the species. This unit provides mostly an undeveloped coastline with limited disturbance from human activity and has seen an increase in green turtle nesting, particularly in the 2021 season (Diez 2021, pers. comm.). This unit provides one of the few green turtle nesting areas in mainland Puerto Rico and supports expansion and recovery of nesting from the Vieques Island nesting beaches (*i.e.*, VPR-01 to 07), ensuring good spatial representation for Puerto Rico. This unit also contains internesting beach area to support placement of multiple nests by individual green turtles within a single

season and provides nesting habitat for leatherback and hawksbill turtles that also occupy this area.

Threats to the PBFs identified within Unit PR-02 include habitat loss, modification, and degradation of nesting beach habitat, naturally caused or human-caused disasters (*e.g.*, hurricanes and oil spills) and responses to disasters, beach erosion, coastal development and associated artificial lighting, recreational activities, and the presence of terrestrial and marine debris. Special management considerations or protection measures to reduce or alleviate the threats may include conducting specific research to better understand erosion patterns, conducting habitat restoration, mitigating lighting impacts, and removing terrestrial debris from the beaches and marine debris that washes ashore. Commonwealth lands within this unit are managed under the Puerto Rico State Wildlife Action Plan (DNER 2015, entire).

#### Unit PR-03: Maunabo

Unit PR-03 consists of 24 ac (10 ha) of beach and coastal vegetation along the southeastern coastline in the Maunabo Municipality, Puerto Rico, on the Caribbean Sea. This unit includes two separate beach segments—California (12 ac (5 ha)) and Punta Tuna (12 ac (5 ha))—just west (*i.e.*, California) and east (*i.e.*, Punta Tuna) of the Punta Tuna Lighthouse at the end of Road PR-760. The unit includes lands from the MHWL to the toe of the secondary dune or developed structures. All lands within this unit are under commonwealth ownership, although a small amount of the upland area of the California Beach segment may be under private ownership (noting that the best available information does not indicate how much area is within private ownership). The 12-ac (5-ha; 50 percent) segment within Punta Tuna Beach is managed by the Puerto Rico DNER as the Punta Tuna Wetland Nature Reserve. General land use within this unit includes passive recreational activities for the public (*e.g.*, use of beach and hiking) and ongoing/yearly sea turtle monitoring.

Unit PR-03 is occupied by the species and contains one or more of the PBFs essential to the conservation of the species. This unit provides a relatively undeveloped coastline with limited disturbance from human activity, including consistent and increasing green turtle nesting activity since 2013 (Crespo and Diez 2022, p. 21). This unit also provides one of the few green turtle nesting areas in mainland Puerto Rico and supports expansion and recovery of



nesting from the important nesting beaches (*i.e.*, VPR–01 to 07), ensuring good spatial representation for Puerto Rico. This unit also contains internesting beach area to support placement of multiple nests by individual green turtles within a single season and provides nesting habitat for leatherback and hawksbill turtles that also occupy this area.

Threats to the PBFs identified within Unit PR–03 include habitat loss, modification, and degradation of nesting beach habitat, naturally caused or human-caused disasters (*e.g.*, hurricanes and oil spills) and responses to disasters, beach erosion, recreational activities, coastal development and associated artificial lighting, and presence of terrestrial and marine debris. Special management considerations or protection measures to reduce or alleviate the threats may include conducting specific research to better understand erosion patterns, conducting habitat restoration, mitigating lighting impacts, and removing terrestrial debris from the beaches and marine debris that washes ashore. Commonwealth lands within this unit are managed under the Puerto Rico State Wildlife Action Plan (DNER 2015, *entire*).

#### Unit VPR–01: Campaña

Unit VPR–01 consists of approximately 11 ac (4 ha) of beach and coastal vegetation along the north shoreline of Vieques Island, in between Punta Cabellos Colorados and just west of Punta Brigadier on Vieques Island, Puerto Rico, on the Caribbean Sea. This unit includes five beach segments starting at Punta Cabellos Colorados and moving east: (1) 2 ac (1 ha); (2) less than 1 ac (less than 1 ha); (3) less than 1 ac (less than 1 ha); (4) 1 ac (less than 1 ha); (5) and 8 ac (3 ha). The unit includes lands from the MHWL to the toe of the secondary dune or developed structures. All lands within this unit are under Federal ownership within the eastern tract of the Vieques NWR. Unit VPR–01 is currently closed to public use because of unexploded ordnance (UXO) management, and there is limited monitoring of natural resources including sea turtle nesting surveys and research.

Unit VPR–01 is occupied by the species and contains one or more of the PBFs essential to the conservation of the species. The beaches within the Vieques NWR harbor the most important and consistent green turtle nesting area outside the main island of Puerto Rico (Barandarian and Bermúdez 2022, *entire*). This unit provides mostly an undeveloped beach shoreline and

supports expansion and recovery beaches from the other units on Vieques Island and ensures good spatial representation of green turtle nesting for the north coast of Vieques. This unit also contains internesting beach area to support placement of multiple nests by individual green turtles within a single season and provides nesting habitat for leatherback and hawksbill turtles that also occupy this area.

Threats to the PBFs identified within Unit VPR–01 include habitat loss, modification, and degradation of nesting beach habitat, naturally caused or human-caused disasters (*e.g.*, hurricanes, oil spills, and UXO management), beach erosion, and presence of terrestrial and marine debris. Special management considerations or protection measures to reduce or alleviate the threats to critical habitat may include conducting specific research to better understand erosion patterns, consultation with the U.S. Navy for their UXO management, conducting public outreach, and removing terrestrial debris on the beaches and marine debris that washes ashore. The Vieques NWR is managed by the USFWS under the Comprehensive Conservation Plan (USFWS 2007, *entire*).

#### Unit VPR–02: Puerto Diablo

Unit VPR–02 consists of approximately 15 ac (6 ha) of beach and coastal vegetation along the north shoreline of Vieques Island, Puerto Rico, on the Caribbean Sea. This unit includes eight beach segments (from west to east): (1) three segments starting approximately 1 mi (1.6 km) east of Punta Goleta and west of Puerto Diablo (two each that are less than 1 ac (less than 1 ha) and one that is 1 ac (less than 1 ha)); (2) one segment within Puerto Diablo (5 ac (2 ha)); (3) and four additional segments before and up to Punta Icacos (1 ac (less than 1 ha), 4 ac (2 ha), 1 ac (less than 1 ha), and 2 ac (1 ha)). The unit includes lands from the MHWL to the toe of the secondary dune or developed structures. All lands within this unit are under Federal ownership within the eastern tract of the Vieques NWR. Unit VPR–02 is currently closed to public use because of UXO management and there is limited monitoring of natural resources, including sea turtle nesting surveys and research.

Unit VPR–02 is occupied by the species and contains one or more of the PBFs essential to the conservation of the species. The beaches within the Vieques NWR provide mostly an undeveloped beach shoreline and harbor the most important and consistent green turtle

nesting area outside the main island of Puerto Rico (Barandarian and Bermúdez 2022, *entire*). This unit supports expansion and recovery beaches from the other units on Vieques Island and ensures good spatial representation of green turtle nesting for the north coast of Vieques. This unit also contains internesting beach area to support placement of multiple nests by individual green turtles within a single season and provides nesting habitat for the leatherback and hawksbill turtles that also occupy this area.

Threats identified to the PBFs within Unit VPR–02 include habitat loss, modification, and degradation of nesting beach habitat, naturally caused or human-caused disasters (*e.g.*, hurricanes, oil spills, and UXO management), beach erosion, and presence of terrestrial and marine debris. Special management considerations or protection measures to reduce or alleviate the threats may include conducting specific research to better understand erosion patterns, consultation with the U.S. Navy for their UXO management, conducting public outreach, and removing terrestrial debris on the beaches and marine debris that washes ashore. The Vieques NWR is managed under the USFWS's Comprehensive Conservation Plan (USFWS 2007, *entire*).

#### Unit VPR–03: Vieques East

Unit VPR–03 consists of approximately 17 ac (7 ha) of beach and coastal vegetation along the northeast to southeast shoreline of Vieques Island, Puerto Rico, on the Caribbean Sea. This unit includes six beach segments (from west to east): (1) one segment along Bahía Salinas (Fósil Beach) totaling 3 ac (1 ha); (2) four segments east of Punta Salinas including Barco Beach (2 ac (1 ha)), unnamed beach (1 ac (less than 1 ha)), Brava Beach (3 ac (1 ha)), and Blanca Beach (3 ac (1 ha)); and (3) one segment towards Tamarindo Sur Beach (6 ac (3 ha)) and less than 1 mi (1.6 km) west of Punta Este. The unit includes lands from the MHWL to the toe of the secondary dune or developed structures. All lands within this unit are under Federal ownership within the eastern tract of the Vieques NWR. Unit VPR–03 is currently closed to public use because of UXO management, and there is limited monitoring of natural resources, including sea turtle nesting surveys and research.

Unit VPR–03 is occupied by the species and contains one or more of the PBFs essential to the conservation of the species. The beaches within the Vieques NWR provide mostly an undeveloped beach shoreline and harbor the most

important and consistent green turtle nesting area outside the main island of Puerto Rico (Barandarian and Bermúdez 2022, entire). This unit supports important nesting beaches and expansion and recovery beaches from the other units on Vieques Island, ensuring good spatial representation of green turtle nesting for the east coast of Vieques. This unit also contains internesting beach area to support placement of multiple nests by individual green turtles within a single season and provides nesting habitat for the leatherback and hawksbill turtles that also occupy this area.

Threats identified to the PBFs within Unit VPR-03 include habitat loss, modification, and degradation of nesting beach habitat, naturally caused or human-caused disasters (*e.g.*, hurricanes, oil spills, and UXO management), beach erosion, and presence of terrestrial and marine debris. Special management considerations or protection measures to reduce or alleviate the threats may include conducting specific research to better understand erosion patterns; consultation with the U.S. Navy for their UXO management actions, conducting public outreach, and removing terrestrial debris on the beaches and marine debris that washes ashore. The Vieques NWR is managed by the USFWS under the Comprehensive Conservation Plan (USFWS 2007, entire).

#### Unit VPR-04: Fanduca to Conejo

Unit VPR-04 consists of approximately 23 ac (9 ha) of beach and coastal vegetation along the southeast shoreline of Vieques Island, Puerto Rico, on the Caribbean Sea. This unit comprises eight segments (west to east): (1) Bahía Fanduca Beach (2 ac (1 ha)); (2) Bahía Yoyé Beach (1 ac (less than 1 ha)); (3) two segments at Bahía Jalova Beach (2 ac (1 ha) and 4 ac (2 ha)); (4) Punta Matías Beach (11 ac (5 ha)); and (5) three 1-ac (less than 1-ha) segments along Conejo Beach just west of Bahía Salinas del Sur. The unit includes lands from the MHWL to the toe of the secondary dune or developed structures. All lands within this unit are under Federal ownership within the eastern tract of the Vieques NWR. Unit VPR-04 is currently closed to public use because of UXO management, and there is limited monitoring of natural resources, including sea turtle nesting surveys and research.

Unit VPR-04 is occupied by the species and contains one or more of the PBFs essential to the conservation of the species. The beaches within the Vieques NWR provide mostly an undeveloped

beach shoreline and harbor the most important and consistent green turtle nesting area outside the main island of Puerto Rico (Barandarian and Bermúdez 2022, entire). This unit supports important beaches on Vieques Island and ensures good spatial representation of green turtle nesting for the southwest coast of Vieques. This unit also contains interesting beach area to support placement of multiple nests by individual green turtles within a single season and provides nesting habitat for the leatherback and hawksbill turtles that also occupy this area.

Threats identified to the PBFs within Unit VPR-04 include habitat loss, modification, and degradation of nesting beach habitat, naturally caused or human-caused disasters (*e.g.*, hurricanes, oil spills, and UXO management), beach erosion, and presence of terrestrial and marine debris. Special management considerations or protection measures to reduce or alleviate the threats may include conducting specific research to better understand erosion patterns; consultation with the U.S. Navy for their UXO management actions; conducting public outreach; removing terrestrial debris on the beaches and marine debris that washes ashore, which can impede the movement of hatchlings and adults between nests and the ocean; and relocating nests when needed, such as when responding to natural or human-caused disasters. The Vieques NWR is managed under the USFWS's Comprehensive Conservation Plan (USFWS 2007, entire).

#### Unit VPR-05: La Chiva

Unit VPR-05 consists of approximately 10 ac (4 ha) of beach and coastal vegetation along the south shoreline of Vieques Island, Puerto Rico, on the Caribbean Sea. This unit comprises two beach segments: (1) within Bahía La Chiva Beach (8 ac (3 ha)); and (2) another smaller segment just west of Punta Conejo (2 ac (1 ha)). The unit includes lands from the MHWL to the toe of the secondary dune or developed structures. All lands within this unit are under Federal ownership within the eastern tract of the Vieques NWR. General land use within this unit is primarily for recreational activities (*e.g.*, beachgoers, snorkeling, and tourism) and conservation with periodic or annual monitoring of natural resources, including sea turtle nesting surveys and habitat restoration.

Unit VPR-05 is occupied by the species and contains one or more of the PBFs essential to the conservation of the species. The beaches within the Vieques

NWR provide mostly an undeveloped beach shoreline and harbor the most important and consistent green turtle nesting area outside the main island of Puerto Rico (Barandarian and Bermúdez 2022, entire). This unit supports expansion and recovery beaches from the other units on Vieques Island and ensures good spatial representation of green turtle nesting for the south coast of Vieques. This unit also contains internesting beach area to support placement of multiple nests by individual green turtles within a single season and provides nesting habitat for the leatherback and hawksbill turtles that also occupy this area.

Threats identified to the PBFs within Unit VPR-05 include habitat loss, modification, and degradation of nesting beach habitat, naturally caused or human-caused disasters (*e.g.*, hurricanes, oil spills, and UXO management), beach erosion, recreational activities, and presence of terrestrial and marine debris. Special management considerations or protection measures to reduce or alleviate the threats may include conducting specific research to better understand erosion patterns; consultation with the U.S. Navy for their UXO management actions, conducting public outreach, and removing terrestrial debris from the beaches and marine debris that washes ashore. The Vieques NWR is managed under the USFWS's Comprehensive Conservation Plan (USFWS 2007, entire).

#### Unit VPR-06: Sun Bay

Unit VPR-06 consists of approximately 13 ac (5 ha) of beach and coastal vegetation along the south shoreline of Vieques Island, just east of the town of Esperanza within Sun Bay on Vieques Island, Puerto Rico, on the Caribbean Sea. The unit includes lands from the MHWL to the toe of the secondary dune or developed structures. All lands within this unit are commonwealth-owned and managed by the Puerto Rico DNER as the Bioluminescent Bays Nature Reserve. General land use within this unit is primarily for recreational activities (*e.g.*, beachgoers, tourism, and camping) and conservation with periodic or annual monitoring of natural resources, including sea turtle nesting surveys and habitat restoration.

Unit VPR-06 is occupied by the species and contains one or more of the PBFs essential to the conservation of the species. This unit supports expansion and recovery beaches from the other units on Vieques Island and ensures good spatial representation of green

turtle nesting for the south coast of Vieques (Barandarian and Bermúdez 2022, entire). This unit also contains interesting beach area to support placement of multiple nests by individual green turtles within a single season and provides nesting habitat for the leatherback and hawksbill turtles that also occupy this area.

Threats to the PBFs identified within Unit VPR-06 include habitat loss, modification, and degradation of nesting beach habitat, naturally caused or human-caused disasters (e.g., hurricanes, oil spills), beach erosion, recreational activities, and presence of terrestrial and marine debris. Special management considerations or protection measures to reduce or alleviate the threats may include conducting specific research to better understand erosion patterns, conducting public outreach, and removing terrestrial debris on the beaches and marine debris that washes ashore. Commonwealth lands within this unit are managed under Puerto Rico's State Wildlife Action Plan (DNER 2015, entire).

#### Unit VPR-07: Vieques Southwest

Unit VPR-07 consists of approximately 48 ac (19 ha) of beach and coastal vegetation along the southwest shoreline of Vieques Island, Puerto Rico, on the Caribbean Sea. This unit comprises two segments in the southwestern edge of the Vieques NWR: (1) one 28-ac (11-ha) segment extending approximately 3 mi (5 km) west of Punta Vaca; and (2) one 19-ac (8-ha) segment starting less than 1 mi (less than 1 km) east of Punta Vaca and extending approximately 2 mi (3 km) east just south of Laguna Playa Grande. The unit includes lands from the MHWL to the toe of the secondary dune or developed structures. Approximately 44 ac (18 ha; 92 percent) of lands within this unit are under Federal ownership within the western tract of the Vieques NWR, and approximately 4 ac (1 ha; 8 percent) are under commonwealth ownership, although a small amount of the upland area under commonwealth ownership may be under private ownership (noting that the best available information does not indicate how much area is within private ownership). General land use within this unit is primarily for recreational activities (e.g., beachgoers and tourism) and conservation with periodic or annual monitoring of natural resources, including sea turtle nesting surveys and habitat restoration.

Unit VPR-07 is occupied by the species and contains one or more of the PBFs essential to the conservation of the

species. The beaches within the Vieques NWR provide mostly an undeveloped beach shoreline and harbor the most important and consistent green turtle nesting area outside the main island of Puerto Rico (Barandarian and Bermúdez 2022, entire). This unit supports important nesting beaches on Vieques Island and ensures good spatial representation of green turtle nesting for the south coast of Vieques. This unit also contains interesting beach area to support placement of multiple nests by individual green turtles within a single season and provides nesting habitat for the leatherback and hawksbill turtles that also occupy this area.

Threats to the PBFs identified within Unit VPR-07 include habitat loss, modification, and degradation of nesting beach habitat, naturally caused or human-caused disasters (e.g., hurricanes and oil spills), beach erosion, recreational activities, and presence of terrestrial and marine debris. Special management considerations or protection measures to reduce or alleviate the threats may include conducting specific research to better understand erosion patterns, conducting public outreach, and removing terrestrial debris from the beaches and marine debris that washes ashore. The Vieques NWR is managed under the USFWS's Comprehensive Conservation Plan (USFWS 2007, entire), and commonwealth lands within this unit are managed under Puerto Rico's State Wildlife Action Plan (DNER 2015, entire).

#### South Atlantic DPS

##### Unit USVI-01: Sandy Point National Wildlife Refuge

Unit USVI-01 consists of approximately 37 ac (15 ha) of beach and coastal vegetation along the Westend Peninsula shoreline within the Sandy Point NWR on the southwest point of St. Croix, U.S. Virgin Islands, in the Caribbean Sea. It also includes a contiguous beach area just outside of the Refuge on the northernmost boundary, on the shore of the Fredericksted pool area at the end of Veterans Shore Drive. The unit includes lands from the MHWL to the toe of the secondary dune or developed structures. Lands within this unit include approximately 35 ac (14 ha; 95 percent) in Federal ownership (managed by the USFWS as the Sandy Point NWR) and 2 ac (1 ha; 5 percent) in territory ownership (managed by the Virgin Islands Department of Sports, Parks, and Recreation). General land use within this unit is primarily for the conservation of sea turtles and recreational activities.

Unit USVI-01 is occupied by the species and contains one or more of the PBFs essential to the conservation of the species. Unit USVI-01 consists of the longest and most continuous stretch of important beach habitat along the western peninsula of St. Croix. This unit provides mostly an undeveloped coastline with limited disturbance from human activity and has seen an increase in green turtle nesting, particularly since 2018 (Lombard 2021, pers. comm.). This area provides the most important green turtle nesting area between Puerto Rico and the U.S. Virgin Islands. This unit also contains interesting beach area to support placement of multiple nests by individual green turtles within a single season. Approximately 27 ac (11 ha) of this unit overlap designated critical habitat for the federally endangered leatherback sea turtle (43 FR 43688, September 26, 1978) and also provides nesting habitat for hawksbill turtles that also occupy this area.

Threats to the PBFs identified within Unit USVI-01 include habitat loss, modification, and degradation of nesting beach habitat, naturally caused or human-caused disasters (e.g., hurricanes and oil spills) and responses to disasters, beach erosion, recreational activities, and presence of terrestrial and marine debris. Special management considerations or protection measures to reduce or alleviate the threats may include controlling public use access on beaches during the nesting season, conducting public outreach, and removing terrestrial debris from the beaches and marine debris that washes ashore. The Sandy Point NWR is managed under the Refuge's Comprehensive Conservation Plan (USFWS 2010, entire).

##### Unit USVI-02: Long Point Bay

Unit USVI-02 consists of approximately 9 ac (4 ha) of mostly undeveloped beach and coastal vegetation along the southwestern shoreline of Long Point Bay just west of Long Point on St. Croix, U.S. Virgin Islands, in the Caribbean Sea, and east of the Sandy Point NWR (USVI-01) along the southern shoreline. The unit includes lands from the MHWL to the toe of the secondary dune or developed structures. All lands within this unit are in territory ownership, although a small amount of the upland area may be under private ownership (noting that the best available information does not indicate how much area may be within private ownership). General land use within this unit includes recreational day use activities (e.g., beachgoers and tourism)



and limited monitoring of sea turtle activity.

Unit USVI-02 is occupied by the species and contains one or more of the PBFs essential to the conservation of the species. This unit supports expansion and recovery beaches from the other U.S. Virgin Islands units and ensures good spatial representation of green turtle nesting for the southwestern shoreline of St. Croix. The Long Point Bay unit provides a mostly undeveloped beach shoreline to support the significant amount of nesting that occurs on the adjacent Sandy Point NWR (Dow et al. 2007, p. 251; Eckert and Eckert 2019, p. 230). This unit also contains interesting beach area to support placement of multiple nests by individual green turtles within a single season and provides nesting habitat for the leatherback and hawksbill turtles that also occupy this area.

Threats to the PBFs identified within Unit USVI-02 include habitat loss, modification, and degradation of nesting beach habitat, naturally caused or human-caused disasters (e.g., hurricanes and oil spills) and responses to disasters, beach erosion, recreational activities, beach driving, coastal development and associated artificial lighting, and presence of terrestrial and marine debris. Special management considerations or protection measures to reduce or alleviate the threats may include conducting specific research to better understand erosion patterns, conducting habitat restoration, mitigating lighting impacts, and removing terrestrial debris from the beaches and marine debris that washes ashore. Territory lands within this unit are managed under the Virgin Islands Wildlife Action Plan (Platenberg and Valiulis 2018, entire).

#### Unit USVI-03: St. Croix South

Unit USVI-03 consists of 20 ac (8 ha) of beach and coastal vegetation along the south-central shoreline of St. Croix, U.S. Virgin Islands, in the Caribbean Sea. This unit comprises two beach segments: (1) 13 ac (5 ha) east of the oil refinery towards Vagthus Point along Manchenil Bay; and (2) 7 ac (3 ha) along Halfpenny Bay towards Ferral Point. The unit includes lands from the MHWL to the toe of the secondary dune or developed structures. All lands within this unit are in territory ownership, although a small amount of the upland area may be under private ownership (noting that the best available information does not indicate how much area may be within private ownership). This unit offers mostly undeveloped beach areas with some areas contiguous with housing and

public access to the beach. General land use within this unit is mostly recreational activities (e.g., beachgoers and tourism), and there is limited monitoring of natural resources that occurs during the sea turtle nesting season.

Unit USVI-03 is occupied by the species and contains one or more of the PBFs essential to the conservation of the species. This unit supports important expansion and recovery beaches and ensures good spatial representation for the south-central coast of St. Croix. Both beaches in Manchenil and Halfpenny Bays have consistent green turtle nesting activity (Dow et al. 2007, p. 251; Eckert and Eckert 2019, p. 230) and present mostly an undeveloped beach shoreline. This unit also contains interesting beach area to support placement of multiple nests by individual green turtles within a single season and provides nesting habitat for the leatherback and hawksbill turtles that also occupy this area. Approximately 0.4 ac (0.2 ha) of this unit overlap designated critical habitat for the federally endangered plant *Agave eggersiana* (79 FR 53315, September 9, 2014).

Threats identified to the PBFs within Unit USVI-03 include habitat loss, modification, and degradation of nesting beach habitat, naturally caused or human-caused disasters (e.g., hurricanes and oil spills) and responses to disasters, beach erosion, coastal development and associated artificial lighting, beach driving, recreational activities, and presence of terrestrial and marine debris. Special management considerations or protection measures to reduce or alleviate the threats may include conducting specific research to better understand erosion patterns, conducting habitat restoration, mitigating lighting impacts, and removing terrestrial debris from the beaches and marine debris that washes ashore. Territory lands within this unit are managed under the Virgin Islands Wildlife Action Plan (Platenberg and Valiulis 2018, entire).

#### Unit USVI-04: East End

Unit USVI-04 consists of 16 ac (6 ha) of mostly undeveloped beach and coastal vegetation along the shoreline from Grapetree Point in the southeast towards the northeast to Romney Point on St. Croix, U.S. Virgin Islands, in the Caribbean Sea. The unit includes six beach segments (starting from Grapetree Point on the southeast): (1) 2 ac (less than 1 ha) along the west end of Grapetree Bay, (2) 4 ac (2 ha) along Jack's Bay, (3) 5 ac (2 ha) along Isaac's Bay, (4) 3 ac (1 ha) along East End Bay,

(5) 1 ac (less than 1 ha) along Whale Point Bay, and (6) 1 ac (less than 1 ha) along Knight's Bay. This unit includes lands from the MHWL to the toe of the secondary dune or developed structures. All lands within this unit are in territory ownership, although a small amount of the upland area may be under private ownership (noting that the best available information does not indicate how much area is within private ownership). As part of the St. Croix East End Marine Park (STXEEMP 2016, entire), general land use within this unit is mostly recreational activities (e.g., beachgoers, tourism, hiking, and recreational fishing), and there is periodic or annual monitoring of natural resources including limited sea turtle nesting surveys.

Unit USVI-04 is occupied by the species and contains one or more of the PBFs essential to the conservation of the species. This unit supports both important expansion and recovery beaches and ensures good spatial representation for the east end coast of St. Croix. This unit harbors one of the most important green turtle nesting areas in St. Croix after Sandy Point NWR (USVI-01) (Dow et al. 2007, p. 251; Eckert and Eckert 2019, p. 230; Pott 2021, entire) and provides mostly an undeveloped coastline with limited disturbance from human activity. This unit also contains interesting beach area to support placement of multiple nests by individual green turtles within a single season and provides nesting habitat for the leatherback and hawksbill turtles that also occupy this area. Approximately 4 ac (2 ha) of this unit overlap designated critical habitat for the federally endangered plant *Agave eggersiana* (79 FR 53315, September 9, 2014).

Threats to the PBFs identified within Unit USVI-04 include habitat loss, modification, and degradation of nesting beach habitat, naturally caused or human-caused disasters (e.g., hurricanes and oil spills) and responses to disasters, beach erosion, coastal development and associated artificial lighting, recreational activities, and presence of terrestrial and marine debris. Special management considerations or protection measures to reduce or alleviate the threats may include conducting specific research to better understand erosion patterns, conducting habitat restoration, mitigating lighting impacts, and removing terrestrial debris from the beaches and marine debris that washes ashore. Territory lands within this unit are managed under the STXEEMP Management Plan (STXEEMP 2016, entire). A portion of these territory-

owned lands in this unit (Isaac's and Jack's Bay beaches) is managed by the TNC (STXEEMP 2016, entire).

#### Unit USVI-05: Chenay to Coakley

Unit USVI-05 consists of 15 ac (6 ha) of mostly undeveloped beach and coastal vegetation along the shoreline from the Southgate Coastal Reserve just west of the Green Cay Marina to Wismenog Point, St. Croix, U.S. Virgin Islands, in the Caribbean Sea. This unit comprises three beach segments (west to east): (1) 6 ac (3 ha) along Chenay Bay; (2) 5 ac (2 ha) along Prune Bay, and (3) 4 ac (2 ha) along Coakley Bay. This unit includes lands from the MHWL to the toe of the secondary dune or developed structures. All lands within this unit are in Territory ownership, although a small amount of the upland area may be under private ownership (noting that the best available information does not indicate how much area is within private ownership). As part of the STXEEMP (2016, entire), general land use within this unit is mostly recreational activities (e.g., beachgoers, tourism, hiking, and recreational fishing), and there is periodic or annual monitoring of natural resources including limited sea turtle nesting surveys.

Unit USVI-05 is occupied by the species and contains one or more of the PBFs essential to the conservation of the species. This unit supports important expansion and recovery nesting areas and ensures good spatial representation for the northeast of St. Croix. The mostly undeveloped coastline experiences limited disturbance from human activity and has consistent green turtle nesting (Dow et al. 2007, p. 251; Eckert and Eckert 2019, p. 230; Pott 2021, entire) from year to year. This unit also contains interesting beach area to support placement of multiple nests by individual green turtles within a single season and provides nesting habitat for the leatherback and hawksbill turtles that also occupy this area.

Threats to the PBFs identified within Unit USVI-05 include habitat loss, modification, and degradation of nesting beach habitat, naturally caused or human-caused disasters (e.g., hurricanes and oil spills) and responses to disasters, beach erosion, coastal development and associated artificial lighting, recreational activities, and presence of terrestrial and marine debris. Special management considerations or protection measures to reduce or alleviate the threats may include conducting specific research to better understand erosion patterns, conducting habitat restoration, mitigating lighting impacts, and removing terrestrial debris from the

beaches and marine debris that washes ashore. Territory lands within this unit are managed under the STXEEMP Management Plan (STXEEMP 2016, entire). A portion of this unit, Southgate Coastal Reserve, is owned and managed by the St. Croix Environmental Association (STXEEMP 2016, entire).

#### Unit USVI-06: Buccaneer

Unit USVI-06 consists of 6 ac (2 ha) of beach and coastal vegetation along the shoreline on the north coast of St. Croix, U.S. Virgin Islands, in the Caribbean Sea. This unit comprises two beach segments: (1) 5 ac (2 ha) along Beauregard Bay just north of Altona Lagoon; and (2) 1 ac (less than 1 ha) along Whistle Beach just east of Shoy Point. This unit includes lands from the MHWL to the toe of the secondary dune or developed structures. All lands within this unit are in territory ownership, although a small amount of the upland area may be under private ownership (noting that the best available information does not indicate how much area is within private ownership). Adjacent private lands within this unit are associated with the Buccaneer Beach and Golf Resort, and, therefore, general land use within this unit includes recreational activities related to the resort (e.g., beachgoers, swimming, and tourism).

Unit USVI-06 is occupied by the species and contains one or more of the PBFs essential to the conservation of the species. This unit provides a partially developed coastline with limited disturbance from human activity associated with the resort. Both beaches within this unit support expansion and recovery nesting beaches from adjacent units (USVI-05, 07, and 08) (Eckert and Eckert 2019, p. 230) and ensure good spatial representation in the north part of St. Croix. This unit also contains interesting beach area to support placement of multiple nests by individual green turtles within a single season and provides nesting habitat for the leatherback and hawksbill turtles that also occupy this area.

Threats to the PBFs identified within Unit USVI-06 include habitat loss, modification, and degradation of nesting beach habitat, naturally caused or human-caused disasters (e.g., hurricanes and oil spills) and responses to disasters, beach erosion, coastal development and associated artificial lighting, recreational activities, and presence of terrestrial and marine debris. Special management considerations or protection measures to reduce or alleviate the threats may include conducting specific research to better understand erosion patterns,

conducting habitat restoration, mitigating lighting impacts, and removing terrestrial debris from the beaches and marine debris that washes ashore. Territory lands within this unit are managed under the Virgin Islands Wildlife Action Plan (Platenberg and Valiulis 2018, entire).

#### Unit USVI-07: Judith's Fancy

Unit USVI-07 consists of 3 ac (1 ha) of beach and coastal vegetation along the north shoreline within the Judith's Fancy Estate just east of Salt River Bay on St. Croix, U.S. Virgin Islands, in the Caribbean Sea. This unit includes lands from the MHWL to the toe of the secondary dune or developed structures. All lands within this unit are in Territory ownership, although a small amount of the upland area may be under private ownership (noting that the best available information does not indicate how much area is within private ownership). General land use within this unit is mostly recreational activities (e.g., beachgoers), and there are limited sea turtle nesting surveys.

Unit USVI-07 is occupied by the species and contains one or more of the PBFs essential to the conservation of the species. This unit supports an expansion and recovery nesting beach for the other adjacent units (USVI-05, 06, and 08) (Eckert and Eckert 2019, p. 230) and ensures good spatial representation for the north shoreline of St. Croix. This unit also contains interesting beach area to support placement of multiple nests by individual green turtles within a single season and provides nesting habitat for the leatherback and hawksbill turtles that also occupy this area.

Threats to the PBFs identified within Unit USVI-07 include habitat loss, modification, and degradation of nesting beach habitat, naturally caused or human-caused disasters (e.g., hurricanes and oil spills), beach erosion, coastal development and associated artificial lighting, recreational activities, and presence of terrestrial and marine debris. Special management considerations or protection measures to reduce or alleviate the threats may include conducting specific research to better understand erosion patterns, conducting habitat restoration, mitigating lighting impacts, and removing terrestrial debris from the beaches and marine debris that washes ashore. Territory lands within this unit are managed under the Virgin Islands Wildlife Action Plan (Platenberg and Valiulis 2018, entire).

## Unit USVI-08: Buck Island Reef National Monument

Unit USVI-08 consists of 12 ac (5 ha) of undeveloped beach and coastal vegetation along the shoreline of Buck Island approximately 2 mi (3 km) off the northeast coast of St. Croix, U.S. Virgin Islands, in the Caribbean Sea. The unit includes lands from the MHWL to the toe of the secondary dune or developed structures from the island's North Shore on the northwest and moving south towards West Beach, South Shore, and Turtle Bay. Lands within this unit are all within Federal ownership and managed by the NPS for conservation and recreation. General land use includes recreational activities (*i.e.*, snorkeling, hiking trails, and picnic day use areas), and scientific research and monitoring of natural resources that may occur year-round, including sea turtle nesting surveys.

Unit USVI-08 is occupied by the species and contains one or more of the PBFs essential to the conservation of the species. This unit provides an undeveloped coastline with limited disturbance from human activity and has had consistent green turtle nesting for at least the past 10 years (NPS 2021b and 2021c, entire) and provides the only important nesting area outside of the main island of St. Croix. This unit also contains interesting beach area to support placement of multiple nests by individual green turtles within a single season and provides nesting habitat for the leatherback and hawksbill turtles that also occupy this area.

Threats to the PBFs identified within Unit USVI-08 include habitat loss, modification, and degradation of nesting beach habitat, naturally caused or human-caused disasters (*e.g.*, hurricanes and oil spills) and responses to disasters, beach erosion, recreational activities, and presence of terrestrial and marine debris. Special management considerations or protection measures to reduce or alleviate the threats may include conducting specific research to better understand erosion patterns and removing terrestrial debris from the beaches and marine debris that washes ashore. The Buck Island Reef National Monument is managed under the NPS's General Management Plan (NPS 2012, entire).

## Effects of Critical Habitat Designation

### Section 7 Consultation

Section 7(a)(2) of the Act requires Federal agencies, including the USFWS, to ensure that any action they fund, authorize, or carry out is not likely to jeopardize the continued existence of any endangered species or threatened

species or result in the destruction or adverse modification of designated critical habitat of such species. In addition, section 7(a)(4) of the Act requires Federal agencies to confer with the USFWS on any agency action which is likely to jeopardize the continued existence of any species proposed to be listed under the Act or result in the destruction or adverse modification of proposed critical habitat.

We published a final rule revising the definition of destruction or adverse modification on August 27, 2019 (84 FR 44976). Destruction or adverse modification means a direct or indirect alteration that appreciably diminishes the value of critical habitat as a whole for the conservation of a listed species.

Compliance with the requirements of section 7(a)(2) is documented through our issuance of:

(1) A concurrence letter for Federal actions that may affect, but are not likely to adversely affect, listed species or critical habitat; or

(2) A biological opinion for Federal actions that may affect, and are likely to adversely affect, listed species or critical habitat.

When we issue a biological opinion concluding that a project is likely to jeopardize the continued existence of a listed species and/or destroy or adversely modify critical habitat, we provide reasonable and prudent alternatives to the project, if any are identifiable, that would avoid the likelihood of jeopardy and/or destruction or adverse modification of critical habitat. We define "reasonable and prudent alternatives" (at 50 CFR 402.02) as alternative actions identified during consultation that:

(1) Can be implemented in a manner consistent with the intended purpose of the action,

(2) Can be implemented consistent with the scope of the Federal agency's legal authority and jurisdiction,

(3) Are economically and technologically feasible, and

(4) Would, in the USFWS Director's opinion, avoid the likelihood of jeopardizing the continued existence of the listed species and/or avoid the likelihood of destroying or adversely modifying critical habitat.

Reasonable and prudent alternatives can vary from slight project modifications to extensive redesign or relocation of the project. Costs associated with implementing a reasonable and prudent alternative are similarly variable.

Regulations at 50 CFR 402.16 set forth requirements for Federal agencies to reinstate consultation if any of the following four conditions occur: (1) the

amount or extent of taking specified in the incidental take statement is exceeded; (2) new information reveals effects of the action that may affect listed species or critical habitat in a manner or to an extent not previously considered; (3) the identified action is subsequently modified in a manner that causes an effect to the listed species or critical habitat that was not considered in the biological opinion or written concurrence; or (4) a new species is listed or critical habitat designated that may be affected by the identified action. The reinstatement requirement applies only to actions that remain subject to some discretionary Federal involvement or control. As provided in 50 CFR 402.16, the requirement to reinstate consultations for new species listings or critical habitat designation does not apply to certain agency actions (*e.g.*, land management plans issued by the Bureau of Land Management in certain circumstances).

### Application of the "Destruction or Adverse Modification" Standard

The key factor related to the destruction or adverse modification determination is whether implementation of the proposed Federal action directly or indirectly alters the designated critical habitat in a way that appreciably diminishes the value of the critical habitat for the conservation of the listed species. As discussed above, the role of critical habitat is to support PBFs essential to the conservation of a listed species and provide for the conservation of the species.

Section 4(b)(8) of the Act requires us to briefly evaluate and describe, in any proposed or final regulation that designates critical habitat, activities involving a Federal action that may violate section 7(a)(2) of the Act by destroying or adversely modifying such habitat, or that may be affected by such designation. One of the most important concepts of an analysis for destruction or adverse modification is the scale at which the analysis and final conclusion are made. Just as the determination of jeopardy under section 7(a)(2) of the Act is made at the scale of the entire listed entity, a determination of destruction or adverse modification is made at the scale of the entire critical habitat designation. Put another way, the determination of "destruction or adverse modification" is based on whether the action will appreciably diminish the value of the critical habitat as a whole, not just in the action area. Therefore, an analysis for destruction or adverse modification for green turtle critical habitat would be performed at the DPS level and would assess whether



the effects of the action will appreciably diminish the value of critical habitat within the affected DPS.

During a consultation under section 7(a)(2) of the Act, activities that we may find are likely to destroy or adversely modify critical habitat for the green turtle DPSs include, but are not limited to:

(1) Actions that would significantly alter the configuration, topography, or substrate of nesting or basking habitats. Such activities could include, but are not limited to, construction development and associated infrastructure, including roadways; commercial and residential development; light installation visible from beaches; fencing installation; hard stabilization structures; removal, placement, or redistribution of sediments, such as beach nourishment; dredged material disposition; planting or promoting dense, woody, nonnative vegetation; and mechanical beach raking. These activities may destroy or degrade beach habitats, eliminating or reducing the terrestrial habitat necessary for green turtle basking, nesting, incubation, hatching, hatchling emergence from the sand, and transit to sea. However, activities that are intended to benefit green turtle critical habitat (*e.g.*, restoration or enhancement of beach/dune habitat, beach renourishment restorations, occasional or episodic protective screening over nests where predator management may not be feasible or proven effective after implementation, and dune stabilizations, including managed sand fencing where deemed appropriate, that demonstrate beneficial contributions to the recovery of the species) following state and federal guidelines, under most circumstances would not significantly adversely alter nesting or basking habitats.

(2) Actions that would inhibit the natural ability of beaches to adapt to sea level rise. Depending on the location, such activities could include, but are not limited to, construction of sea walls, bulkheads, revetments, jetties, groins, beachside buildings, parking lots and roadways, and artificial dunes with rock or clay cores or stabilized with fencing or densely planted vegetation outside of State and Federal guidelines. Such structures prevent the natural migration of barrier beach habitats, increasing the rate and areal extent of inundation and corresponding loss of green turtle nesting and basking habitats.

## Exemptions

### *Application of Section 4(a)(3) of the Act*

The Sikes Act Improvement Act of 1997 (Sikes Act) (16 U.S.C. 670a) required each military installation that includes land and water suitable for the conservation and management of natural resources to complete an integrated natural resources management plan (INRMP) by November 17, 2001. An INRMP integrates implementation of the military mission of the installation with stewardship of the natural resources found on the base. Each INRMP includes:

- (1) An assessment of the ecological needs on the installation, including the need to provide for the conservation of listed species;
- (2) A statement of goals and priorities;
- (3) A detailed description of management actions to be implemented to provide for these ecological needs; and
- (4) A monitoring and adaptive management plan.

Among other things, each INRMP must, to the extent appropriate and applicable, provide for fish and wildlife management; fish and wildlife habitat enhancement or modification; wetland protection, enhancement, and restoration where necessary to support fish and wildlife; and enforcement of applicable natural resource laws.

The National Defense Authorization Act for Fiscal Year 2004 (Pub. L. 108–136) amended the Act to limit areas eligible for designation as critical habitat. Specifically, section 4(a)(3)(B)(i) of the Act (16 U.S.C. 1533(a)(3)(B)(i)) provides that the Secretary shall not designate as critical habitat any lands or other geographical areas owned or controlled by the DoD, or designated for its use, that are subject to an integrated natural resources management plan prepared under section 101 of the Sikes Act (16 U.S.C. 670a), if the Secretary determines in writing that such plan provides a benefit to the species for which critical habitat is proposed for designation.

We consult with the military on the development and implementation of INRMPs for installations with listed species. We analyzed INRMPs developed by military installations located within the range of the proposed critical habitat designation for the green turtle to determine if they meet the criteria for exemption from critical habitat under section 4(a)(3) of the Act. There are 14 DoD-owned or -managed areas with completed USFWS-approved INRMPs for lands within the range of the green turtle proposed critical habitat

designation. These lands are addressed in eight INRMPs within the Central North Pacific DPS (398 ac (161 ha)), the Central West Pacific DPS (49.5 ac (20.5 ha)), and the North Atlantic DPS (2,865 ac (1,159 ha)), including a total of approximately 3,313 ac (1,341 ha) qualifying for exemption from critical habitat under section 4(a)(3) of the Act. Each of these approved INRMPs and their benefits to the green turtle and its habitat are summarized below.

### *Approved INRMPs*

Pacific Missile Range Facility, Island of Kaua'i, HI; Central North Pacific DPS; 298 ac (121 ha)

The Pacific Missile Range Facility includes lands on multiple Hawaiian Islands, totaling 3,700 ac (1,497 ha) and is identified as the largest instrumented multi-environment test range in the world. The facility supports training, tactics development, and evaluations of air, surface, and subsurface weapons systems for the Navy and other DoD agencies, foreign military forces, and private industry, as well as varied support of naval operations (DoD 2010, p. 2–1). For this proposed rule, we are only addressing coastal facility lands on Kaua'i at the Navy-owned Barking Sands (Main Base), which includes range operations, missile assembly and launch, radar tracking, communications, aviation and aviation support, a torpedo shop, and personnel support.

Natural resources are managed at the Pacific Missile Range Facility to support the military mission and to provide sustainable environments for training, education, and operations. Installation objectives are established, prioritized, and revisited on a regular basis, including consideration of natural resources management to meet both installation (mission) and regional objectives. The primary goal of the INRMP is to “support and sustain the military mission of Pacific Missile Range Facility while managing, protecting, and enhancing biological diversity and ecosystem integrity of military lands and waters and all associated threatened and endangered species and their habitats” (DoD 2010, p. 1–10). The 2010 Pacific Missile Range Facility INRMP guides the management and conservation of natural resources under the installation's control. It provides interdisciplinary strategic guidance for the management of natural resources, including the green turtle, in support of the military mission at Barking Sands.

We identified 298 ac (121 ha) of DoD lands within the Barking Sands area that harbor important basking and nesting

habitat consisting of beach, dune, and coastal vegetation. These lands are considered occupied by the species and provide natural beach habitat important for green turtle basking and nesting activity.

Natural resources management at Barking Sands is addressed through the following categories: project-specific management action, natural resources studies, use of Geographic Information systems, forestry, community outreach, outdoor recreation, land management, flood plains, law enforcement, wildland fire, and leases and encroachment (DoD 2010, p. 3–56). Recommended management actions outlined in the INRMP (DoD 2010, pp. 9–3, 9–5, 9–7, 9–9) that provide a conservation benefit to green turtles include:

- (1) Conducting predator control;
- (2) Implementing sea turtle management, including daily records of observations (sightings, tracks, and nesting events);
- (3) Protecting, monitoring, and recording sea turtle nests;
- (4) Implementing standard operating procedures that require beaches to be surveyed 1 hour prior to beach landing exercises, and delaying training if turtles are present until they voluntarily leave the area;
- (5) Conducting cleanup events of marine debris that washes ashore;
- (6) Implementing invasive species prevention and control, and developing a biosecurity program that helps prevent the introduction and transportation of invasive species;
- (7) Implementing habitat and dune restoration activities;
- (8) Continuing to restrict beach and dune access to maintain native vegetation;
- (9) Continuing to distribute natural resources information to Navy personnel and civilians, including information on natural resource policies and regulations; and
- (10) Ensuring that construction and maintenance projects are reviewed by an environmental coordinator to ensure contractors are aware of guidelines to avoid impacting sensitive vegetation.

Based on the above considerations, and in accordance with section 4(a)(3)(B)(i) of the Act, we have determined that the identified lands are subject to the Pacific Missile Range Facility INRMP and that conservation efforts identified in the INRMP will provide a benefit to the green turtle. Therefore, lands within this installation are exempt from critical habitat designation under section 4(a)(3) of the Act. We are not including 298 ac (121 ha) of habitat in this proposed critical

habitat designation because of this exemption.

Bellows Air Force Station, Island of O'ahu, HI; Central North Pacific DPS; 5 ac (2 ha)

Bellows Air Force Station is located on the windward side of the Ko'olau Mountain Range approximately 25 mi (40 km) east of Honolulu, bordered by the Marine Corps Training Area Bellow to the west and south, and the Pacific Ocean (Waimānalo Bay) to the east. The installation encompasses approximately 422 ac (171 ha) of DoD-managed lands to include wetlands, forested land, beach areas, as well as recreational facilities, inactive runways, taxiways, aircraft parking areas, and roads. Its main use/mission is to provide training, recreation, and leisure programs for Air Force, DoD Service components, families, and civilian personnel (BAFS 2018, pp. 18–20).

We identified 5 ac (2 ha) of DoD lands within this area that harbor important basking and nesting habitat consisting of beach, dune, and coastal vegetation. These lands are considered occupied by the species and provide a natural beach and dune complex important for green turtle nesting activity.

The Air Force's INRMP (BAFS 2018, entire) is an installation-specific Environmental Management Plan that guides the management and conservation of natural resources under the installation's control. The INRMP outlines management practices and work projects that are necessary to protect the environment and preserve the Bellows Air Force Station's dual mission of training and recreation and aligns with Pacific Air Force's mission to address emerging adversarial threats and strategic survivability goals. It also incorporates the 18th Wing mission with natural resources management and stewardship to be implemented at Detachment 2, 18th Force Support Squadron (Det 2, 18 FSS) located at Bellows Air Force Station.

Section 7.4 of the INRMP describes management of threatened and endangered species on the installation, including green turtles and their habitat (BAFS 2018, pp. 91–112). General management measures benefit green turtles (e.g., predator control, cooperating with associated recovery activities, implementing beach shoreline protections) in addition to implementation of the following best management practices set forth by the Pacific Islands Fish and Wildlife Office:

- (1) Implementing training on sea turtle protection procedures for relevant staff, volunteers, and contractors;

- (2) Providing guests with turtle conservation information;

- (3) Continuing not to use recreational equipment (e.g., chairs, umbrellas);

- (4) Removing marine debris that washes ashore;

- (5) Implementing pet restrictions;

- (6) Encouraging native plant growth on beaches and sand dunes to reduce erosion by stabilizing the beach;

- (7) Removing or avoiding use of nonnative plant species that would inhibit and entangle turtle hatchlings;

- (8) During nesting and hatchling emergence periods, preventing driving of any vehicles on the oceanward side of active nests, raking out tire ruts, and restricting driving on beaches to only Bellows Air Force Station staff when necessary;

- (9) If nest excavations must occur, contacting the Pacific Islands Fish and Wildlife Office no later than 7 days prior to incubation day 65 to coordinate nest excavations;

- (10) Providing informational signs and installing nest protection areas/signs to prevent nest disturbances and protect basking hotspots; and

- (11) Encouraging fisherman to use barbless hooks and to disentangle turtles.

Additionally, the Station conducts incidental monitoring of basking sea turtles (BAFS 2018, p. 113). The Air Force provides training and field forms to staff/volunteers to identify and record incidental encounters with sea turtles and install informational/educational signs in high public use areas where green turtles regularly bask.

Based on the above considerations, and in accordance with section 4(a)(3)(B)(i) of the Act, we have determined that the identified lands are subject to the Bellows Air Force Station INRMP and that conservation efforts identified in the INRMP will provide a benefit to the green turtle. Therefore, lands within this installation are exempt from critical habitat designation under section 4(a)(3) of the Act. We are not including 5 ac (2 ha) of habitat in this proposed critical habitat designation because of this exemption.

Joint Base Pearl Harbor–Hickam, Island of O'ahu, HI; Central North Pacific DPS; 10 ac (4 ha)

Naval Station Pearl Harbor and Hickam Air Force Base combined to form the Joint Base Pearl Harbor–Hickam; the Navy acts as “Component Lead” for the installation (Navy 2011, p. 2–1). The total area that the Navy oversees for this installation includes 24,895 ac (10,075 ha) of land and approximately 68,081 ac (27,552 ha) of water (Navy 2011, p. 2–1).

Natural resources management for multiple Air Force properties in Hawai'i that are now under Navy jurisdiction are addressed jointly in the Joint Base Pearl Harbor–Hickam INRMP (see chapter 7; Navy 2011, p. ES–1).

The primary goal of the INRMP is to support and sustain the military mission of Joint Base Pearl Harbor–Hickam while managing, protecting, and enhancing biological diversity and ecosystem integrity of military lands and waters, including the associated threatened and endangered species and their habitats (Navy 2011, p. 1–11). Additionally, it is also a goal of the INRMP to provide multiple-use programs for the management, conservation, and protection of renewable natural resources including wildlife, soil, water, and natural areas in conformance with applicable Federal and State of Hawai'i natural resource laws, regulations, and policies (Navy 2011, p. 1–11). These goals are further amplified by implementation of adaptive management strategies and ecosystem management considerations (Navy 2011, p. 1–14).

We identified a total of 10 ac (4 ha) of DoD lands at White Plains Beach and Nimitz Beach (natural beach area) and at Iroquois Point (renourished/manmade beach area) that harbor important basking and nesting habitat consisting of beach and coastal vegetation. These lands are considered occupied by the species and provide both natural renourished beach important for green turtle basking and nesting activity.

The 2011 INRMP includes natural resources program management for threatened and endangered species and conservation actions for the green turtle and its habitat. Management that benefits green turtles and their habitat includes:

- (1) Providing staff-focused annual natural resource training;
- (2) Reducing marine debris that washes ashore;
- (3) Providing awareness of the Act, protected species, and natural resources stewardship;
- (4) Maintaining/updating SOPs for protection of Act-protected species; and
- (5) Conducting predator control at Nimitz and White Plains beaches.

Based on the above considerations, and in accordance with section 4(a)(3)(B)(i) of the Act, we have determined that the identified lands are subject to the Navy's Joint Base Pearl Harbor–Hickam INRMP and that conservation efforts identified in the INRMP will provide a benefit to the green turtle. Therefore, lands within this installation are exempt from critical habitat designation under section 4(a)(3)

of the Act. We are not including 10 ac (4 ha) of habitat in this proposed critical habitat designation because of this exemption.

Marine Corps Base Hawai'i at Kāne'ohe Bay, Island of O'ahu, HI; Central North Pacific DPS; 44 ac (18 ha)

The Marine Corps Base Hawai'i encompasses approximately 4,500 ac (1,821 ha) of DoD lands across eight properties on O'ahu, including Marine Corps Base Hawai'i at Kāne'ohe Bay, Marine Corps Training Area Bellows, Waikane Valley Impact Area, Marine Corps Base Hawai'i at Camp H.M. Smith, Pu'uloa Range Training Facility, Manana Housing Area, Pearl City Annex, and Moloka'i Training Support Facility (Marine Corps 2017, Section 4.3, pp. 4–1 through 4–7). The Marine Corp's mission at Marine Corps Base Hawai'i includes maintaining facilities and providing programs and service in support of units, individuals, and families in order to enhance and sustain combat readiness for all operating forces and tenant organizations (Marine Corps 2017, p. 4–1). Tenant commands supported include the 3rd Marine Regiment (Reinforced), Marine Aircraft Group-24, and Combat 19 Logistics Battalion-3.

The Marine Corps Base Hawai'i at Kāne'ohe Bay is located on Mōkapu Peninsula (windward O'ahu) covering approximately 2,951 ac (1,194 ha) of land, as well as a 0.3-mi (.5-km) Naval Defensive Sea Area (*i.e.*, security buffer zone) extending seaward from the shorelines. The base comprises training areas, active-duty housing, residential housing, administrative and operational buildings, wetlands, wildlife management areas, and personnel support facilities (Marine Corps 2017, p. 4–4). We identified 44 ac (18 ha) of DoD lands within this area that are occupied by green turtles and harbor important green turtle basking and nesting habitat consisting of beach, dune, and coastal vegetation.

The 2017 Marine Corps Base Hawai'i INRMP guides the management and conservation of natural resources under the Marine Corps' control, guiding the management of natural resources, including green turtles and their habitat (Marine Corps 2017, appendix C). The base engages in a variety of conservation measures for green turtles (Marine Corps 2017, pp. C2–10 through C2–12), which also benefit other sea turtles that are known to occur on the base, including:

- (1) Implementing management actions to minimize erosion and pollution runoff;
- (2) Conducting invasive species removal;

- (3) Conducting predator control;
- (4) Monitoring for sea turtle occurrences and nesting, including monitoring of discovered nest sites;

- (5) Monitoring sea turtle basking activities;

- (6) Working with facility engineers to minimize lighting near shorelines, including any new lighting installations to use International Dark-Sky compliant fixtures;

- (7) Protecting native beach strand vegetation to reduce erosion and stabilize the land;

- (8) Protecting nesting and basking turtles by erecting barriers and monitoring the turtle activity;

- (9) Ensuring that any pets are allowed only on authorized beaches and only if leashed;

- (10) Implementing sea turtle nesting protection measures (*e.g.*, installing signs at sea turtle nesting sites and limiting the presence of people within 100 ft (30 m) of the nesting site, making the beach off limits to dogs until hatchlings depart, preventing driving on the oceanward side of active nests, raking tire ruts);

- (11) Conducting nest excavations if necessary, including coordinating with the Pacific Islands Fish and Wildlife Office;

- (12) Removing marine debris that washes ashore;

- (13) Enforcing a 500-yd (457-m) seaward buffer zone to control all access and resources including fishing, surfing, and other near-shore activities;

- (14) Implementing protocols for military maneuvers and large-scale recreational events; and

- (15) Conducting educational outreach regarding sea turtle information.

Based on the above considerations, and in accordance with section 4(a)(3)(B)(i) of the Act, we have determined that the identified lands are subject to the Marine Corps' INRMP and that conservation efforts identified in the INRMP will provide a benefit to the green turtle. Therefore, lands within this installation are exempt from critical habitat designation under section 4(a)(3) of the Act. We are not including 44 ac (18 ha) of habitat in this proposed critical habitat designation because of this exemption.

Marine Corps Training Area Bellows, Island of O'ahu, HI; Central North Pacific DPS; 18 ac (7 ha)

Marine Corps Training Area Bellows is one of eight facilities that comprise Marine Corps Base Hawai'i (see above). Marine Corps Training Area Bellows encompasses approximately 1,074 ac (435 ha) of the military-controlled lands at Bellows on the windward coast of



O'ahu, approximately 12 mi (19 km) south of Marine Corps Base Hawai'i at Kāne'ohe Bay (see above) (Marine Corps 2017, p. 4–5). This facility is a non-live-fire training range that supports ground maneuver operations, including a 0.5-mi (0.8-km) beach front area that supports ship-to-shore operations involving Landing Craft Air Cushioned and amphibious assault vehicle landings (Marine Corps 2017, p. 4–5). The beach and shoreline area are used for the military during the week and are open to public recreational activities on weekends and holidays. See above description of the military mission for this training area under the section for Marine Corps Base Hawai'i Kāne'ohe Bay. We identified 18 ac (7 ha) of DoD lands within this area that are occupied by green turtles and harbor important green turtle basking and nesting habitat consisting of beach, dune, and coastal vegetation.

The Marine Corps Training Area Bellows natural resources management is incorporated into the Marine Corps Base Hawai'i INRMP (Marine Corps 2017, entire). Therefore, the conservation measures that benefit green turtles and their habitat are as described above under the approved INRMP section for Marine Corps Base Hawai'i at Kāne'ohe Bay (Marine Corps 2017, pp. C2–10 through C2–12).

Based on the above considerations, and in accordance with section 4(a)(3)(B)(i) of the Act, we have determined that the identified lands are subject to the Marine Corps' INRMP and that conservation efforts identified in the INRMP will provide a benefit to the green turtle. Therefore, lands within this installation are exempt from critical habitat designation under section 4(a)(3) of the Act. We are not including 18 ac (7 ha) of habitat in this proposed critical habitat designation because of this exemption.

Marine Corps Pu'uloa Training Facility, Island of O'ahu, HI; Central North Pacific DPS; 3.5 ac (1 ha)

Marine Corps Pu'uloa Training Facility is one of eight facilities that comprise Marine Corps Base Hawai'i (see above). The Pu'uloa Range Training Facility encompasses 162 ac (66 ha) on the coast of O'ahu near Pearl Harbor's Iroquois Point in leeward O'ahu (Marine Corps 2017, p. 4–7). This is an active training facility used for small arms qualification and practice, to include six live-fire ranges.

We identified 3.5 ac (1 ha) of DoD lands within this area that are occupied by green turtles and harbor important green turtle basking and nesting habitat consisting of beach and coastal

vegetation. The Marine Corps Pu'uloa Training Facility's natural resources management is incorporated into the Marine Corps Base Hawai'i Kāne'ohe INRMP (Marine Corps 2017, entire). Therefore, the conservation measures that benefit green turtles and their habitat are as described above under the approved INRMP section for Marine Corps Base Hawai'i at Kāne'ohe Bay (Marine Corps 2017, pp. C2–10 through C2–12).

Based on the above considerations, and in accordance with section 4(a)(3)(B)(i) of the Act, we have determined that the identified lands are subject to the Marine Corps' INRMP and that conservation efforts identified in the INRMP will provide a benefit to the green turtle. Therefore, lands within this installation are exempt from critical habitat designation under section 4(a)(3) of the Act. We are not including 3.5 ac (1 ha) of habitat in this proposed critical habitat designation because of this exemption.

Dillingham Military Reservation, Island of O'ahu, HI; Central North Pacific DPS; 14.5 ac (6 ha)

The U.S. Army Garrison Hawai'i encompasses approximately 47,869 ac (19,372 ha) of DoD lands across seven properties on O'ahu including Schofield Barracks Military Reservation, Schofield Barracks East Range, Kawaihoa Training Area, Kahuku Training Area, Dillingham Military Reservation, Makua Military Reservation, and Tripler Army Medical Center (U.S. Army Garrison 2010, section ES, pp. 1–9). The strategy of the INRMP is to protect the Army's mission and access to air, land, and water resources while supporting non-military activities and maintaining functional, healthy ecosystems for present and future generations (U.S. Army Garrison 2010, Section 1, pp. 4–5).

The U.S. Army Garrison Hawai'i at Dillingham Military Reservation located near Kaena Point along the north shore of Oahu covers approximately 664 ac (269 ha) of land. The reservation comprises training areas, a private-use/owned cantonment (developed) area, a joint use civilian/military airfield, and three airborne drop zones (U.S. Army Garrison 2010, p. ES–7).

We identified 14.5 ac (6 ha) of DoD lands within Dillingham Military Reservation that harbor important basking and nesting habitat consisting of beach, dune, and coastal vegetation. These lands are considered occupied by the species and provide a natural beach and dune complex important for green turtle basking and nesting activity.

The O'ahu Army 2010–2014 INRMP (U.S. Army Garrison 2010, entire), although out-of-date, is operational and will be updated as soon as feasible. In the interim, the Army has developed an Addendum to the INRMP that includes natural resources program management for threatened and endangered species and conservation actions for the green turtle and its habitat (U.S. Army Environmental Command 2022, pp. 12–13). Management that benefits green turtles and their habitat includes (but is not limited to):

- (1) Installing exclusion fencing around sea turtle nests;
- (2) Installing and maintaining barricades to prevent off-road driving on beaches;
- (3) Installing educational signage on beaches;
- (4) Restricting recreational access;
- (5) Planning for catastrophic events;
- (6) Conducting biannual beach clean-ups of terrestrial debris and marine debris that washes ashore.

Based on the above considerations, and in accordance with section 4(a)(3)(B)(i) of the Act, we have determined that the identified lands are subject to the Army's INRMP and that conservation efforts identified in the INRMP will provide a benefit to the green turtle. Therefore, lands within this installation are exempt from critical habitat designation under section 4(a)(3) of the Act. We are not including 14.5 ac (6 ha) of habitat in this proposed critical habitat designation because of this exemption.

Mākua Military Reservation, Island of O'ahu, HI; Central North Pacific DPS; 5 ac (2 ha)

Army Garrison Mākua Military Reservation is one of seven facilities that comprise the Army Garrison Hawai'i (see above under Dillingham Military Reservation regarding military activities and applicable INRMP). The Mākua Military Reservation encompasses 4,190 ac (1,696 ha) on the coast of O'ahu near Kaena Point in leeward O'ahu (U.S. Army Garrison 2010, p. ES–8). This is an active training facility used for both maneuver and live-fire training.

We identified 5 ac (2 ha) of DoD lands within Mākua Military Reservation that harbor important basking and nesting habitat consisting of beach, dune, and coastal vegetation. These lands are considered occupied by the species and provide a natural beach and dune complex important for green turtle basking and nesting activity.

The 2022 Addendum to the 2010–2014 INRMP (see above under Dillingham Military Reservation)

includes natural resources program management for threatened and endangered species and conservation actions for the green turtle and its habitat at Army Garrison Mākua Military Reservation. The conservation measures that benefit green turtles and their habitat are as described above under the approved INRMP section for Dillingham Military Reservation (U.S. Army Environmental Command 2022, pp. 12–13).

Based on the above considerations, and in accordance with section 4(a)(3)(B)(i) of the Act, we have determined that the identified lands are subject to the Army's INRMP and that conservation efforts identified in the INRMP will provide a benefit to the green turtle. Therefore, lands within this installation are exempt from critical habitat designation under section 4(a)(3) of the Act. We are not including 5 ac (2 ha) of habitat in this proposed critical habitat designation because of this exemption.

Naval Base Guam Main Base, Asan, Guam; Central West Pacific DPS; 7 ac (3 ha)

The Naval Base Guam Main Base is one of 13 Department of Navy holdings on Guam and Department-leased lands on Tinian and Farallon de Medinilla that are part of Joint Region Marianas (under Commander, Navy Installations Command) (Navy 2019, Table 1–1 and Figure 1–2). The mission of the Joint Region Marianas is providing executive-level installation management support to all 13 DoD components and tenants through assigned regional installations on Guam and the commonwealth of the Northern Mariana Islands in support of training in the Marianas; acting as the interface between the Department of the Navy and the civilian community; ensuring compliance with all environmental laws and regulations, safety procedures, and equal opportunity policy; and performing other functions and tasks as may be assigned (Navy 2019, p. 2–1).

Naval Base Guam Main Base is 3,455 ac (1,398 ha) and is located around Apra Harbor and on the Orote Peninsula along the central west side of Guam and consists of several locations that are controlled by the Navy. The Naval Base Guam Main Base supports Commander Naval Forces Marianas, Submarine Squadron 15, Coast Guard Sector Guam, Naval Special Warfare Unit One, and 28 other tenant commands, and is the home base of three Los Angeles class submarines and dozens of units operating in support of U.S. Indo-Pacific Command, U.S. Pacific Fleet, Seventh Fleet, and Fifth Fleet (Navy 2019, p. 2–

7). The primary function of the Base is to support fleet units and operational forces of the 5th and 7th Fleets, and it serves as a forward deployment base and logistics hub that includes a distribution center for material, personnel, and munitions that support sea, land, and air forces operating in Asia and the Western Pacific (Navy 2019, p. 4–77). We identified 7 ac (3 ha) of Navy lands within this area that are occupied by green turtles and harbor important green turtle nesting habitat consisting of beach, dune, and coastal vegetation.

The 2019 Joint Region Marianas INRMP guides the management and conservation of natural resources, including green turtles and their habitat (Navy 2019, entire). Additionally, approximately 506 ac (205 ha) of Guam NWR lands overlay Navy lands on the Base, providing important habitat for federally listed species (Navy 2019, table 1–1). The Naval Base Guam Main Base engages in a variety of general conservation measures to benefit green turtles (e.g., terrestrial habitat management, terrestrial invasive species management, a regional biosecurity plan to reduce the risk of spreading nonnative species) and species-specific conservation measures for green turtles (Navy 2019, pp. 5–82 through 5–89), including:

(1) Conducting monitoring activities to inform adaptive management actions and avoid sensitive areas during construction, operations, and training;

(2) Monitoring and protecting green turtles to maintain habitat and improve nesting success;

(3) Annually locating, protecting, and evaluating all turtle nest sites to determine nest success, emergence success, and depredation;

(4) Removing nonnative, invasive vegetation at Spanish Steps Beach to increase the likelihood of successful hatching and promote successful hatchlings traversing to the ocean, and to promote natural regeneration of native strand vegetation;

(5) Controlling monitor lizards at nesting beaches and covering nests with wire mesh to increase hatchling success;

(6) Protecting nesting female turtles and nests by limiting vehicle access to nesting beaches through placement of barriers on the beach access sites to Dadi Beach; and

(7) Participating in turtle conservation meetings and sharing turtle information with partners.

Based on the above considerations, and in accordance with section 4(a)(3)(B)(i) of the Act, we have determined that the identified lands are subject to the Navy's INRMP and that

conservation efforts identified in the INRMP will provide a benefit to the green turtle. Therefore, lands within this installation are exempt from critical habitat designation under section 4(a)(3) of the Act. We are not including 7 ac (3 ha) of habitat in this proposed critical habitat designation because of this exemption.

Andersen Air Force Base, Yigo, Guam; Central West Pacific DPS; 32 ac (13 ha)

Andersen Air Force Base is one of 13 Department of Navy holdings on Guam and Department-leased lands on Tinian and Farallon de Medinilla that are part of Joint Region Marianas (under Commander, Navy Installations Command) (see *Naval Base Guam Main Base*, above). Andersen Air Force Base encompasses 15,400 ac (6,272 ha) of terrestrial lands (plus additional submerged areas) on the north end of Guam, approximately 15 mi (24 km) from the capital, Agana. The Base serves as a stopping point for numerous aircraft en route to Japan, Korea, and other Asian locations, providing operational and mission activities supported by runways and aircraft operations (Navy 2019, p. 2–8). It is host unit to the 26th Wing and also home to the 36th Mobility Response Squadron, Helicopter Sea Combat Squadron 25, the 69th Reconnaissance Group-Detachment 1, 644th Combat Communications Squadron, the 94th Army Air and Missile Defense Command, the 734th Air Mobility Squadron, and the 22nd Space Operations Squadron-Detachment 5. Approximately 10,158 ac (4,111 ha) of Guam NWR lands overlay Air Force lands on the Base, providing important habitat for federally listed species (Navy 2019, table 1–1).

We identified 32 ac (13 ha) of DoD lands on Andersen Air Force Base that are occupied by green turtles and harbor important green turtle nesting habitat consisting of beach, dune, and coastal vegetation. Natural resources management for sea turtles and their habitat is incorporated into the Joint Region Marianas INRMP (Navy 2019, entire). The Base engages in a variety of general conservation measures to benefit green turtles (e.g., terrestrial habitat management, terrestrial invasive species management, a regional biosecurity plan to reduce the risk of spreading nonnative species) and species-specific conservation measures for green turtles (Navy 2019, pp. 9–67, 9–68, 9–72 through 9–75), including:

(1) Conducting surveys to monitor long-term trends of spatial and temporal distribution of sea turtle nesting activity;

(2) Protecting nests from ungulates and monitor lizard predation through screening and monitoring;

(3) Implementing shoreline vegetation management to increase the likelihood of successful hatching of sea turtles and hatchling turtles successfully traversing the strand vegetation and beach access to the ocean;

(4) Removing nonnative, invasive vegetation to enhance natural regeneration of native strand vegetation; and

(5) Conducting an outreach and education program that includes two annual beach cleanups along Tarague Beach, public presentations to schools and incoming families, and information to recreational beach visitors through signage and outreach materials.

Based on the above considerations, and in accordance with section 4(a)(3)(B)(i) of the Act, we have determined that the identified lands are subject to the Joint Region Marianas INRMP and that conservation efforts identified in the INRMP will provide a benefit to the green turtle. Therefore, lands within this installation are exempt from critical habitat designation under section 4(a)(3) of the Act. We are not including 32 ac (13 ha) of habitat in this proposed critical habitat designation because of this exemption.

Naval Base Guam Telecommunication Site, Santa Rita, Guam; Central West Pacific DPS; 1 ac (0.5 ha)

Naval Base Guam Telecommunication Site is one of 13 Department of Navy holdings on Guam and Department-leased lands on Tinian and Farallon de Medinilla that are part of Joint Region Marianas (under Commander, Navy Installations Command) (see *Naval Base Guam Main Base*, above). Naval Base Guam Telecommunication Site encompasses 2,412 ac (976 ha) of terrestrial lands (plus additional submerged areas) located on the northwestern coast of the island. The Site provides multispectral connectivity, NetOps, and information assurance to the Navy, Joint, and Coalition forces on Guam, and in the Western Pacific and Indian Oceans, and its mission is to provide continuous global and universal communications services to fleet units, shore activities, and joint forces (Navy 2019, p. 8–1). Approximately 2,097 ac (848 ha) of Guam NWR lands overlay Air Force lands on the Base (of which 252 ac (101 ha) are the Haputo Ecological Reserve Area) (Navy 2019, p. 8–1, table 1–1).

We identified 1 ac (0.5 ha) of DoD land on the Naval Base Guam Telecommunication Site that is occupied by green turtles and harbors

important green turtle nesting habitat consisting of beach, dune, and coastal vegetation. Natural resources management for sea turtles and their habitat is incorporated into the Joint Region Marianas INRMP (Navy 2019, entire). The Site engages in a variety of general conservation measures to benefit green turtles (e.g., terrestrial habitat management, terrestrial invasive species management, a regional biosecurity plan to reduce the risk of spreading nonnative species) and species-specific conservation measures for green turtles (Navy 2019, pp. 8–47, 8–48, 8–52 through 8–56), including:

(1) Conducting regular sea turtle nest monitoring that assists with overall population monitoring in Guam;

(2) Implementing predator control measures to protect species and coordinate efforts with appropriate agencies; and

(3) Implementing a Natural Resources Stewardship Outreach and Public Engagement Program, which includes terrestrial and marine natural resources educational outreach projects, to ensure education regarding regulations, policies, and information about natural resources, including green turtles.

Based on the above considerations, and in accordance with section 4(a)(3)(B)(i) of the Act, we have determined that the identified lands are subject to the Joint Region Marianas INRMP and that conservation efforts identified in the INRMP will provide a benefit to the green turtle. Therefore, land within this installation is exempt from critical habitat designation under section 4(a)(3) of the Act. We are not including 1 ac (0.5 ha) of habitat in this proposed critical habitat designation because of this exemption.

Tinian Military Lease Area, Commonwealth of the Northern Mariana Islands; Central West Pacific DPS; 9.5 ac (4 ha)

The Tinian Military Lease Area is one of 13 Department of Navy holdings on Guam and Department-leased lands on Tinian and Farallon de Medinilla that are part of Joint Region Marianas (under Commander, Navy Installations Command) (see *Naval Base Guam Main Base*, above). The Tinian Military Lease Area encompasses 15,347 ac (6,211 ha) of terrestrial lands (plus additional submerged areas) located north of the Tinian International Airport (West Field). The Area is managed by the Navy, although there are no permanent military facilities in the military lease area other than World War II-era structures. Medium- and small-scale training activities occur annually while large-scale training activities occur

infrequently, including combat search and rescue, amphibious assault, amphibious raid, personnel insertion and extraction, airfield seizure, and humanitarian assistance/disaster relief operations (Navy 2019, p. 11–3). The area is open to public access and recreational use (e.g., fishing, swimming, camping) except when military training activities may require closures of some or all of the area (Navy 2019, p. 11–1).

We identified 9.5 ac (4 ha) of DoD land on the Tinian Military Lease Area that is occupied by green turtles and harbors important green turtle nesting habitat consisting of beach, dune, and coastal vegetation. Natural resources management for sea turtles and their habitat is incorporated into the Joint Region Marianas INRMP (Navy 2019, entire). The Area engages in a variety of general conservation measures to benefit green turtles (e.g., terrestrial habitat management, terrestrial invasive species management, a regional biosecurity plan to reduce the risk of spreading nonnative species) and species-specific conservation measures for green turtles (Navy 2019, pp. 8–47, 8–48, 8–52 through 8–54), including:

(1) Monitoring sea turtle nesting at the 18 beaches on Joint Region Marianas leased lands (Unai Chulu, Unai Lam Lam, Unai Babui, Unai Chiget and Unai Masalok, and the 13 separate pocket beaches within Unai Dankulo), and collecting data on sea turtle nesting activity, evidence of poaching, nest depredation, and hatching and emergence success. (Genetic sampling will also be conducted to determine population origins);

(2) Protecting nesting female turtles and nests by limiting vehicle access to nesting beaches through placement of concrete barriers at beach access sites to Unai Dankulo, Unai Chulu, Unai Masalok, Unai Babui, and Unai Chiget;

(3) Coordinating with local officials on placement of barriers to ensure access to public parking and placing educational signs at beach entrances or parking areas; and

(4) Removing marine debris that washes ashore from all sea turtle nesting beaches, with increased frequency as needed where debris accumulates more after storms.

Based on the above considerations, and in accordance with section 4(a)(3)(B)(i) of the Act, we have determined that the identified lands are subject to the Joint Region Marianas INRMP and that conservation efforts identified in the INRMP will provide a benefit to the green turtle. Therefore, lands within this installation are exempt from critical habitat designation under



section 4(a)(3) of the Act. We are not including 9.5 ac (4 ha) of habitat in this proposed critical habitat designation because of this exemption.

Tyndall Air Force Base, Bay County, FL; North Atlantic DPS; 1,244 ac (503 ha)

Tyndall Air Force Base is located on 30,000 ac (12,141 ha) in southeastern Bay County, approximately 13 mi (20 km) east of Panama City, Florida. The installation includes forested areas and beaches that provide a sea-to-land transition area that is vital for military operations including ground-training and airspace activities that are also shared with other Air Force bases and DoD branches. Tyndall's missions include the 325th Fighter Wing, 325th Operations Group, 325th Maintenance Group, 325th Mission Support Group, and other Major Associate Tenants to include the 53rd Weapons Evaluation Group, Air Force Civil Engineer Center, Airbase Technologies Division, and Detachment 1, 823rd Rapid Engineer Deployable Heavy Operational Repair Squadron Engineers.

Tyndall Air Force Base is a base combined of developed and natural areas located on a peninsula that is bisected by U.S. Highway 98. The base is approximately 18 mi (29 km) long and 3 mi (4.8 km) wide, and is surrounded by East Bay, St. Andrew Bay, and the Gulf of Mexico to the north, west, and south, respectively. We identified 1,244 ac (503 ha) of DoD lands within this area that harbor important nesting habitat consisting of beach, dune, and coastal vegetation. These lands are considered occupied by the species and are known to support high-density nesting within the State of Florida's Northwest management unit, thus providing a natural beach and dune complex important for green turtle nesting activity.

The 2020 Tyndall Air Force Base INRMP guides the management and conservation of natural resources under the installation's control. It provides interdisciplinary strategic guidance for the management of natural resources in support of the military mission within the land and water ranges of the Installation. The Tyndall Air Force Base INRMP integrates and prioritizes wildlife, wildland fire, forest management, and coastal zone and marine resources management activities to protect and effectively manage the Air Force Base's aquatic and terrestrial environments and ensure "no net loss" in the operational capability of these resources to support the Air Force's training missions.

The 2020 INRMP has a chapter for natural resources program management,

including a specific section (Section 15, Tab 3—Threatened and Endangered Species Component Plan) that details management for threatened and endangered species and conservation actions for the green turtle and its habitat. For sea turtles in general, the INRMP focuses on providing protection measures for the species and its habitat as well as monitoring sea turtle nesting activity and protection measures (Tyndall AFB 2020, Section 15 Tab 3, pp. 17–23). The Threatened and Endangered Species Component Plan portion of the INRMP identifies the following management and protective measures to achieve conservation goals for green turtles:

- (1) Conducting sea turtle monitoring to collect annual nesting activity;
- (2) Locating and protecting sea turtle nests for military mission avoidance purposes;
- (3) Conducting nest relocations when nests are laid at or below the high tide line;
- (4) Implementing predator control;
- (5) Identifying and determining resolution of beach lighting issues;
- (6) Enforcing beach driving restrictions; and
- (7) Restoring and protecting nesting habitat.

Based on the above considerations, and in accordance with section 4(a)(3)(B)(i) of the Act, we have determined that the identified lands are subject to the Tyndall Air Force Base INRMP and that conservation efforts identified in the INRMP will provide a benefit to the green turtle. Therefore, lands within this installation are exempt from critical habitat designation under section 4(a)(3) of the Act. We are not including 1,244 ac (503 ha) of habitat in this proposed critical habitat designation because of this exemption.

Eglin Air Force Base, Gulf County, FL; North Atlantic DPS; 1,621 ac (656 ha)

Eglin Air Force Base, also known as the Eglin Military Complex, is located in Santa Rosa, Okaloosa, Walton, and Gulf Counties in Northwest Florida and the Gulf, and occupies 464,000 ac (187,774 ha). The Eglin Military Complex includes the mainland Reservation located in Santa Rosa (Santa Rosa Island Range Complex), Okaloosa, and Walton Counties, as well as a small parcel (962 ac (389 ha)) on Cape San Blas in Gulf County, Florida, the latter of which is approximately 3 mi (5 km) of spit shoreline along the Gulf of Mexico that is separated from the mainland by St. Joseph Bay.

Eglin Air Force Base is the largest forested military reservation in the United States. It supports a multitude of

military testing and training operations, as well as many diverse species and habitats. Eglin's missions include the 7th Special Forces Group (Airborne), Amphibious Ready Group/Marine Expeditionary Unit, Stand-off Precision Guided Missile, and Massive Ordnance Air Blast.

The portion of Eglin Air Force Base where we have identified important nesting habitat for green turtle is on the Santa Rosa Island Range Complex. We identified 1,621 ac (656 ha) of lands within this area that harbor important nesting habitat consisting of beach, dune, and coastal vegetation. These lands are considered occupied by the species and are known to support high-density nesting within the State of Florida's Northwest management unit for green turtles, thus providing a natural beach and dune complex important for green turtle nesting habitat.

The 2017–22 Eglin Air Force Base INRMP guides the management and conservation of natural resources under the installation's control. It provides interdisciplinary strategic guidance for the management of natural resources in support of the military mission within the land and water ranges of the Eglin Military Complex. The Eglin Air Force Base INRMP integrates and prioritizes wildlife, fire, and forest management activities to protect and effectively manage the Complex's aquatic and terrestrial environments and ensure "no net loss" in the operational capability of these resources to support Eglin test and training missions.

The 2017–22 INRMP and the more detailed Threatened and Endangered Species Component Plan Update (DoD 2017, appendix E) explains natural resources program management, including a specific section that details management for threatened and endangered species, including conservation actions for the green turtle and its habitat. The INRMP identifies the need to develop and implement programs to protect and conserve federally listed endangered and threatened plants and wildlife and candidate species, including the green turtle. The following management and protective measures to achieve conservation goals for green turtles include:

- (1) Annually locating, protecting, and evaluating all sea turtle nests on Air Force property at Cape San Blas and Santa Rosa Island Range Complex;
- (2) Annually relocating all sea turtle nests within A–15 training area to allow for unrestricted diurnal military training;

(3) Responding to, and investigating, all sea turtle stranding reports on Air Force property;

(4) Annually surveying and maintaining public access control measures on Cape San Blas to protect threatened and endangered species habitat and ensuring the long-term sustainability of the Base's barrier island ecosystem for mission use;

(5) Maintaining informational signs at beach access points concerning the protection of sea turtles, shorebirds, beach mice and other unique barrier island natural resources;

(6) Exploring options for cost-share partnerships with the adjacent City of Destin and/or Okaloosa County to improve stewardship (including cleanup of recreation access points) of Santa Rosa Island;

(7) Managing lighting on all barrier island property to ensure there is no source of disorientation on Air Force managed land, including to keep all light fixtures turtle-friendly, shield all lights such that they are not visible from the beach, and to turn off all unnecessary lights; and

(8) Reducing the Base's overall contribution to urban glow by eliminating unnecessary lights, reducing the wattage of lights, and replacing fixtures with dimmer, more turtle-friendly lights.

Based on the above considerations, and in accordance with section 4(a)(3)(B)(i) of the Act, we have determined that the identified lands are subject to the Eglin Air Force Base INRMP and that conservation efforts identified in the INRMP will provide a benefit to the green turtle. Therefore, lands within this installation are exempt from critical habitat designation under section 4(a)(3) of the Act. We are not including approximately 1,621 ac (656 ha) of habitat in this proposed critical habitat designation because of this exemption.

#### **Consideration of Impacts Under Section 4(b)(2) of the Act**

Section 4(b)(2) of the Act states that the Secretary shall designate and make revisions to critical habitat on the basis of the best available scientific data after taking into consideration the economic impact, national security impact, and any other relevant impact of specifying any particular area as critical habitat. The Secretary may exclude an area from designated critical habitat based on economic impacts, impacts on national security, or any other relevant impacts. Exclusion decisions are governed by the regulations at 50 CFR 424.19 and the Policy Regarding Implementation of Section 4(b)(2) of the Endangered

Species Act (hereafter, the "2016 Policy"; 81 FR 7226, February 11, 2016), both of which were developed jointly with the NMFS. We also refer to a 2008 Department of the Interior Solicitor's opinion entitled "The Secretary's Authority to Exclude Areas from a Critical Habitat Designation under Section 4(b)(2) of the Endangered Species Act" (M-37016).

In considering whether to exclude a particular area from the designation, we identify the benefits of including the area in the designation, identify the benefits of excluding the area from the designation, and evaluate whether the benefits of exclusion outweigh the benefits of inclusion. If the analysis indicates that the benefits of exclusion outweigh the benefits of inclusion, the Secretary may exercise discretion to exclude the area only if such exclusion would not result in the extinction of the species. In making the determination to exclude a particular area, the statute on its face, as well as the legislative history, are clear that the Secretary has broad discretion regarding which factor(s) to use and how much weight to give to any factor. In our final rules, we explain any decision to exclude areas, as well as decisions not to exclude, to make clear the rational basis for our decision. We describe below the process that we use for taking into consideration each category of impacts and any initial analyses of the relevant impacts.

#### *Consideration of Economic Impacts*

Section 4(b)(2) of the Act and its implementing regulations require that we consider the economic impact that may result from a designation of critical habitat. To assess the probable economic impacts of a designation, we must first evaluate specific land uses or activities and projects that may occur in the area of the critical habitat. We then must evaluate the impacts that a specific critical habitat designation may have on restricting or modifying specific land uses or activities for the benefit of the species and its habitat within the areas proposed. We then identify which conservation efforts may be the result of the species being listed under the Act versus those attributed solely to the designation of critical habitat for this particular species. The probable economic impact of a proposed critical habitat designation is analyzed by comparing scenarios both "with critical habitat" and "without critical habitat."

The "without critical habitat" scenario represents the baseline for the analysis, which includes the existing regulatory and socio-economic burden imposed on landowners, managers, or other resource users potentially affected

by the designation of critical habitat (e.g., under the Federal listing as well as other Federal, State, and local regulations). Therefore, the baseline represents the costs of all efforts attributable to the listing of the species under the Act (i.e., conservation of the species and its habitat incurred regardless of whether critical habitat is designated). The "with critical habitat" scenario describes the incremental impacts associated specifically with the designation of critical habitat for the species. The incremental conservation efforts and associated impacts would not be expected without the designation of critical habitat for the species. In other words, the incremental costs are those attributable solely to the designation of critical habitat, above and beyond the baseline costs. These are the costs we use when evaluating the benefits of inclusion and exclusion of particular areas from the final designation of critical habitat should we choose to conduct a discretionary 4(b)(2) exclusion analysis.

Executive Orders (E.O.s) 12866 and 13563 direct Federal agencies to assess the costs and benefits of available regulatory alternatives in quantitative (to the extent feasible) and qualitative terms. Consistent with the E.O. regulatory analysis requirements, our effects analysis under the Act may take into consideration impacts to both directly and indirectly affected entities, where practicable and reasonable. If sufficient data are available, we assess to the extent practicable the probable impacts to both directly and indirectly affected entities. Section 3(f) of E.O. 12866 identifies four criteria when a regulation is considered a "significant regulatory action," and requires additional analysis, review, and approval if met. The criterion relevant here is whether the designation of critical habitat may have an economic effect of \$200 million or more in any given year (section 3(f)(1)). Therefore, our consideration of economic impacts uses a screening analysis to assess whether a designation of critical habitat for green turtle is likely to exceed the economically significant threshold.

For this particular designation, we developed an incremental effects memorandum (IEM) considering the probable incremental economic impacts that may result from this proposed designation of critical habitat. The information contained in our IEM was then used to develop a screening analysis of the probable effects of the designation of critical habitat for the green turtle's terrestrial environment (Industrial Economics, Inc. 2023, entire). We began by conducting a

screening analysis of the proposed designation of critical habitat in order to focus our analysis on the key factors that are likely to result in incremental economic impacts. The purpose of the screening analysis is to filter out particular geographical areas of critical habitat that are already subject to such protections and are, therefore, unlikely to incur incremental economic impacts. In particular, the screening analysis considers baseline costs (*i.e.*, absent critical habitat designation) and includes any probable incremental economic impacts where land and water use may already be subject to conservation plans, land management plans, best management practices, or regulations that protect the habitat area as a result of the Federal listing status of the species. Ultimately, the screening analysis allows us to focus our analysis on evaluating the specific areas or sectors that may incur probable incremental economic impacts as a result of the designation. The presence of the listed species in occupied areas of critical habitat means that any destruction or adverse modification of those areas is also likely to jeopardize the continued existence of the species. Therefore, designating occupied areas as critical habitat typically causes little if any incremental impacts above and beyond the impacts of listing the species. As a result, we generally focus the screening analysis on areas of unoccupied critical habitat (unoccupied units or unoccupied areas within occupied units). Overall, the screening analysis assesses whether designation of critical habitat is likely to result in any additional management or conservation efforts that may incur incremental economic impacts. This screening analysis combined with the information contained in our IEM constitute what we consider to be our draft economic analysis (DEA) of the proposed critical habitat designation for the green turtle's terrestrial environment; our DEA is summarized in the narrative below.

As part of our screening analysis, we considered the types of economic activities that are likely to occur within the areas likely affected by the critical habitat designation. In our evaluation of the probable incremental economic impacts that may result from the proposed designation of critical habitat within the terrestrial environment for the green turtle, first we identified, in the IEM dated September 30, 2022, probable incremental economic impacts associated with the following categories of activities:

- *Animal and Plant Health Inspection Service*: control and management of invasive, harmful, or overabundant

species; predator control to benefit target ecosystems or species.

- *Department of Defense (DoD)*: operation, maintenance, and upgrades of military property and infrastructure, including training and testing; and unexploded ordnance management.

- *Federal Emergency Management Agency*: alterations to both habitats and developments to increase coastal resiliency and/or to facilitate recovery of human communities following disasters or emergencies (such as coastal storms). Emergency consultation may also be conducted during or shortly after a disaster, for example, to stage emergency response equipment in green turtle habitat, to transit through habitat as part of the emergency response, or retrieve orphaned vessels, containers, or other items from habitat.

- *Federal Energy Regulatory Commission*: non-Federal activities that require Federal authorization, such as liquefied natural gas facilities and associated pipeline infrastructure.

- *Federal Highway Administration*: transportation infrastructure maintenance and upgrades.

- *Federal Aviation Administration*: operation, management, and upgrades of airports and air traffic control systems.

- *National Aeronautics and Space Administration*: rocket and drone launches; drone and aircraft flights; recreational beach uses (*e.g.*, swimming, sunbathing, and off-road vehicles); beach renourishment and seawall repair; protected species management; facility maintenance and construction, and educational use.

- *National Park Service*: infrastructure maintenance or upgrades, habitat or species management, research, and changes to visitor use policies or regulations.

- *U.S. Army Corps of Engineers (Corps)*: federally funded coastal engineering, such as beach nourishment, dredging, shoreline stabilization, and habitat restoration; non-Federal activities that require Federal permits, such as coastal engineering, coastal development (*e.g.*, residential, commercial, recreational infrastructure), transportation infrastructure (*e.g.*, docks, piers, ports, roads, rail lines), utility and energy infrastructure, habitat restoration, habitat and species management (*e.g.*, mosquito control), and aquaculture.

- *U.S. Coast Guard*: response actions associated with cleanup of hazardous substances in the coastal and marine environments; authorization of fireworks displays.

- *U.S. Fish and Wildlife Service (USFWS), National Wildlife Refuges (NWR)*: land acquisition, infrastructure

maintenance or upgrades, habitat or species management, research, and changes to visitor use policies or regulations.

We considered each industry or category individually. Additionally, we considered whether their activities have any Federal involvement. Critical habitat designation generally will not affect activities that do not have any Federal involvement; under the Act, designation of critical habitat only affects activities conducted, funded, permitted, or authorized by Federal agencies. In areas where the green turtle is present, Federal agencies would be required to consult with the USFWS under section 7 of the Act on activities they fund, permit, or implement that may affect the species. If we finalize this proposed critical habitat designation, Federal agencies would be required to consider the effects of their actions on the designated habitat, and if the Federal action may affect critical habitat, our consultations would include an evaluation of measures to avoid the destruction or adverse modification of critical habitat.

In our IEM, we attempted to clarify the distinction between the effects that would result from the species being listed and those attributable to the critical habitat designation (*i.e.*, difference between the jeopardy and adverse modification standards) for the green turtle's critical habitat. The following specific circumstances help to inform our evaluation: (1) The essential PBFs identified for critical habitat are the same features essential for the life requisites of the species, and (2) any actions that would likely adversely affect the essential PBFs of occupied critical habitat are also likely to adversely affect the species itself. The IEM outlines our rationale concerning this limited distinction between baseline conservation efforts and incremental impacts of the designation of critical habitat for this species. This evaluation of the incremental effects has been used as the basis to evaluate the probable incremental economic impacts of this proposed designation of critical habitat.

The proposed critical habitat designation within the terrestrial environment for the green turtle includes 101 proposed critical habitat units, totaling approximately 8,870 ac (3,590 ha), all of which were occupied by the green turtle at the time of listing, and are currently occupied. Accordingly, because all units are occupied, the economic costs of critical habitat within the terrestrial environment for the five DPSs of green turtle will most likely be limited to



additional administrative effort to consider adverse modification of green sea turtle habitat during section 7 consultations, though additional consultations and project modifications are possible. This finding is based on the following (Industrial Economics, Inc. 2023, pp. 3, 20):

(1) Projects with a Federal nexus are anticipated to be subject to section 7 consultation regardless of whether critical habitat is designated because the units are occupied, although some new consultations are possible, particularly in the remote areas of the designation where the species presence may not have previously been known;

(2) Critical habitat designation could, but is unlikely to in most cases, change the Service's recommendations for project modifications as part of future consultations considering the green turtle;

(3) State, territory, or commonwealth laws protecting sea turtles and requiring certain types of sand for beach nourishment projects provide additional baseline protection to the green turtle, including locations where it is only seasonally or sporadically present; and

(4) The presence of other listed species with similar habitat requirements and existing critical habitat provides additional baseline protection. Total overlap with existing critical habitat is 5,619 ac (2,274 ha), including 375 ac (152 ha) across 31 units in the Central North Pacific DPS, 25 ac (10 ha) across 23 units in the Central West Pacific DPS, 4,849 ac (1,962 ha) across 33 units in the North Atlantic DPS, and 31 ac (12 ha) across 8 units in the South Atlantic DPS. There is no overlap of existing critical habitat in the Central South Pacific DPS.

Based on consultation history for the green turtle, the number of future consultation actions, including technical assistances, is likely to be approximately 119 per year on average (approximately 17 formal consultations, 41 informal consultations, and 61 technical assistance efforts) across the five DPSs. The additional administrative cost of addressing adverse modification in these consultations is likely to be less than \$220,000 per year (2022 dollars) on average, comprising approximately \$92,000 for formal consultations, \$110,000 for informal consultations, and \$25,000 for technical assistances (Industrial Economics, Inc. 2023, p. 21 and Exhibit 8). The largest concentration of incremental consultation costs may accrue in the North Atlantic DPS (54 percent), followed by the Central North Pacific DPS (38 percent), the Central West Pacific DPS (5 percent), the South

Atlantic DPS (3 percent), and the Central South Pacific DPS (less than 1 percent). Cost estimates assume that consultations would occur even in the absence of critical habitat due to the presence of the listed species, and the amount of administrative effort to address critical habitat during this process is relatively minor (Industrial Economics, Inc. 2023, p. 21). Additionally, the designation is not expected to trigger additional requirements under State, Territory, Commonwealth, or other local government regulations; however, it may cause developers or landowners to perceive that private lands will be subject to use restrictions or litigation from third parties, resulting in costs (Industrial Economics Inc. 2023, pp. 3, 22–23). While perceptual effects on land values are possible, the likelihood and magnitude of such effects are uncertain, and data limitations also prevent the quantification of the possible incremental reduction in property values (Industrial Economics, Inc. 2023, pp. 3, 23).

We are soliciting data and comments from the public on the DEA discussed above, as well as any other public comments on the proposed rule (see Information Requested, above). During the development of a final designation, we will consider the information presented in the DEA and any additional information on economic impacts we receive during the public comment period to determine whether any specific areas should be excluded from the final critical habitat designation under authority of section 4(b)(2), our implementing regulations at 50 CFR 424.19, and the 2016 Policy. We may exclude an area from critical habitat if we determine that the benefits of excluding the area outweigh the benefits of including the area, provided the exclusion will not result in the extinction of this species.

#### *Consideration of National Security Impacts or Homeland Security Impacts*

Section 4(a)(3)(B)(i) of the Act may not cover all DoD lands or areas that pose potential national-security concerns (e.g., a DoD installation that is in the process of revising its INRMP for a newly listed species or a species previously not covered). If a particular area is not covered under section 4(a)(3)(B)(i), then national-security or homeland-security concerns are not a factor in the process of determining what areas meet the definition of "critical habitat." However, the USFWS must still consider impacts on national security, including homeland security, on those lands or areas not covered by

section 4(a)(3)(B)(i) because section 4(b)(2) requires the USFWS to consider those impacts whenever it designates critical habitat. Accordingly, if DoD, Department of Homeland Security (DHS), or another Federal agency has requested exclusion based on an assertion of national-security or homeland-security concerns, or we have otherwise identified national-security or homeland-security impacts from designating particular areas as critical habitat, we generally have reason to consider excluding those areas.

However, we cannot automatically exclude requested areas. When DoD, DHS, or another Federal agency requests exclusion from critical habitat on the basis of national-security or homeland-security impacts, we must conduct an exclusion analysis if the Federal requester provides information, including a reasonably specific justification of an incremental impact on national security that would result from the designation of that specific area as critical habitat. That justification could include demonstration of probable impacts, such as impacts to ongoing border-security patrols and surveillance activities, or a delay in training or facility construction, as a result of compliance with section 7(a)(2) of the Act. If the agency requesting the exclusion does not provide us with a reasonably specific justification, we will contact the agency to recommend that it provide a specific justification or clarification of its concerns relative to the probable incremental impact that could result from the designation. If we conduct an exclusion analysis because the agency provides a reasonably specific justification or because we decide to exercise the discretion to conduct an exclusion analysis, we will defer to the expert judgment of DoD, DHS, or another Federal agency as to: (1) Whether activities on its lands or waters, or its activities on other lands or waters, have national-security or homeland-security implications; (2) the importance of those implications; and (3) the degree to which the cited implications would be adversely affected in the absence of an exclusion. In that circumstance, in conducting a discretionary section 4(b)(2) exclusion analysis, we will give great weight to national-security and homeland-security concerns in analyzing the benefits of exclusion.

Under section 4(b)(2) of the Act, we also consider whether a national security or homeland security impact might exist on lands owned or managed by DoD or DHS. In preparing this proposal, we have determined that, other than the land exempted under

section 4(a)(3)(B)(i) of the Act based upon the existence of an approved INRMP (see Exemptions, above), the lands within the proposed designation of critical habitat within the terrestrial environment for the green turtle are not owned or managed by DoD or DHS. Therefore, we anticipate no impacts on national security or homeland security.

#### *Consideration of Other Relevant Impacts*

Under section 4(b)(2) of the Act, we consider any other relevant impacts, in addition to economic impacts and impacts on national security discussed above. To identify other relevant impacts that may affect the exclusion analysis, we consider a number of factors, including whether there are permitted conservation plans covering the species in the area—such as HCPs, safe harbor agreements, or candidate conservation agreements with assurances—or whether there are non-permitted conservation agreements and partnerships that may be impaired by designation of, or exclusion from, critical habitat. In addition, we look at whether Tribal conservation plans or partnerships, Tribal resources, or government-to-government relationships of the United States with Tribal entities may be affected by the designation. We also consider any State, local, social, or other impacts that might occur because of the designation.

When analyzing other relevant impacts of including a particular area in a designation of critical habitat, we weigh those impacts relative to the conservation value of the particular area. To determine the conservation value of designating a particular area, we consider a number of factors, including, but not limited to, the additional regulatory benefits that the area would receive due to the protection from destruction or adverse modification as a result of actions with a Federal nexus, the educational benefits of mapping essential habitat for recovery of the listed species, and any benefits that may result from a designation due to State or Federal laws that may apply to critical habitat.

In the case of green turtles, the benefits of critical habitat include public awareness of the presence of green turtles and the importance of habitat protection, and, where a Federal nexus exists, increased habitat protection for green turtles due to protection from destruction or adverse modification of critical habitat. Continued implementation of an ongoing management plan that provides conservation equal to or more than the protections that result from a critical

habitat designation would reduce those benefits of including that specific area in the critical habitat designation.

After identifying the benefits of inclusion and the benefits of exclusion, we carefully weigh the two sides to evaluate whether the benefits of exclusion outweigh those of inclusion. If our analysis indicates that the benefits of exclusion outweigh the benefits of inclusion, we then determine whether exclusion would result in extinction of the species. If exclusion of an area from critical habitat will result in extinction, we will not exclude it from the designation.

#### *Private or Other Non-Federal Conservation Plans Related to Permits Under Section 10 of the Act*

HCPs for incidental take permits under section 10(a)(1)(B) of the Act provide for partnerships with non-Federal entities to minimize and mitigate impacts to listed species and their habitat. In some cases, HCP permittees agree to do more for the conservation of the species and their habitats on private lands than designation of critical habitat would provide alone. We place great value on the partnerships that are developed during the preparation and implementation of HCPs.

When we undertake a discretionary section 4(b)(2) exclusion analysis based on permitted conservation plans (such as HCPs), we anticipate consistently excluding such areas if incidental take caused by the activities in those areas is covered by the permit under section 10 of the Act and the HCP meets all of the following three factors (see the 2016 Policy for additional details):

(a) The permittee is properly implementing the HCP and is expected to continue to do so for the term of the agreement. An HCP is properly implemented if the permittee is and has been fully implementing the commitments and provisions in the HCP, implementing agreement, and permit.

(b) The species for which critical habitat is being designated is a covered species in the HCP, or very similar in its habitat requirements to a covered species. The recognition that the USFWS extends to such an agreement depends on the degree to which the conservation measures undertaken in the HCP would also protect the habitat features of the similar species.

(c) The HCP specifically addresses that species' habitat and meets the conservation needs of the species in the planning area.

The proposed critical habitat designation in the terrestrial

environment includes areas that are covered by the following permitted plan providing for the conservation of green turtles: the Indian River HCP.

#### *Indian River County Habitat Conservation Plan (HCP)*

In preparing this proposal, we have determined that 139 ac (56 ha) of lands associated with the Indian River County HCP from Sebastian Inlet to Indian River Shores (Unit FL-04) are included within the terrestrial environment for green turtle proposed critical habitat. This HCP specifically addresses the protection of sea turtles on the Indian River County's eroding beaches. As discussed in the Unit FL-04 description above, activities on the sandy beach and dune lands (*i.e.*, covered lands that are not part of the adjacent Archie Carr NWR and Sebastian Inlet State Park that also occur within this unit) include a variety of recreational activities (*e.g.*, swimming, walking, fishing) and residential development (beachfront properties). The HCP describes measures that will be undertaken to minimize impacts to sea turtles during emergency shoreline protection projects and implements a series of conservation programs to offset unavoidable take. The primary goal of the HCP is to allow Indian River County to continue to assist its citizens in responding to emergency shoreline conditions following severe storm events. Implementation of the programs and policies contained in the HCP will allow the County to engage in these activities in a manner and extent compatible with the protection of sea turtles. Detailed minimization measures are described in chapter 9 (Ecological Associates, Inc. 2017, pp. 95–110).

The biological goal of the Indian River County HCP is to increase the productivity of the County's beaches as sea turtle nesting habitat (Ecological Associates, Inc. 2017, p. 119). This measure addresses the physical and biological features essential to the conservation of green turtles, including protecting and restoring extra-tidal and dry sandy beaches where green turtle nesting occurs (PBF 1), ensuring sufficient darkness through a lighting ordinance so adult females are not deterred from emerging onto beaches and both hatchlings and females can orient to the sea (PBF 2), and protecting the natural coastal processes or artificially created or maintained habitat that mimics natural conditions (PBF 4) (Ecological Associates, Inc. 2017, entire). The HCP includes multiple activities in support of the biological goal (Ecological Associates, Inc. 2017, p. 119), such as (but not limited to):

conducting nesting surveys, conducting predator control, and permitting/regulating emergency shoreline protection projects to minimize impacts to sea turtles. The HCP also includes mitigated unavoidable take through acquisition of coastal property and a predator control program that provides quantifiable benefits to sea turtles in excess of the amount of take likely to occur from shoreline protection measures initiated under the County's emergency authorization (Ecological Associates, Inc. 2017, p. 10). The HCP continues to be implemented, to include our receipt of annual reports with updated green turtle information (*e.g.*, nesting success, nest fates, threats). This HCP is currently permitted with a 30-year incidental take permit until December 1, 2034.

#### Summary of Exclusions Considered Under 4(b)(2) of the Act

We have reason to consider excluding the following area under section 4(b)(2) of the Act from the final critical habitat designation for green turtles in the North Atlantic DPS: Unit FL-04 (Sebastian Inlet to Indian River Shores). Approximately 139 ac (56 ha) meet the definition of critical habitat, but we are considering possible exclusion of this area from the final critical habitat designation based on implementation of beneficial conservation measures afforded to green turtle and its habitat via the formalized Indian River County HCP.

In conclusion, for this proposed rule, we have reason to consider excluding the area identified above from the final designation based on other relevant impacts. We specifically solicit comments on the inclusion or exclusion of this area. We also solicit comments on whether there are potential economic, national security, or other relevant impacts from designating any other particular areas as critical habitat within any of the five DPSs; for additional comments requested on this proposed rule, please see Information Requested, above. As part of developing the final designation of critical habitat, we will evaluate the information we receive regarding potential impacts from designating the area described above or any other particular areas, and we may conduct a discretionary exclusion analysis to determine whether to exclude those areas under authority of section 4(b)(2) and our implementing regulations at 50 CFR 424.19. If we receive a request for exclusion of a particular area and after evaluation of supporting information we do not exclude, we will fully describe our decision in the final rule for this action.

#### Required Determinations

##### *Clarity of the Rule*

We are required by Executive Orders 12866 and 12988 and by the Presidential Memorandum of June 1, 1998, to write all rules in plain language. This means that each rule we publish must:

- (1) Be logically organized;
- (2) Use the active voice to address readers directly;
- (3) Use clear language rather than jargon;
- (4) Be divided into short sections and sentences; and
- (5) Use lists and tables wherever possible.

If you feel that we have not met these requirements, send us comments by one of the methods listed in **ADDRESSES**. To better help us revise the rule, your comments should be as specific as possible. For example, you should tell us the numbers of the sections or paragraphs that are unclearly written, which sections or sentences are too long, the sections where you feel lists or tables would be useful, etc.

##### *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 rule is significant.

Executive Order (E.O.) 14094 reaffirms the principles of E.O. 12866 and E.O. 13563 and states that regulatory analysis should facilitate agency efforts to develop regulations that serve the public interest, advance statutory objectives, and are consistent with E.O. 12866, E.O. 13563, and the Presidential Memorandum of January 20, 2021 (Modernizing Regulatory Review). Regulatory analysis, as practicable and appropriate, shall recognize distributive impacts and equity, to the extent permitted by law. E.O. 13563 emphasizes further that regulations must be based on the best available science and that the rulemaking process must allow for public participation and an open exchange of ideas. We have developed this proposed rule in a manner consistent with these requirements.

##### *Regulatory Flexibility Act (5 U.S.C. 601 et seq.)*

Under the Regulatory Flexibility Act (RFA; 5 U.S.C. 601 *et seq.*), as amended by the Small Business Regulatory Enforcement Fairness Act of 1996 (SBREFA; 5 U.S.C. 801 *et seq.*), whenever an agency is required to

publish a notice of rulemaking for any proposed or final rule, it must prepare and make available for public comment a regulatory flexibility analysis that describes the effects of the rule on small entities (*i.e.*, small businesses, small organizations, and small government jurisdictions). However, no regulatory flexibility analysis is required if the head of the agency certifies the rule will not have a significant economic impact on a substantial number of small entities. The SBREFA amended the RFA to require Federal agencies to provide a certification statement of the factual basis for certifying that the rule will not have a significant economic impact on a substantial number of small entities.

According to the Small Business Administration, small entities include small organizations such as independent nonprofit organizations; small governmental jurisdictions, including school boards and city and town governments that serve fewer than 50,000 residents; and small businesses (13 CFR 121.201). Small businesses include manufacturing and mining concerns with fewer than 500 employees, wholesale trade entities with fewer than 100 employees, retail and service businesses with less than \$5 million in annual sales, general and heavy construction businesses with less than \$27.5 million in annual business, special trade contractors doing less than \$11.5 million in annual business, and agricultural businesses with annual sales less than \$750,000. To determine whether potential economic impacts to these small entities are significant, we considered the types of activities that might trigger regulatory impacts under this designation as well as types of project modifications that may result. In general, the term "significant economic impact" is meant to apply to a typical small business firm's business operations.

Under the RFA, as amended, and as understood in light of recent court decisions, Federal agencies are required to evaluate the potential incremental impacts of rulemaking on those entities directly regulated by the rulemaking itself; in other words, the RFA does not require agencies to evaluate the potential impacts to indirectly regulated entities. The regulatory mechanism through which critical habitat protections are realized is section 7 of the Act, which requires Federal agencies, in consultation with the USFWS, to ensure that any action authorized, funded, or carried out by the agency is not likely to destroy or adversely modify critical habitat. Therefore, under section 7, only Federal action agencies are directly subject to



the specific regulatory requirement (avoiding destruction and adverse modification) imposed by critical habitat designation. Consequently, it is our position that only Federal action agencies would be directly regulated if we adopt the proposed critical habitat designation. The RFA does not require evaluation of the potential impacts to entities not directly regulated. Moreover, Federal agencies are not small entities. Therefore, because no small entities would be directly regulated by this rulemaking, the USFWS certifies that, if made final as proposed, the proposed critical habitat designation will not have a significant economic impact on a substantial number of small entities.

In summary, we have considered whether the proposed designation would result in a significant economic impact on a substantial number of small entities. For the above reasons and based on currently available information, we certify that, if made final, the proposed critical habitat designation will not have a significant economic impact on a substantial number of small business entities. Therefore, an initial regulatory flexibility analysis is not required.

*Energy Supply, Distribution, or Use—Executive Order 13211*

Executive Order 13211 (Actions Concerning Regulations That Significantly Affect Energy Supply, Distribution, or Use) requires agencies to prepare statements of energy effects when undertaking certain actions. In our draft economic analysis, we did not find that the designation of this proposed critical habitat for the green turtle in the terrestrial environment would significantly affect energy supplies, distribution, or use. Renewable energy activities have been known to occur within one unit in the Central North Pacific DPS (Industrial Economics Inc. 2023, Appendix B). This activity is one that we consult on with Federal agencies under section 7 of the Act. As discussed in the DEA, the costs associated with consultations related to occupied critical habitat would be largely administrative in nature and are not anticipated to reach \$200 million in any given year based on the anticipated annual number of consultations and associated consultation costs, which are not expected to exceed \$220,000 per year (2022 dollars) (Industrial Economics Inc. 2023, pp. 3, 20, 23). Therefore, this action is not a significant energy action, and no statement of energy effects is required.

*Unfunded Mandates Reform Act (2 U.S.C. 1501 et seq.)*

In accordance with the Unfunded Mandates Reform Act (2 U.S.C. 1501 et seq.), we make the following finding:

(1) This proposed rule would not produce a Federal mandate. In general, a Federal mandate is a provision in legislation, statute, or regulation that would impose an enforceable duty upon State, local, or Tribal governments, or the private sector, and includes both “Federal intergovernmental mandates” and “Federal private sector mandates.” These terms are defined in 2 U.S.C. 658(5)–(7). “Federal intergovernmental mandate” includes a regulation that “would impose an enforceable duty upon State, local, or Tribal governments” with two exceptions. It excludes “a condition of Federal assistance.” It also excludes “a duty arising from participation in a voluntary Federal program,” unless the regulation “relates to a then-existing Federal program under which \$500,000,000 or more is provided annually to State, local, and Tribal governments under entitlement authority,” if the provision would “increase the stringency of conditions of assistance” or “place caps upon, or otherwise decrease, the Federal Government’s responsibility to provide funding,” and the State, local, or Tribal governments “lack authority” to adjust accordingly. At the time of enactment, these entitlement programs were: Medicaid; Aid to Families with Dependent Children work programs; Child Nutrition; Food Stamps; Social Services Block Grants; Vocational Rehabilitation State Grants; Foster Care, Adoption Assistance, and Independent Living; Family Support Welfare Services; and Child Support Enforcement. “Federal private sector mandate” includes a regulation that “would impose an enforceable duty upon the private sector, except (i) a condition of Federal assistance or (ii) a duty arising from participation in a voluntary Federal program.”

The designation of critical habitat does not impose a legally binding duty on non-Federal Government entities or private parties. Under the Act, the only regulatory effect is that Federal agencies must ensure that their actions are not likely to destroy or adversely modify critical habitat under section 7. While non-Federal entities that receive Federal funding, assistance, or permits, or that otherwise require approval or authorization from a Federal agency for an action, may be indirectly impacted by the designation of critical habitat, the legally binding duty to avoid destruction or adverse modification of

critical habitat rests squarely on the Federal agency. Furthermore, to the extent that non-Federal entities are indirectly impacted because they receive Federal assistance or participate in a voluntary Federal aid program, the Unfunded Mandates Reform Act would not apply, nor would critical habitat shift the costs of the large entitlement programs listed above onto State governments.

(2) We do not believe that this rule would significantly or uniquely affect small governments because it is not anticipated to reach a Federal mandate of \$200 million in any given year; that is, it is not a “significant regulatory action” under the Unfunded Mandates Reform Act. The designation of critical habitat imposes no obligations on State or local governments. By definition, Federal agencies are not considered small entities, although the activities they fund or permit may be proposed or carried out by small entities. Consequently, we do not believe that the proposed critical habitat designation would significantly or uniquely affect small government entities. Therefore, a small government agency plan is not required.

*Takings—Executive Order 12630*

In accordance with E.O. 12630 (Government Actions and Interference with Constitutionally Protected Private Property Rights), we have analyzed the potential takings implications of designating critical habitat for the green turtle within the Central North Pacific DPS, Central South Pacific DPS, Central West Pacific DPS, North Atlantic DPS, and South Atlantic DPS in a takings implications assessment. The Act does not authorize the USFWS to regulate private actions on private lands or confiscate private property as a result of critical habitat designation. Designation of critical habitat does not affect land ownership, or establish any closures, or restrictions on use of or access to the designated areas. Furthermore, the designation of critical habitat does not affect landowner actions that do not require Federal funding or permits, nor does it preclude development of habitat conservation programs or issuance of incidental take permits to permit actions that do require Federal funding or permits to go forward. However, Federal agencies are prohibited from carrying out, funding, or authorizing actions that would destroy or adversely modify critical habitat. A takings implications assessment has been completed for the proposed designation of critical habitat for the green turtle (including all five DPSs addressed in this proposed rule), and it concludes that, if adopted, this

proposed designation of critical habitat would not pose significant takings implications for lands within or affected by the designation.

#### *Federalism—Executive Order 13132*

In accordance with E.O. 13132 (Federalism), this proposed rule does not have significant federalism effects. A federalism summary impact statement is not required. In keeping with Department of the Interior and Department of Commerce policy, we requested information from, and coordinated development of this proposed critical habitat designation with, appropriate State resource agencies. From a federalism perspective, the designation of critical habitat directly affects only the responsibilities of Federal agencies. The Act imposes no other duties with respect to critical habitat, either for States and local governments, or for anyone else. As a result, the proposed rule does not have substantial direct effects either on the States, or on the relationship between the Federal government and the States, or on the distribution of powers and responsibilities among the various levels of government. The proposed designation may have some benefit to these governments because the areas that contain the features essential to the conservation of the species are more clearly defined, and the PBFs of the habitat necessary for the conservation of the species are specifically identified. This information does not alter where and what federally sponsored activities may occur. However, it may assist State and local governments in long-range planning because they no longer have to wait for case-by-case section 7 consultations to occur.

Where State and local governments require approval or authorization from a Federal agency for actions that may affect critical habitat, consultation under section 7(a)(2) of the Act would be required. While non-Federal entities that receive Federal funding, assistance, or permits, or that otherwise require approval or authorization from a Federal agency for an action, may be indirectly impacted by the designation of critical habitat, the legally binding duty to avoid destruction or adverse modification of critical habitat rests squarely on the Federal agency.

#### *Civil Justice Reform—Executive Order 12988*

In accordance with E.O. 12988 (Civil Justice Reform), the Office of the Solicitor has determined that the rule would not unduly burden the judicial system and that it meets the requirements of sections 3(a) and 3(b)(2)

of the Order. We have proposed designating critical habitat in accordance with the provisions of the Act. To assist the public in understanding the habitat needs of the species, this proposed rule identifies the PBFs essential to the conservation of the species. The proposed areas of critical habitat are presented on maps, and the proposed rule provides several options for the interested public to obtain more detailed location information, if desired.

#### *Paperwork Reduction Act of 1995 (44 U.S.C. 3501 et seq.)*

This rule does not contain information collection requirements, and a submission to the Office of Management and Budget (OMB) under the Paperwork Reduction Act of 1995 (44 U.S.C. 3501 et seq.) is not required. We may not conduct or sponsor and you are not required to respond to a collection of information unless it displays a currently valid OMB control number.

#### *National Environmental Policy Act (42 U.S.C. 4321 et seq.)*

It is our position that, outside the jurisdiction of the U.S. Court of Appeals for the Tenth Circuit, we do not need to prepare environmental analyses pursuant to the National Environmental Policy Act (NEPA; 42 U.S.C. 4321 et seq.) in connection with designating critical habitat under the Act. We published a notice outlining our reasons for this determination in the **Federal Register** on October 25, 1983 (48 FR 49244). This position was upheld by the U.S. Court of Appeals for the Ninth Circuit (*Douglas County v. Babbitt*, 48 F.3d 1495 (9th Cir. 1995), cert. denied 516 U.S. 1042 (1996)).

#### *Government-to-Government Relationship With Tribes*

In accordance with the President's memorandum of April 29, 1994 (Government-to-Government Relations with Native American Tribal Governments; 59 FR 22951), E.O. 13175 (Consultation and Coordination with Indian Tribal Governments), and the Department of the Interior's manual at 512 DM 2, we readily acknowledge our responsibility to communicate meaningfully with federally recognized Tribes on a government-to-government basis. In accordance with Secretary's Order 3206 of June 5, 1997 (American Indian Tribal Rights, Federal-Tribal Trust Responsibilities, and the Endangered Species Act), we readily acknowledge our responsibilities to work directly with Tribes in developing programs for healthy ecosystems, to acknowledge that Tribal lands are not

subject to the same controls as Federal public lands, to remain sensitive to Indian culture, and to make information available to Tribes. We have determined that no Tribal lands fall within the boundaries of the proposed critical habitat for the green turtle (although we note that the Seminole Tribe of Florida has expressed interest in staying informed about this proposed critical habitat designation; we have and will continue to coordinate with them), so no Tribal lands would be affected by the proposed designation.

#### **References Cited**

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

#### **Authors**

The primary authors of this proposed rule are the staff members of the Fish and Wildlife Service's Species Assessment Team, the Florida Ecological Services Field Office, the Caribbean Ecological Services Field Office, and the Pacific Islands Fish and Wildlife Office.

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

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

#### **Proposed Regulation Promulgation**

Accordingly, we propose to amend part 17, subchapter B of chapter I, title 50 of the Code of Federal Regulations, 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. In § 17.11, amend paragraph (h) in the List of Endangered and Threatened Wildlife under REPTILES by revising the entries for “Sea turtle, green [Central North Pacific DPS]”, “Sea turtle, green [Central South Pacific DPS]”, “Sea turtle, green [Central West Pacific DPS]”, “Sea turtle, green [North Atlantic DPS]”, and “Sea turtle, green [South Atlantic DPS]” to read as follows:

#### **§ 17.11 Endangered and threatened wildlife.**

\* \* \* \* \*

(h) \* \* \*

Common name	Scientific name	Where listed	Status	Listing citations and applicable rules
REPTILES				
Sea turtle, green [Central North Pacific DPS].	<i>Chelonia mydas</i> .....	Green sea turtles originating from the Central North Pacific Ocean, bounded by the following coordinates: 41° N, 169° E in the northwest; 41° N, 143° W in the northeast; 9° N, 125° W in the southeast; and 9° N, 175° W in the southwest.	T	81 FR 20058, 4/6/2016; <sup>J</sup> 50 CFR 17.42(b); <sup>4d</sup> 50 CFR 223.205; 50 CFR 223.206; 50 CFR 223.207; 50 CFR 17.95(c). <sup>CH</sup>
Sea turtle, green [Central South Pacific DPS].	<i>Chelonia mydas</i> .....	Green sea turtles originating from the Central South Pacific Ocean, bounded by the following coordinates: 9° N, 175° W in the northwest; 9° N, 125° W in the northeast; 40° S, 96° W in the southeast; 40° S, 176° E in the southwest; and 13° S, 171° E in the west.	E	81 FR 20058, 4/6/2016; <sup>J</sup> 50 CFR 224.104; 50 CFR 17.95(c). <sup>CH</sup>
Sea turtle, green [Central West Pacific DPS].	<i>Chelonia mydas</i> .....	Green sea turtles originating from the Central West Pacific Ocean, bounded by the following coordinates: 41° N, 146° E in the northwest; 41° N, 169° E in the northeast; 9° N, 175° W in the east; 13° S, 171° E in the southeast; along the northern coast of the island of New Guinea; and 4.5° N, 129° E in the west.	E	81 FR 20058, 4/6/2016; <sup>J</sup> 50 CFR 224.104; 50 CFR 17.95(c). <sup>CH</sup>
Sea turtle, green [North Atlantic DPS].	<i>Chelonia mydas</i> .....	Green sea turtles originating from the North Atlantic Ocean, bounded by the following lines and coordinates: 48° N Lat. in the north, along the western coasts of Europe and Africa (west of 5.5° W. Long.); north of 19° N Lat. in the east; bounded by 19° N, 65.1° W to 14° N, 65.1° W then 14° N, 77° W in the south and west; and along the eastern coasts of the Americas (north of 7.5° N, 77° W).	T	81 FR 20058, 4/6/2016; <sup>J</sup> 50 CFR 17.42(b); <sup>4d</sup> 50 CFR 223.205; 50 CFR 223.206; 50 CFR 223.207; 50 CFR 17.95(c). <sup>CH</sup>
Sea turtle, green [South Atlantic DPS].	<i>Chelonia mydas</i> .....	Green sea turtles originating from the South Atlantic Ocean, bounded by the following lines and coordinates: along the northern and eastern coasts of South America (east of 7.5° N, 77° W); 14° N, 77° W to 14° N, 65.1° W to 19° N, 65.1° W in the north and west; 19° N Lat. in the northeast; 40° S, 19° E in the southeast; and 40° S Lat. in the south.	T	81 FR 20058, 4/6/2016; <sup>J</sup> 50 CFR 17.42(b); <sup>4d</sup> 50 CFR 223.205; 50 CFR 223.206; 50 CFR 223.207; 50 CFR 17.95(c). <sup>CH</sup>

■ 3. In § 17.95, amend paragraph (c) by adding:

■ a. An entry for “Green Sea Turtle (*Chelonia mydas*), Central North Pacific DPS” after the entry for “Desert Tortoise—Mojave Population (*Gopherus agassizii*)”;

■ b. An entry for “Green Sea Turtle (*Chelonia mydas*), Central South Pacific DPS” after the new entry for “Green Sea Turtle (*Chelonia mydas*), Central North Pacific DPS”;

■ c. An entry for “Green Sea Turtle (*Chelonia mydas*), Central West Pacific DPS” after the new entry for “Green Sea Turtle (*Chelonia mydas*), Central South Pacific DPS”;

■ d. An entry for “Green Sea Turtle (*Chelonia mydas*), North Atlantic DPS” after the new entry for “Green Sea Turtle (*Chelonia mydas*), Central West Pacific DPS”;

■ e. An entry for “Green Sea Turtle (*Chelonia mydas*), South Atlantic DPS” after the new entry for “Green Sea Turtle (*Chelonia mydas*), North Atlantic DPS”.

The additions read as follows:

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

\* \* \* \* \*

(c) *Reptiles.*

\* \* \* \* \*

Green Sea Turtle (*Chelonia mydas*),  
Central North Pacific DPS

(1) Within the Central North Pacific distinct population segment (DPS) of the green sea turtle, critical habitat units are depicted for Hawaii, Honolulu, Kauai, and Maui Counties in the State of Hawaii on the maps in this entry.

(2) Within these areas, the physical or biological features essential to the

conservation of green sea turtle consist of the following components:

(i) Extra-tidal or dry sandy beaches from the mean high water line—the line on a chart or map that represents the intersection of the land with the water surface at the elevation of mean high water line—to areas of beach landward of the mean high water line and which contain the characteristics set forth in paragraphs (2)(i) through (iv) of this entry. These beaches include:

(A) Habitat for green turtles to transit across beaches and for nest placement that includes:

(1) Relatively unimpeded wet and dry sand or nearshore access areas from the ocean to the beach for nesting females and from the beach to the ocean for both post-nesting females and hatchlings; and

(2) Drier sand areas located above mean high water in the supralittoral



zone to avoid being inundated frequently by high tides.

(B) Sand substrate that:

(1) Allows for suitable nest construction;

(2) Is suitable for facilitating gas diffusion conducive to embryo development;

(3) Can develop and maintain temperatures and a moisture content conducive to embryo development; and

(4) Allows for emergence of hatchlings from eggshells, through sand substrate to the beach surface.

(ii) Nesting beach habitat with sufficient darkness such that nesting turtles are not deterred from emerging onto the beach and hatchlings and post-nesting females can orient to the sea.

(iii) Natural coastal processes or artificially created or maintained habitat mimicking natural conditions. This includes artificial habitat types that mimic natural conditions described in paragraphs (2)(i) and (ii) of this entry for beach access, nest site selection, nest construction, egg deposition and

incubation, and hatchling emergence and movement to the sea.

(iv) Within the range of the Central North Pacific DPS, basking habitat that includes access to natural and artificial coastlines with gradually sloping beaches (sandy, corally, or gravel substrate), emergent sandy lands, sand spits, low shelving reef rocks, as well as relatively unimpeded nearshore access from the ocean to the beach.

(3) Critical habitat does not include manmade structures (such as buildings, aqueducts, runways, roads and other paved areas, abandoned military structures, and hardened shorelines) and the land on which they are located existing within the legal boundaries on the effective date of the final rule.

(4) Data layers defining map units were created using green sea turtle survey and distribution data provided by multiple local and regional sources as available (*e.g.*, reports, databases, and species expert knowledge) and as maintained by the National Oceanic and Atmospheric Administration's Pacific Fisheries Science Center, universities,

local governments, and nonprofit organizations across the main Hawaiian Islands. Landforms were primarily delineated based on the most current available aerial maps. The maps in this entry, as modified by any accompanying regulatory text, establish the boundaries of the terrestrial critical habitat designation. The coordinates or plot points or both on which each map is based are available to the public at the USFWS's internet site at <https://www.fws.gov/office/florida-ecological-services/library/green-sea-turtle>, at <https://www.regulations.gov> under Docket No. FWS-R4-ES-2022-0164, and at the two field offices responsible for this designation. You may obtain field office location information by contacting one of the USFWS regional offices, the addresses of which are listed at 50 CFR 2.2.

(5) Three index maps follow:

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Figure 1 to Green Sea Turtle (*Chelonia mydas*), Central North Pacific DPS paragraph (5)

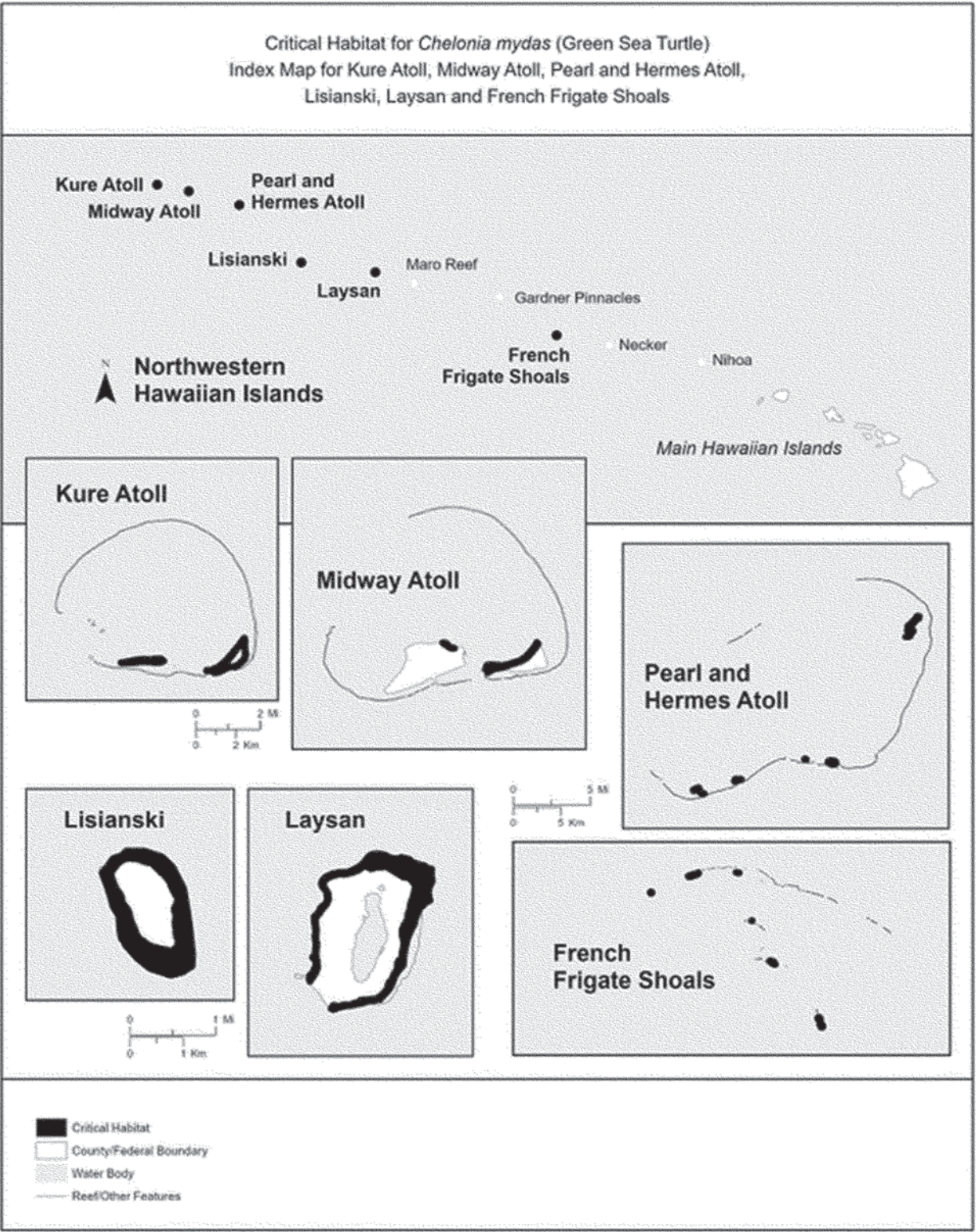


Figure 2 to Green Sea Turtle (*Chelonia mydas*), Central North Pacific DPS paragraph (5)



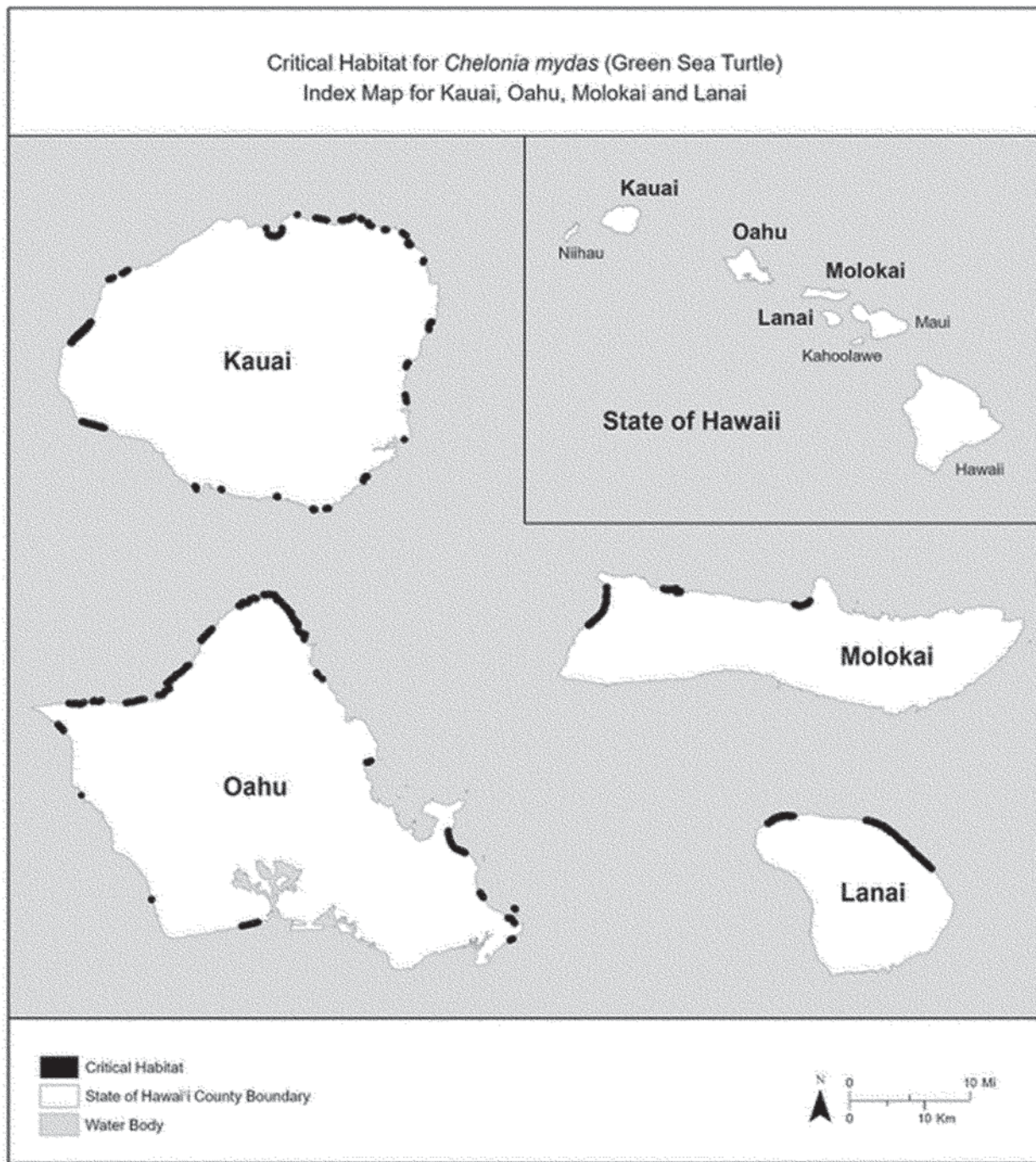
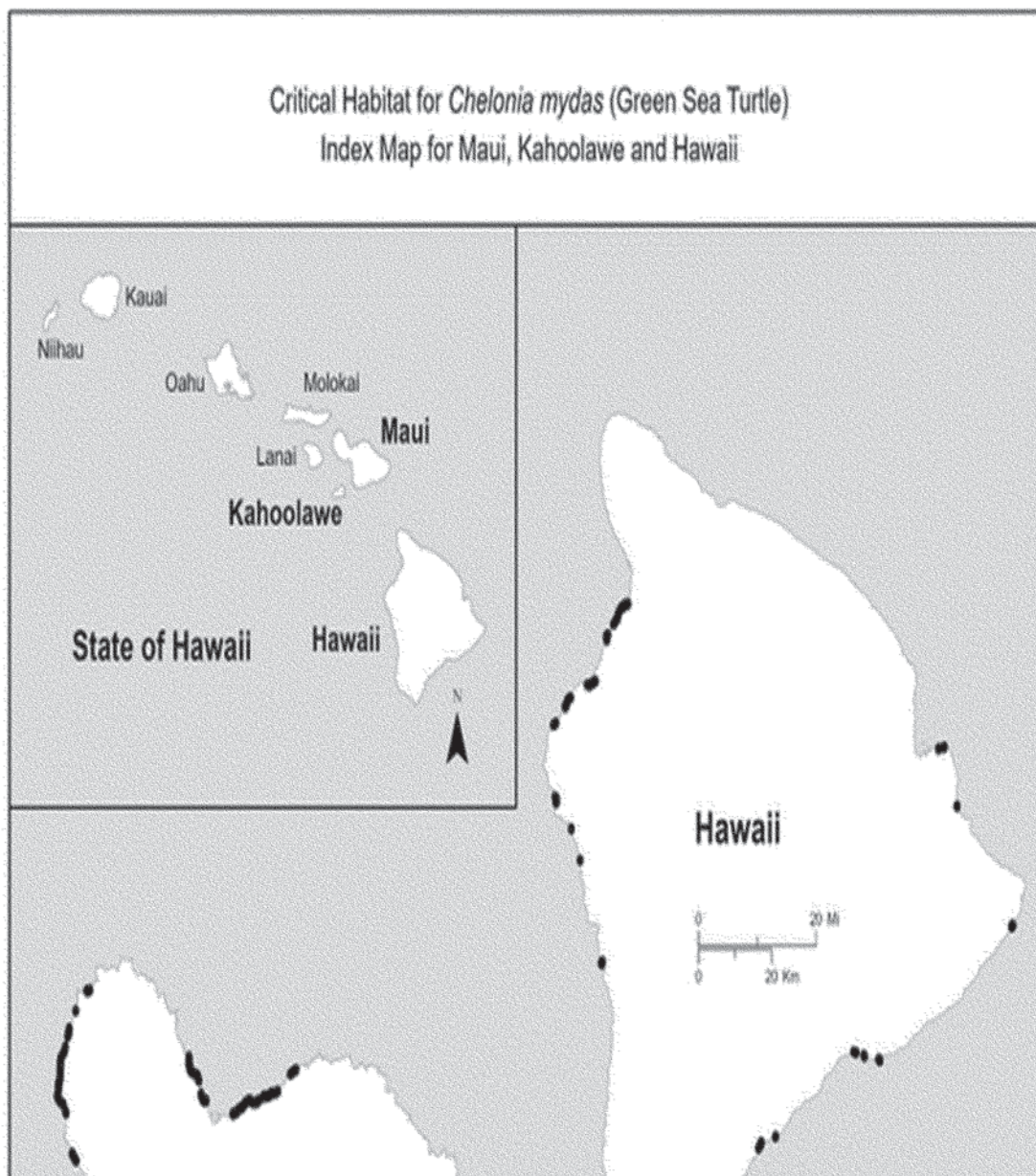


Figure 3 to Green Sea Turtle (*Chelonia mydas*), Central North Pacific DPS paragraph (5)





(6) Unit HI-01: Kure Atoll, Northwestern Hawaiian Islands, Honolulu County, Hawaii.

(i) Unit HI-01 consists of 106 acres (ac) (43 hectares (ha)) on Kure Atoll (also known as (a.k.a.) Holaniku or Mokupapapa), the northernmost island in the Hawaiian archipelago. This unit

is located approximately 57 to 60 miles (mi) (92 to 96 kilometers (km)) northwest of Midway Islands (a.k.a. Kuaihelani or Pihemanu) and includes beach, sandy shoals, coastal vegetation, and emergent sandy lands from the mean high water line (MHWL) to the line indicating the beginning of dense

vegetation. This unit includes two segments, one on Kure Sand Island and the second on Green Island. All lands within this unit are in State ownership.

(ii) Map of Unit HI-01 follows: Figure 4 to Green Sea Turtle (*Chelonia mydas*), Central North Pacific DPS paragraph (6)(ii)





(7) Unit HI-02: Midway Islands, Northwestern Hawaiian Islands, Hawaii.

(i) Unit HI-02 consists of 88 ac (35 ha) on Midway Islands (a.k.a. Kuaihelani or Pihemanu), part of the United States Minor Outlying Islands, the second northernmost island in the Hawaiian archipelago. This unit is located approximately 57 to 60 mi (92 to 96 km)

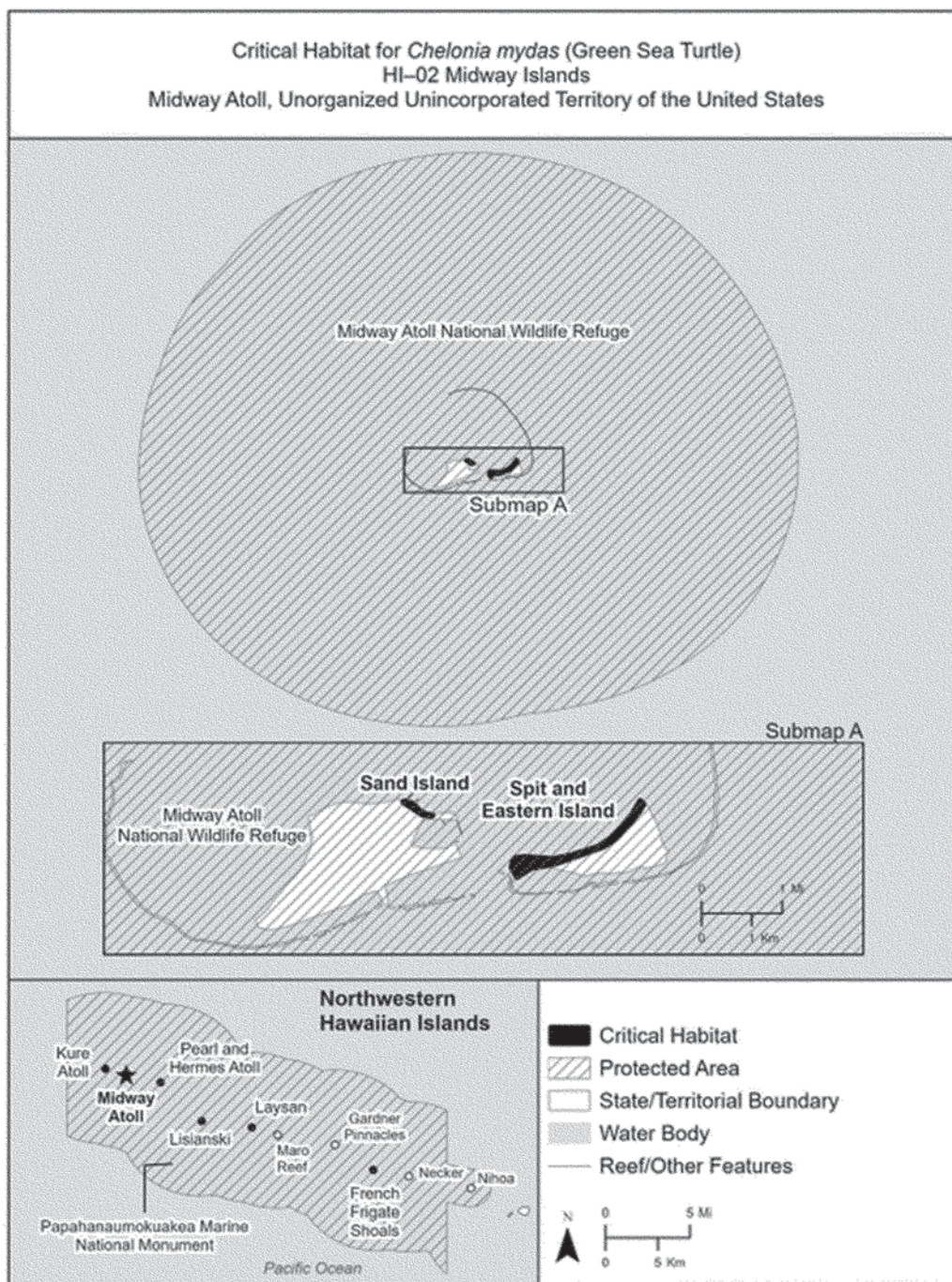
east of Kure Atoll (a.k.a. Holaniku or Mokupapapa) and includes beach, coastal vegetation, sandy shoals, and emergent sandy lands from the MHWL to the line indicating the beginning of dense vegetation or hardened or developed structures. This unit includes one segment along the northeastern shore of Sand Island, and another

segment on Spit and Eastern Islands. All lands within this unit are in Federal ownership.

(ii) Map of Unit HI-02 follows:

Figure 5 to Green Sea Turtle (*Chelonia mydas*), Central North Pacific DPS paragraph (7)(ii)





(8) Unit HI-03: Pearl and Hermes Atoll, Honolulu County, Hawaii.

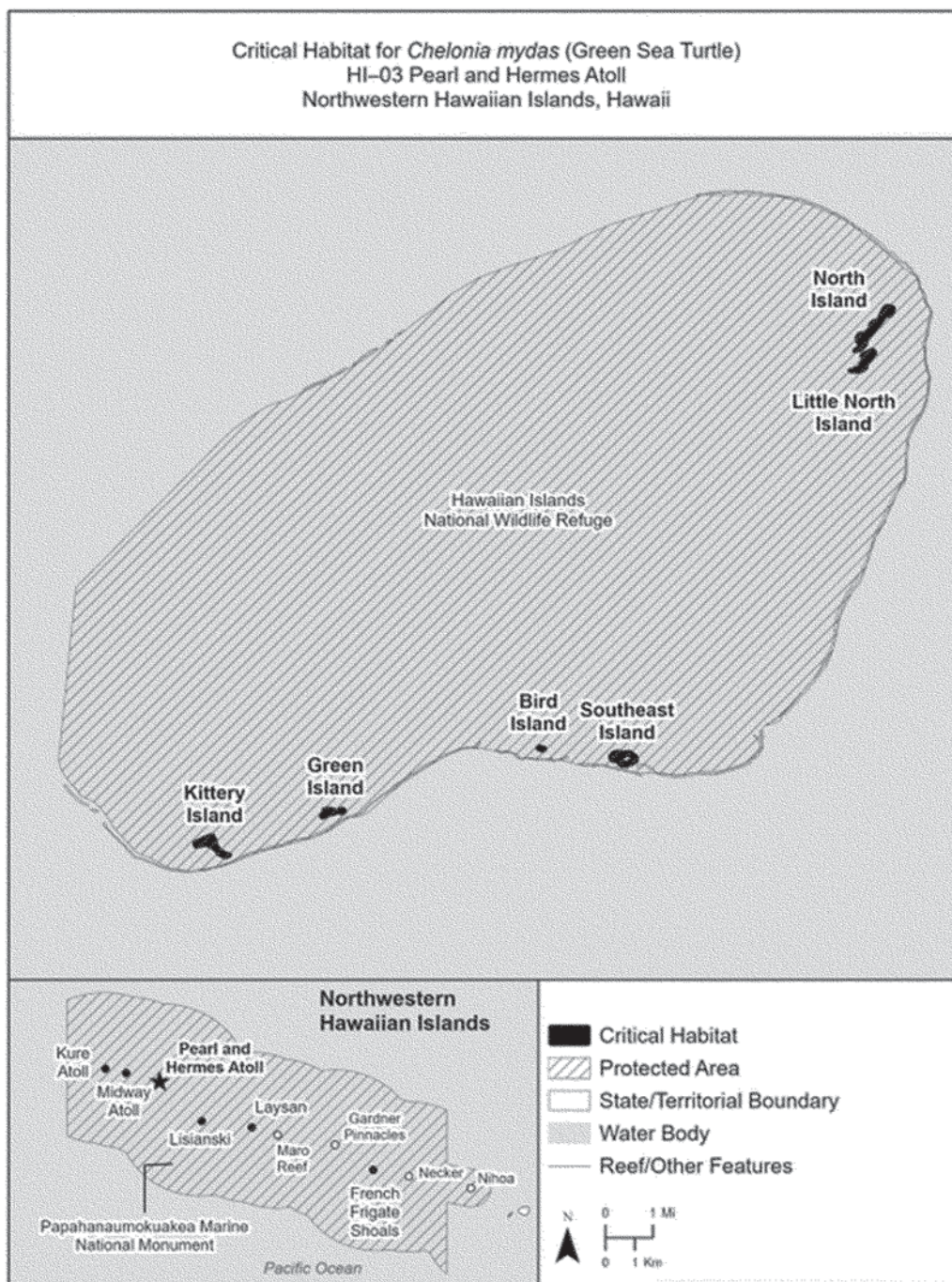
(i) Unit HI-03 consists of 207 ac (84 ha) on Pearl and Hermes Atoll (a.k.a. Manawai or Holoikauaua), the third northernmost island in the Hawaiian archipelago. This unit is located approximately 97 mi (156 km) southeast

of Midway Islands (a.k.a. Kuaihelani or Pihemanu), and includes beach, coastal vegetation, sandy shoals, and emergent sandy lands from the MHWL to the line indicating the beginning of dense vegetation. This unit includes seven segments: one each on North Island, Little North Island, Southeast Island,

Bird Island, and Kittery Island (a.k.a. Seal Kittery Island), and two on Green Island. All lands within this unit are in Federal ownership.

(ii) Map of Unit HI-03 follows: Figure 6 to Green Sea Turtle (*Chelonia mydas*), Central North Pacific DPS paragraph (8)(ii)





(9) Unit HI-04: Lisianski Island, Honolulu County, Hawaii.

(i) Unit HI-04 consists of 295 ac (119 ha) on Lisianski Island (a.k.a. Kapou or Papaapoho), the fourth northernmost island in the Hawaiian archipelago. This island unit is located approximately 256

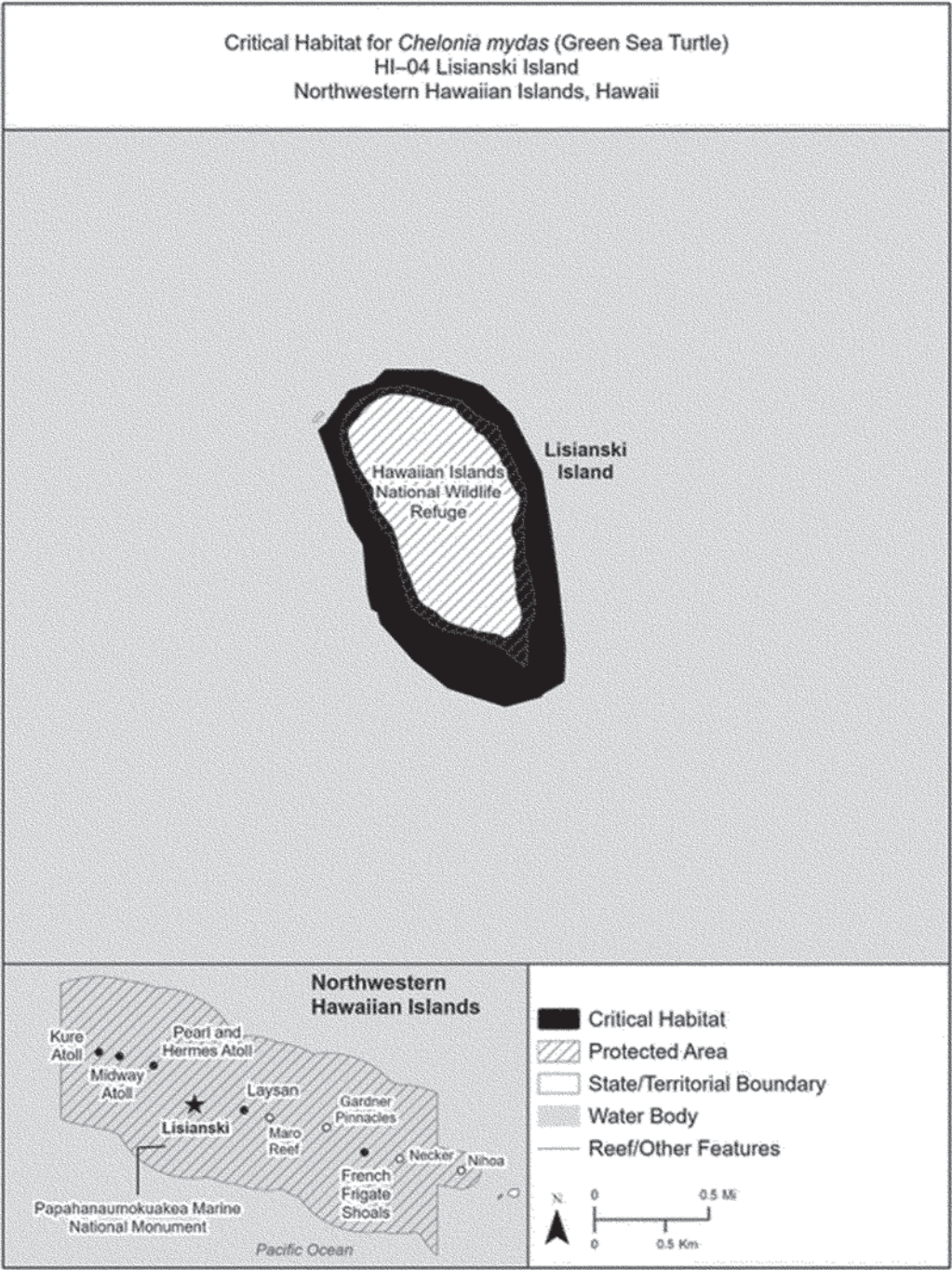
mi (412 km) southeast of Midway Islands (a.k.a. Kuaihelani or Pihemanu), and includes beach, coastal vegetation, sandy shoals, and emergent sandy lands from the MHWL to the line indicating the beginning of dense vegetation. All

lands within this unit are in Federal ownership.

(ii) Map of Unit HI-04 follows:

Figure 7 to Green Sea Turtle (*Chelonia mydas*), Central North Pacific DPS paragraph (9)(ii)



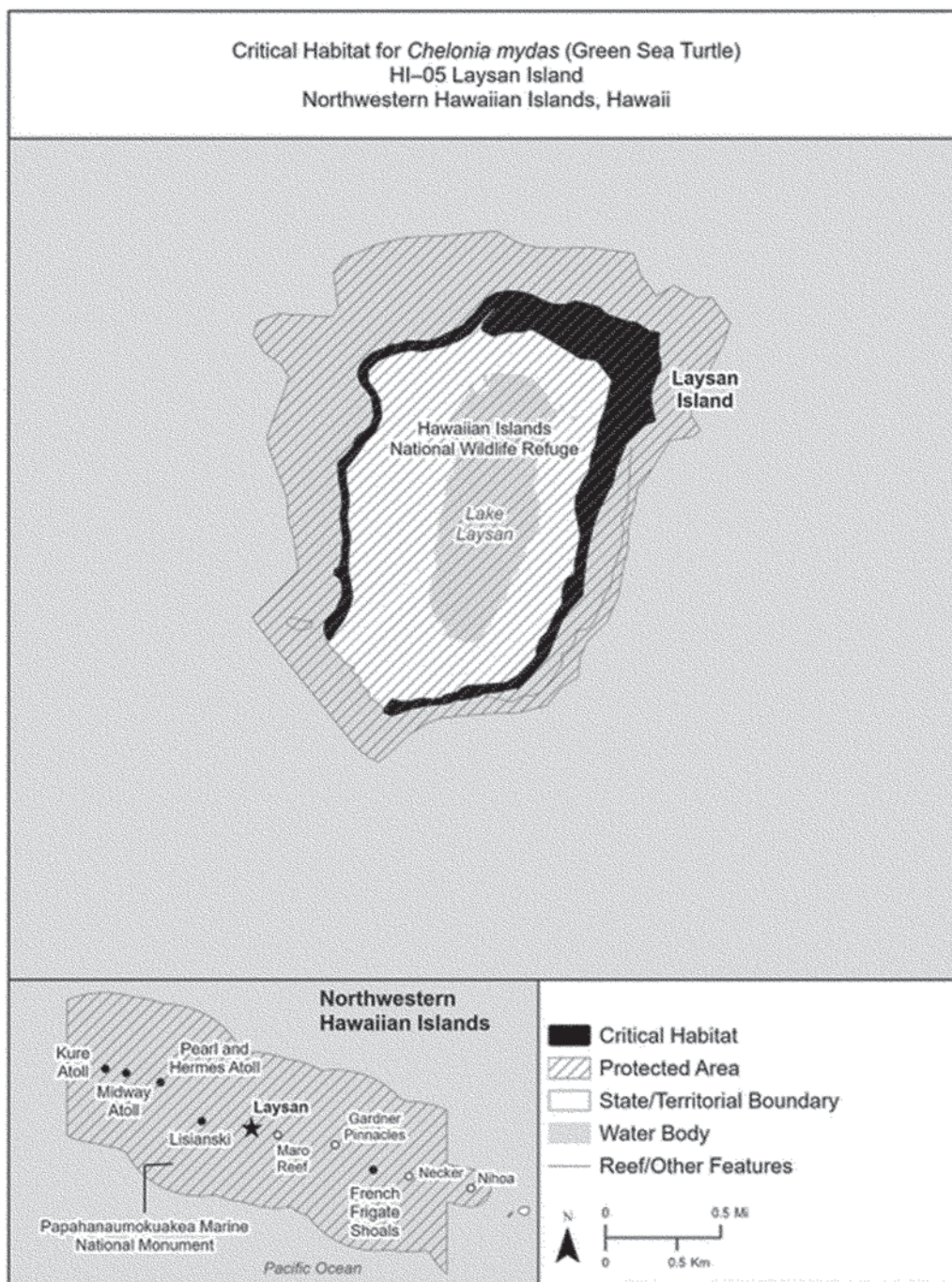


(10) Unit HI-05: Laysan Island, Honolulu County, Hawaii.  
(i) Unit HI-05 consists of 171 ac (69 ha) on Laysan Island (a.k.a. Kamole or Kauo), the fifth northernmost island in the Hawaiian archipelago. This island unit is located approximately 386 mi

(621 km) southeast of Midway Islands (a.k.a. Kuaihelani or Pihemanu) and includes beach, coastal vegetation, sandy shoals, and emergent sandy lands from the MHWL to the line indicating the beginning of dense vegetation. All

lands within this unit are in Federal ownership.  
(ii) Map of Unit HI-05 follows:  
Figure 8 to Green Sea Turtle (*Chelonia mydas*), Central North Pacific DPS paragraph (10)(ii)





(11) Unit HI-06: French Frigate Shoals, Honolulu County, Hawaii.

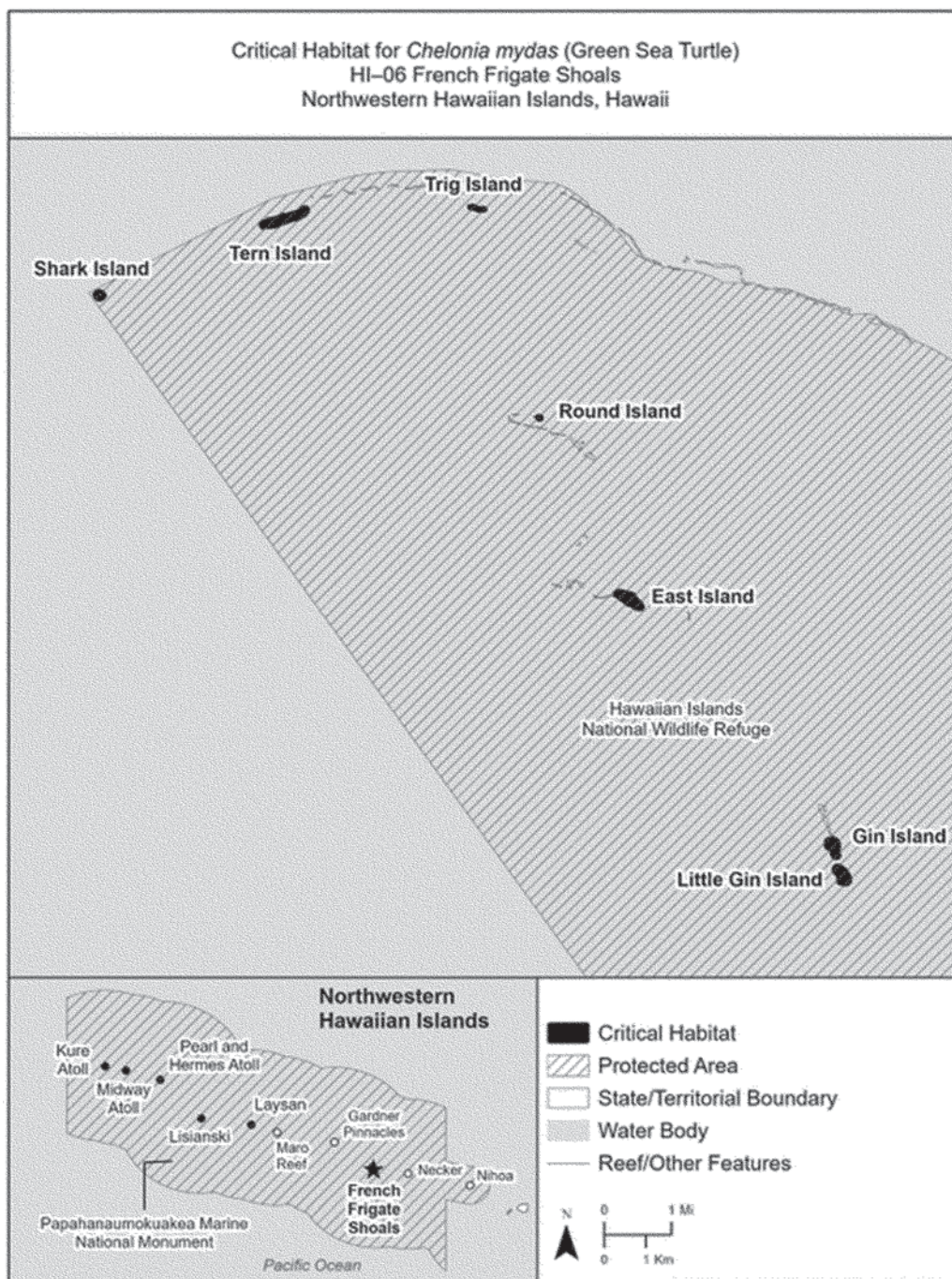
(i) Unit HI-06 consists of 95 ac (38 ha) in French Frigate Shoals (a.k.a. Lalo or Kanemilohai), the sixth northernmost island in the Hawaiian archipelago. This unit is located approximately 557 to 761 mi (896 to 1,226 km) southeast of

Midway Islands (a.k.a. Kuaihelani or Pihemanu), and includes beach, coastal vegetation, sandy shoals, and emergent sandy lands from the MHWL to the line indicating the beginning of dense vegetation or hardened or developed structures. This unit includes seven segments on Shark Island, Tern Island,

Trig Island, Round Island, East Island, Little Gin Island, and Gin Island. All lands within this unit are in Federal ownership.

(ii) Map of Unit HI-06 follows: Figure 9 to Green Sea Turtle (*Chelonia mydas*), Central North Pacific DPS paragraph (11)(ii)





(12) Unit HI-07: Halelea and Koolau Moku, Kauai County, Hawaii.

(i) Unit HI-07 consists of 69 ac (28 ha) along the north shore of the island of Kauai. This unit is located approximately 2 mi (4 km) to the west and 11 mi (18 km) to the east of community of Princeville, Kauai, and includes beach, coastal vegetation, sandy shoals, and emergent sandy lands from the MHWL to the line indicating the beginning of dense vegetation, cliff, or hardened or developed structures.

This unit comprises 22 segments in 10 areas on the northeast side of the island, including: 4 segments within Hanalei Bay; 1 segment on Sea Lodge Beach; 1 segment on Anini Beach; 3 segments on Kalihiwai Beach; 6 segments at Kauapea Beach; 1 segment north of Crater Hill at Makapili Beach; 1 segment along the southwest shore of Kilauea Bay at Wailapa Beach; 1 segment on Pilaa Beach; 1 segment on Kaakaaniu Beach (a.k.a. Larsen's Beach or Lepeuli Beach); 2 segments along Moloaa Bay; and 1

segment on Papaa Beach. Lands within this unit include approximately 2 ac (1 ha) in Federal ownership, less than 1 ac (less than 1 ha) in State ownership, less than 1 ac (less than 1 ha) in local government ownership, 9 ac (3 ha) in private/other ownership, and 59 ac (24 ha) that are uncategorized.

(ii) Maps of Unit HI-07 follow:

Figure 10 to Green Sea Turtle (*Chelonia mydas*), Central North Pacific DPS paragraph (12)(ii)



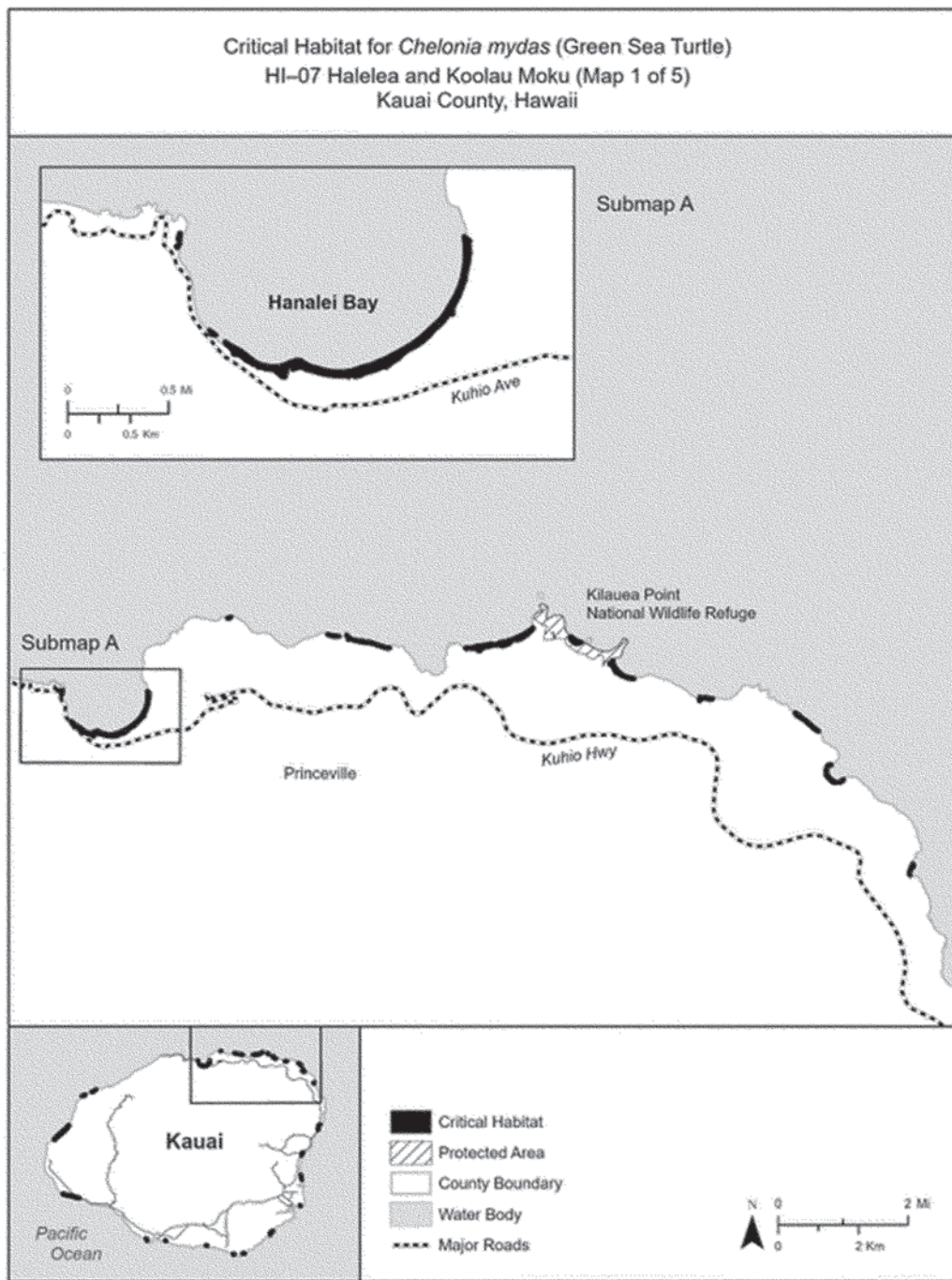


Figure 11 to Green Sea Turtle (*Chelonia mydas*), Central North Pacific DPS paragraph (12)(ii)

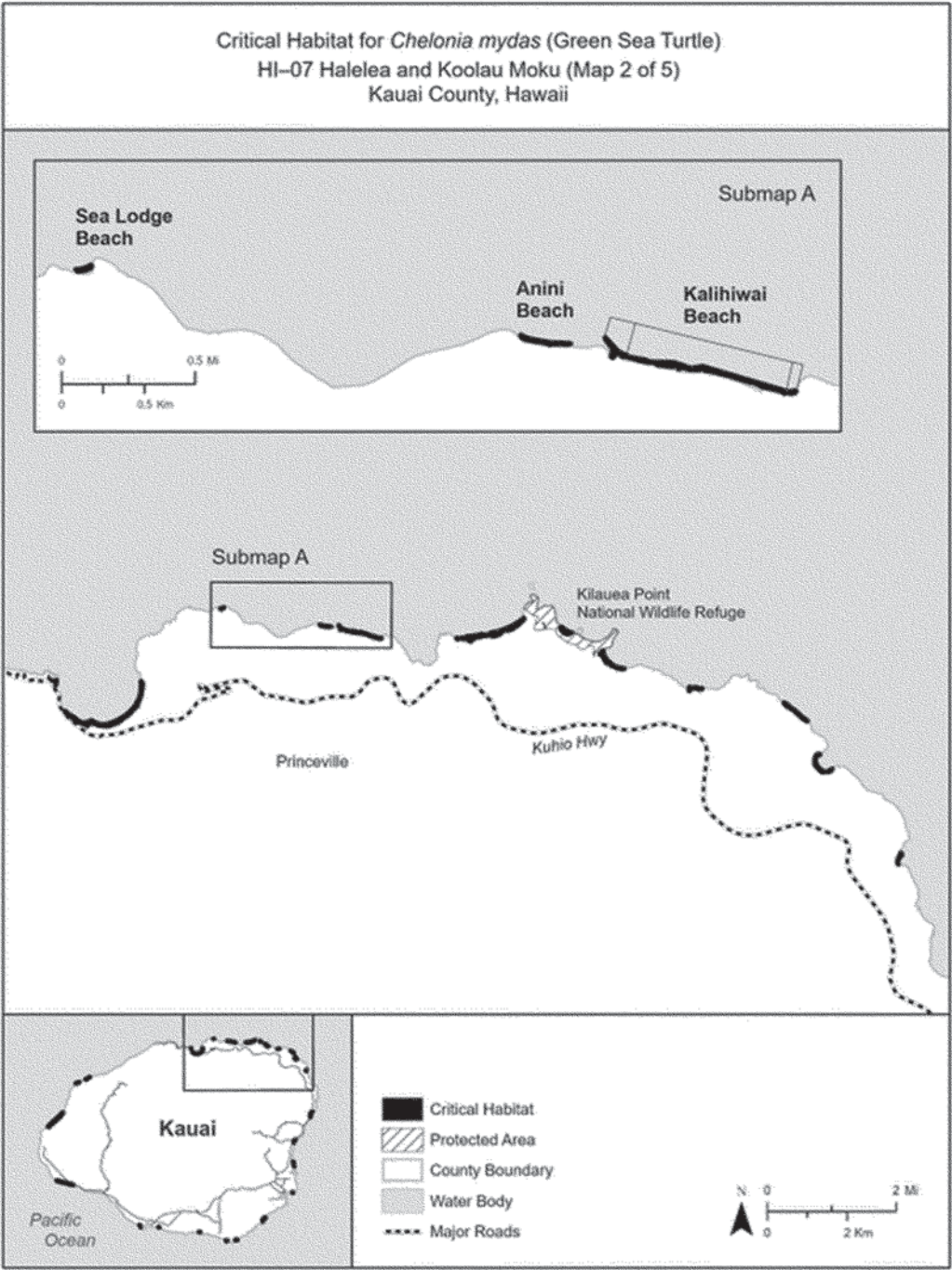


Figure 12 to Green Sea Turtle (*Chelonia mydas*), Central North Pacific DPS paragraph (12)(ii)



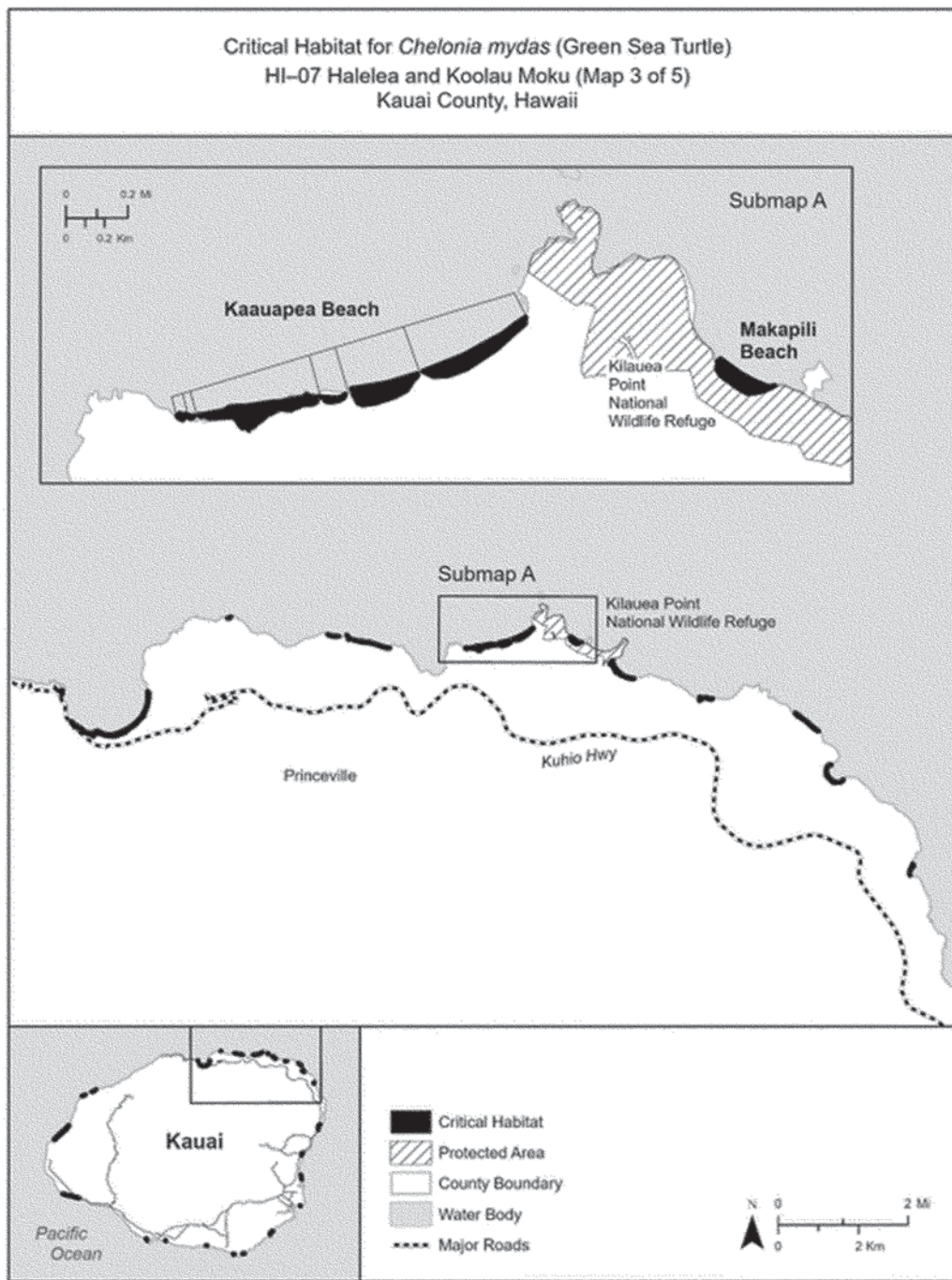


Figure 13 to Green Sea Turtle (*Chelonia mydas*), Central North Pacific DPS paragraph (12)(ii)

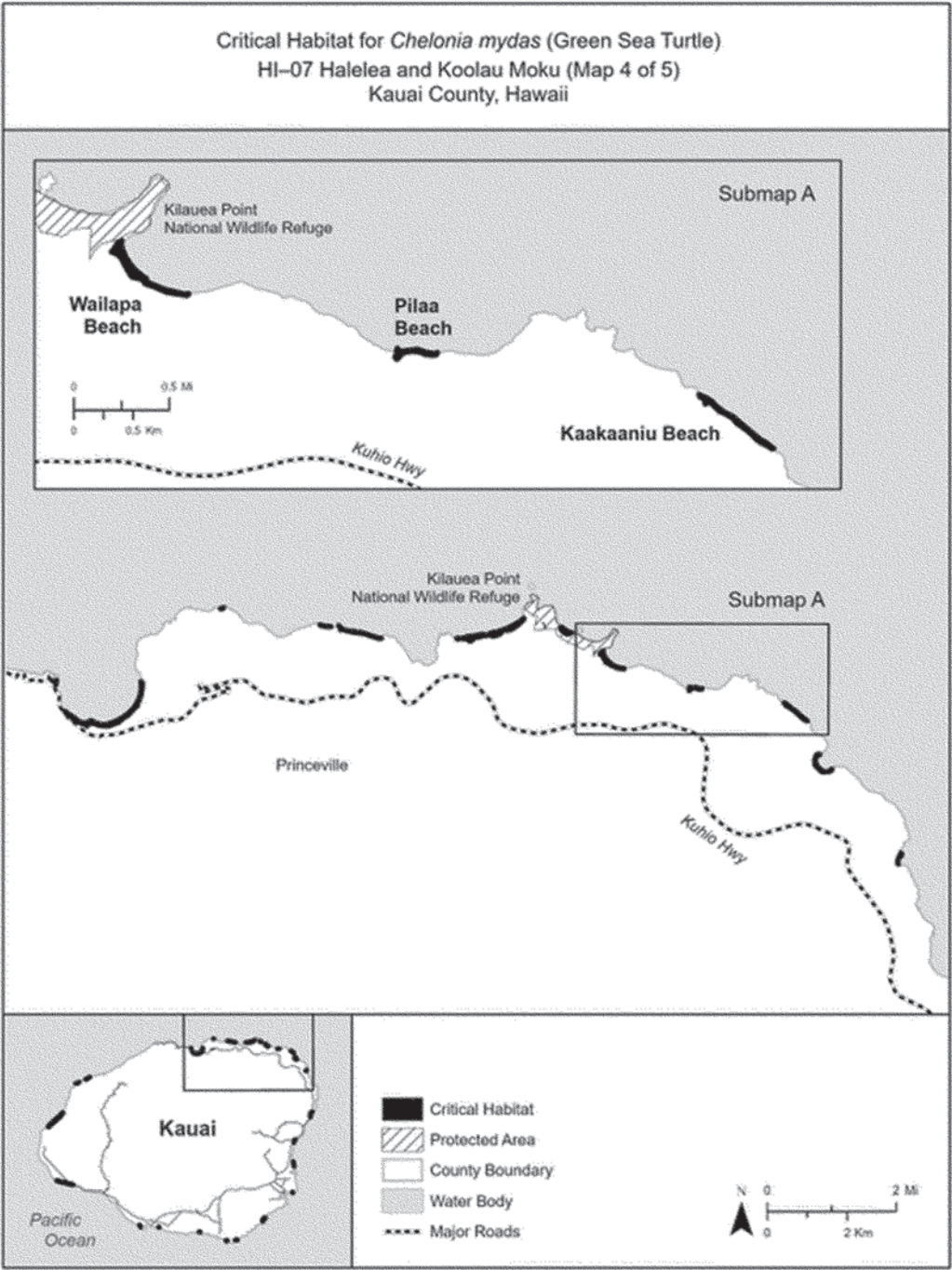
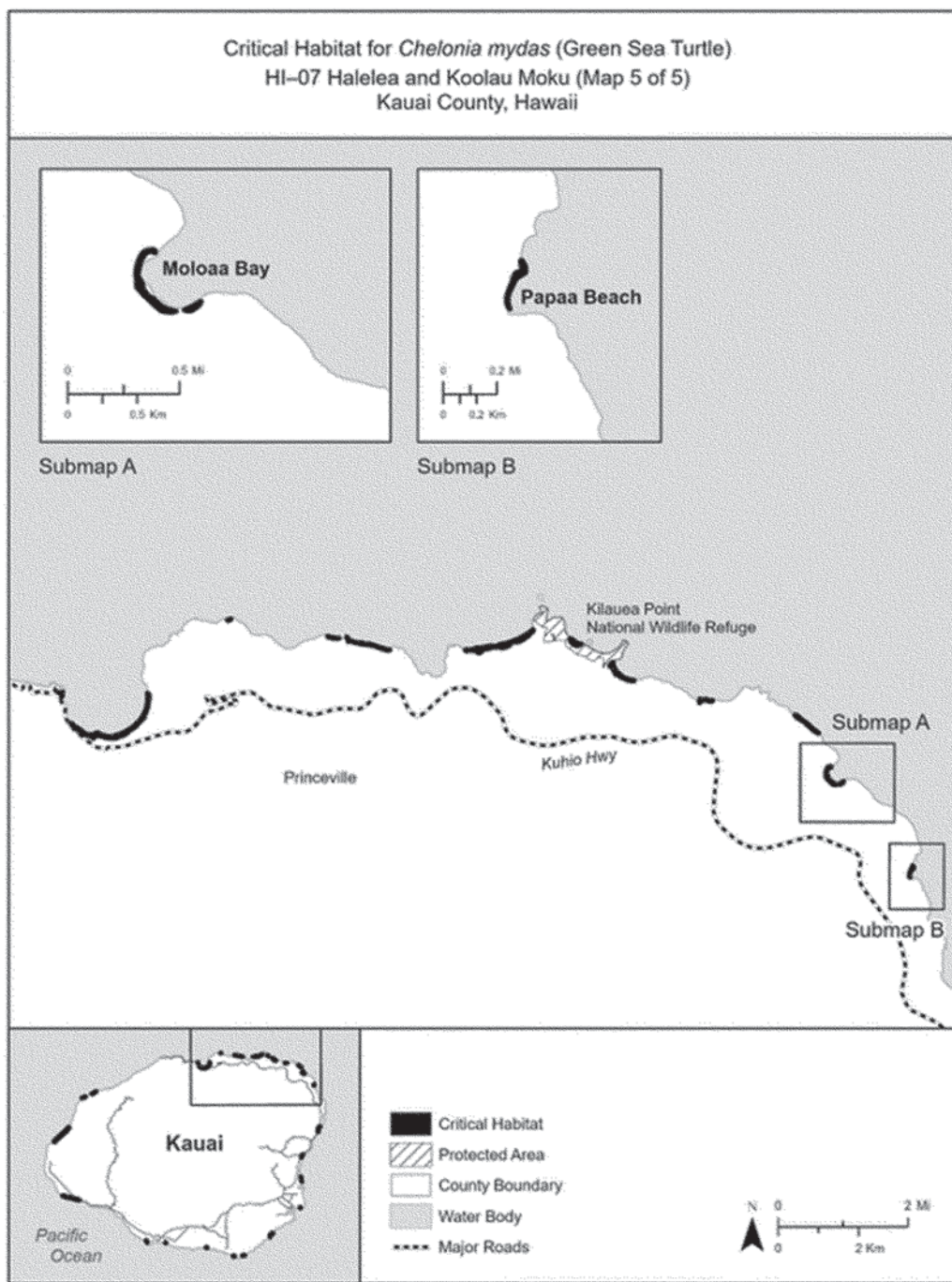


Figure 14 to Green Sea Turtle (*Chelonia mydas*), Central North Pacific DPS paragraph (12)(ii)





(13) Unit HI-08: Na Pali Coast and Mānā Plains, Kauai County, Hawaii.

(i) Unit HI-08 consists of 254 ac (103 ha) along the western coast of the island of Kauai. This unit is located in and to the west of the community of Kekaha and includes beach, coastal vegetation, sandy shoals, and emergent sandy lands from the MHWL to the line indicating

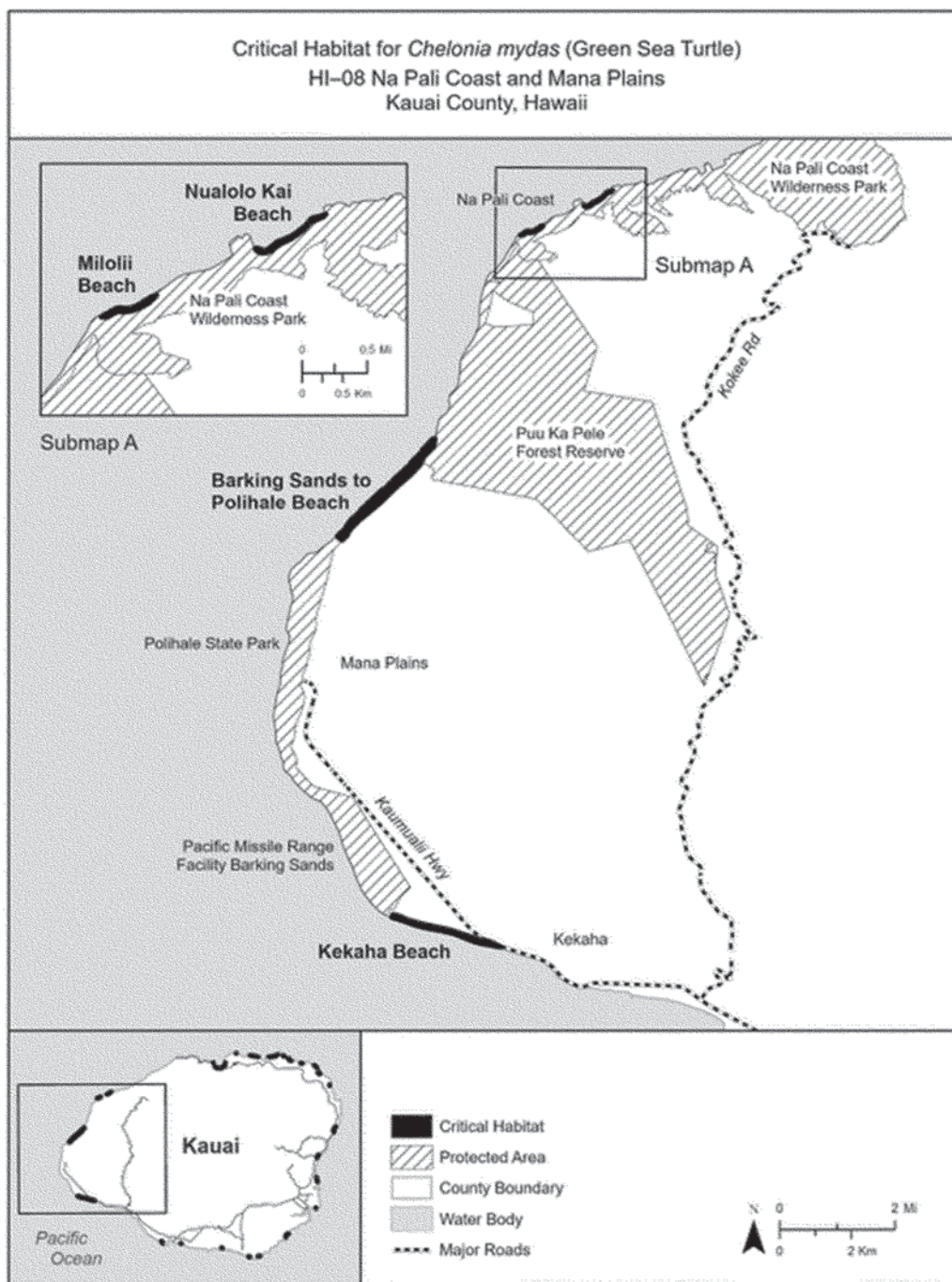
the beginning of dense vegetation, cliff, or hardened or developed structures. This unit comprises four segments in two areas: two segments along the Na Pali Coast at Nualolo Kai Beach and Milolii Beach, and two adjacent segments along the coast of Mānā Plains at Barking Sands to Polihale Beach and Kekaha Beach. Lands within this unit

include approximately 228 ac (92 ha) in State ownership and 26 ac (11 ha) that are uncategorized.

(ii) Map of Unit HI-08 follows:

Figure 15 to Green Sea Turtle (*Chelonia mydas*), Central North Pacific DPS paragraph (13)(ii)





(14) Unit HI-09: Puna Moku on Kauai, Kauai County, Hawaii.

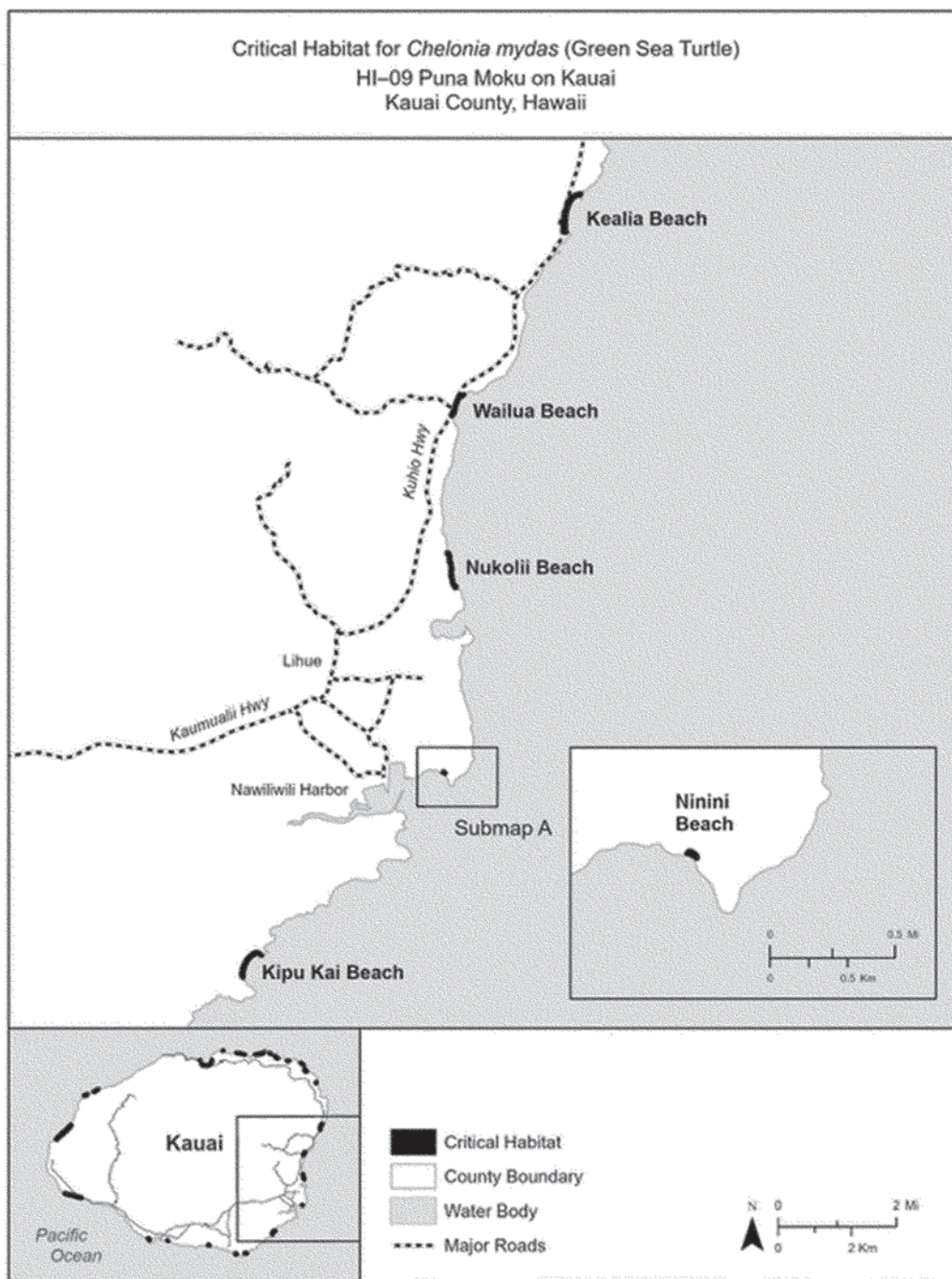
(i) Unit HI-09 consists of 33 ac (13 ha) along the eastern coast of the island of Kauai, approximately 9 mi (15 km) to the northeast and 5 mi (8 km) to the southwest of the town of Lihue, Kauai. The unit includes beach, coastal vegetation, sandy shoals, and emergent sandy lands from the MHWL to the line

indicating the beginning of dense vegetation, cliff, or hardened or developed structures. This unit comprises five segments in three areas: three segments on Kealia Beach, Wailua Beach, and Nukolii Beach; one segment on the northeast shoreline of Nawiliwili Harbor at Ninini Beach; and one segment on Kipu Kai Beach. Lands within this unit include approximately

3 ac (1 ha) in State ownership, 2 ac (1 ha) in local government ownership, 13 ac (5 ha) in private/other ownership, and 14 ac (6 ha) that are uncategorized.

(ii) Map of Unit HI-09 follows:

Figure 16 to Green Sea Turtle (*Chelonia mydas*), Central North Pacific DPS paragraph (14)(ii)



(15) Unit HI-10: Kona Moku on Kauai, Kauai County, Hawaii.

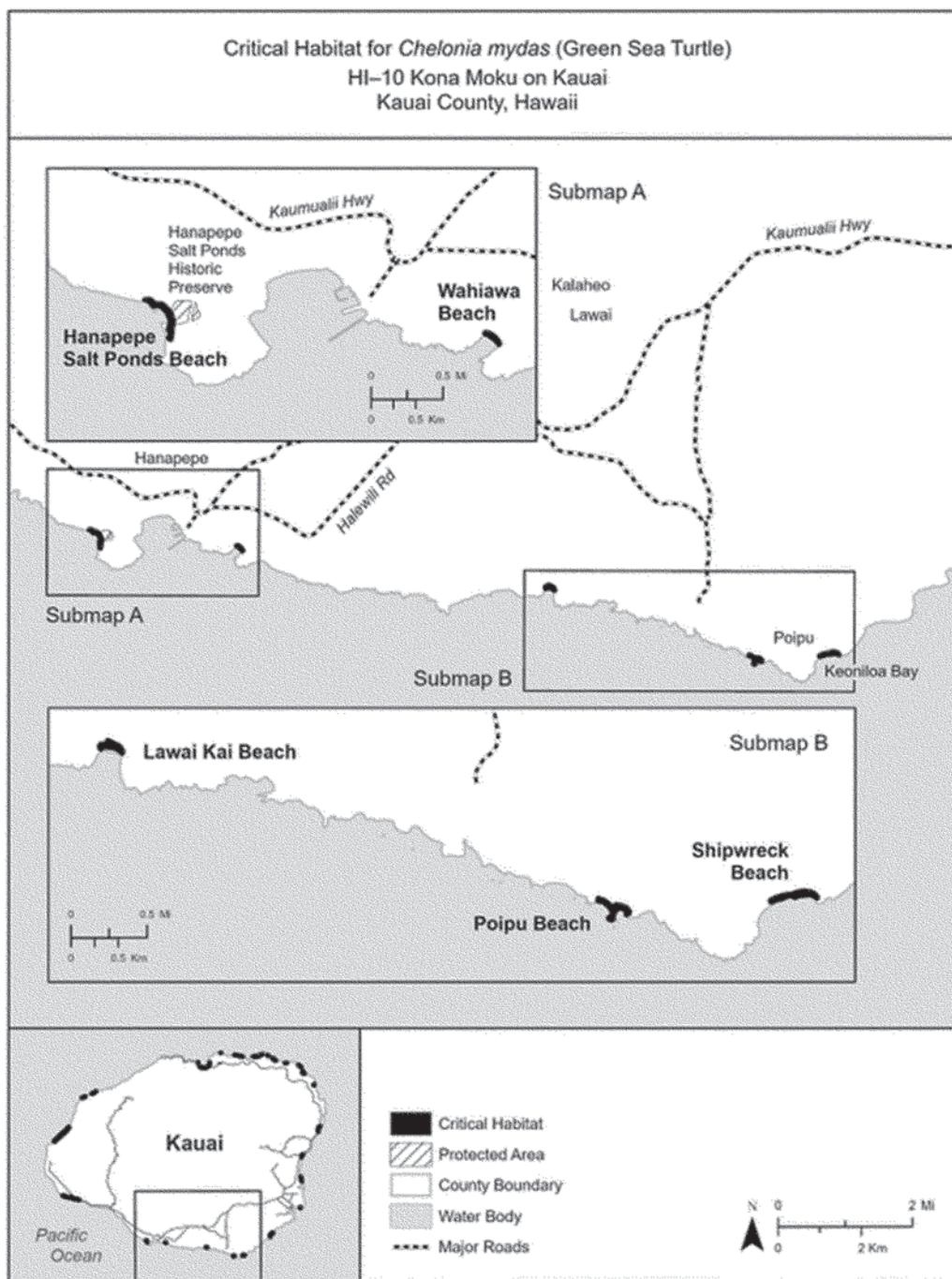
(i) Unit HI-10 consists of 14 ac (6 ha) in the communities of Hanapepe, Lawai, and Poipu on the island of Kauai. This unit is located approximately 6 mi (9 km) to the southwest and 7 mi (11 km) to the southeast of the community of Kalaheo, Kauai, and includes beach, coastal vegetation, sandy shoals, and

emergent sandy lands from the MHWL to the line indicating the beginning of dense vegetation, cliff, or hardened or developed structures. This unit comprises five segments in four areas: one segment each on Hanapepe Salt Pond Beach and Wahiawa Beach, one segment on Lawai Kai Beach, one segment along Poipu Beaches, and one segment along Keoniloa Bay at

Shipwreck Beach. Lands within this unit include approximately 4 ac (2 ha) in State ownership, 3 ac (1 ha) in local government ownership, 6 ac (3 ha) in private/other ownership, and 1 ac (1 ha) that is uncategorized.

(ii) Map of Unit HI-10 follows: Figure 17 to Green Sea Turtle (*Chelonia mydas*), Central North Pacific DPS paragraph (15)(ii)





(16) Unit HI-11: Northern Koolauloa Moku, Honolulu County, Hawaii.

(i) Unit HI-11 consists of 132 ac (54 ha) in the communities of Haleiwa, Kahuku, Laie, and Hauula on the island of Oahu. This unit is located less than 1 mi (1 km) north and 11 mi (17 km) east of the community of Pupukea, Oahu, and includes beach, coastal vegetation, sandy shoals, and emergent sandy lands from the MHWL to the line indicating the beginning of dense

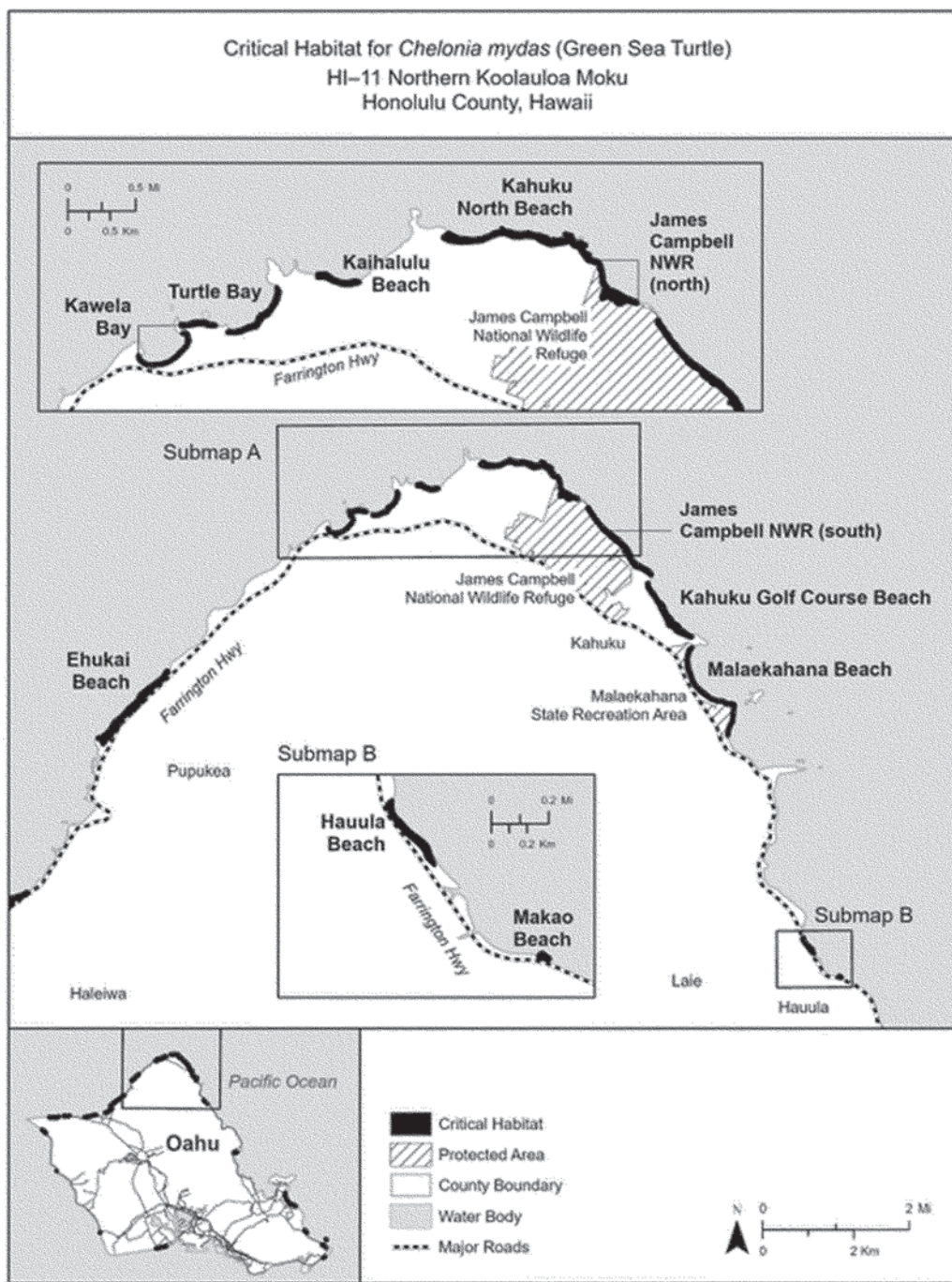
vegetation, cliff, or hardened or developed structures. This unit comprises 12 segments in 5 areas: 1 segment on Ehukai Beach; 2 segments within Kawela Bay; 1 segment each at Turtle Bay, Kaihalulu Beach, and Kahuku North Beach; 2 segments along the shoreline of James Campbell National Wildlife Refuge (NWR); and 1 segment each on Kahuku Golf Course Beach, Malaekahana Beach, Hauula Beach, and Makao Beach. Lands within

this unit include approximately 24 ac (10 ha) in Federal ownership, 26 ac (10 ha) in State ownership, less than 1 ac (less than 1 ha) in local government ownership, 30 ac (12 ha) in private/other ownership, and 53 ac (21 ha) that are uncategorized.

(ii) Map of Unit HI-11 follows:

Figure 18 to Green Sea Turtle (*Chelonia mydas*), Central North Pacific DPS paragraph (16)(ii)





(17) Unit HI-12: Waialua Moku, Honolulu County, Hawaii.

(i) Unit HI-12 consists of 82 ac (33 ha) in the communities of Mokuleia, Waialua, and Haleiwa. This unit is located approximately 26 to 30 mi (42 to 49 km) northwest of the city of Honolulu, Oahu, and includes beach, sandy shoals, coastal vegetation, and emergent sandy lands from the MHWL to the line indicating the beginning of

dense vegetation, cliff, or hardened or developed structures. This unit comprises 12 segments in 5 areas: 2 segments along Mokuleia Beach, 1 segment that runs parallel to Croizer Drive, 2 segments within Alii Beach Park, 4 segments within Haleiwa Beach Park and Puaena Beach, and 3 segments east of Puaena Point at Puaena Point to Papailoa Beach and at Chun's Reef. Lands within this unit include

approximately less than 1 ac (less than 1 ha) in Federal ownership, 7 ac (3 ha) in State ownership, 5 ac (2 ha) in local government ownership, 29 ac (12 ha) in private/other ownership, and 41 ac (17 ha) that are uncategorized.

(ii) Maps of Unit HI-12 follow:

Figure 19 to Green Sea Turtle (*Chelonia mydas*), Central North Pacific DPS paragraph (17)(ii)

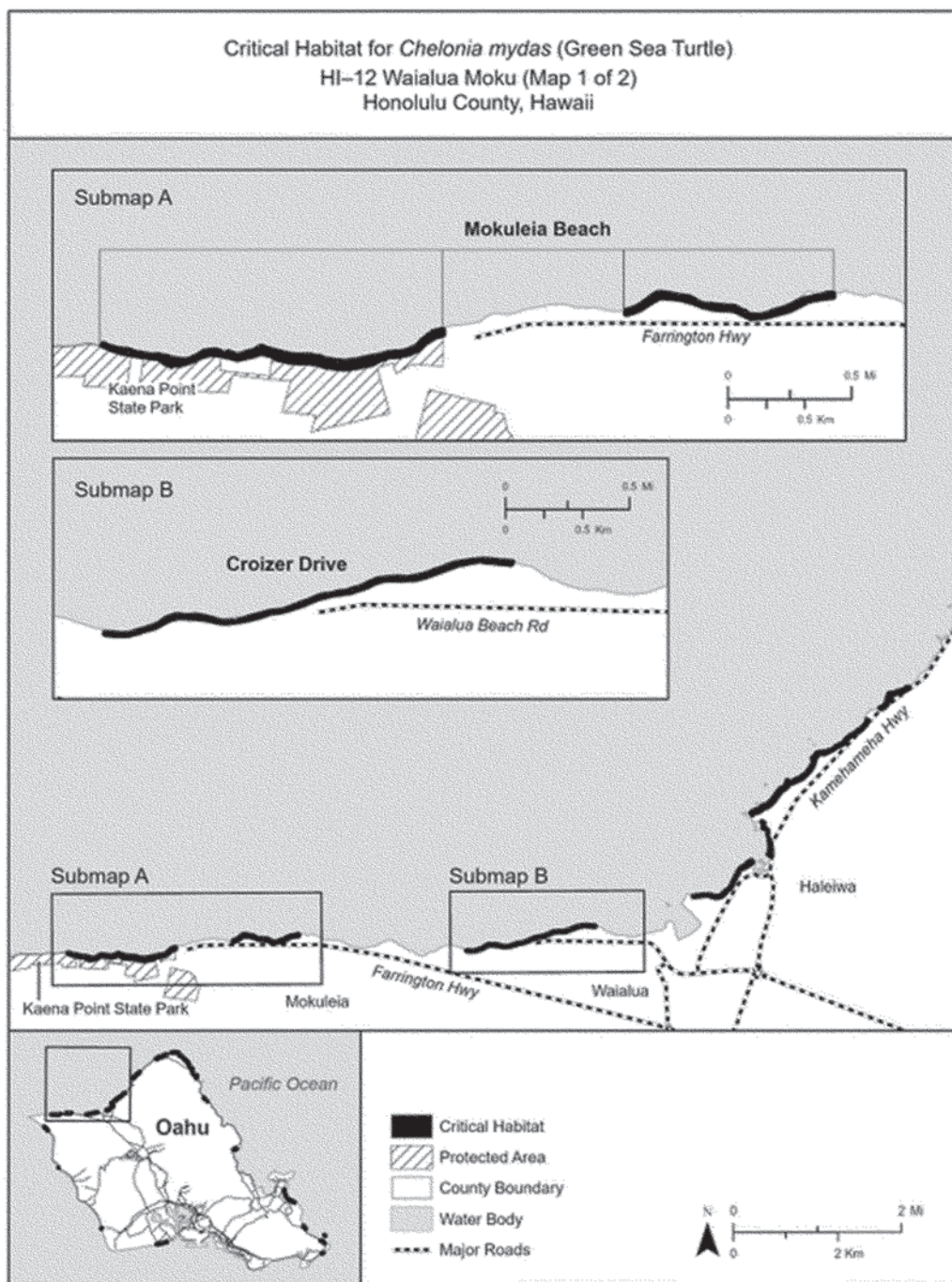
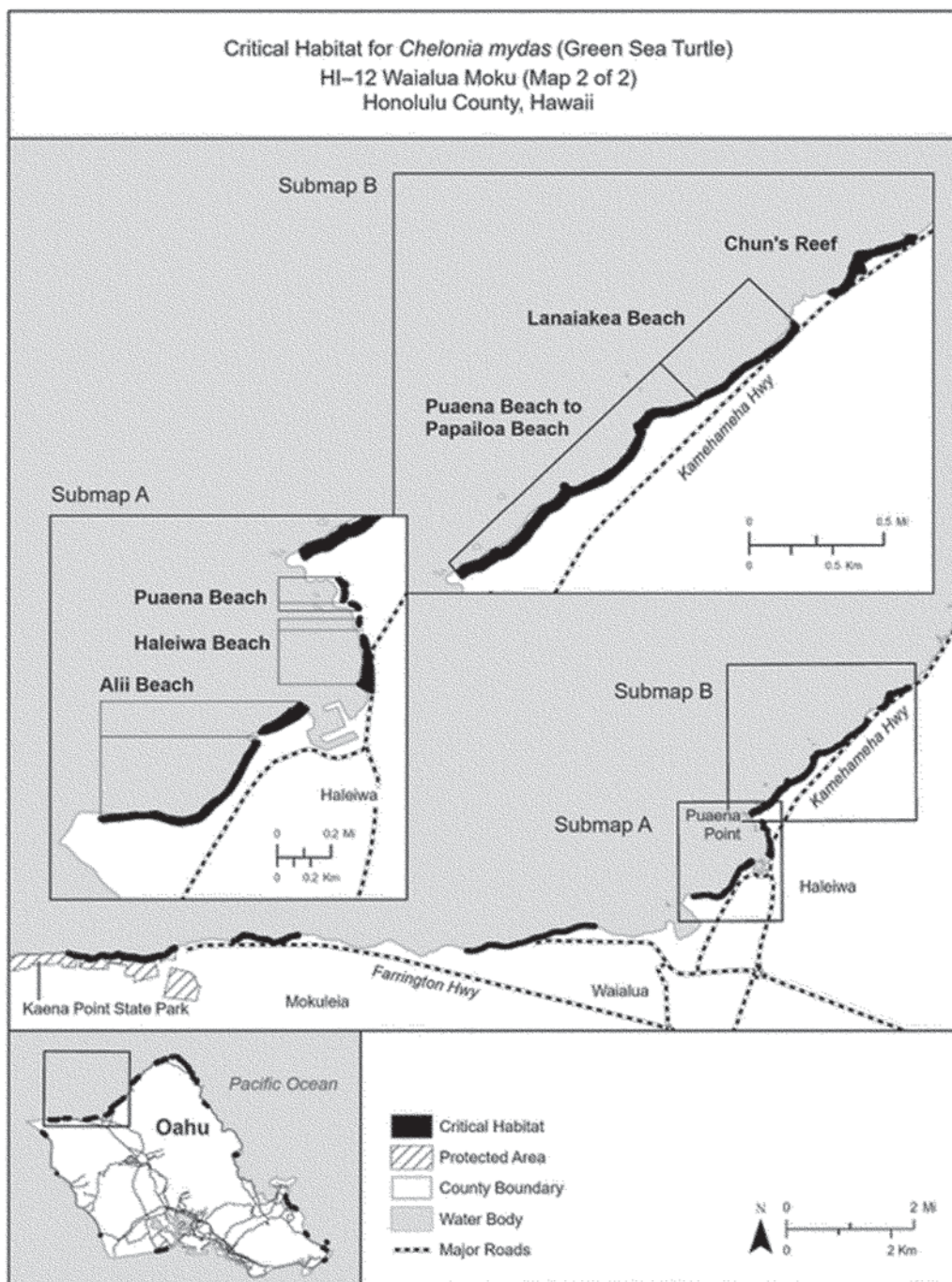


Figure 20 to Green Sea Turtle (*Chelonia mydas*), Central North Pacific DPS paragraph (17)(ii)





(18) Unit HI-13: Waianae Moku, Honolulu County, Hawaii.

(i) Unit HI-13 consists of 13 ac (5 ha) along the west coast of Oahu. This unit is located approximately 26 to 30 mi (41 to 49 km) northwest of city of Honolulu, Oahu, and includes beach, sandy shoals, coastal vegetation, and emergent sandy

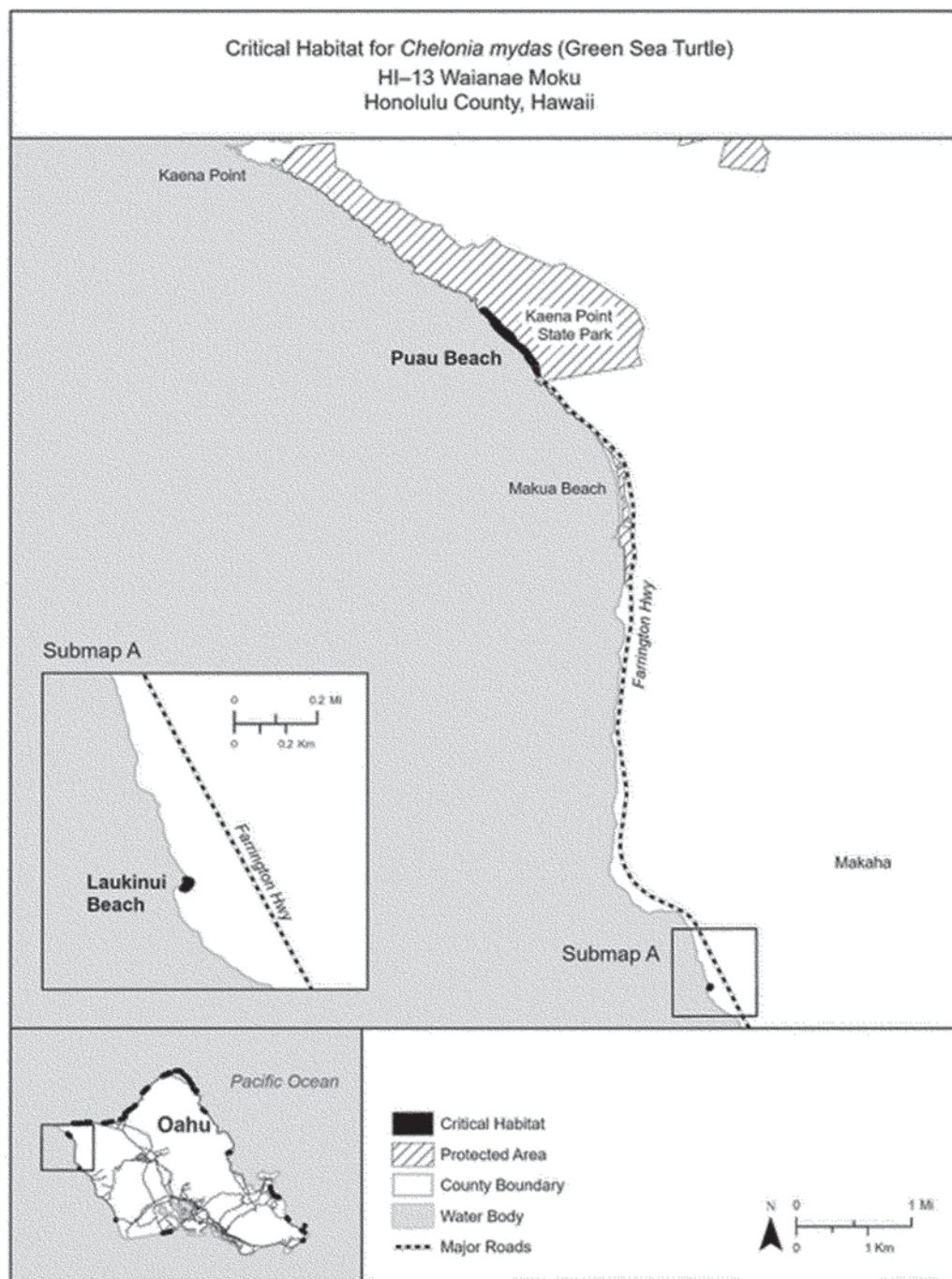
lands from the MHWL to the line indicating the beginning of dense vegetation. This unit comprises two segments south of Kaena Point at Puau Beach and Laukinui (a.k.a. Aki's Cove). Lands within this unit include approximately 13 ac (5 ha) in State ownership, less than 1 ac (less than 1

ha) in private ownership, and less than 1 ac (less than 1 ha) that is uncategorized.

(ii) Map of Unit HI-13 follows:

Figure 21 to Green Sea Turtle (*Chelonia mydas*), Central North Pacific DPS paragraph (18)(ii)





(19) Unit HI-14: Koolaupoko Moku, Honolulu County, Hawaii.

(i) Unit HI-14 consists of 53 ac (22 ha) along the east coast of Oahu. This unit is located approximately 12 to 14 mi (20 to 22 km) north and east of city of Honolulu, Oahu, and includes beach, sandy shoals, coastal vegetation, and emergent sandy lands from the MHWL to the line indicating the beginning of dense vegetation, cliff, or hardened or

developed structures. This unit comprises seven segments in four areas: one segment along the shores of Kaneohe Bay at Molii Beach; four segments along the east coast of Oahu on Kailua Beach, Bagley Beach (a.k.a. Sherwoods Beach), Kalapueo Beach, and Makapuu Beach; one segment at Manana Island (a.k.a. Rabbit Island); and one segment along the southeast shore of Oahu at Sandy Beach. Lands within

this unit include approximately 7 ac (3 ha) in State ownership, 3 ac (1 ha) in local government ownership, less than 1 ac (less than 1 ha) in private/other ownership, and 42 ac (17 ha) that are uncategorized.

(ii) Maps of Unit HI-14 follow:

Figure 22 to Green Sea Turtle (*Chelonia mydas*), Central North Pacific DPS paragraph (19)(ii)

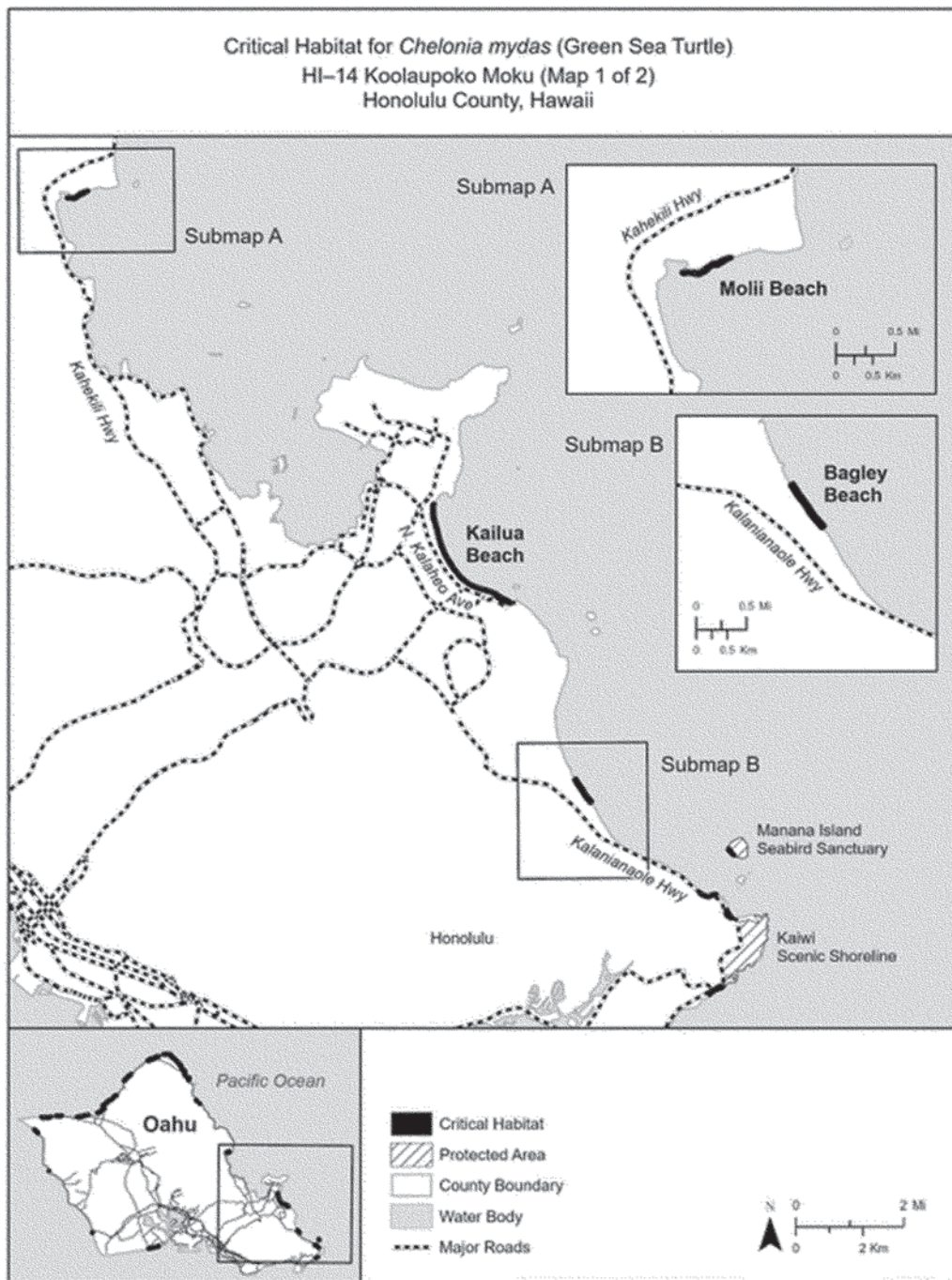
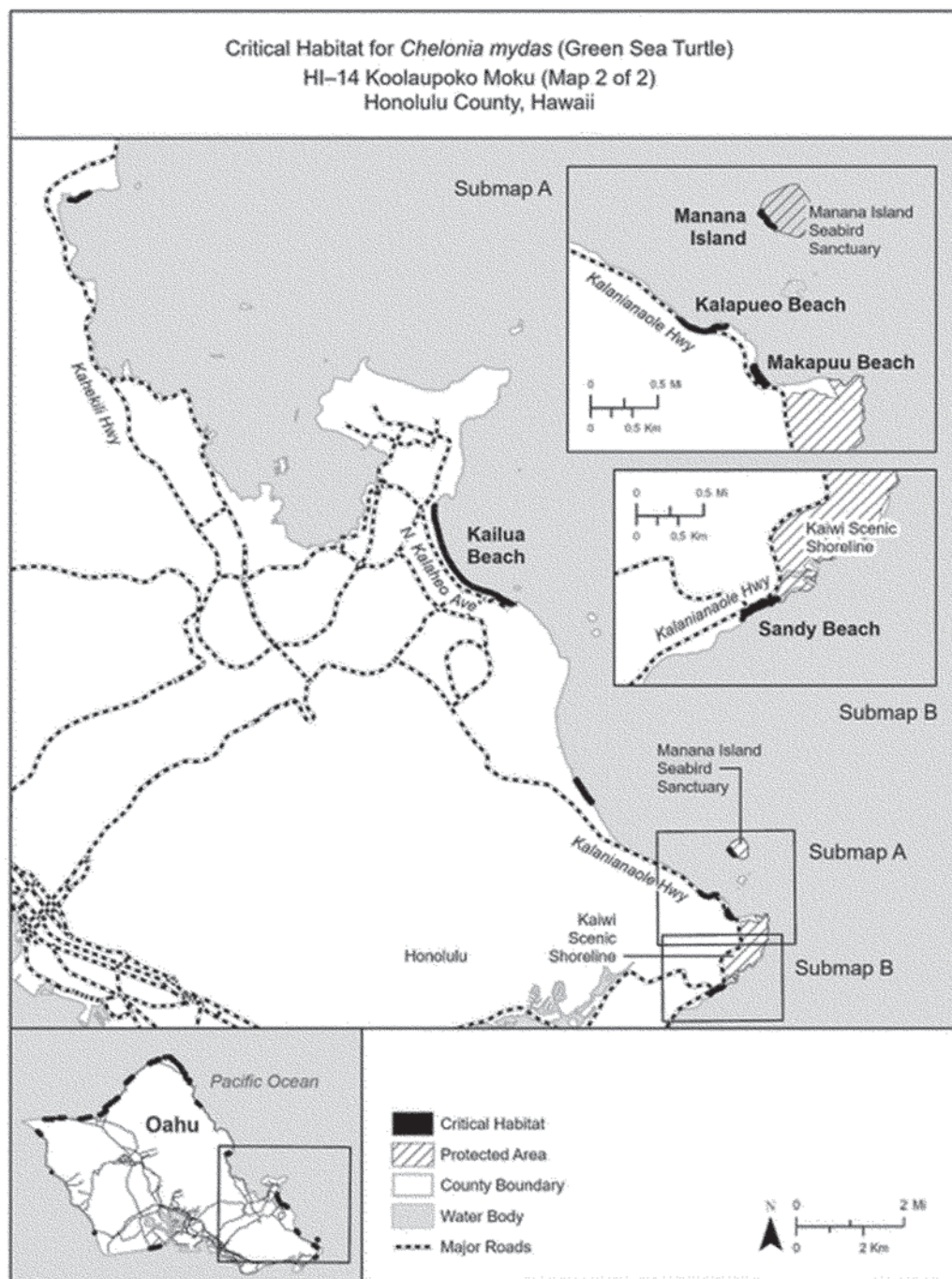


Figure 23 to Green Sea Turtle (*Chelonia mydas*), Central North Pacific DPS paragraph (19)(ii)





(20) Unit HI-15: Ewa Moku, Honolulu County, Hawaii.

(i) Unit HI-15 consists of 9 ac (4 ha) in the community of Ewa Beach on the island of Oahu. This unit is located approximately 9 to 17 mi (14 to 28 km) west of the city of Honolulu, Oahu, and includes beach, sandy shoals, coastal vegetation, and emergent sandy lands

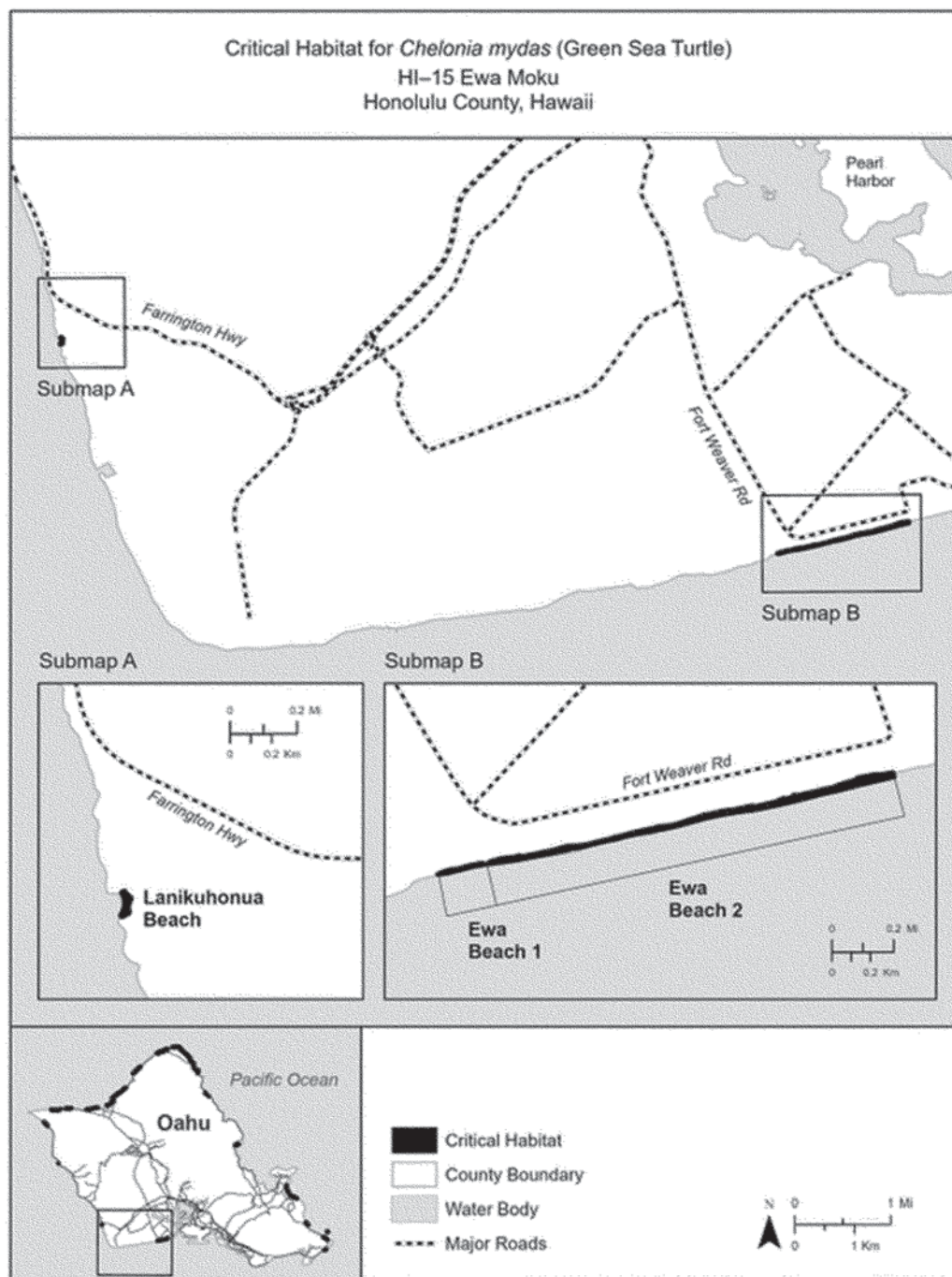
from the MHWL to the line indicating the beginning of dense vegetation, or hardened or developed structures. This unit comprises three segments in two areas west of Pearl Harbor: one segment on the southwest coast of Oahu at Lanikuhonua Beach, and two segments along Ewa Beach. Lands within this unit include approximately less than 1 ac

(less than 1 ha) in local government ownership, 2 ac (1 ha) in private/other ownership, and 7 ac (3 ha) that are uncategorized.

(ii) Map of Unit HI-15 follows:

Figure 24 to Green Sea Turtle (*Chelonia mydas*), Central North Pacific DPS paragraph (20)(ii)





(21) Unit HI-16: Molokai, Maui and Kalawao Counties, Hawaii.

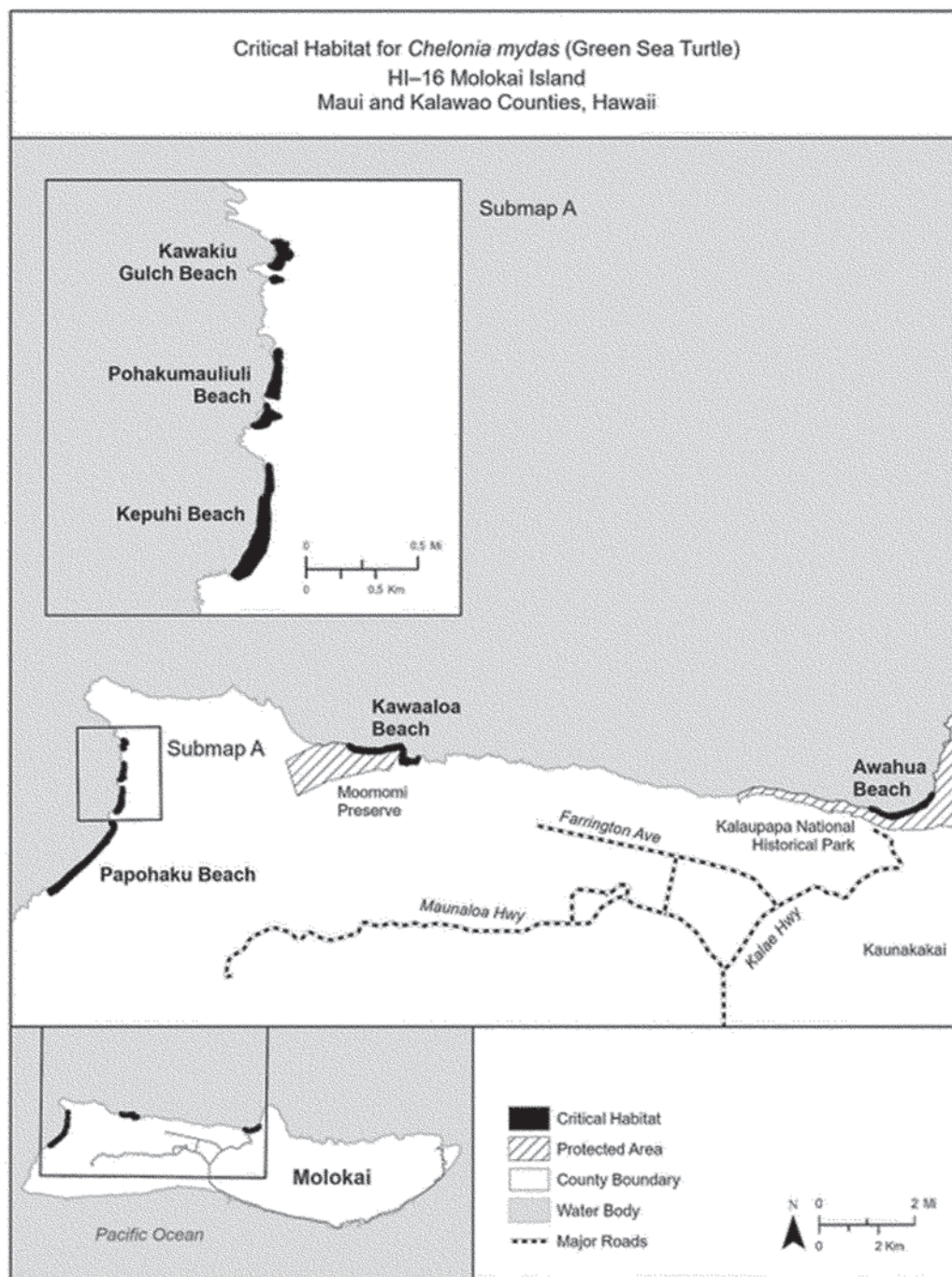
(i) Unit HI-16 consists of 160 ac (65 ha) along the eastern and northern coasts of Molokai. This unit is located approximately 7 to 17 mi (11 to 27 km) northwest to north of the town of Kaunakakai, Molokai, and includes beach, sandy shoals, coastal vegetation, and emergent sandy lands from the

MHWL to the line indicating the beginning of dense vegetation or cliff. This unit comprises eight segments in five areas: two segments on Kawakiu Gulch Beach, two segments on Papohakumauliuli Beach, one segment each at Kepuhi Beach and Papohaku Beach, one segment at Kawasaloa Beach, and one segment at Awahua Beach (Kalaupapa National Historical Park).

Lands within this unit include approximately 15 ac (6 ha) in State ownership, 104 ac (42 ha) in private ownership, and 40 ac (16 ha) that are uncategorized.

(ii) Map of Unit HI-16 follows:

Figure 25 to Green Sea Turtle (*Chelonia mydas*), Central North Pacific DPS paragraph (21)(ii)



(22) Unit HI-17: Kaanapali Moku, Maui County, Hawaii.

(i) Unit HI-17 consists of 34 ac (14 ha) along the northeast coast of Maui. This unit is located approximately 1 to 5 mi (2 to 8 km) northeast and southwest of the community of Kapalua, including beach, sandy shoals, coastal vegetation, and emergent sandy lands from the

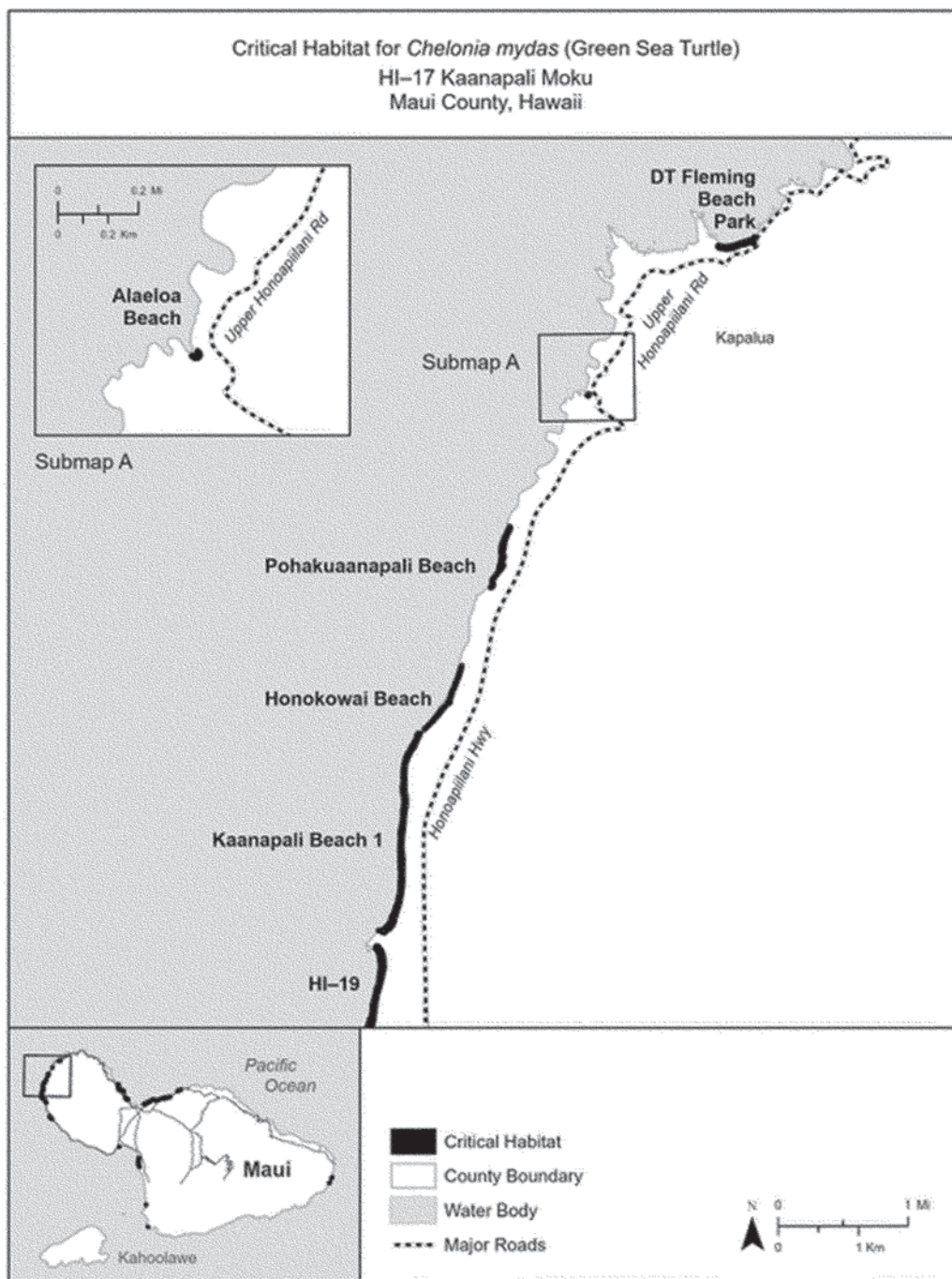
MHWL to the line indicating the beginning of dense vegetation or hardened or developed structures. This unit includes five segments in three areas: one segment on D.T. Fleming Beach Park; one segment on Alaeloa Beach; and one segment each on Pohakuanapali Beach, Honokowai Beach, and Kaanapali Beach 1. Lands

within this unit include approximately 1 ac (less than 1 ha) in State ownership, 10 ac (4 ha) in private ownership, and 23 ac (9 ha) that are uncategorized.

(ii) Map of Unit HI-17 follows:

Figure 26 to Green Sea Turtle (*Chelonia mydas*), Central North Pacific DPS paragraph (22)(ii)





(23) Unit HI-18: Puali Komohana and Hamakuapoko Moku, Maui County, Hawaii.

(i) Unit HI-18 consists of 73 ac (29 ha) on the northeast coastline of West Maui and the northwest coastline of East Maui, on the island of Maui. This unit is located approximately 5 to 8 mi (7 to 13 km) northwest to east of the community of Kahului, and includes beach, sandy shoals, coastal vegetation, and emergent sandy lands from the

MHWL to the line indicating the beginning of dense vegetation, cliff, or hardened or developed structures. This unit comprises 16 segments in 6 areas: northwest of Kahului Harbor, 1 segment each on Kalaieiliili Beach, Waihee Beach, and Kaehu Beach; 4 segments by the Kahului International Airport along Kanaha Beach; 1 segment along Papaula Point; 3 segments east of the Kahului International Airport along Spreckelsville Beach; 1 segment on

Kapukaulua Beach; 2 segments along Paia Bay; and 2 segments along Hamakuapoko-Hookipa Beach. Lands within this unit include approximately 17 ac (7 ha) in State ownership, 6 ac (2 ha) in local government ownership, 30 ac (12 ha) in private/other ownership, and 19 ac (8 ha) that are uncategorized.

(ii) Maps of Unit HI-18 follow: Figure 27 to Green Sea Turtle (*Chelonia mydas*), Central North Pacific DPS paragraph (23)(ii)



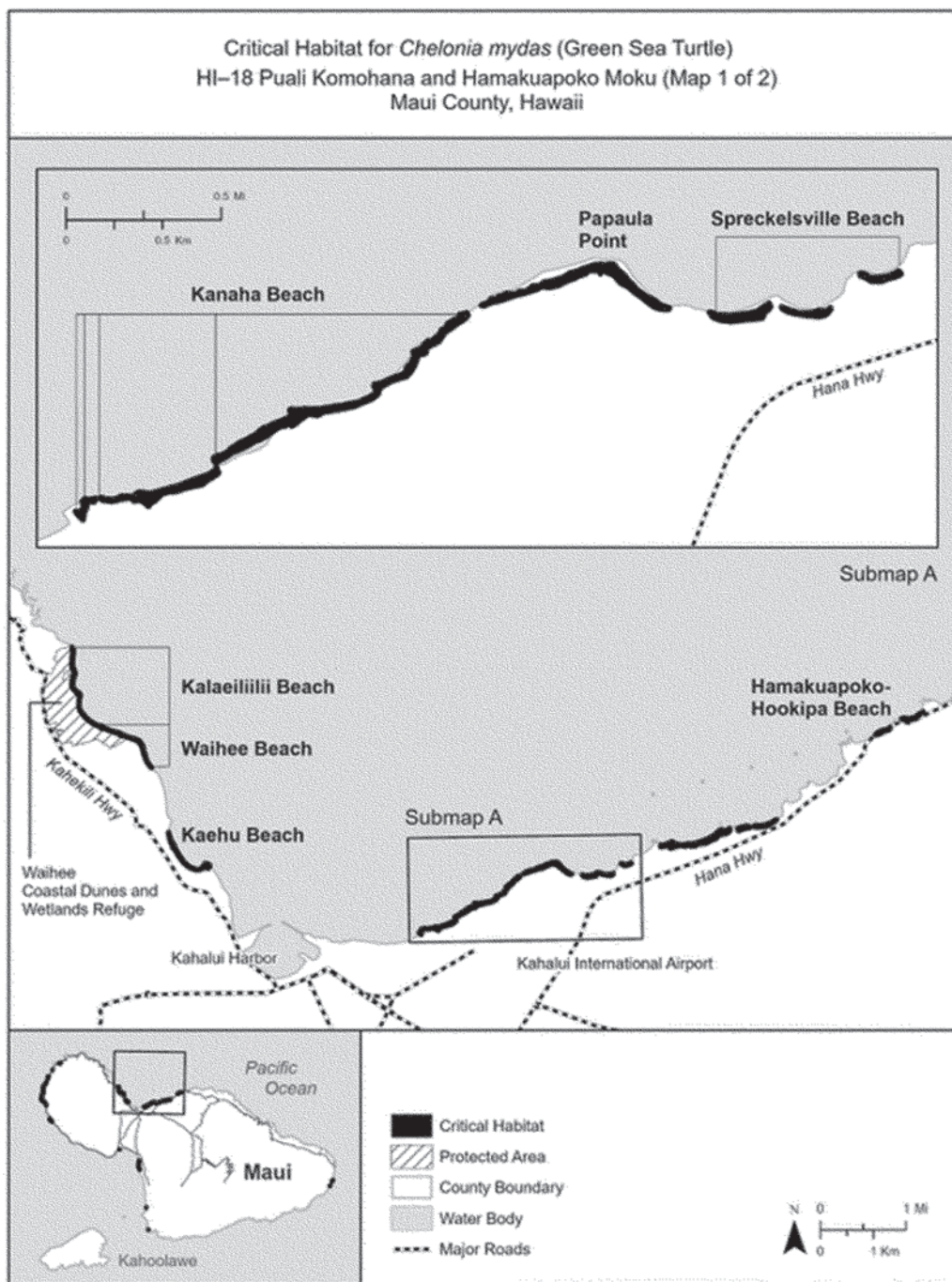
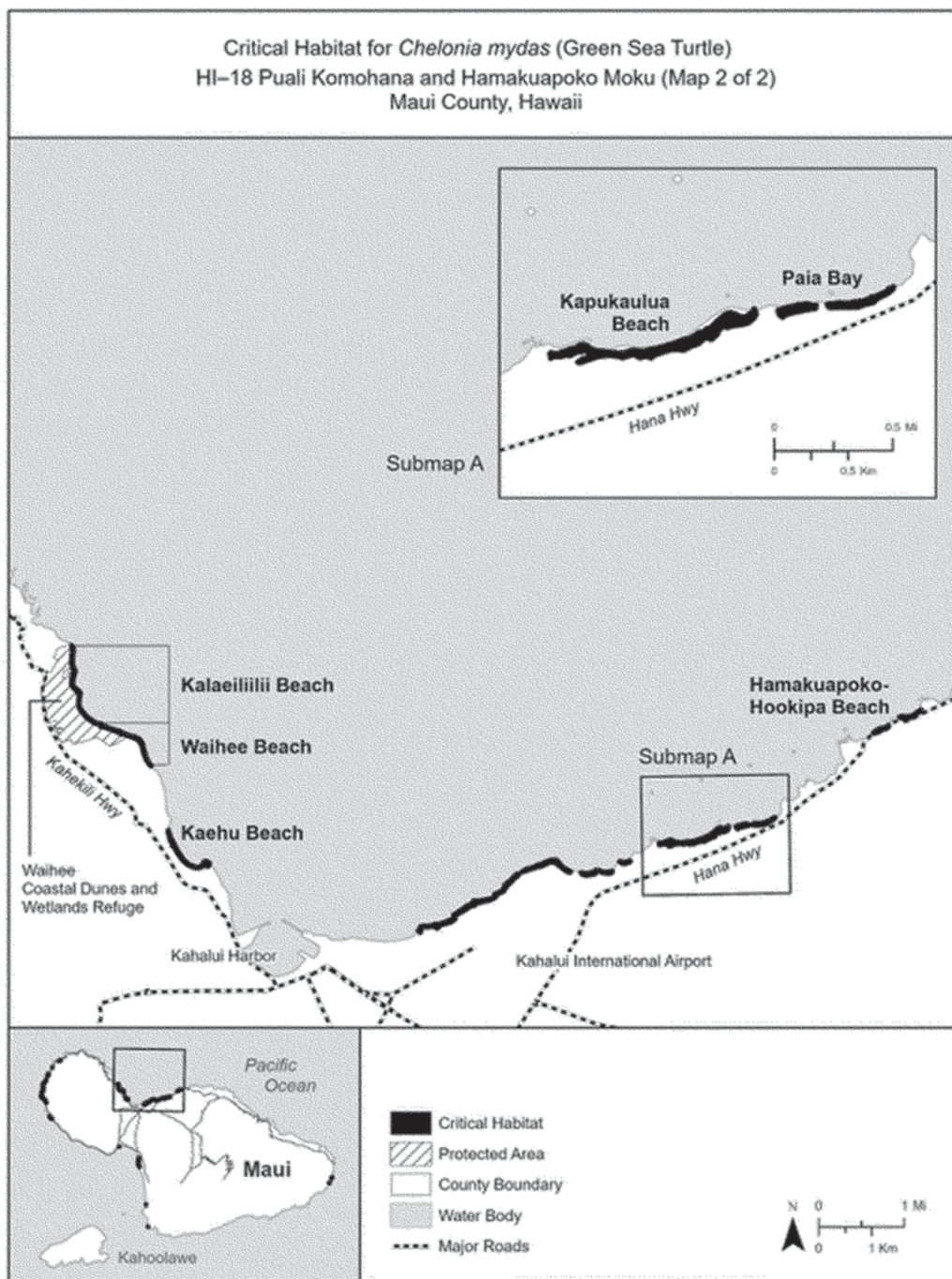


Figure 28 to Green Sea Turtle (*Chelonia mydas*), Central North Pacific DPS paragraph (23)(ii)



(24) Unit HI-19: Lahaina Moku, Maui County, Hawaii.

(i) Unit HI-19 consists of 32 ac (13 ha) from the communities of Kaanapali to Lahaina on the island of Maui. This unit is located approximately 1 to 3 mi (2 to 5 km) northwest and southeast of the town of Lahaina, and includes beach, sandy shoals, coastal vegetation, and

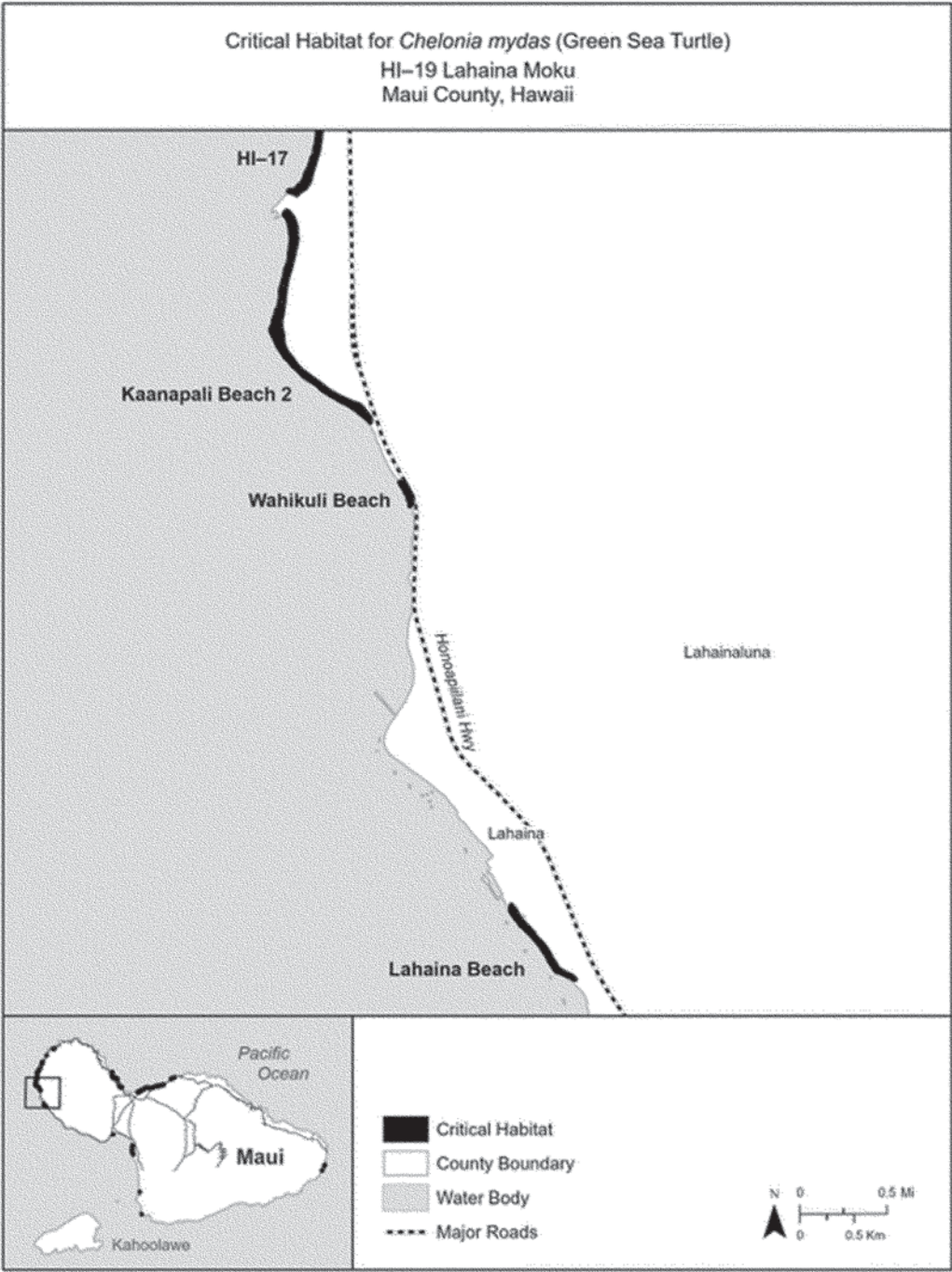
emergent sandy lands from the MHWL to the line indicating the beginning of dense vegetation, or hardened or developed structures. This unit comprises three segments, one each at Kaanapali Beach, Wahikuli Beach, and Lahaina Beach. Lands within this unit include approximately less than 1 ac (less than 1 ha) in State ownership, 3 ac

(1 ha) in local government ownership, 7 ac (3 ha) in private/other ownership, and 23 ac (9 ha) that are uncategorized.

(ii) Map of Unit HI-19 follows:

Figure 29 to Green Sea Turtle (*Chelonia mydas*), Central North Pacific DPS paragraph (24)(ii)





(25) Unit HI-20: South Puali Komohana and Kula Moku, Maui County, Hawaii.

(i) Unit HI-20 consists of 17 ac (7 ha) along the shores of Maalaea Bay in Kihei on the island of Maui. This unit is located approximately 13 to 17 mi (21 to 27 km) south of the town of Lahaina and includes beach, sandy shoals, coastal vegetation, and emergent sandy

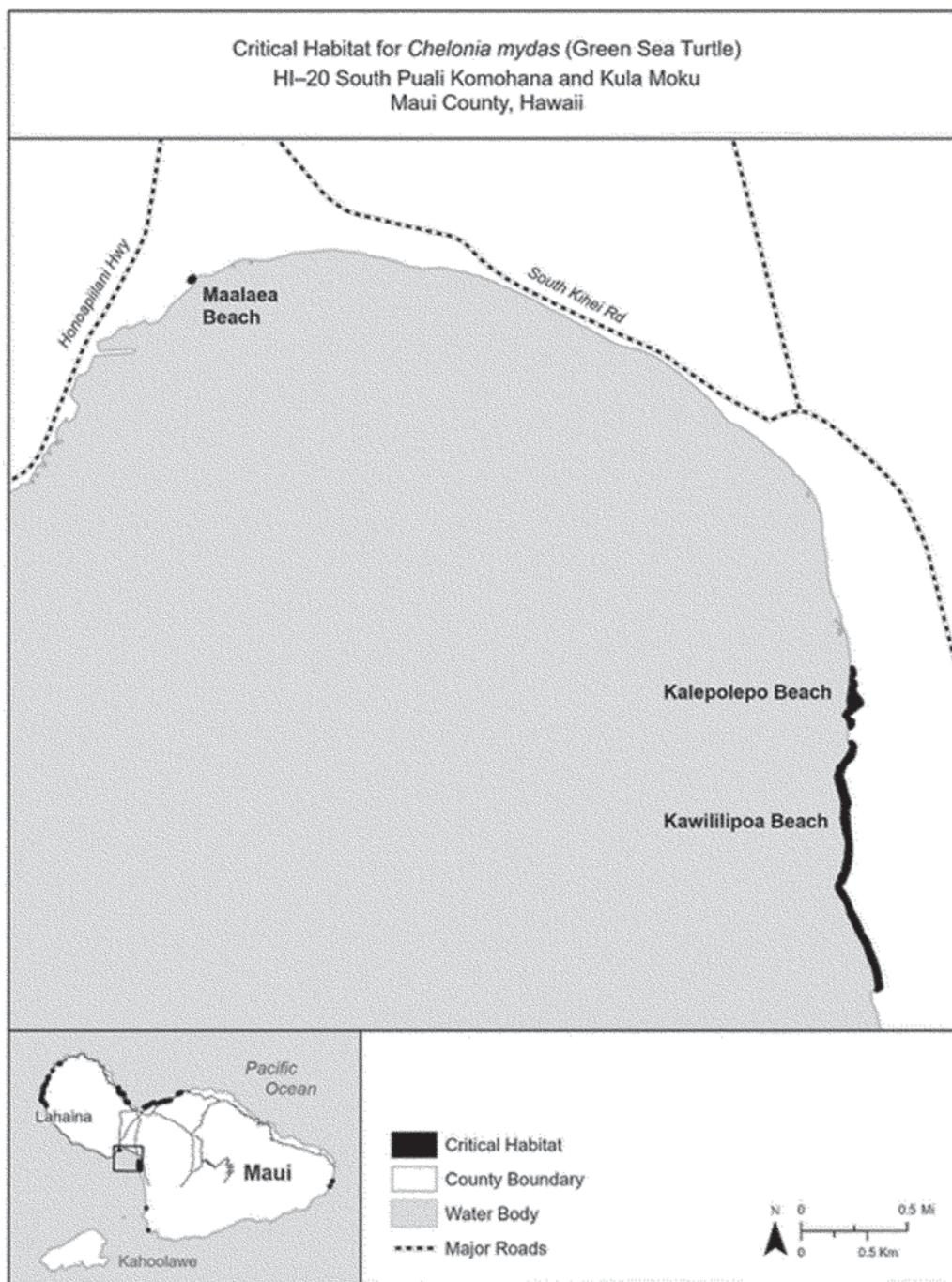
lands from the MHWL to the line indicating the beginning of dense vegetation, cliff, or hardened or developed structures. This unit comprises three segments, one each on Maalaea Beach, Kalepolepo Beach, and Kawililipoa Beach. Lands within this unit include approximately less than 1 ac (less than 1 ha) in Federal ownership, less than 1 ac (less than 1 ha) in State

ownership, 4 ac (2 ha) in local government ownership, less than 1 ac (less than 1 ha) in private/other ownership, and 12 ac (5 ha) that are uncategorized.

(ii) Map of Unit HI-20 follows:

Figure 30 to Green Sea Turtle (*Chelonia mydas*), Central North Pacific DPS paragraph (25)(ii)





(26) Unit HI-21: Hana Moku, Maui County, Hawaii.

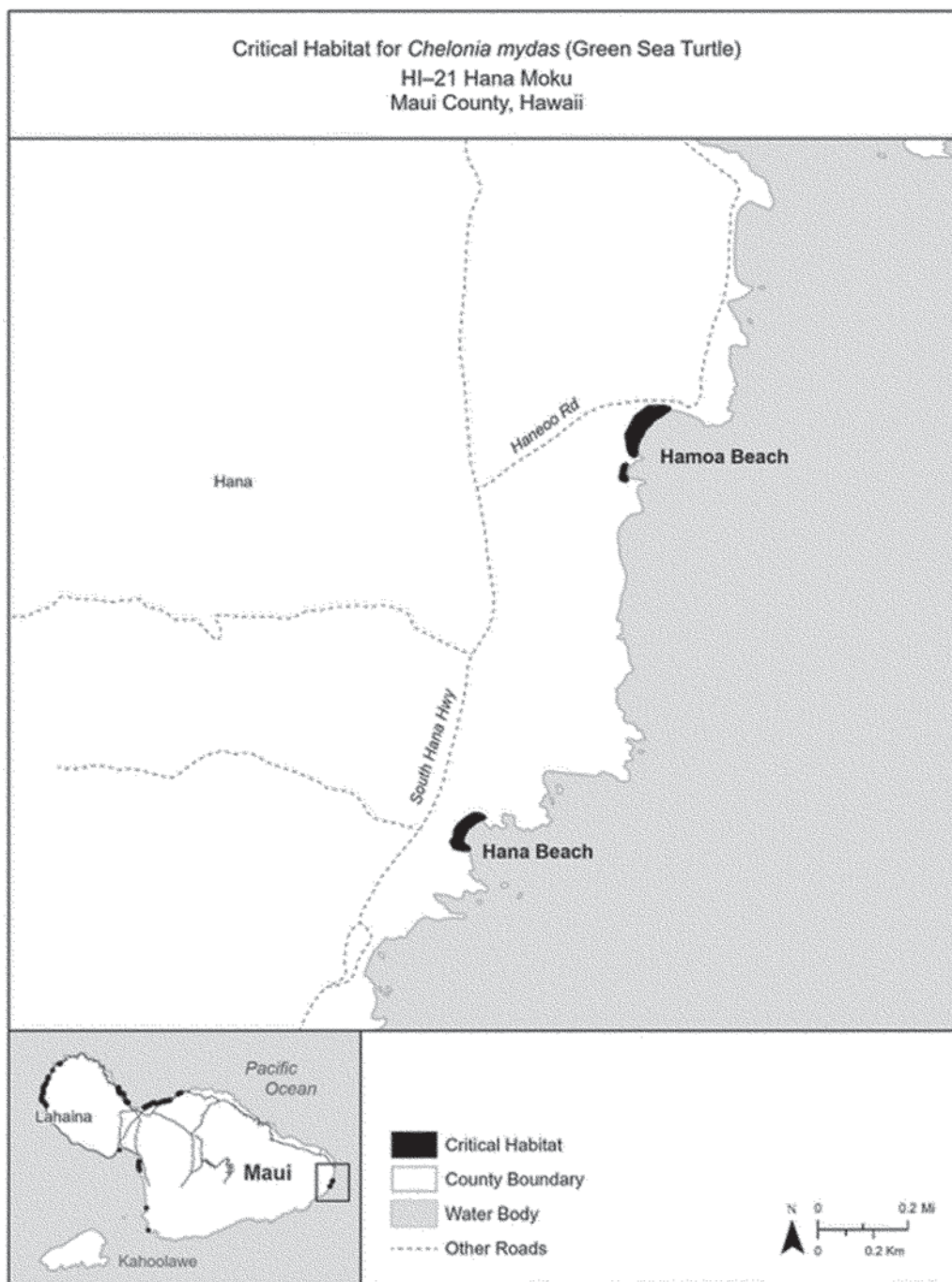
(i) Unit HI-21 consists of 3 ac (1 ha) in the small rural community of Hana on the island of Maui. This unit is located approximately 46 mi (74 km) southeast of the town of Lahaina, and includes beach, sandy shoals, coastal

vegetation, emergent sandy lands, and low shelving reef or rock above the MHWL to the line indicating the beginning of dense vegetation or cliff. This unit comprises three segments, two on Hamoa Beach and one on Hana Beach. Lands within this unit include approximately 2 ac (1 ha) in private

ownership and 1 ac (less than 1 ha) that is uncategorized.

(ii) Map of Unit HI-21 follows:

Figure 31 to Green Sea Turtle (*Chelonia mydas*), Central North Pacific DPS paragraph (26)(ii)



(27) Unit HI-22: Honuaula Moku, Maui County, Hawaii.

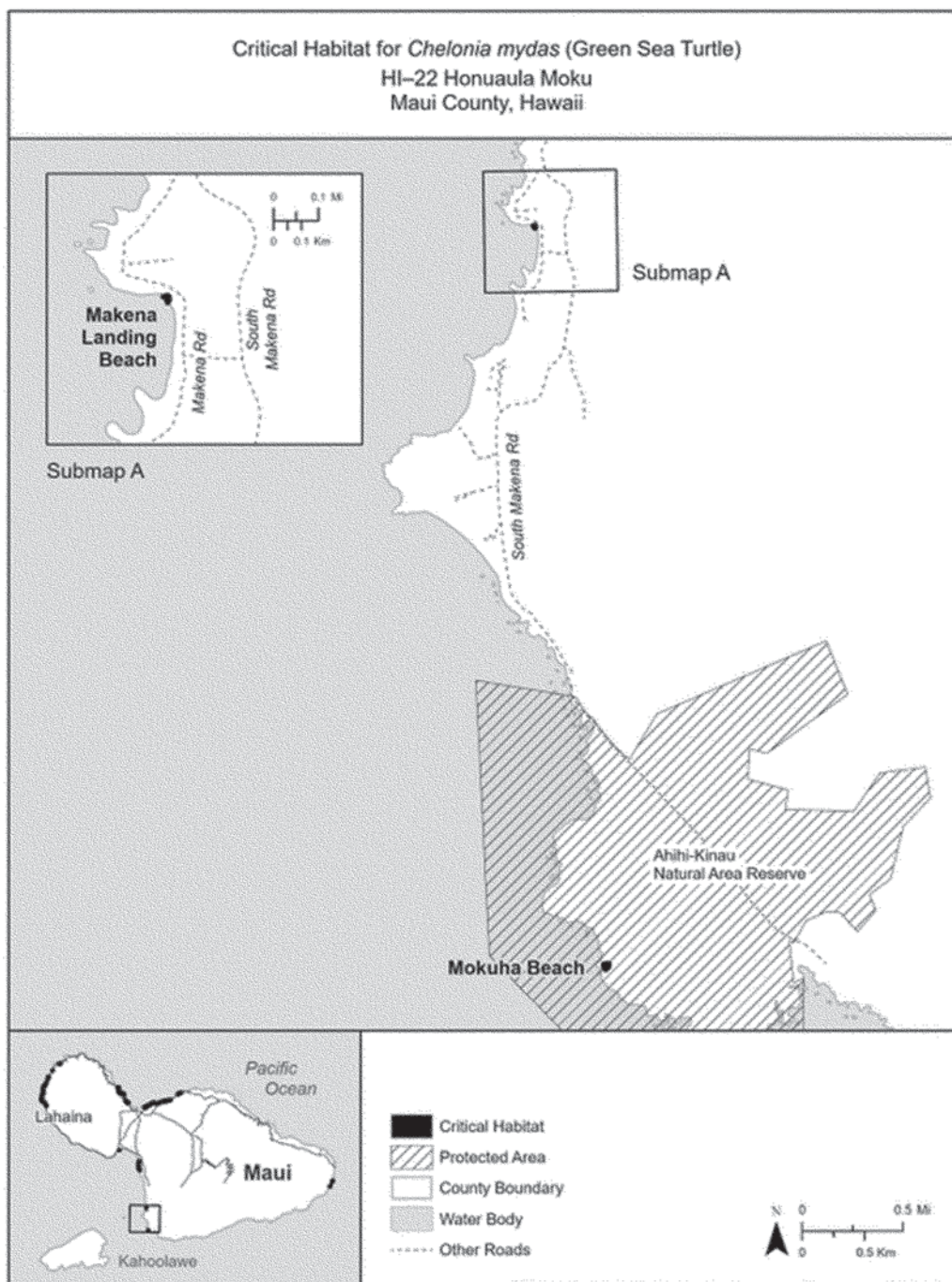
(i) Unit HI-22 consists of less than 1 ac (less than 1 ha) along the south coast of the island of Maui. This unit is located approximately 22 to 25 mi (35 to 40 km) southeast of the town of Lahaina, and includes beach, emergent

sandy lands, and low shelving reef or rock from the MHWL to the line indicating the beginning of dense vegetation, a lava rock, or hardened or developed structures. This unit comprises two segments at Makena Landing Beach and Mokuha Beach. Lands within this unit include

approximately less than 1 ac (less than 1 ha) in State ownership and less than 1 ac (less than 1 ha) in private ownership.

(ii) Map of Unit HI-22 follows: Figure 32 to Green Sea Turtle (*Chelonia mydas*), Central North Pacific DPS paragraph (27)(ii)





(28) Unit HI-23: Lanai Island, Maui County, Hawaii.

(i) Unit HI-23 consists of 161 ac (65 ha) along the north and northeast coast of Lanai on the island of Maui. This unit is located approximately 6 to 10 mi (10 to 16 km) northwest to northeast of Lanai City and

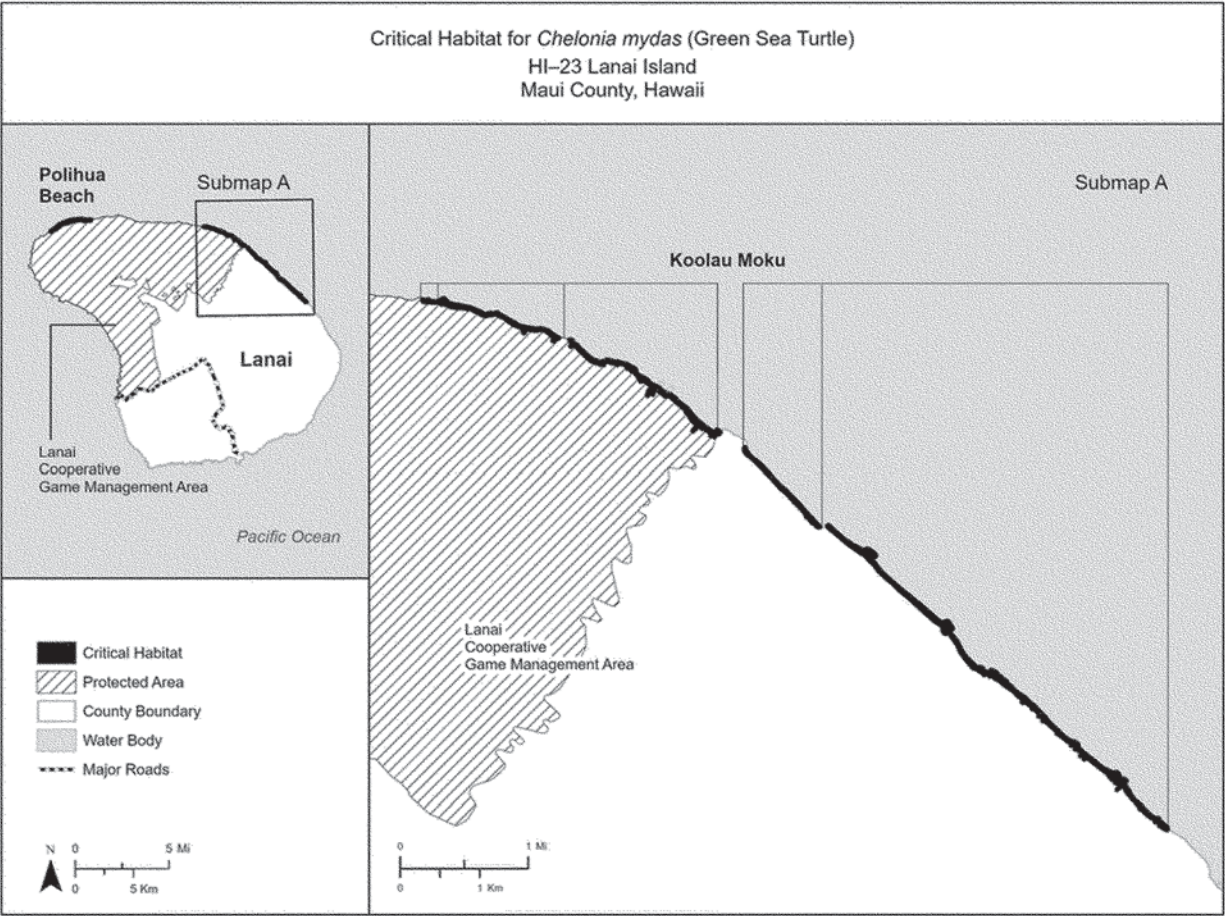
includes beach, sandy shoals, coastal vegetation, and emergent sandy lands from the MHWL to the line indicating the beginning of dense vegetation. This unit comprises six segments in two areas: one segment at Polihua Beach and five segments in Koolau Moku. Lands within this unit include approximately

145 ac (59 ha) in private ownership and 17 ac (7 ha) that are uncategorized.

(ii) Map of Unit HI-23 follows:

Figure 33 to Green Sea Turtle (*Chelonia mydas*), Central North Pacific DPS paragraph (28)(ii)

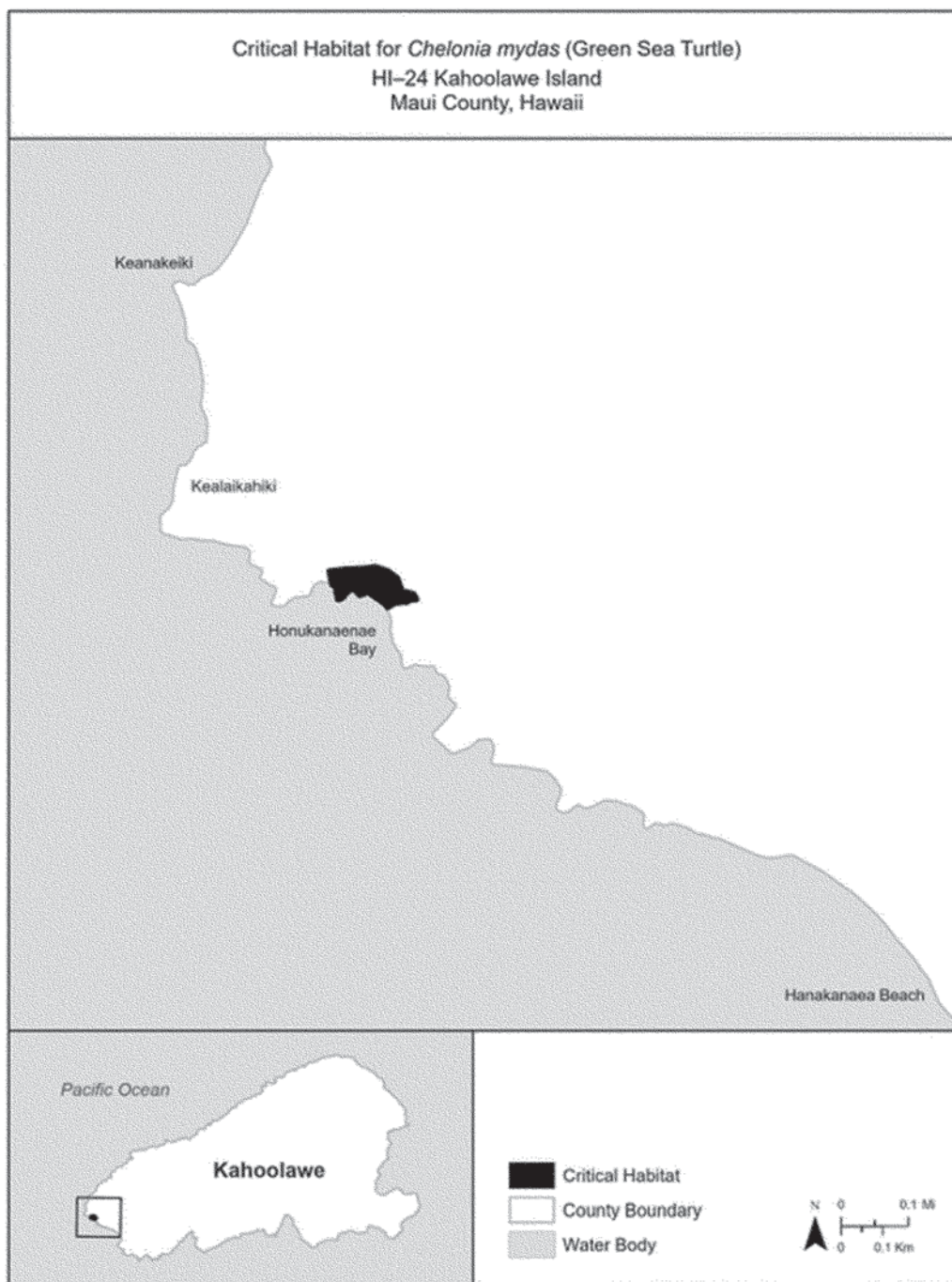




(29) Unit HI-24: Kahoolawe Island, Maui County, Hawaii.  
(i) Unit HI-24 consists of 3 ac (1 ha) along the west coast of the island of Kahoolawe. This unit is located approximately 25 mi (41 km) southeast

of Lanai City and includes beach and coastal vegetation from the MHWL to the line indicating the beginning of dense vegetation. All lands within this unit are in State ownership.  
(ii) Map of Unit HI-24 follows:

Figure 34 to Green Sea Turtle (*Chelonia mydas*), Central North Pacific DPS paragraph (29)(ii)



(30) Unit HI-25: South Kohala, Hawaii County, Hawaii.

(i) Unit HI-25 consists of 33 ac (13 ha) in the community of Puako on the island of Hawaii. This unit is located approximately 52 to 55 mi (83 to 88 km) northwest of the town of Hilo, and includes beach, sandy shoals, coastal vegetation, emergent sandy lands, and low shelving reef or rock from the

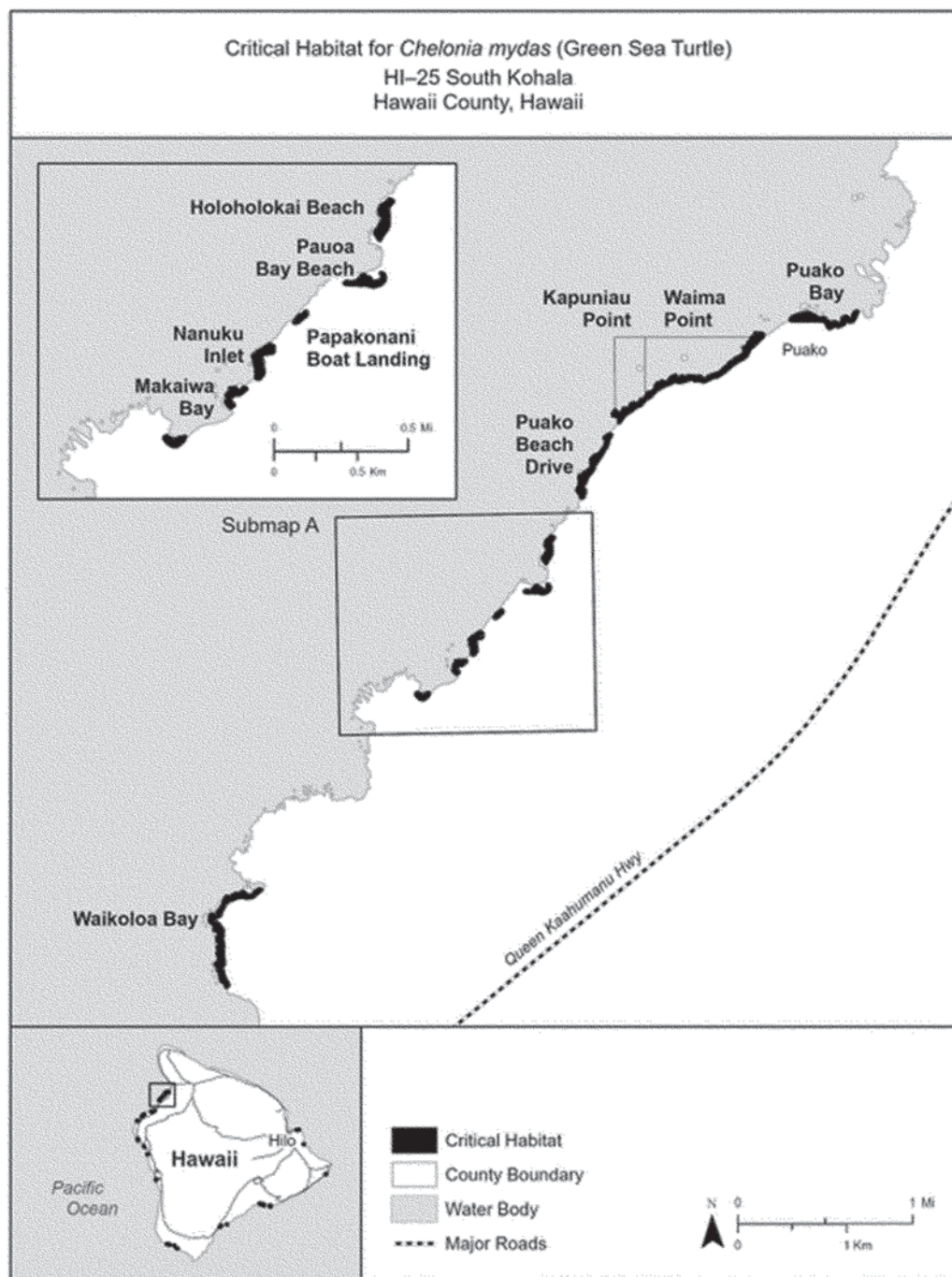
MHWL to the line indicating the beginning of dense vegetation or hardened or developed structures. This unit comprises 11 segments in 3 areas: 1 segment each on Puako Bay, Waima Point, Kapunia Point, Puako Beach Drive, Holoholokai Beach, Pauoa Bay Beach, Papakonani Boat Landing, and Nanuku Cove; 2 segments along Makaiwa Bay; and 1 segment along

Waikoloa Bay. Lands within this unit include approximately 18 ac (7 ha) in State ownership, 9 ac (3 ha) in private ownership, and 7 ac (3 ha) that are uncategorized.

(ii) Map of Unit HI-25 follows:

Figure 35 to Green Sea Turtle (*Chelonia mydas*), Central North Pacific DPS paragraph (30)(ii)





(31) Unit HI-26: Kona Moku on Hawaii Island, Hawaii County, Hawaii.

(i) Unit HI-26 consists of 50 ac (20 ha) in the communities of Kukio and Kailua-Kona on the island of Hawaii. This unit is located approximately 55 to 58 mi (89 to 93 km) west of the town of Hilo and includes beach, sandy shoals, and emergent sandy lands, and low shelving reef or rock from the MHWL to the line indicating the beginning of dense vegetation, lava

flow, cliff, or hardened or developed structures. This unit comprises 15 segments in 4 areas: (1) 5 segments along Kiholo Beach; 1 segment each along Kaupulehu Beach, Kaupulehu Coast, Kukio Bay, and Kikaua Beach; 1 segment each along Kaloko Point and Honokohau Bay, Waiaha Bay, and Kahaluu Beach (all south of the Kona International Airport); and 3 segments along Honaunau Bay. Lands within this unit include approximately 12 ac (5 ha)

in Federal ownership, 15 ac (6 ha) in State ownership, less than 1 ac (less than 1 ha) in local government ownership, 10 ac (4 ha) in private/other ownership, and 13 ac (5 ha) that are uncategorized.

(ii) Maps of Unit HI-26 follow:

Figure 36 to Green Sea Turtle (*Chelonia mydas*), Central North Pacific DPS paragraph (31)(ii)



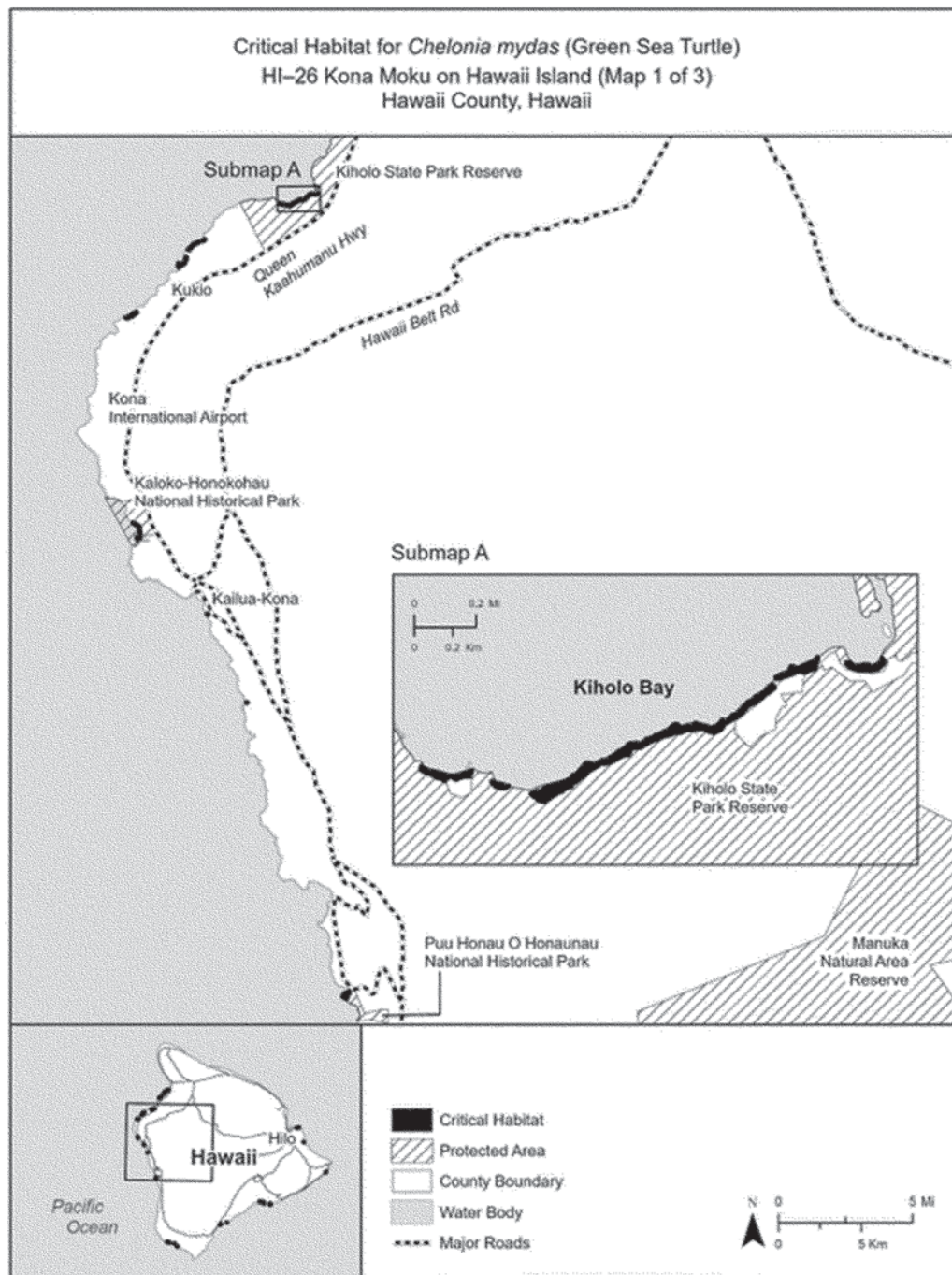


Figure 37 to Green Sea Turtle (*Chelonia mydas*), Central North Pacific DPS paragraph (31)(ii)

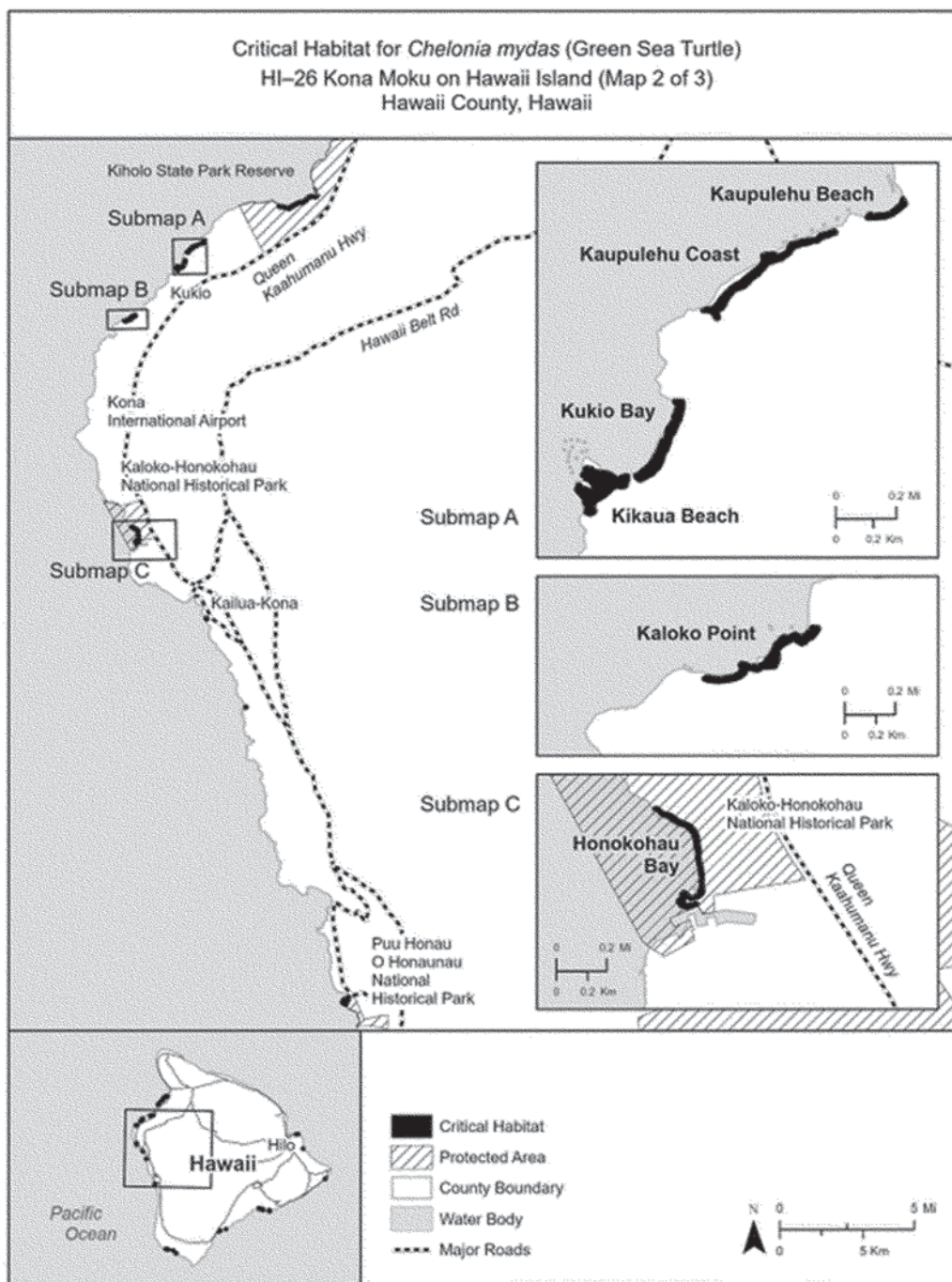
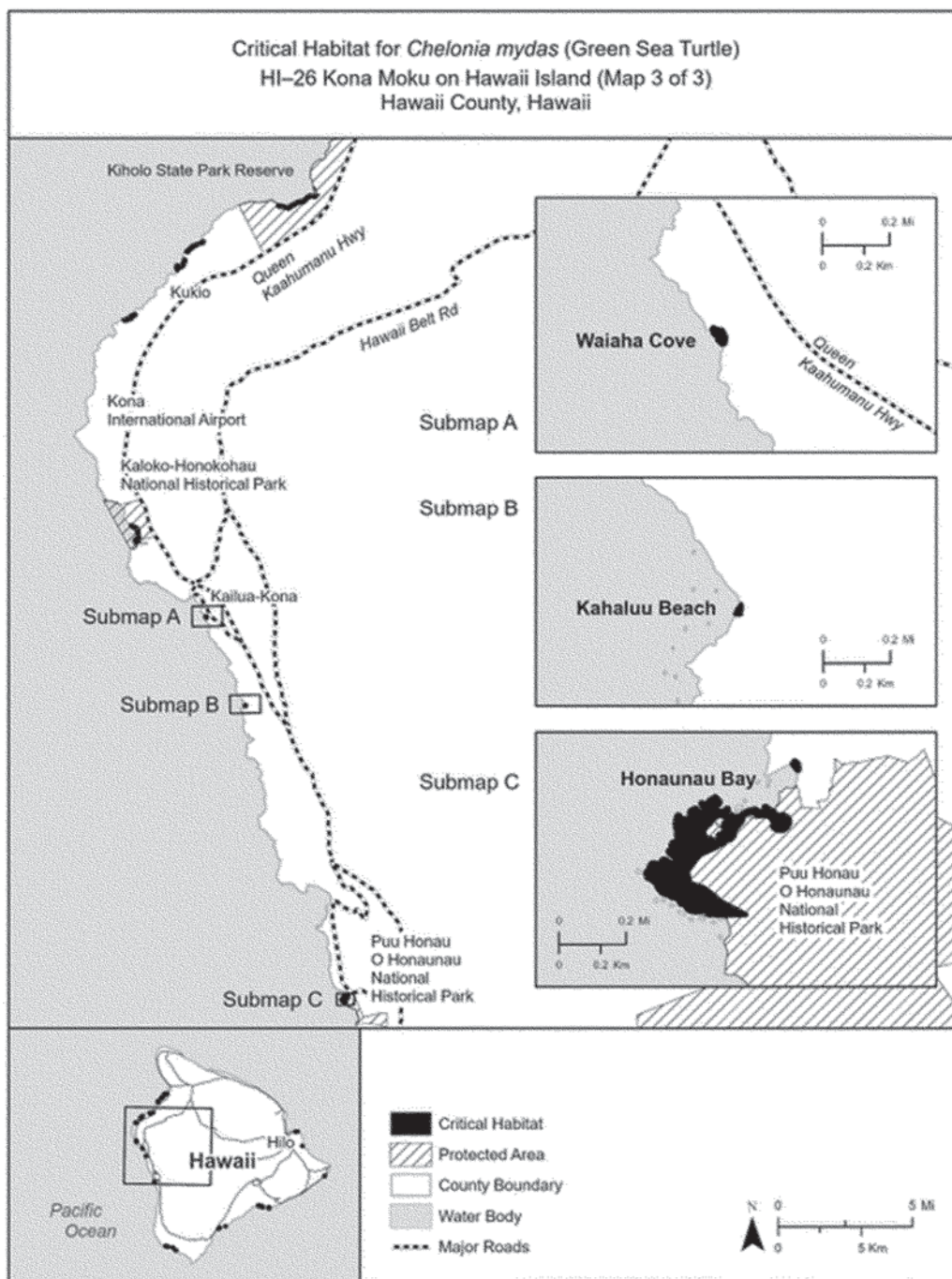


Figure 38 to Green Sea Turtle (*Chelonia mydas*), Central North Pacific DPS paragraph (31)(ii)





(32) Unit HI-27: Hilo Moku, Hawaii County, Hawaii.

(i) Unit HI-27 consists of 2 ac (1 ha) in the town of Hilo on the island of Hawaii. This unit is located approximately 4 to 5 mi (6 to 8 km) northeast of the Hilo International Airport and includes beach, emergent

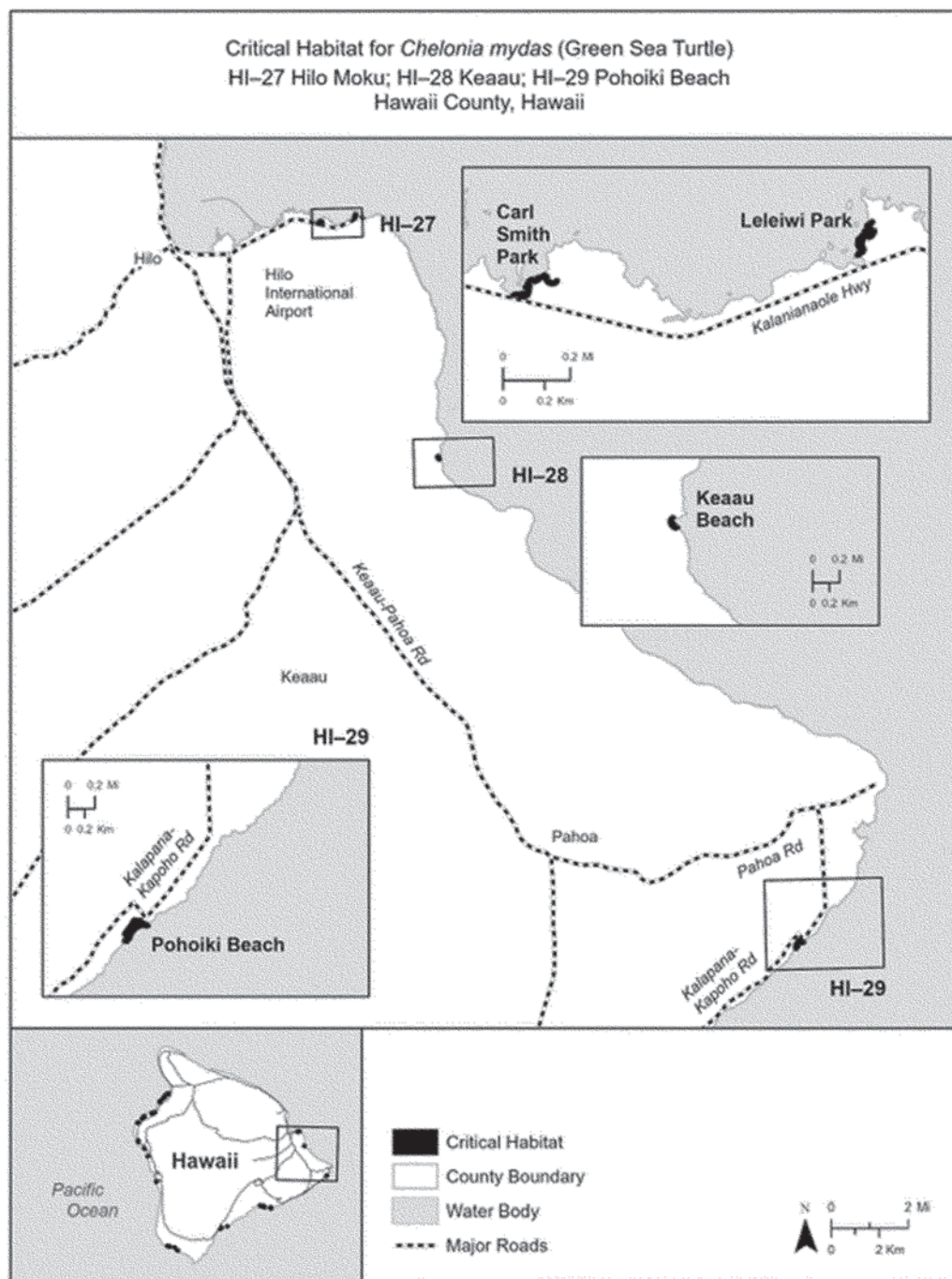
sandy lands, and low shelving reef or rock from the MHWL to the line indicating the beginning of dense vegetation, cliff, or lava flow. This unit comprises two segments at Carl Smith Park and Leleiwi Park. Lands within this unit include approximately 1 ac (less than 1 ha) in State ownership, less

than 1 ac (less than 1 ha) in local government ownership, and 1 ac (less than 1 ha) that is uncategorized.

(ii) Map of Unit HI-27, HI-28, and HI-29 follows:

Figure 39 to Green Sea Turtle (*Chelonia mydas*), Central North Pacific DPS paragraph (32)(ii)



**BILLING CODE 4333-15-C**

(33) Unit HI-28: Keaau, Hawaii County, Hawaii.

(i) Unit HI-28 consists of 1 ac (less than 1 ha) in the community of Keaau on the island of Hawaii. This unit is located approximately 9 mi (14 km) southeast of the town of Hilo and includes beach, emergent sandy lands, and low shelving reef or rock from the MHWL to the line indicating the beginning of dense vegetation. Lands within this unit include approximately less than 1 ac (less than 1 ha) in private

ownership and less than 1 ac (less than 1 ha) that is uncategorized.

(ii) Map of Unit HI-28 is provided at paragraph (32)(ii) of this entry.

(34) Unit HI-29: Pohoiki Beach, Hawaii County, Hawaii.

(i) Unit HI-29 consists of 9 ac (4 ha) in the community of Pahoehoe on the island of Hawaii. This unit is located approximately 24 mi (39 km) southeast of the town of Hilo and includes beach, sandy shoals, emergent sandy lands, and low shelving reef or rock from the MHWL to the line indicating the beginning of dense vegetation or lava

flow. Lands within this unit include approximately less than 1 ac (less than 1 ha) in State ownership, 4 ac (1 ha) in local government ownership, less than 1 ac (less than 1 ha) in private/other ownership, and 6 ac (2 ha) that are uncategorized.

(ii) Map of Unit HI-29 is provided at paragraph (32)(ii) of this entry.

(35) Unit HI-30: Keauhou, Hawaii County, Hawaii.

(i) Unit HI-30 consists of 16 ac (7 ha) in the community of Volcano on the island of Hawaii. This unit is located approximately 33 mi (53 km) southwest

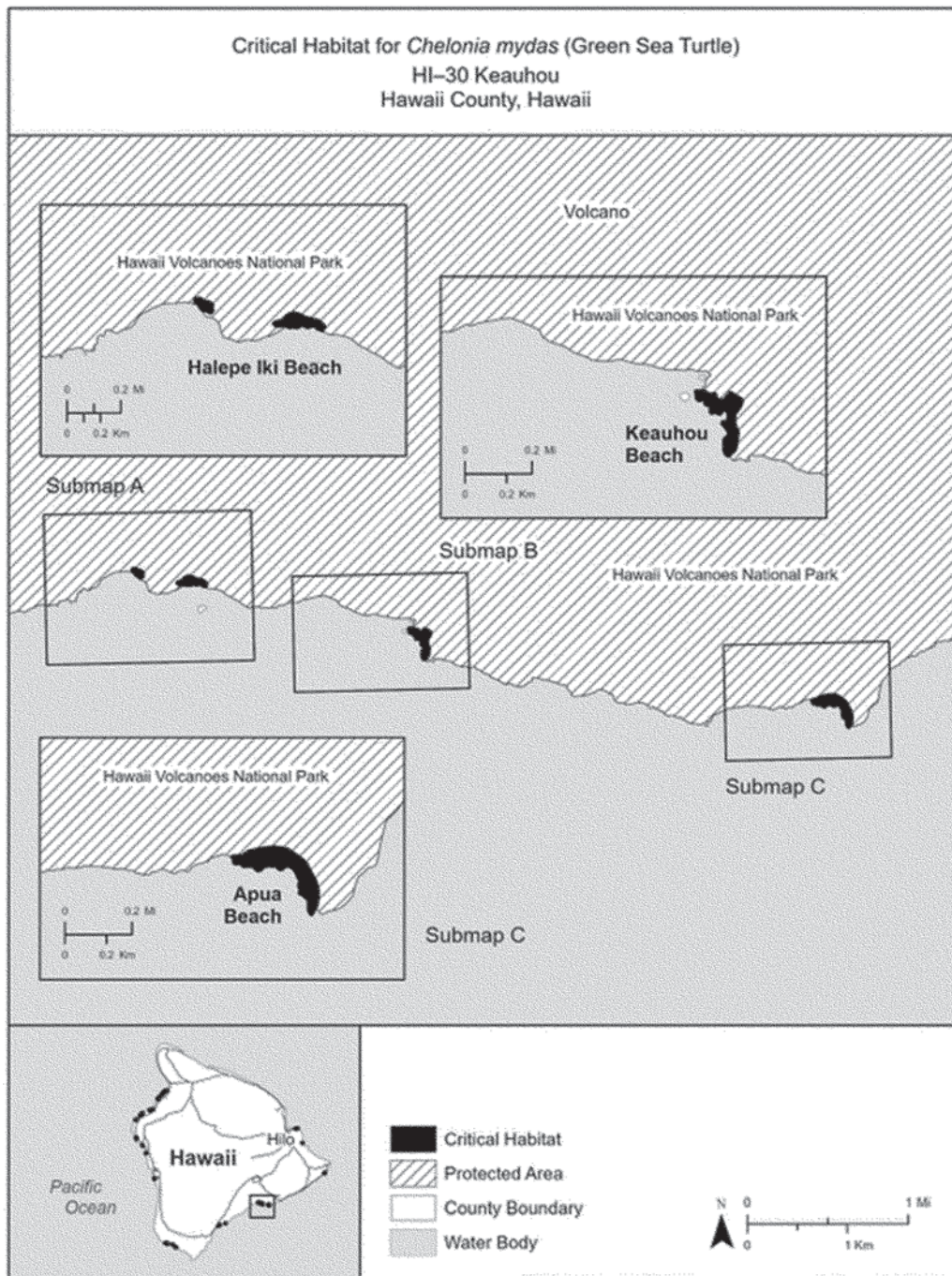
of the town of Hilo and includes black sand beach, sandy shoals, emergent sandy lands, and low shelving reef or rock from the MHWL to the line indicating the beginning of dense vegetation or lava flow. This unit comprises four segments in two areas:

two segments along Halape Iki Beach and one segment each along Keauhou Point and Apua Point. Lands within this unit include approximately 9 ac (4 ha) in Federal ownership and 7 ac (3 ha) that are uncategorized.

(ii) Map of Unit HI-30 follows:

BILLING CODE 4333-15-P

Figure 40 to Green Sea Turtle (*Chelonia mydas*), Central North Pacific DPS paragraph (35)(ii)



(36) Unit HI-31: Kau Moku, Hawaii County, Hawaii.

(i) Unit HI-31 consists of 17 ac (7 ha) along the southeast and southern coast of the island of Hawaii. This unit is located approximately 47 to 69 mi (75

to 111 km) southwest of the town of Hilo and includes black sand beach, sandy shoals, coastal vegetation, emergent sandy lands, and low shelving reef or rock from the MHWL to the line indicating the beginning of dense

vegetation, cliff, or lava flow. This unit comprises 10 segments in 4 areas: 1 segment along the southwest coast of Hawaii Island on Awili Shoreline; 2 segments along Humuhumu Point; 1 segment each on Pohue Beach and



Kahakahakea Beach; and 1 segment each along the southeast shore coast of Hawaii Island on Kamehame Beach, Punaluu Beach, Puu Moa Point, Kapukini Shoreline, and Ninole Cove. Lands within this unit include

approximately 5 ac (2 ha) in Federal ownership, 3 ac (1 ha) in State ownership, 4 ac (2 ha) in local government ownership, 4 ac (1 ha) in private/other ownership, and 2 ac (1 ha) that are uncategorized.

(ii) Maps of Unit HI-31 follow:  
Figure 41 to Green Sea Turtle (*Chelonia mydas*), Central North Pacific DPS paragraph (36)(ii)

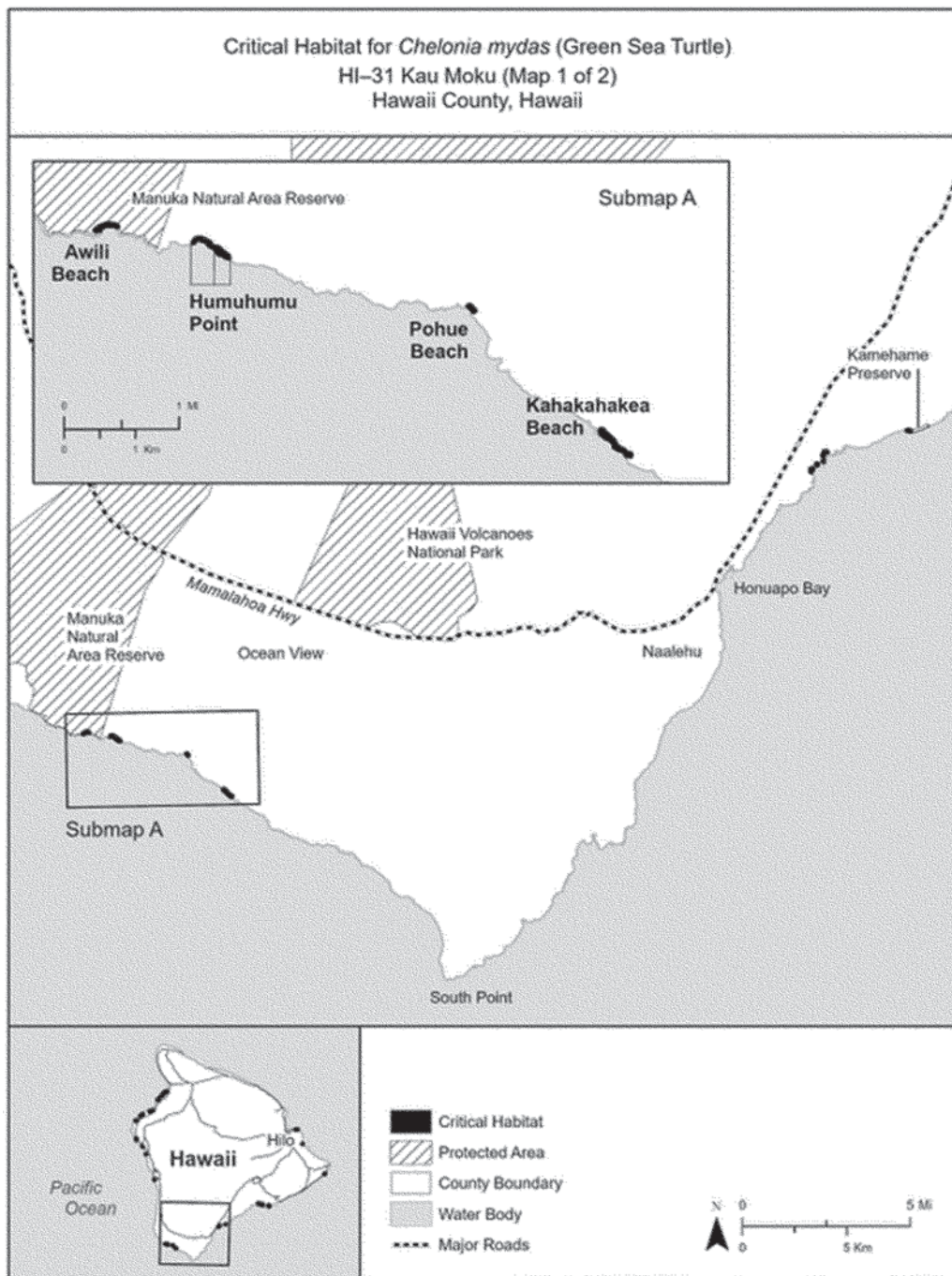
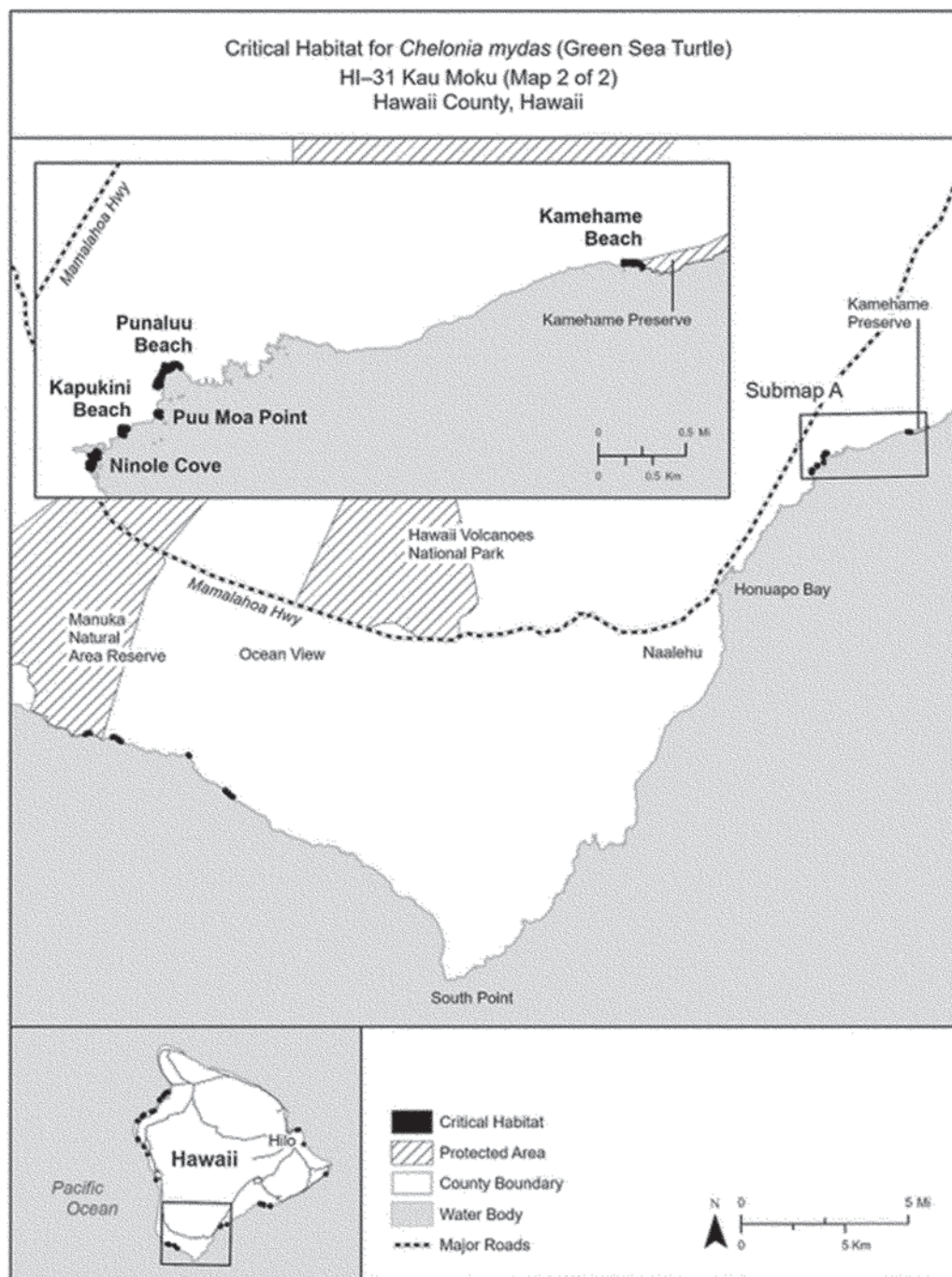


Figure 42 to Green Sea Turtle (*Chelonia mydas*), Central North Pacific DPS paragraph (36)(ii)



**BILLING CODE 4333-15-C****Green Sea Turtle (*Chelonia mydas*),  
Central South Pacific DPS**

(1) Within the Central South Pacific distinct population segment (DPS) of the green sea turtle, critical habitat units are depicted for the U.S. Territories of Palmyra Atoll and American Samoa on the maps in this entry.

(2) Within these areas, the physical or biological features essential to the conservation of green sea turtle consist of the following components:

(i) Extra-tidal or dry sandy beaches from the mean high water line—the line on a chart or map that represents the intersection of the land with the water surface at the elevation of mean high water line—to areas of beach landward of the mean high water line and which contain the characteristics set forth in paragraphs (2)(i) through (iii) of this entry. These beaches include:

(A) Habitat for green turtles to transit across beaches and for nest placement that includes:

(1) Relatively unimpeded wet and dry sand or nearshore access areas from the

ocean to the beach for nesting females and from the beach to the ocean for both post-nesting females and hatchlings; and

(2) Drier sand areas located above mean high water in the supralittoral zone to avoid being inundated frequently by high tides.

(B) Sand substrate that:

(1) Allows for suitable nest construction;

(2) Is suitable for facilitating gas diffusion conducive to embryo development;

(3) Can develop and maintain temperatures and a moisture content conducive to embryo development; and

(4) Allows for emergence of hatchlings from eggshells, through sand substrate to the beach surface.

(ii) Nesting beach habitat with sufficient darkness such that nesting turtles are not deterred from emerging onto the beach and hatchlings and post-nesting females can orient to the sea.

(iii) Natural coastal processes or artificially created or maintained habitat mimicking natural conditions. This includes artificial habitat types that mimic natural conditions described in paragraphs (2)(i) and (ii) of this entry for beach access, nest site selection, nest construction, egg deposition and incubation, and hatchling emergence and movement to the sea.

(3) Critical habitat does not include manmade structures (such as buildings, aqueducts, runways, roads and other paved areas, abandoned military structures, and hardened shorelines) and the land on which they are located existing within the legal boundaries on the effective date of the final rule.

(4) Data layers defining map units were created using green sea turtle survey and distribution data provided by multiple local and regional sources as available (*e.g.*, reports, databases, and species expert knowledge) and as maintained by the National Oceanic and Atmospheric Administration's Pacific Fisheries Science Center, universities, and local government. Landforms were primarily delineated based on the most current available aerial maps. The maps in this entry, as modified by any

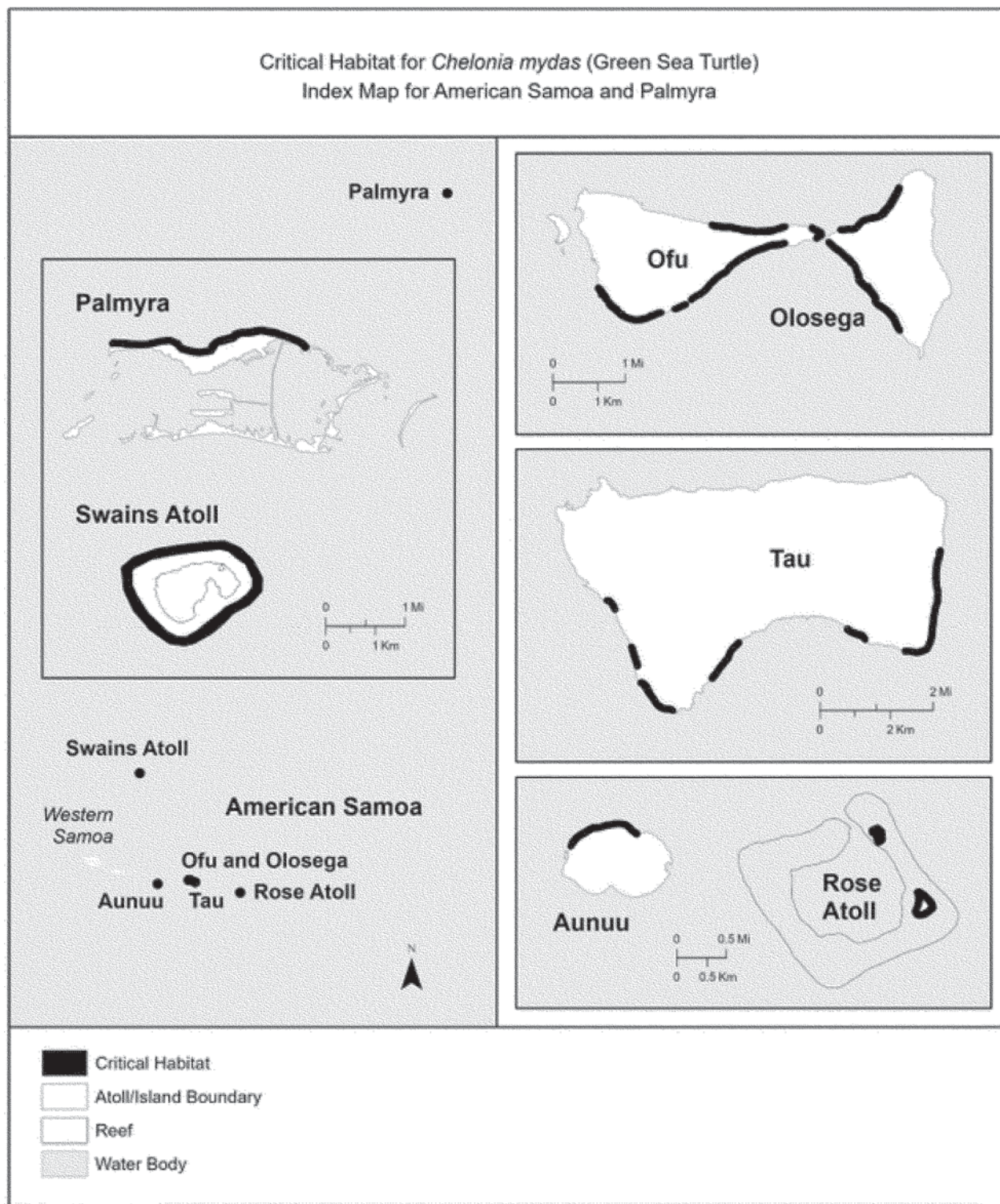
accompanying regulatory text, establish the boundaries of the terrestrial critical habitat designation. The coordinates or plot points or both on which each map is based are available to the public at the USFWS's internet site at <https://www.fws.gov/office/florida-ecological-services/library/green-sea-turtle>, at <https://www.regulations.gov> under Docket No. FWS-R4-ES-2022-0164, and at the two field offices responsible for this designation. You may obtain field office location information by contacting one of the USFWS regional offices, the addresses of which are listed at 50 CFR 2.2.

(5) Index map follows:

**BILLING CODE 4333-15-P**

Figure 1 to Green Sea Turtle (*Chelonia mydas*), Central South Pacific DPS paragraph (5)





(6) Unit AS-01: Palmyra Atoll, Incorporated Unorganized Territory of the United States.

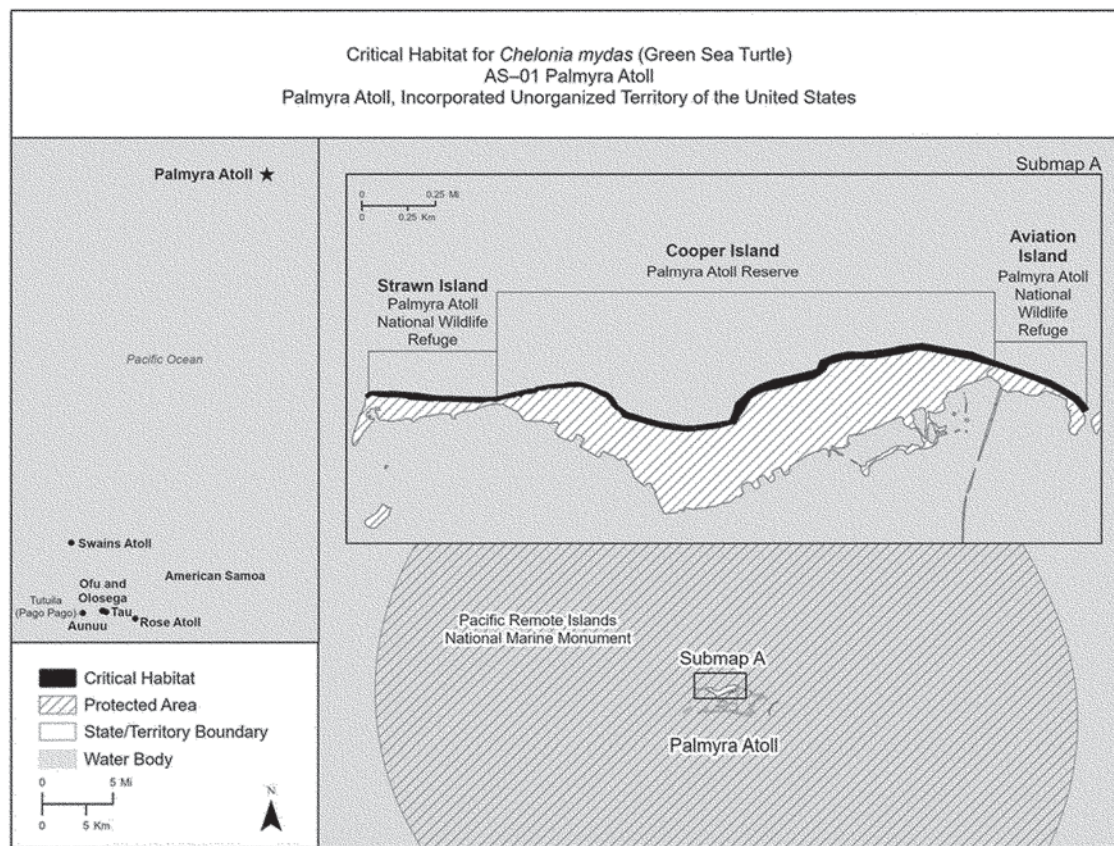
(i) Unit AS-01 consists of 22 acres (ac) (9 hectares (ha)) on Palmyra Atoll, the second northernmost atoll in the Northern Line Islands, which is located approximately 1,512 miles (mi) (2,434 kilometers (km)) north of Pago Pago, the

territorial capital village of American Samoa on Tutuila Island, American Samoa (also known as (a.k.a.) Amerika Samoa). This unit includes beach, coastal vegetation, and sandy shoals from the mean high water line (MHWL) to the line indicating the beginning of dense vegetation or now abandoned structures. This unit comprises three

segments on Strawn, Cooper, and Aviation Islands. Lands within this unit include approximately 7 ac (3 ha) in Federal ownership and 15 ac (6 ha) in private ownership.

(ii) Map of Unit AS-01 follows: Figure 2 to Green Sea Turtle (*Chelonia mydas*), Central South Pacific DPS paragraph (6)(ii)





(7) Unit AS-02: Swains Island, Territory of American Samoa.

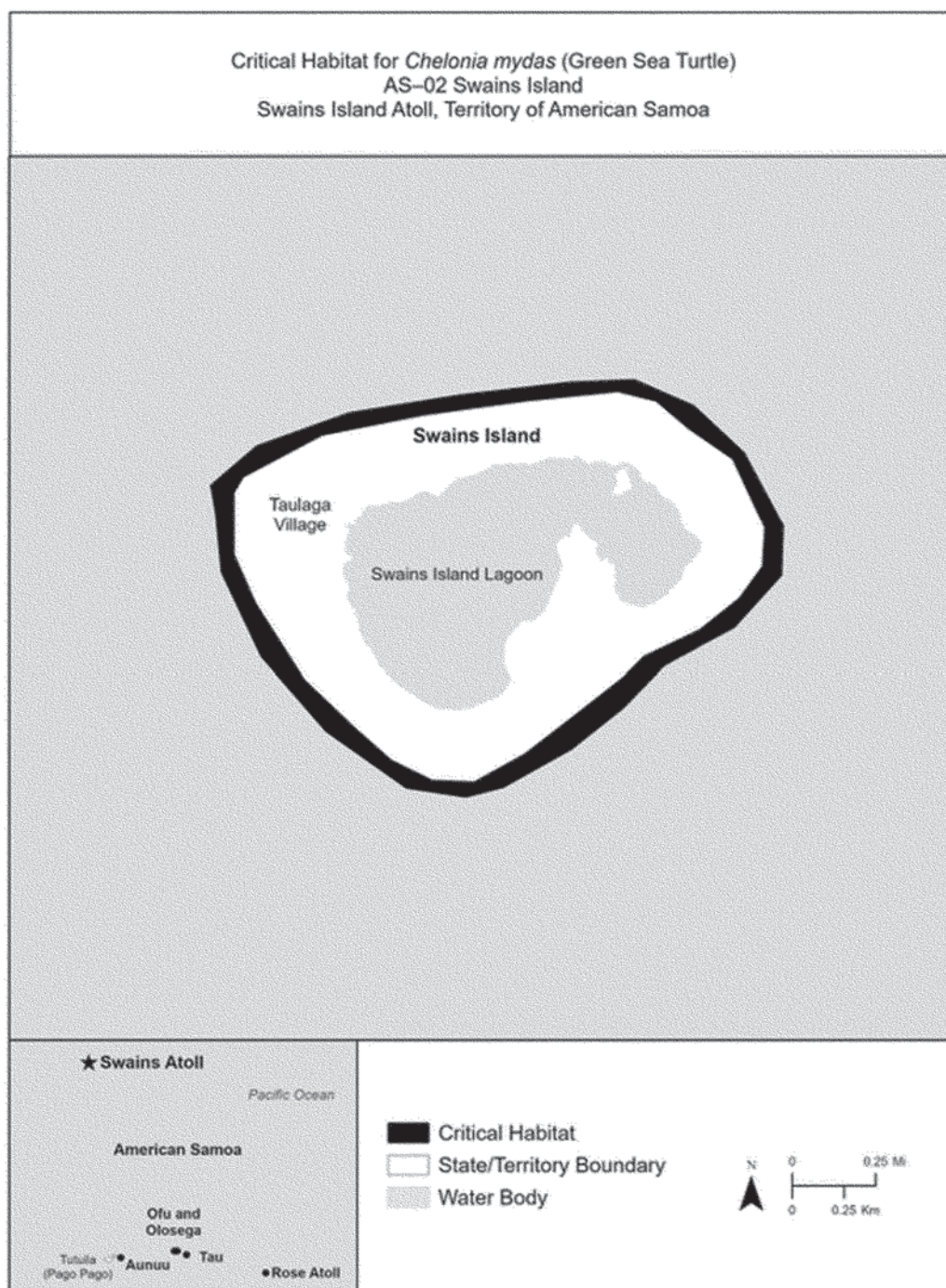
(i) Unit AS-02 consists of 125 ac (50 ha) on Swains Island, Swains Island Atoll, which is located approximately 224 mi (360 km) north of Pago Pago, the

territorial capital village of American Samoa on Tutuila Island. This unit includes beach, coastal vegetation, and sandy shoals from the MHWL to the line indicating the beginning of dense vegetation or hardened or developed

structures. All lands within this unit are uncategorized ownership.

(ii) Map of Unit AS-02 follows: Figure 3 to Green Sea Turtle (*Chelonia mydas*), Central South Pacific DPS paragraph (7)(ii)





(8) Unit AS-03: Ofu and Olosega Islands, Manua Island Group, Territory of American Samoa.

(i) Unit AS-03 consists of 49 ac (20 ha) on Ofu and Olosega Islands, the westernmost islands in the Manua Island Group, which is located approximately 69 to 72 mi (111 to 116 km) slightly northeast of Pago Pago, the territorial capital village of American Samoa on Tutuila Island. This unit includes beach, coastal vegetation, and sandy shoals from the MHWL to the line

indicating the beginning of dense vegetation, cliff, or hardened or developed structures. This unit comprises 12 segments in 9 areas: 2 segments along the northeast coast of Ofu Island at Tuafanua and Mafafa, 2 segments along Asagatai, 3 segments along the southeast coastline of Ofu at Toaga, 1 segment northeast of Ofu Airport at Fatauana, 1 segment surrounding the Ofu Airport at Vaoto, 1 segment northwest of the Ofu Airport at Matasina, 1 segment along the north

coast of Olosega Island within the village of Sili and the settlements of Faiava and Lalomoana, and 1 segment along the south coast of Olosega Island within the village of Olosega. All lands within this unit are uncategorized ownership.

(ii) Maps of Unit AS-03 follow:

Figure 4 to Green Sea Turtle (*Chelonia mydas*), Central South Pacific DPS paragraph (8)(ii)



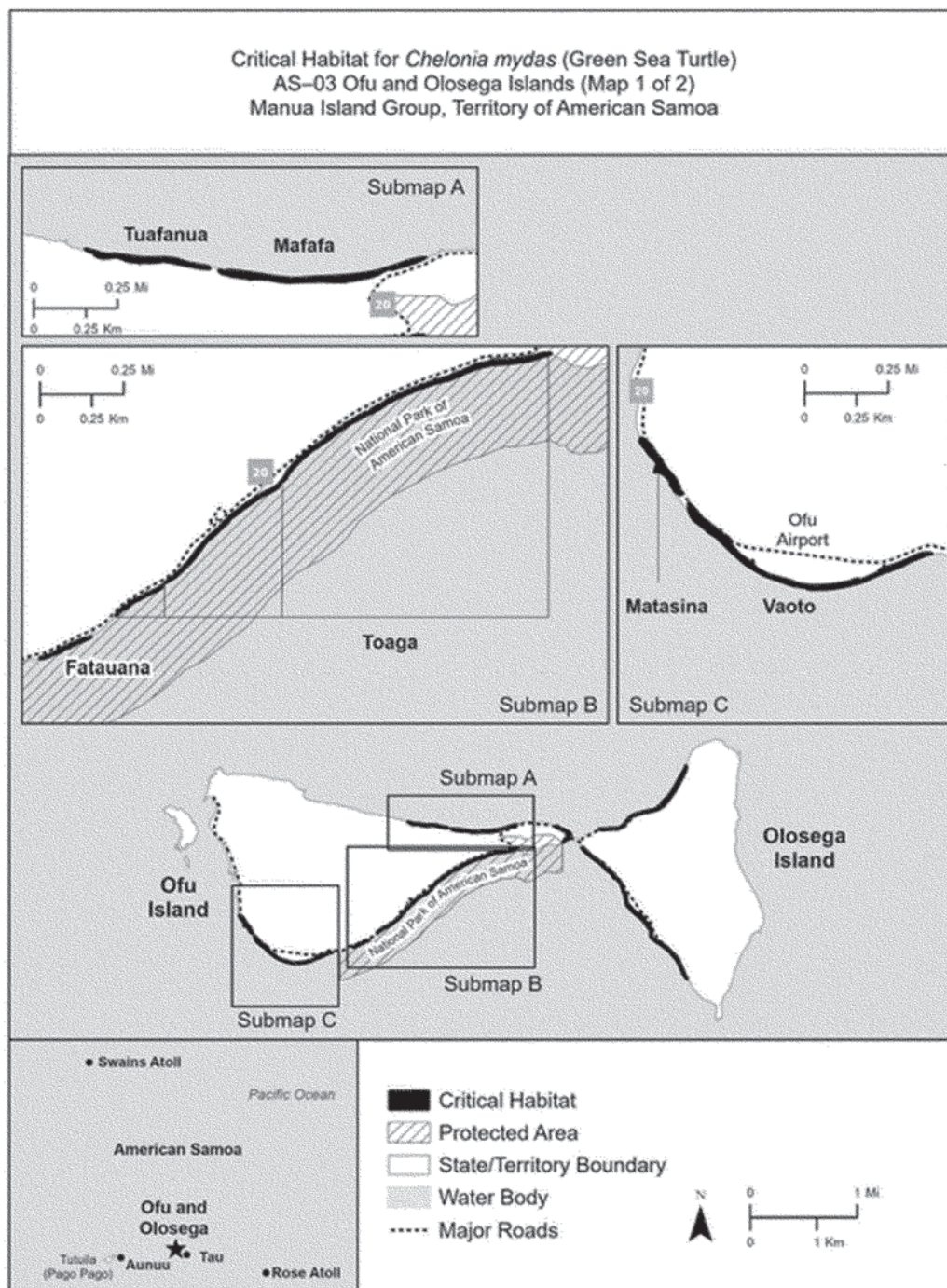
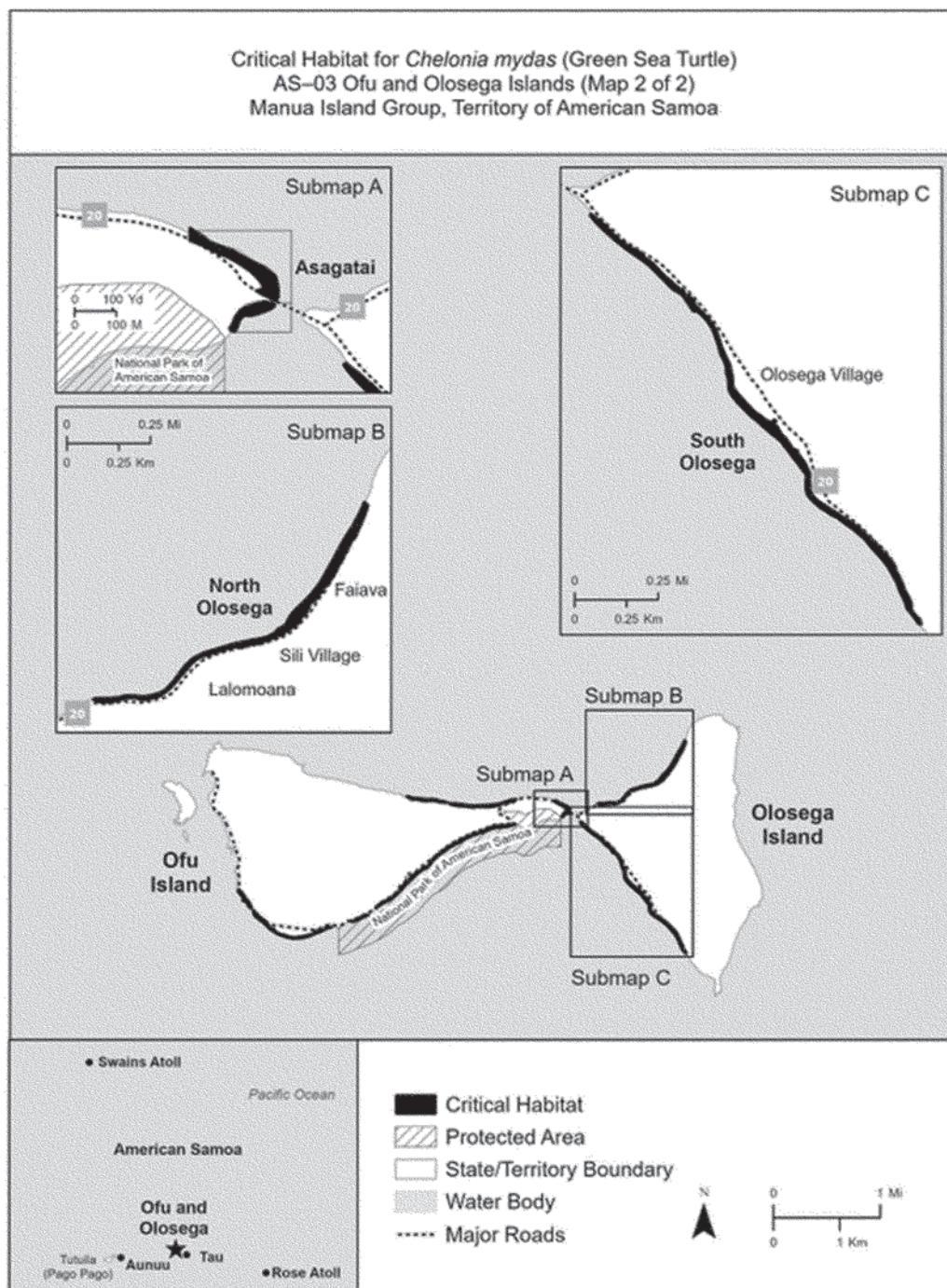


Figure 5 to Green Sea Turtle (*Chelonia mydas*), Central South Pacific DPS paragraph (8)(ii)





(9) Unit AS-04: Tau Island, Manua Island Group, Territory of American Samoa.

(i) Unit AS-04 consists of 34 ac (14 ha) on Tau Island, the easternmost island in the Manua Island Group, which is located approximately 80 to 85 mi (129 to 137 km) east of Pago Pago, the territorial capital village of American Samoa on Tutuila Island. This unit includes beach, coastal vegetation,

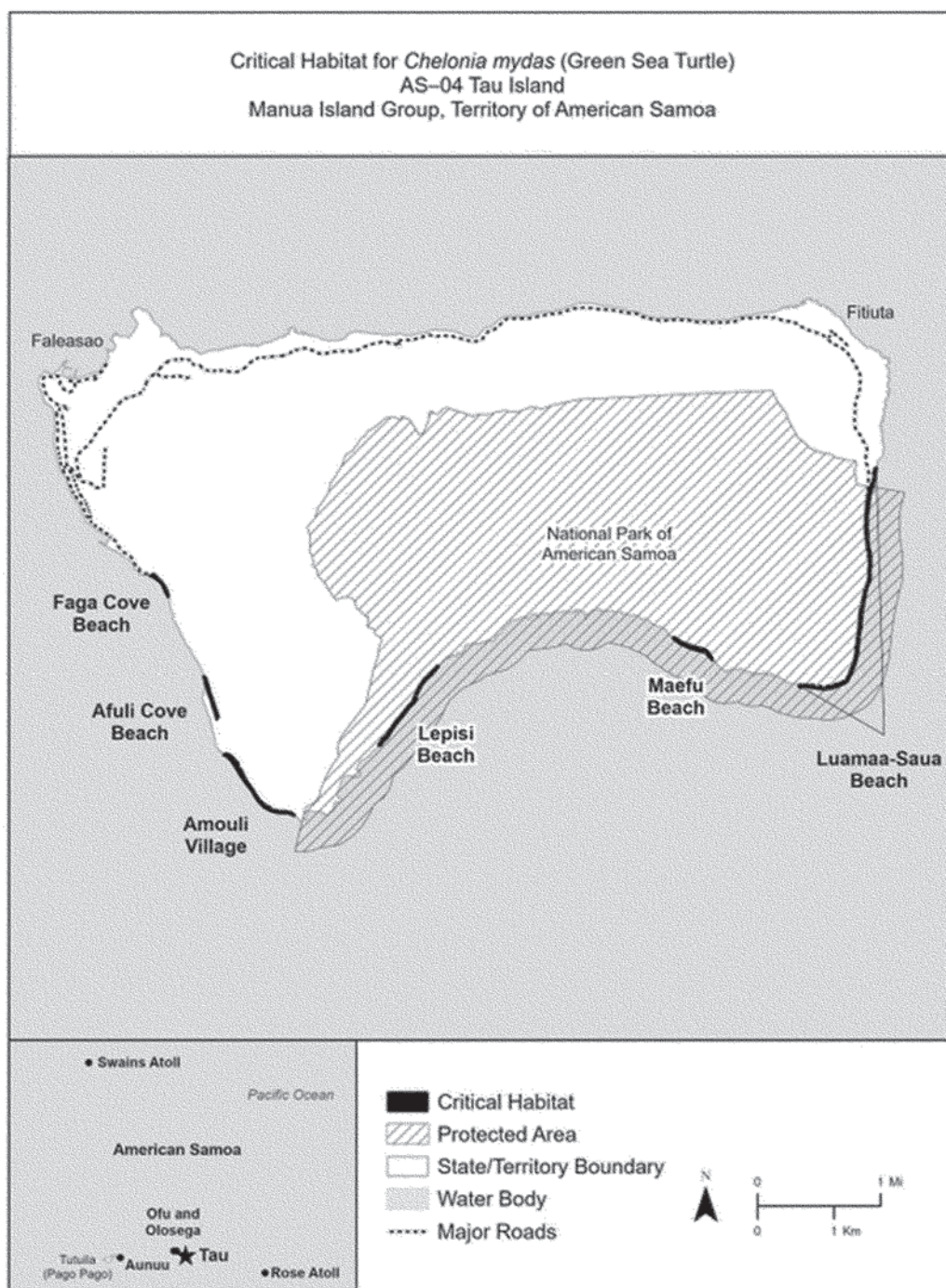
and sandy shoals from the MHWL to the line indicating the beginning of dense vegetation, cliff, or hardened or developed structures. This unit comprises six segments in three areas: one segment along the east coast of Tau Island at Luamaa-Saua Beach (13 ac (5 ha)); one segment each along the south coast at Maefu Beach (4 ac (1 ha)) and Lepisi Beach (6 ac (2 ha)); and three

segments along the western coast of Tau at the old Amouli Village (Amouli Beach) (7 ac (3 ha)), Afuli Cove Beach (3 ac (1 ha)), and Fagamolo Cove Beach (1 ac (less than 1 ha)). All lands within this unit are uncategorized ownership.

(ii) Map of Unit AS-04 follows:

Figure 6 to Green Sea Turtle (*Chelonia mydas*), Central South Pacific DPS paragraph (9)(ii)





(10) Unit AS-05: Aunuu Island, Manua Island Group, Territory of American Samoa.

(i) Unit AS-05 consists of 3 ac (1 ha) on Aunuu Island, which is located approximately 10 mi (15 km) east of Pago Pago, the territorial capital village

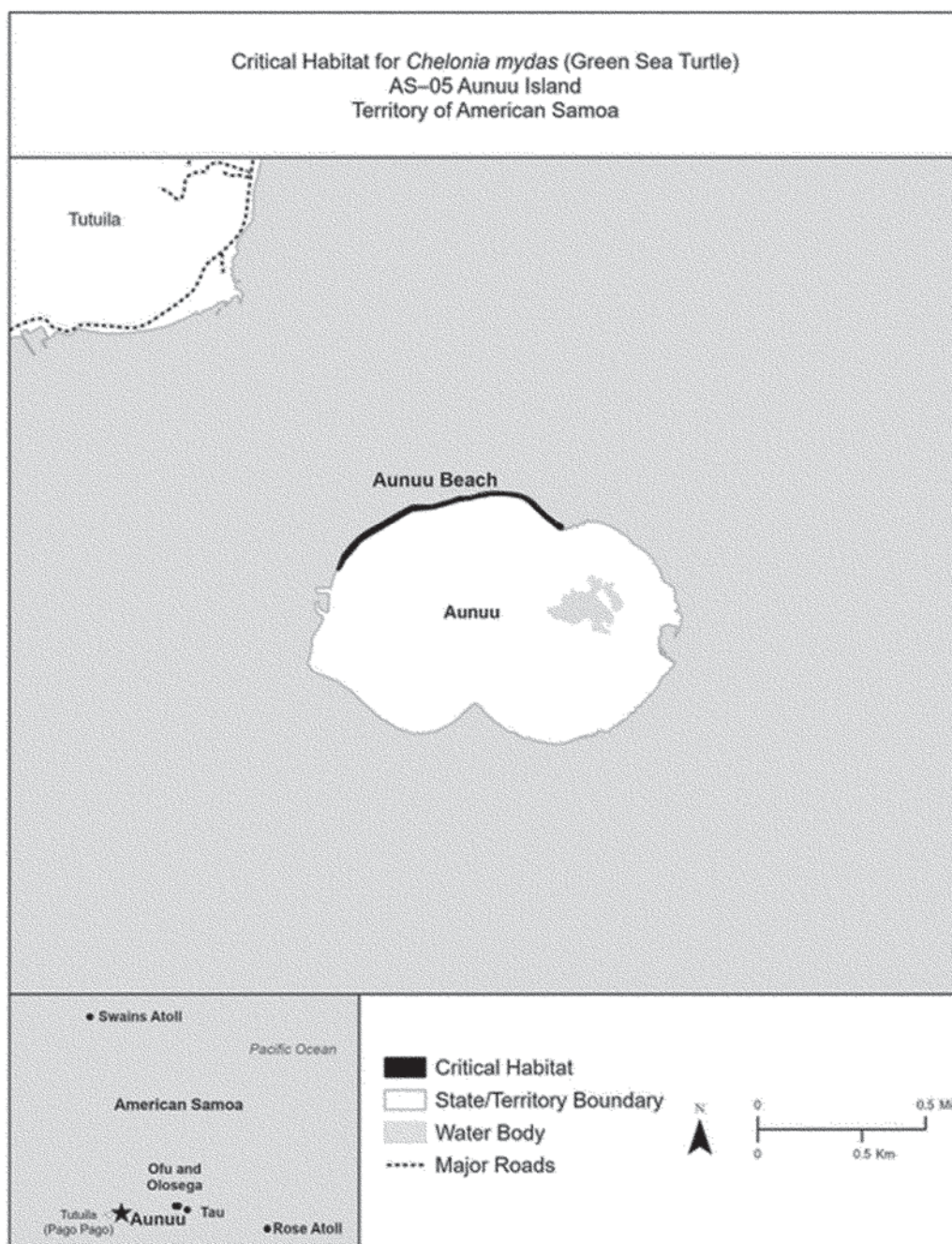
of American Samoa on Tutuila Island. This unit includes beach, coastal vegetation, and sandy shoals from the MHWL to the line indicating the beginning of dense vegetation and hardened or developed structures. All

lands within this unit are uncategorized ownership.

(ii) Map of Unit AS-05 follows:

Figure 7 to Green Sea Turtle (*Chelonia mydas*), Central South Pacific DPS paragraph (10)(ii)





(11) Unit AS-06: Rose Atoll, Territory of American Samoa.

(i) Unit AS-06 consists of 10 ac (4 ha) on Rose Atoll (a.k.a. Motu o Manu), American Samoa, which is located approximately 260 mi (418 km) east of Pago Pago, the territorial capital village

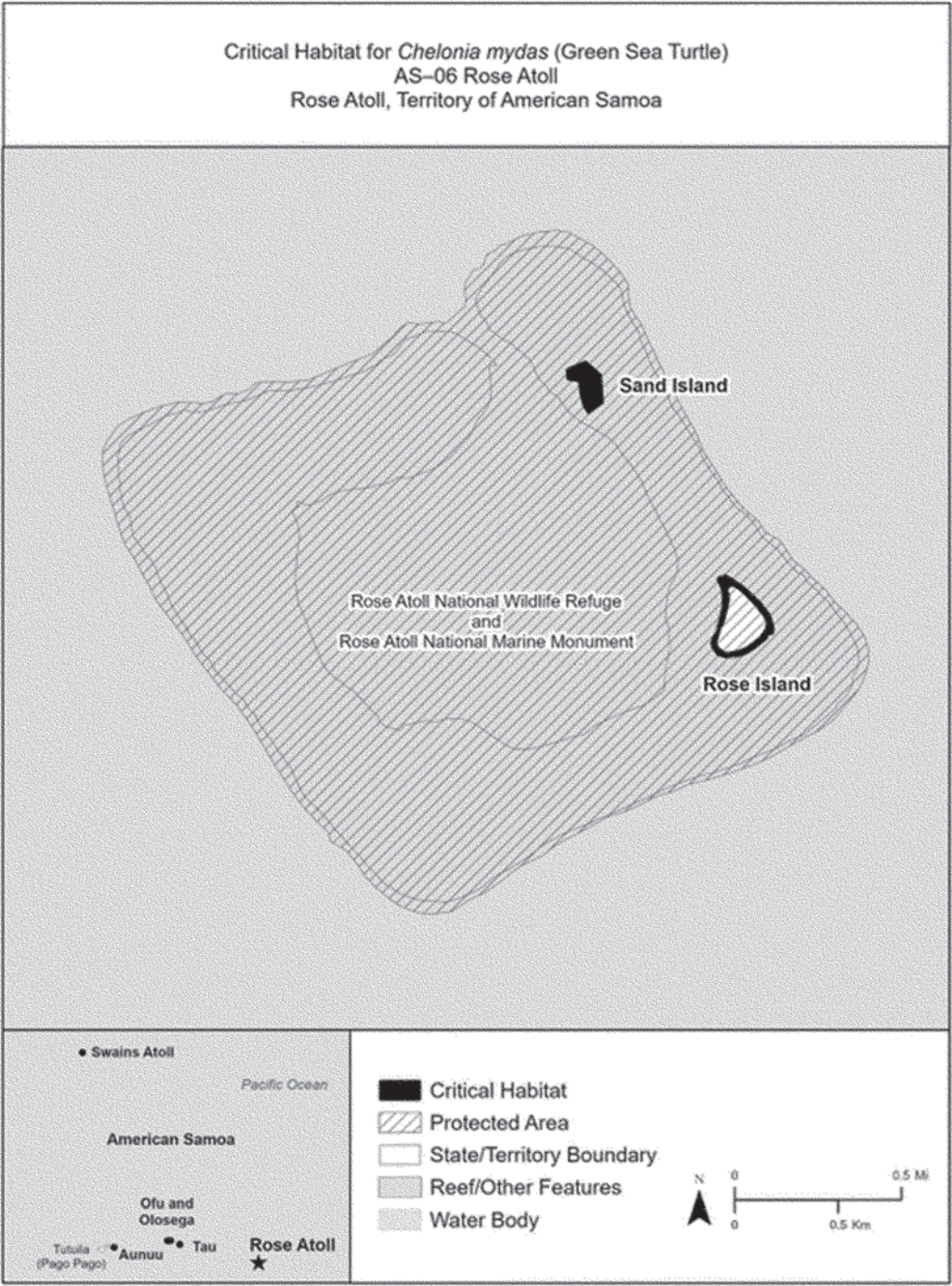
of American Samoa on Tutuila Island. This unit includes beach, coastal vegetation, and sandy shoals from the MHWL to the line indicating the beginning of dense vegetation or hardened or developed structures. This unit comprises two segments on Sand

Island and Rose Island. All lands within this unit are in Federal ownership.

(ii) Map of Unit AS-06 follows:

Figure 8 to Green Sea Turtle (*Chelonia mydas*), Central South Pacific DPS paragraph (11)(ii)





**BILLING CODE 4333-15-C**

Green Sea Turtle (*Chelonia mydas*),  
Central West Pacific DPS

(1) Within the Central West Pacific distinct population segment (DPS) of the green sea turtle, critical habitat units are depicted for the U.S. Territory of Guam and the Commonwealth of the Northern Mariana Islands on the maps in this entry.

(2) Within these areas, the physical or biological features essential to the

conservation of green sea turtle consist of the following components:

(i) Extra-tidal or dry sandy beaches from the mean high water line—the line on a chart or map that represents the intersection of the land with the water surface at the elevation of mean high water line—to areas of beach landward of the mean high water line and which contain the characteristics set forth in paragraphs (2)(i) through (iii) of this entry. These beaches include:

- (A) Habitat for green turtles to transit across beaches and for nest placement that include:
- (1) Relatively unimpeded wet and dry sand or nearshore access areas from the ocean to the beach for nesting females and from the beach to the ocean for both post-nesting females and hatchlings; and
- (2) Drier sand areas located above mean high water in the supralittoral zone to avoid being inundated frequently by high tides.
- (B) Sand substrate that:

(1) Allows for suitable nest construction;

(2) Is suitable for facilitating gas diffusion conducive to embryo development;

(3) Can develop and maintain temperatures and a moisture content conducive to embryo development; and

(4) Allows for emergence of hatchlings from eggshells, through sand substrate to the beach surface.

(ii) Nesting beach habitat with sufficient darkness such that nesting turtles are not deterred from emerging onto the beach and hatchlings and post-nesting females can orient to the sea.

(iii) Natural coastal processes or artificially created or maintained habitat mimicking natural conditions. This includes artificial habitat types that mimic natural conditions described in paragraphs (2)(i) and (ii) of this entry for beach access, nest site selection, nest construction, egg deposition and

incubation, and hatchling emergence and movement to the sea.

(3) Critical habitat does not include manmade structures (such as buildings, aqueducts, runways, roads and other paved areas, abandoned military structures, and hardened shorelines) and the land on which they are located existing within the legal boundaries on the effective date of the final rule.

(4) Data layers defining map units were created using green sea turtle distribution data provided by multiple local and regional sources as available (e.g., reports, databases, and data maintained by the National Oceanic and Atmospheric Administration's Pacific Fisheries Science Center, universities, local governments, and nonprofit organizations across the range of the species). Landforms were primarily delineated based on the most current available aerial maps. The maps in this

entry, as modified by any accompanying regulatory text, establish the boundaries of the terrestrial critical habitat designation. The coordinates or plot points or both on which each map is based are available to the public at the USFWS's internet site at <https://www.fws.gov/office/florida-ecological-services/library/green-sea-turtle>, at <https://www.regulations.gov> under Docket No. FWS-R4-ES-2022-0164, and at the two field offices responsible for this designation. You may obtain field office location information by contacting one of the USFWS regional offices, the addresses of which are listed at 50 CFR 2.2.

(5) Two index maps follow:

Figure 1 to Green Sea Turtle (*Chelonia mydas*), Central West Pacific DPS paragraph (5)

**BILLING CODE 4333-15-P**



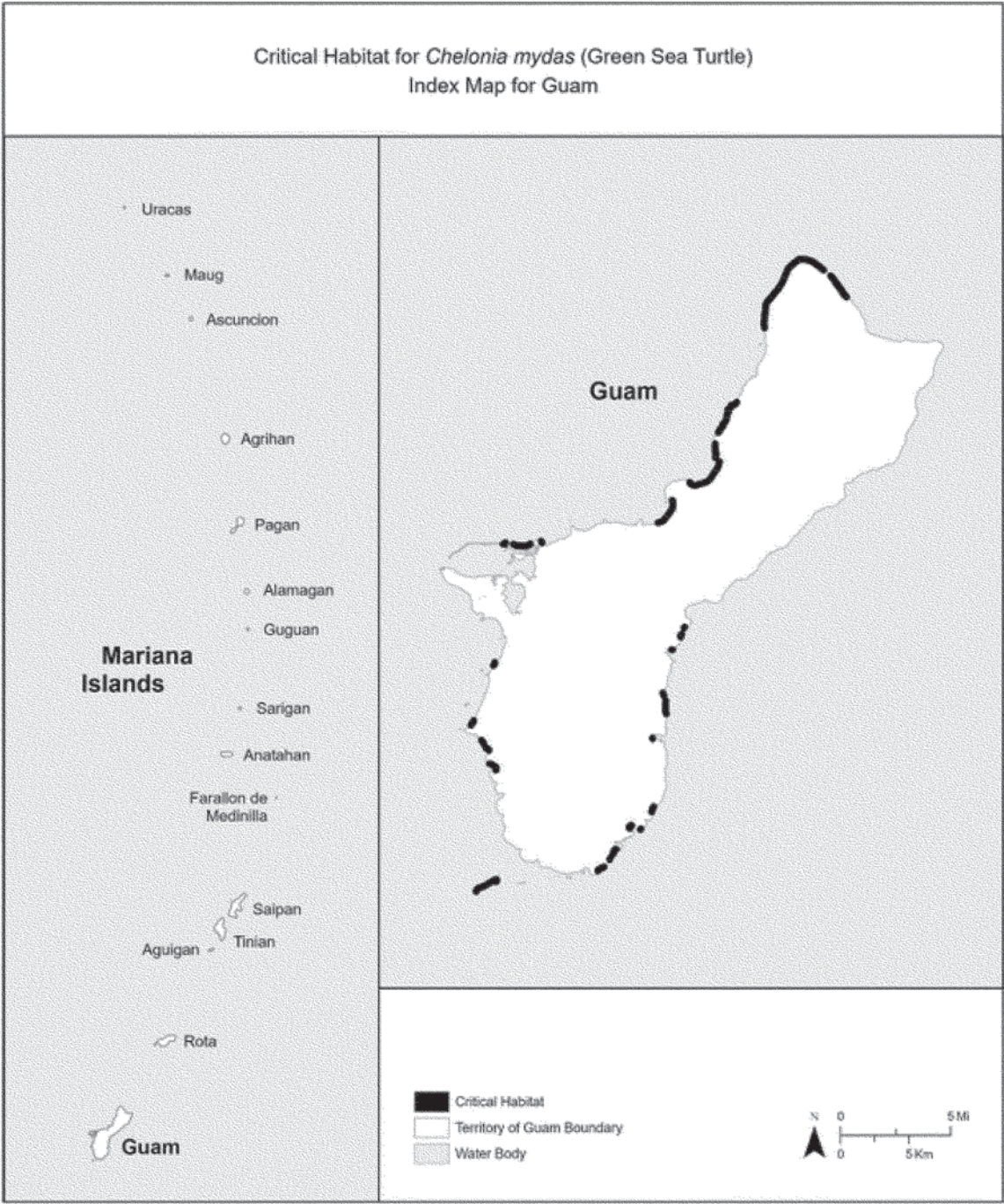
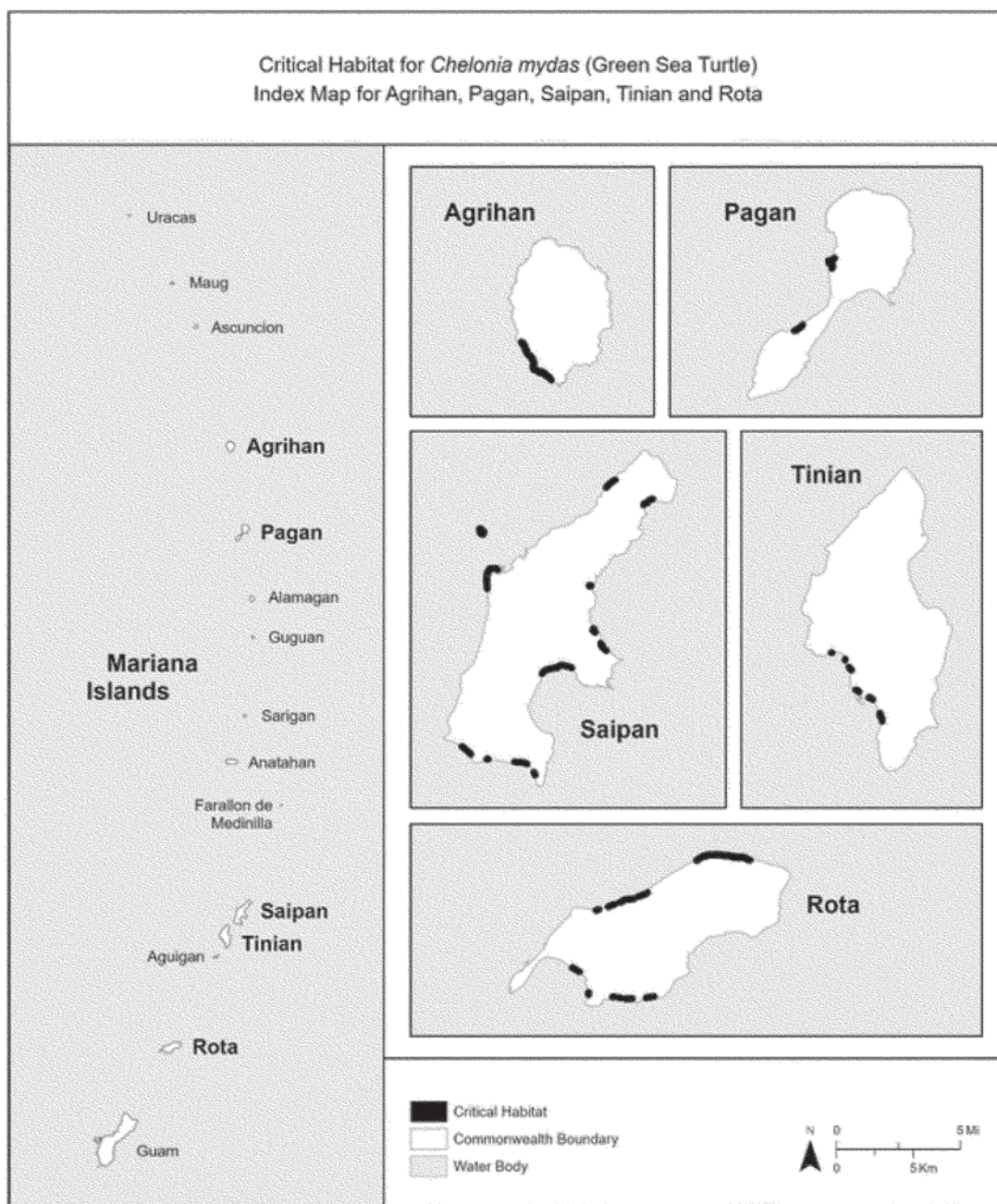


Figure 2 to Green Sea Turtle (*Chelonia mydas*), Central West Pacific DPS paragraph (5)





(6) Unit GU-01: Ritidian Point and Uruno Beach, Guam Island, Territory of Guam.

(i) Unit GU-01 consists of 37 acres (ac) (15 hectares (ha)) in Dededo (also known as (a.k.a.) Dedidu) and Yigo (a.k.a. Yigu) Villages in the northern part of Guam and is located approximately 12 miles (mi) (19 kilometers (km)) northeast of the Capital Village of Hagatna. This unit includes

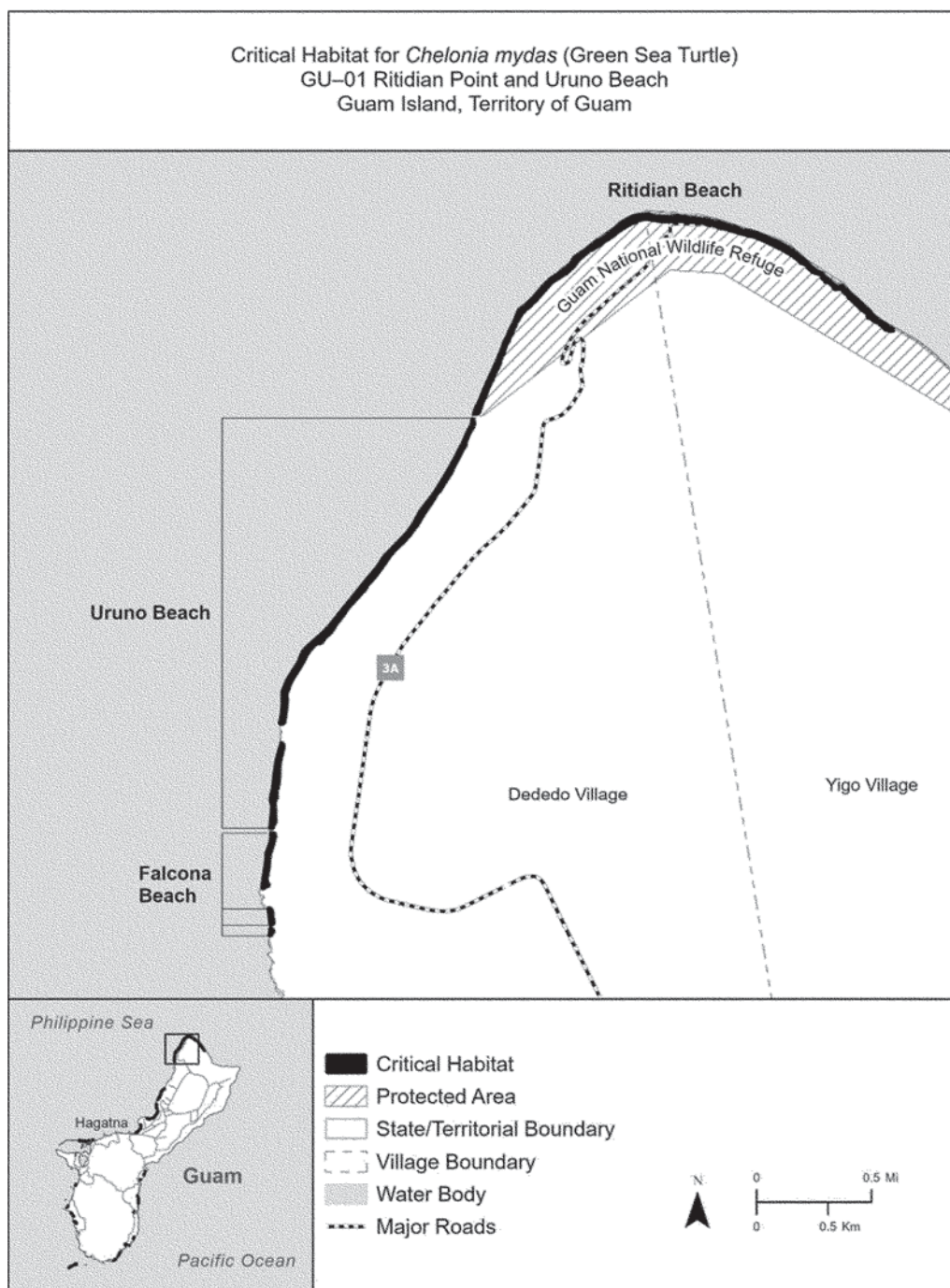
beach, coastal vegetation, and atoll forest from the mean high water line (MHWL) to the line indicating the beginning of dense vegetation, cliff, or hardened or developed structures. This unit comprises six segments in two areas: Ritidian Beach (a.k.a. Litekyan Village, Guam National Wildlife Refuge (NWR), and Ritidian Point), and along Uruno Beach (a.k.a. Urunao Beach) and

Falcona Beach. Lands within this unit include approximately 18 ac (7 ha) in Federal ownership, less than 1 ac (less than 1 ha) in Territorial ownership, 13 ac (5 ha) in private ownership, and 6 ac (2 ha) that are uncategorized.

(ii) Map of Unit GU-01 follows:

Figure 3 to Green Sea Turtle (*Chelonia mydas*), Central West Pacific DPS paragraph (6)(ii)





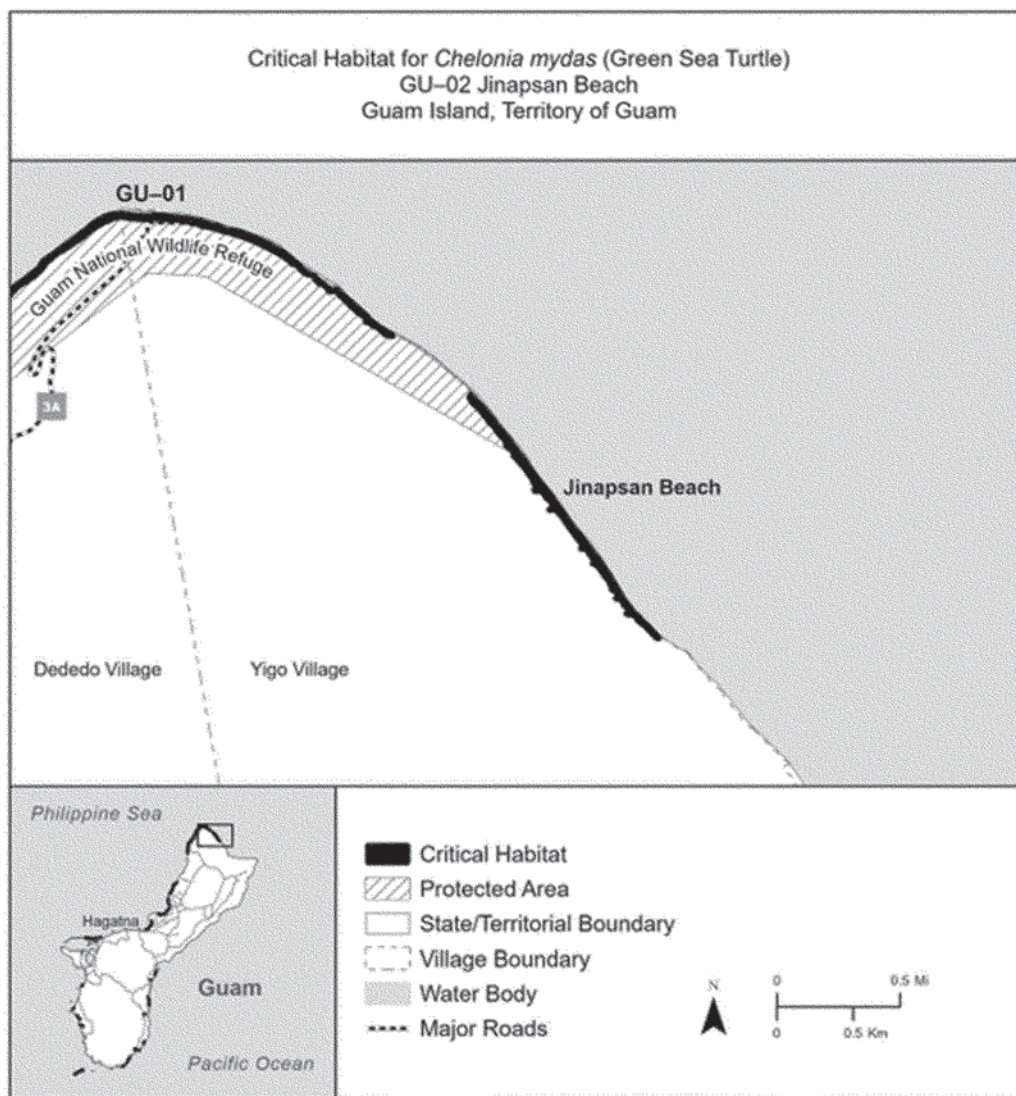
(7) Unit GU-02: Jinapsan Beach, Guam Island, Territory of Guam.

(i) Unit GU-02 consists of 14 ac (6 ha) at Jinapsan (a.k.a. Hinapsan) Beach in Yigo (a.k.a. Yigu) Village in the northern part of Guam and is located approximately 14 mi (23 km) northeast

of the Capital Village of Hagatna. This unit includes beach, coastal vegetation, and atoll forest from the MHWL to the line indicating the beginning of dense vegetation, cliff, or hardened or developed structures. Lands within this unit include approximately 4 ac (1 ha)

in Federal ownership, 3 ac (1 ha) in private ownership, and 8 ac (3 ha) that are uncategorized.

(ii) Map of Unit GU-02 follows: Figure 4 to Green Sea Turtle (*Chelonia mydas*), Central West Pacific DPS paragraph (7)(ii)



(8) Unit GU-03: Tanguisson, Guam Island, Territory of Guam.

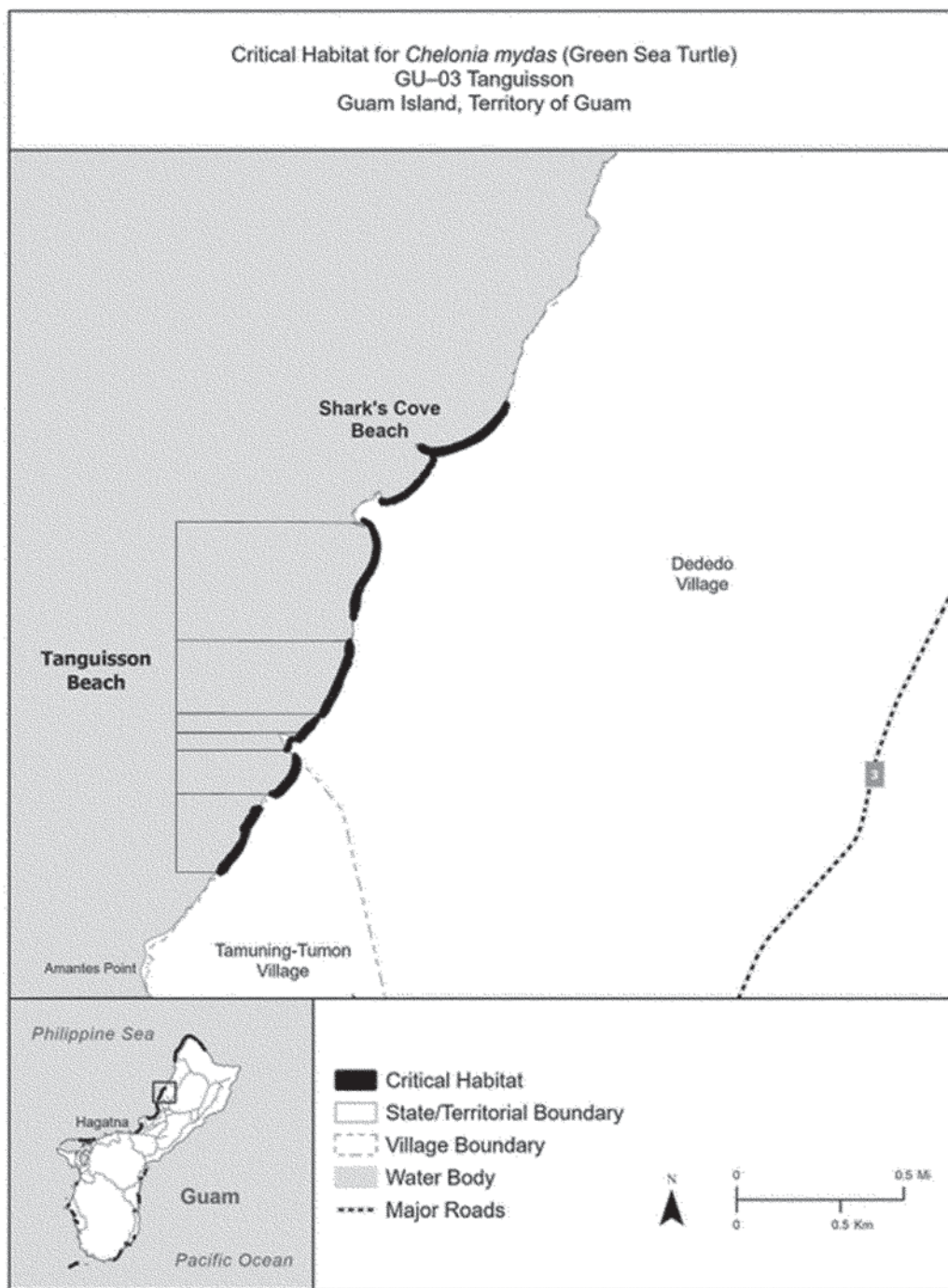
(i) Unit GU-03 consists of 12 ac (5 ha) in Dededo (a.k.a. Dededu) Village on the west side of northern Guam and is located approximately 7 mi (11 km) northeast of the Capital Village of Hagatna. This unit includes beach,

coastal vegetation, and atoll forest from the MHWL to the line indicating the beginning of dense vegetation, cliff, or hardened or developed structures. This unit comprises seven segments in two areas: one segment at Shark's Cove, and six segments along Tanguisson Beach. Lands within this unit include

approximately 6 ac (2 ha) in Territorial ownership and 6 ac (2 ha) that are uncategorized.

(ii) Map of Unit GU-03 follows: Figure 5 to Green Sea Turtle (*Chelonia mydas*), Central West Pacific DPS paragraph (8)(ii)





(9) Unit GU-04: Tumon Bay, Guam Island, Territory of Guam.

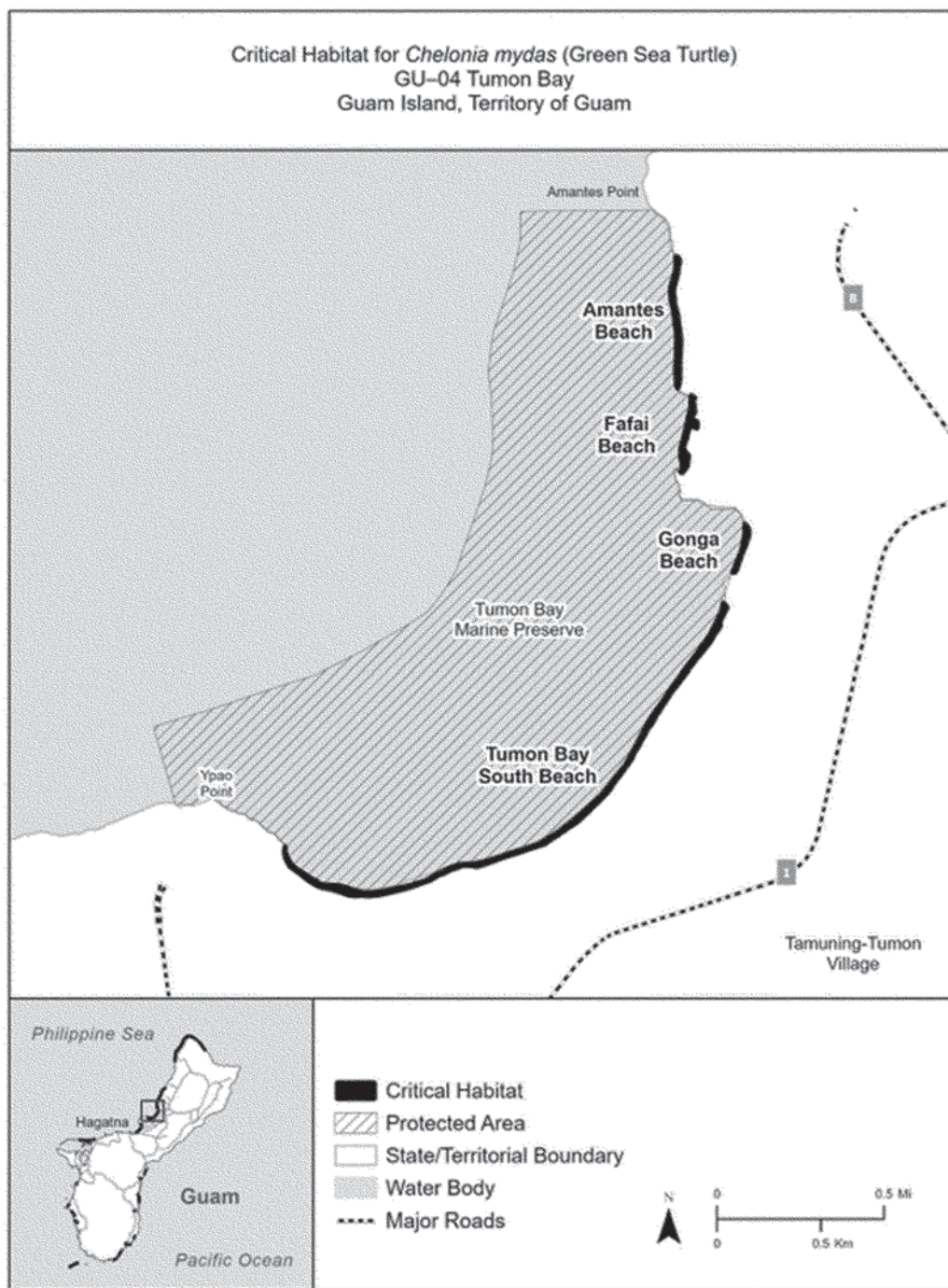
(i) Unit GU-04 consists of 14 ac (6 ha) in Tamuning-Tumon (a.k.a. Tamuneng-Tomhom) and Dededo (a.k.a. Dedidu) Villages, northern Guam, part of the Territory of Guam. This unit is located approximately 3 mi (5 km) northeast of the Capital Village of Hagatna, and

includes beach, coastal vegetation, and atoll forest from the MHWL. The landward boundary is the line indicating the beginning of dense vegetation, cliff, or hardened or developed structures. This unit comprises four segments in four areas, including on Amantes Beach, Fafai Beach (a.k.a. Gun Beach), Gongga Beach,

and Tumon Bay South Beach. Lands within this unit include approximately 10 ac (4 ha) in private ownership and 4 ac (1 ha) that are uncategorized.

(ii) Map of Unit GU-04 follows:

Figure 6 to Green Sea Turtle (*Chelonia mydas*), Central West Pacific DPS paragraph (9)(ii)



(10) Unit GU-05: Hagatna Bay, Guam Island, Territory of Guam.

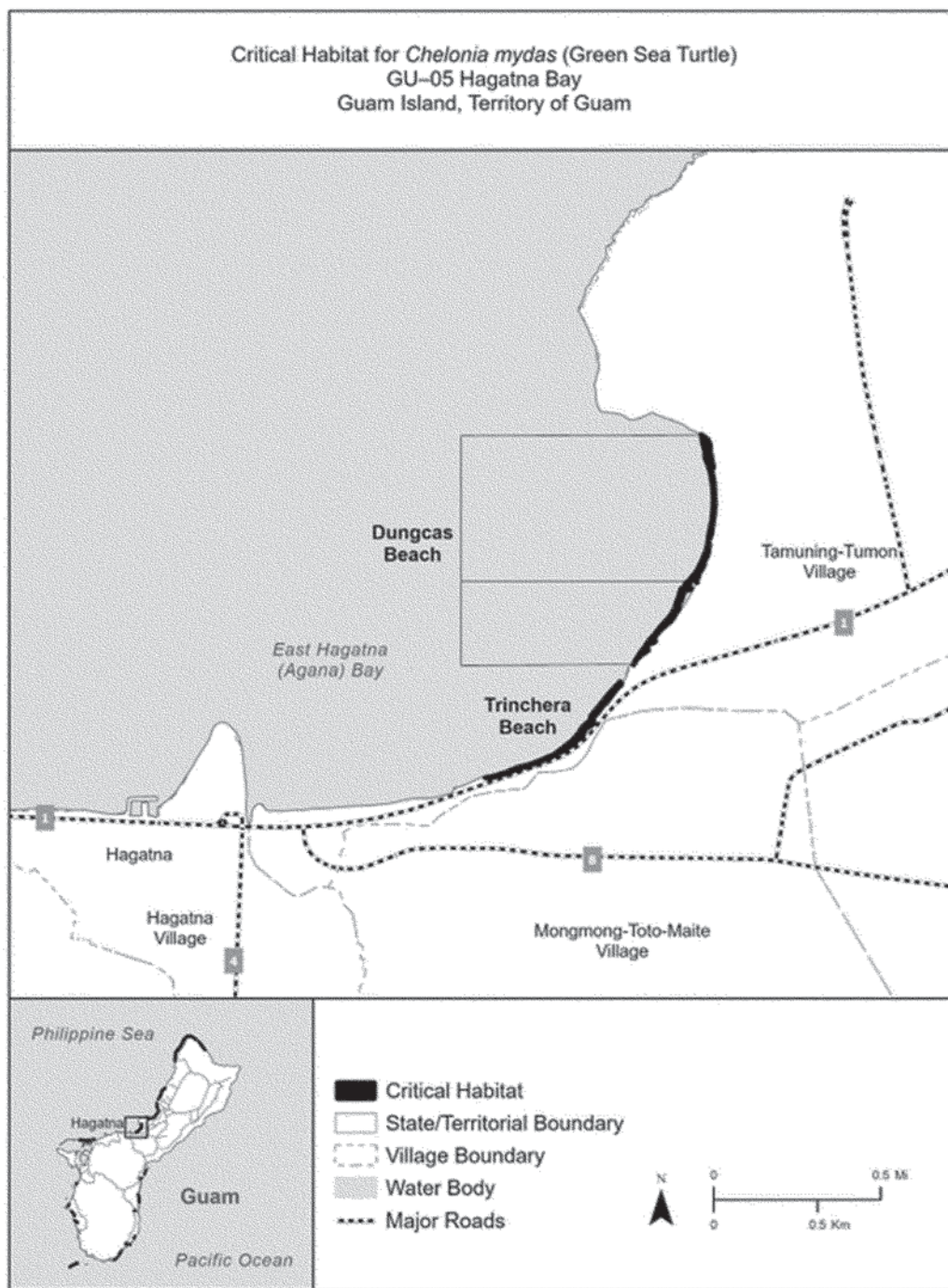
(i) Unit GU-05 consists of 7 ac (3 ha) in East Agana Bay, Tamuning-Tumon (a.k.a. Tamuneng-Tomhom) Village on the west coast of northern Guam and is located approximately 1 mi (less than 1 km) northeast of the Capital Village of

Hagatna. This unit includes beach and sandy shoals from the MHWL to the line indicating the beginning of dense vegetation, cliff, or hardened or developed structures. This unit comprises three segments, including two segments on Dungcas Beach and one segment on Trinchera Beach. Lands

within this unit include approximately 1 ac (less than 1 ha) in private ownership and 6 ac (3 ha) that are uncategorized.

(ii) Map of Unit GU-05 follows: Figure 7 to Green Sea Turtle (*Chelonia mydas*), Central West Pacific DPS paragraph (10)(ii)





(11) Unit GU-06: Cabras Island, Guam Island, Territory of Guam.

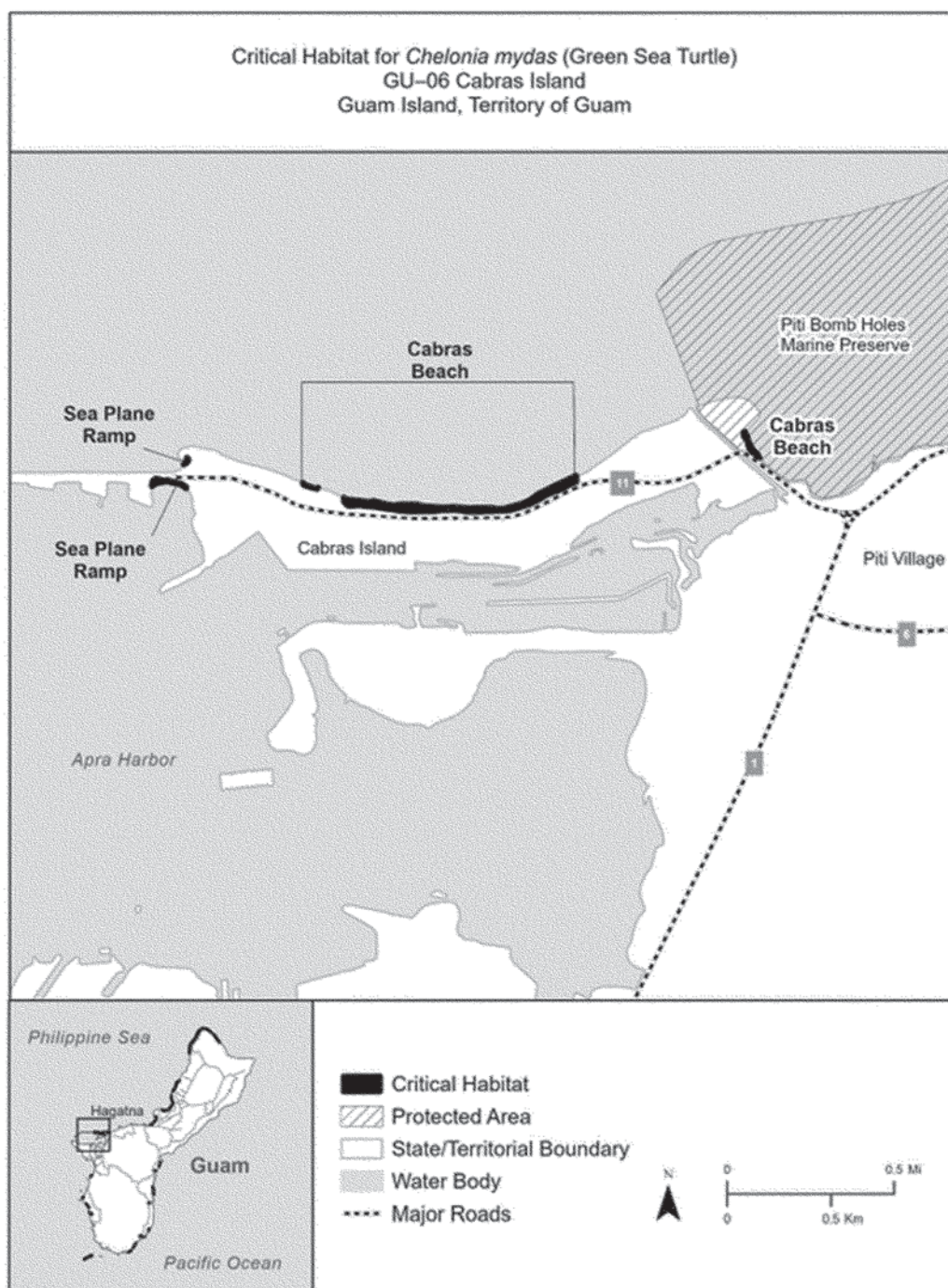
(i) Unit GU-06 consists of 8 ac (3 ha) in Piti Village on the east coast of central Guam, which is located approximately 8 mi (13 km) west of the Capital Village of Hagatna. This unit includes beach and coastal vegetation

from the MHWL to the line indicating the beginning of dense vegetation or hardened or developed structures. This unit comprises five segments in two areas: two segments at Sea Plane Ramp along Apra Harbor and along the Philippine Sea, and three segments on Cabras Beach. Lands within this unit

include less than 1 ac (less than 1 ha) in private ownership and 8 ac (3 ha) that are uncategorized.

(ii) Map of Unit GU-06 follows:

Figure 8 to Green Sea Turtle (*Chelonia mydas*), Central West Pacific DPS paragraph (11)(ii)



(12) Unit GU-07: Agat Bay, Guam Island, Territory of Guam.

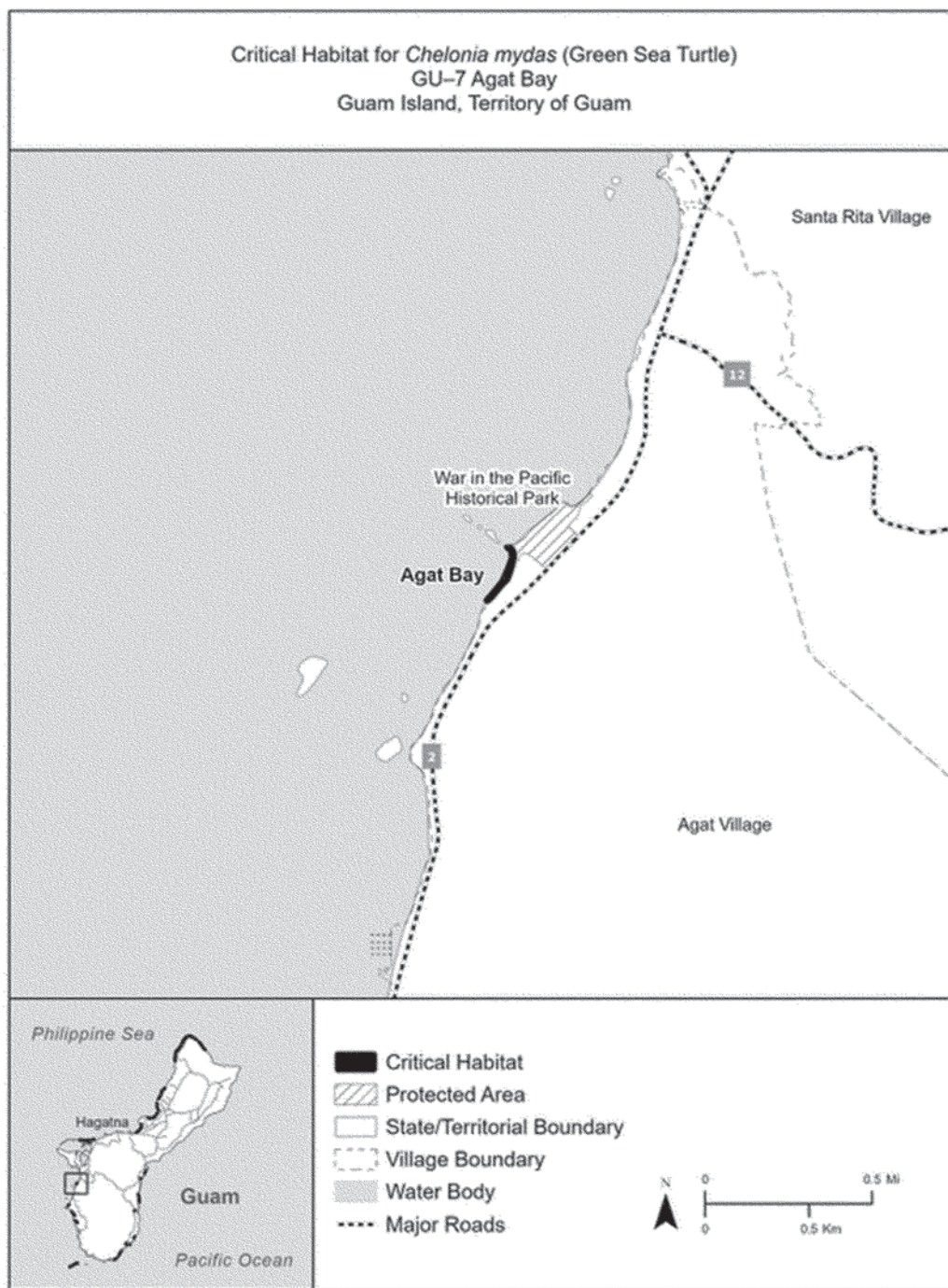
(i) Unit GU-07 consists of 1 ac (less than 1 ha) in Agat Bay (a.k.a. Hagat Bay) in Aagat Village (a.k.a. Hagat Village) on the west coast of central Guam, which is located approximately 9 mi (14 km)

southwest of the Capital Village of Hagatna. This unit includes beach and coastal vegetation from the MHWL to the line indicating the beginning of dense vegetation, cliff, or hardened or developed structures. Lands within this unit include approximately less than 1

ac (less than 1 ha) in Federal ownership and less than 1 ac (less than 1 ha) that is uncategorized.

(ii) Map of Unit GU-07 follows: Figure 9 to Green Sea Turtle (*Chelonia mydas*), Central West Pacific DPS paragraph (12)(ii)





(13) Unit GU-08: Pago Point to Ylig Bay, Guam Island, Territory of Guam.

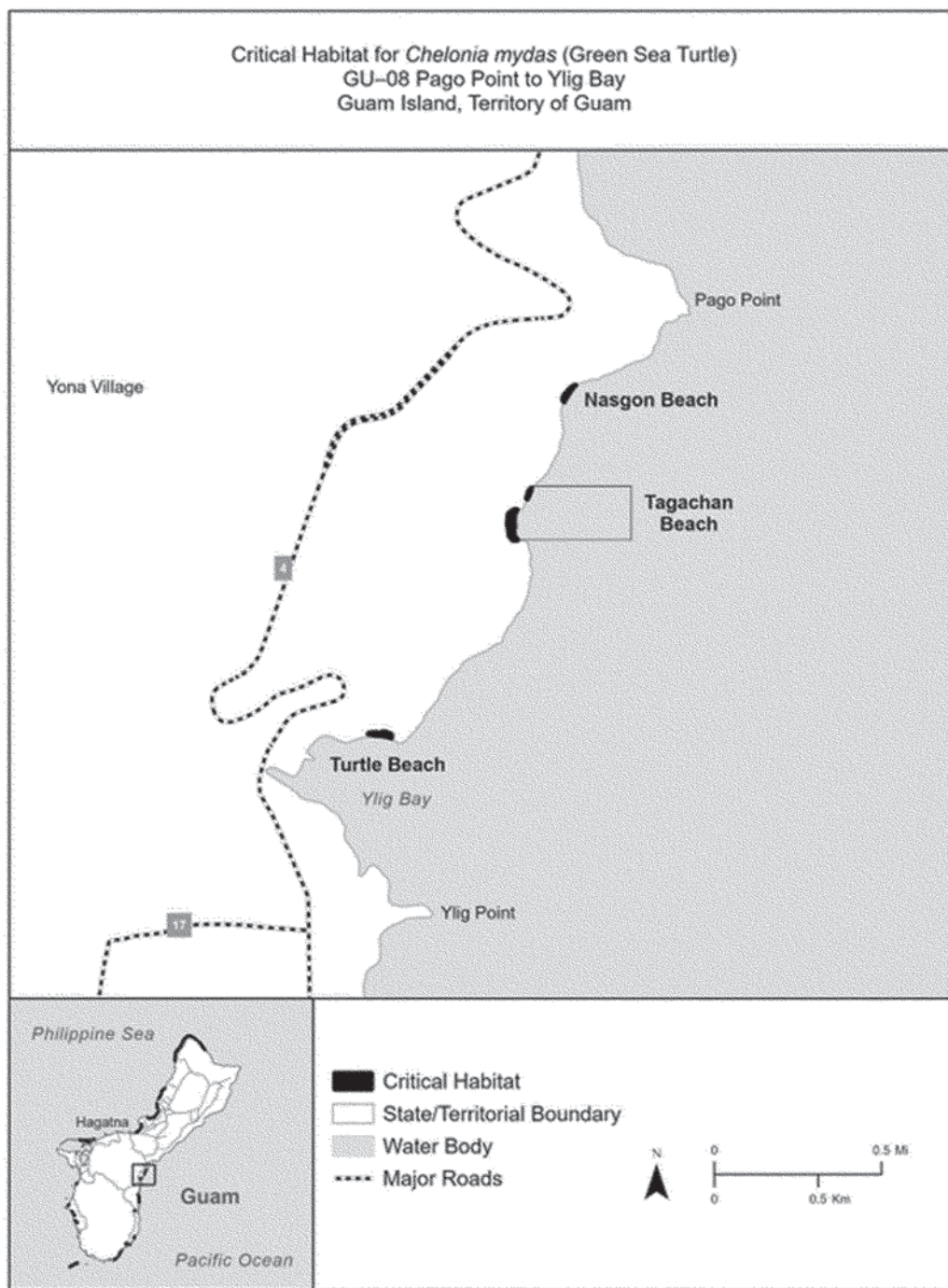
(i) Unit GU-08 consists of 2 ac (1 ha) Yona Village in central Guam, approximately 5 mi (8 km) southeast of the Capital Village of Hagatna. This unit includes beach, coastal vegetation, and atoll forest from the MHWL to the line

indicating the beginning of dense vegetation, cliff, or hardened or developed structures. This unit comprises four small segments in three areas: one segment on Nasgon Beach, two segments on Tagachan Beach, and one segment in Ylig Bay (a.k.a. Ilig Bay) at Turtle Beach. Lands within this unit

include approximately 2 ac (1 ha) in private ownership and less than 1 ac (less than 1 ha) that is uncategorized.

(ii) Map of Unit GU-08 follows:

Figure 10 to Green Sea Turtle (*Chelonia mydas*), Central West Pacific DPS paragraph (13)(ii)



(14) Unit GU-09: Talofoto Village, Guam Island, Territory of Guam.

(i) Unit GU-09 consists of 4 ac (2 ha) in Talofoto Village on the eastern coast of southern Guam and is located approximately 8 mi (14 km) south of the Capital Village of Hagatna. This unit includes beach, coastal vegetation, and

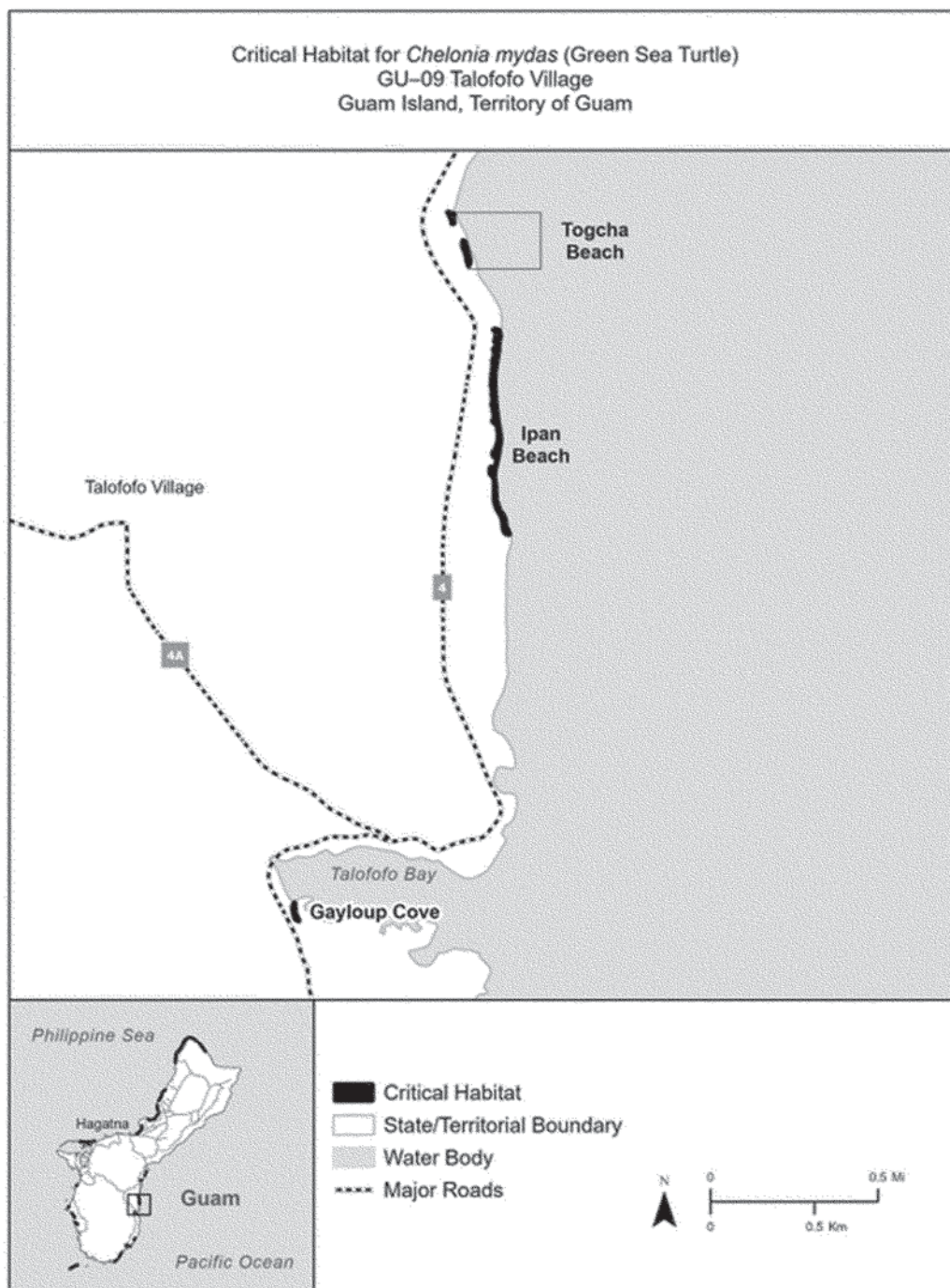
atoll forest from the MHWL to the line indicating the beginning of dense vegetation, cliff, or hardened or developed structures. This unit comprises four segments: two segments at Togcha Beach, one segment on Ipan Beach, and one segment in Inarajan Bay at Gayloup Cove. Lands within this unit

include approximately 2 ac (1 ha) in private ownership and 3 ac (1 ha) that are uncategorized.

(ii) Map of Unit GU-09 follows:

Figure 11 to Green Sea Turtle (*Chelonia mydas*), Central West Pacific DPS paragraph (14)(ii)





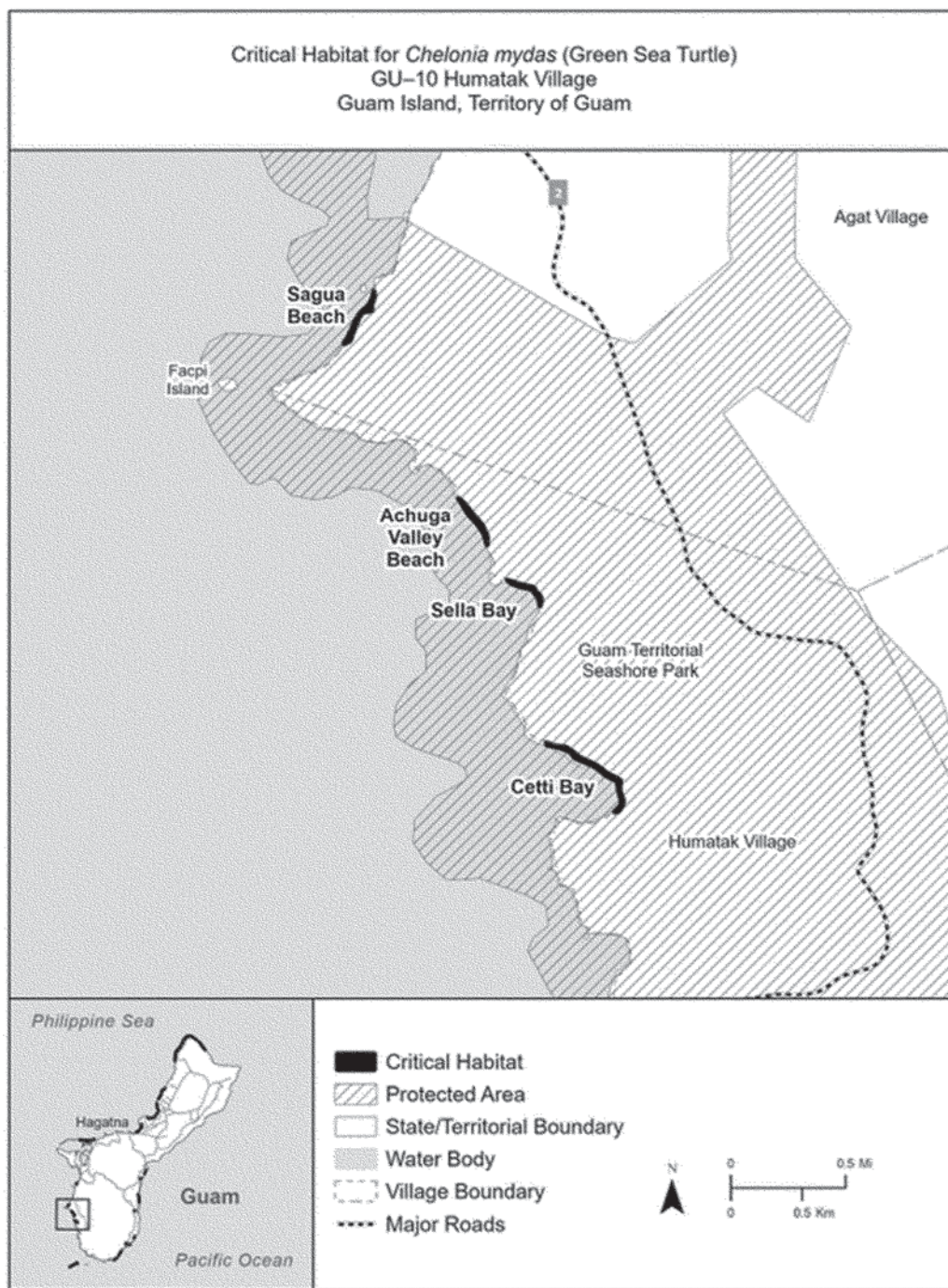
(15) Unit GU-10: Humatak Village, Guam Island, Territory of Guam.

(i) Unit GU-10 consists of 7 ac (3 ha) in Humatak Village along the western coast of southern Guam, located approximately 13 mi (20 km) southwest of the Capital Village of Hagatna. This

unit includes beach habitat from the MHWL to the line indicating the beginning of dense vegetation, cliff, or hardened or developed structures. This unit comprises four segments, one each on Sagua Beach, Achuga Valley Beach, Sella Bay, and Cetti Bay. Lands within

this unit include approximately 1 ac (1 ha) in private ownership and 6 ac (3 ha) that are uncategorized.

(ii) Map of Unit GU-10 follows: Figure 12 to Green Sea Turtle (*Chelonia mydas*), Central West Pacific DPS paragraph (15)(ii)



(16) Unit GU-11: Nomna Bay, Guam Island, Territory of Guam.

(i) Unit GU-11 consists of less than 1 ac (less than 1 ha) in Talofofo Village on the eastern coast of southern Guam, which is located approximately 10 mi (15 km) southeast of the Capital Village

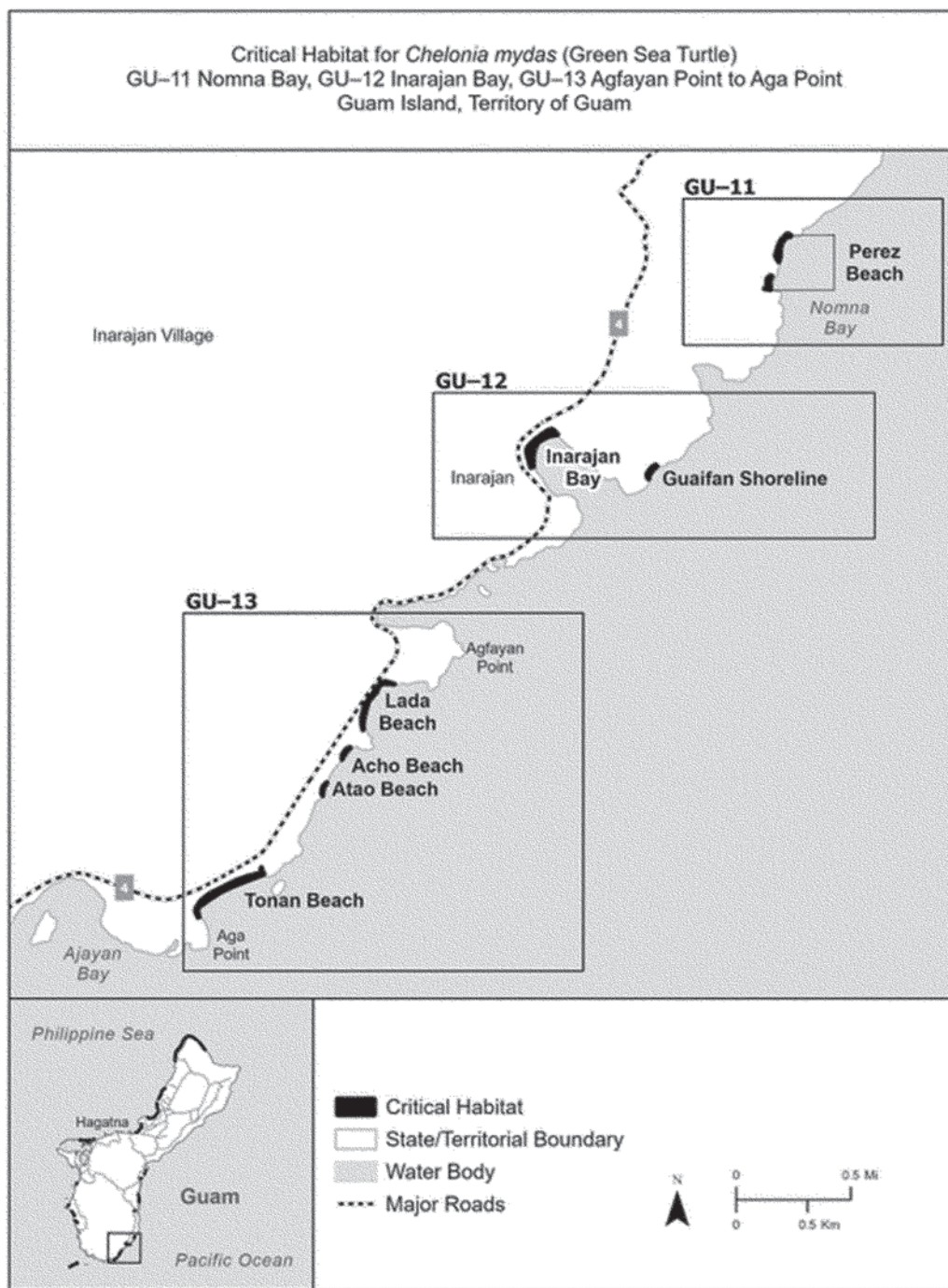
of Hagatna. This unit includes beach from the MHWL to the line indicating the beginning of dense vegetation, cliff, or hardened or developed structures. This unit comprises two segments in Nomna Bay (a.k.a. Nomnia Bay) at Perez

Beach. All land within this unit is uncategorized ownership.

(ii) Map of Units GU-11, GU-12, and GU-13 follows:

Figure 13 to Green Sea Turtle (*Chelonia mydas*), Central West Pacific DPS paragraph (16)(ii)





(17) Unit GU-12: Inarajan Bay, Guam Island, Territory of Guam.

(i) Unit GU-12 consists of 4 ac (1 ha) in Inarajan Village (a.k.a. Inalahan Village) on the east coast of southern Guam, which is located approximately 13 mi (22 km) southeast of the Capital Village of Hagatna. This unit includes beach and coastal vegetation from the MHWL to the line indicating the beginning of dense vegetation, cliff, or hardened or developed structures. This unit comprises two segments, one each on Guaifan shoreline and along Inarajan

Bay (a.k.a. Inalahan Beach). Lands within this unit include approximately 1 ac (less than 1 ha) in private ownership and 3 ac (1 ha) that are uncategorized.

(ii) Map of Unit GU-12 is provided at paragraph (16)(ii) of this entry.

(18) Unit GU-13: Agfayan Point to Aga Point, Guam Island, Territory of Guam.

(i) Unit GU-13 consists of 5 ac (2 ha) in Inarajan Village (a.k.a. Inalahan Village) between Agfayan Point (a.k.a. Akfayan Point) and Aga Point on the

south coast of Guam and is located approximately 16 mi (25 km) southeast of the Capital Village of Hagatna. This unit includes beach and coastal vegetation from the MHWL to the line indicating the beginning of dense vegetation, cliff, or hardened or developed structures. This unit comprises four segments in three areas: one segment on Lada Beach, two segments on Acho Beach and Atao Beach, one segment on Tonan Beach. Lands within this unit include less than



2 ac (1 ha) in private ownership and less than 4 ac (1 ha) that are uncategorized.

(ii) Map of Unit GU-13 is provided at paragraph (16)(ii) of this entry.

(19) Unit GU-14: Cocos Island, Guam Island, Territory of Guam.

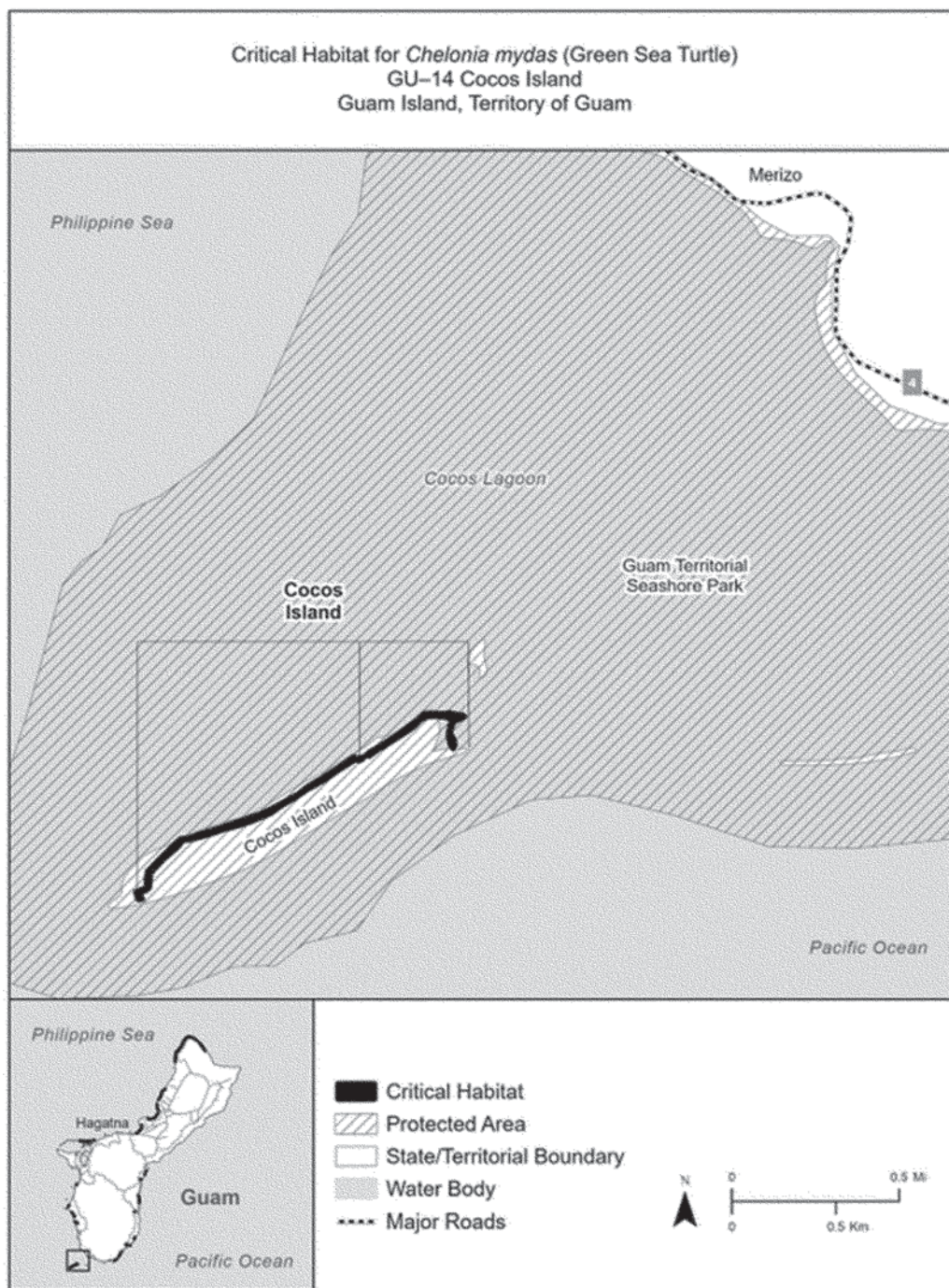
(i) Unit GU-14 consists of 8 ac (3 ha) in Cocos Island (a.k.a. Dano Village), an island off the south coast of Guam, and

is located approximately 17 mi (27 km) southwest of the Capital Village of Hagatna that occurs on the main island. The unit includes beach, coastal vegetation, and atoll forest from the MHWL to the line indicating the beginning of dense vegetation or hardened or developed structures. This unit comprises two segments along

Cocos Island Beach. Lands within this unit include approximately 1 ac (less than 1 ha) in private ownership and 7 ac (3 ha) that are uncategorized.

(ii) Map of Unit GU-14 follows:

Figure 14 to Green Sea Turtle (*Chelonia mydas*), Central West Pacific DPS paragraph (19)(ii)



(20) Unit MP-01: Agrihan Island, Saipan Island, Commonwealth of the Northern Mariana Islands (CNMI).

(i) Unit MP-01 consists of 44 ac (18 ha) along the southwest coast of Agrihan (a.k.a. Agrigan) Island in the northern

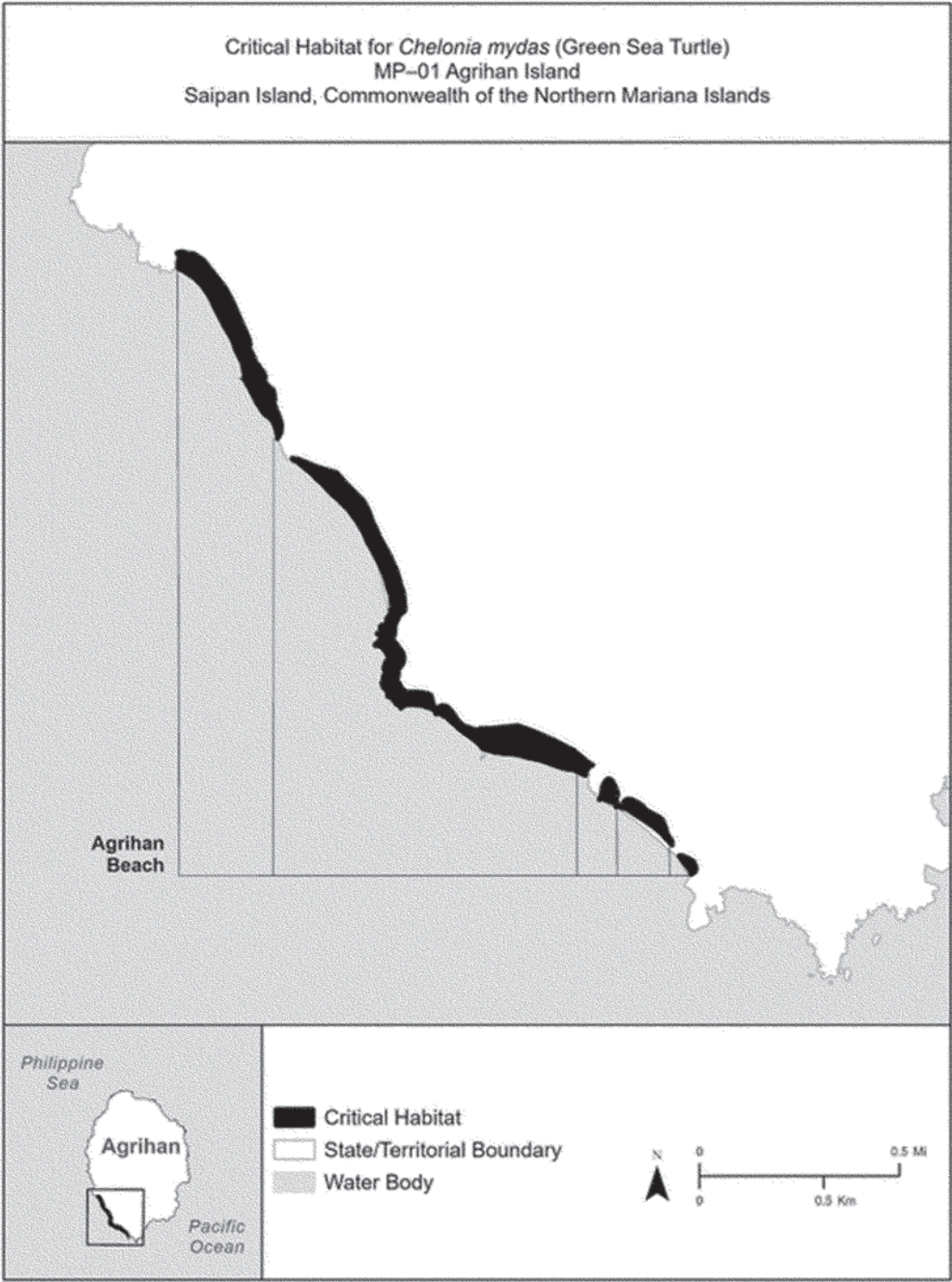
part of the Mariana Archipelago, part of the CNMI (a.k.a. Sankattan Siha Na Islas Marianas, Commonwealth Teel Faluw



kka Efang Ilol Marianas). This unit is located approximately 199 mi (320 km) north of Capitol Hill, Saipan (a.k.a. Saipan, Seipel), and includes beach and coastal vegetation from the MHWL to the line indicating the beginning of

dense vegetation, cliff, or hardened or developed structures. This unit comprises five segments along the southwest side of Agrihan Island on Agrihan Beach. All lands within this unit are uncategorized ownership.

(ii) Map of Unit MP-01 follows:  
Figure 15 to Green Sea Turtle (*Chelonia mydas*), Central West Pacific DPS paragraph (20)(ii)



(21) Unit MP-02: Pagan Island, Saipan Island, Commonwealth of the Northern Mariana Islands.  
(i) Unit MP-02 consists of 12 ac (5 ha) along the western coast on Pagan Island in the northern part of the Mariana

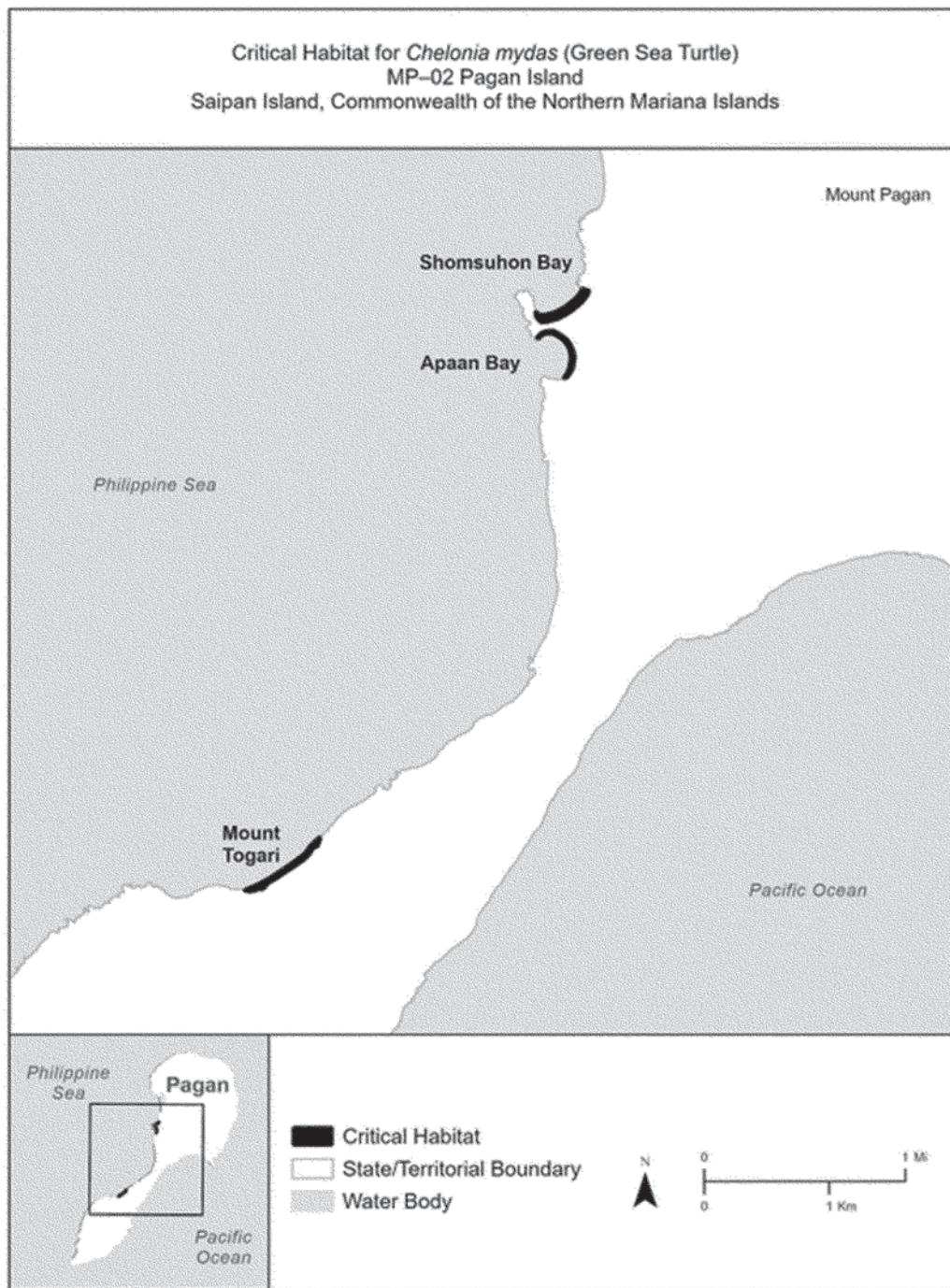
Archipelago and is located approximately 203 mi (326 km) north of Capitol Hill, Saipan. This unit includes beach and coastal vegetation from the MHWL to the line indicating the beginning of dense vegetation or cliff.

This unit comprises three segments in two areas: two segments, one each along Shomushon Bay (a.k.a. Red Beach) and Apaan Bay (a.k.a. Green Beach), and one segment along the west side of Mount

Togari. All lands within this unit are uncategorized ownership.

(ii) Map of Unit MP-02 follows:

Figure 16 to Green Sea Turtle (*Chelonia mydas*), Central West Pacific DPS paragraph (21)(ii)



(22) Unit MP-03: Wing Beach and Bird Island, Saipan Island, Commonwealth of the Northern Mariana Islands.

(i) Unit MP-03 consists of 7 ac (3 ha) in Marpi Village, northwestern and northeastern coast of Saipan, and is located approximately 4 mi (7 km) northeast of Capitol Hill, Saipan. This

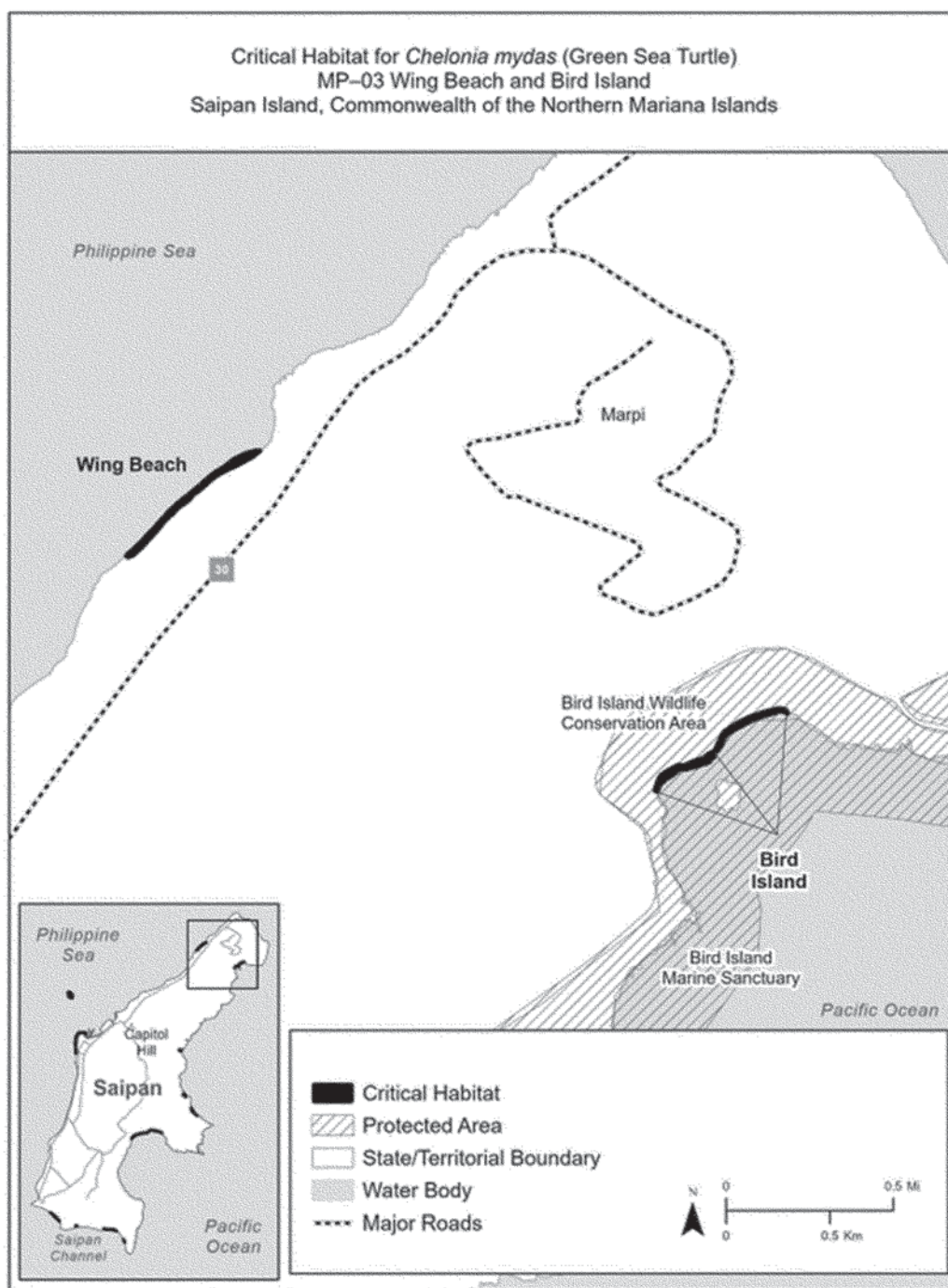
unit includes beach, coastal vegetation, and atoll forest from the MHWL to the line indicating the beginning of dense vegetation, cliff, or hardened or developed structures. This unit comprises three segments, including one on Wing Beach (a.k.a. Unai Makpe) on the northwestern coast, and two adjacent segments at Bird Island (a.k.a.

Unai Fanonchuluyan). Lands within this unit include approximately 4 ac (2 ha) in Commonwealth ownership and 3 ac (1 ha) that are uncategorized.

(ii) Map of Unit MP-03 follows:

Figure 17 to Green Sea Turtle (*Chelonia mydas*), Central West Pacific DPS paragraph (22)(ii)





(23) Unit MP-04: Managaha Island and Unai Makaka, Saipan Island, Commonwealth of the Northern Mariana Islands.

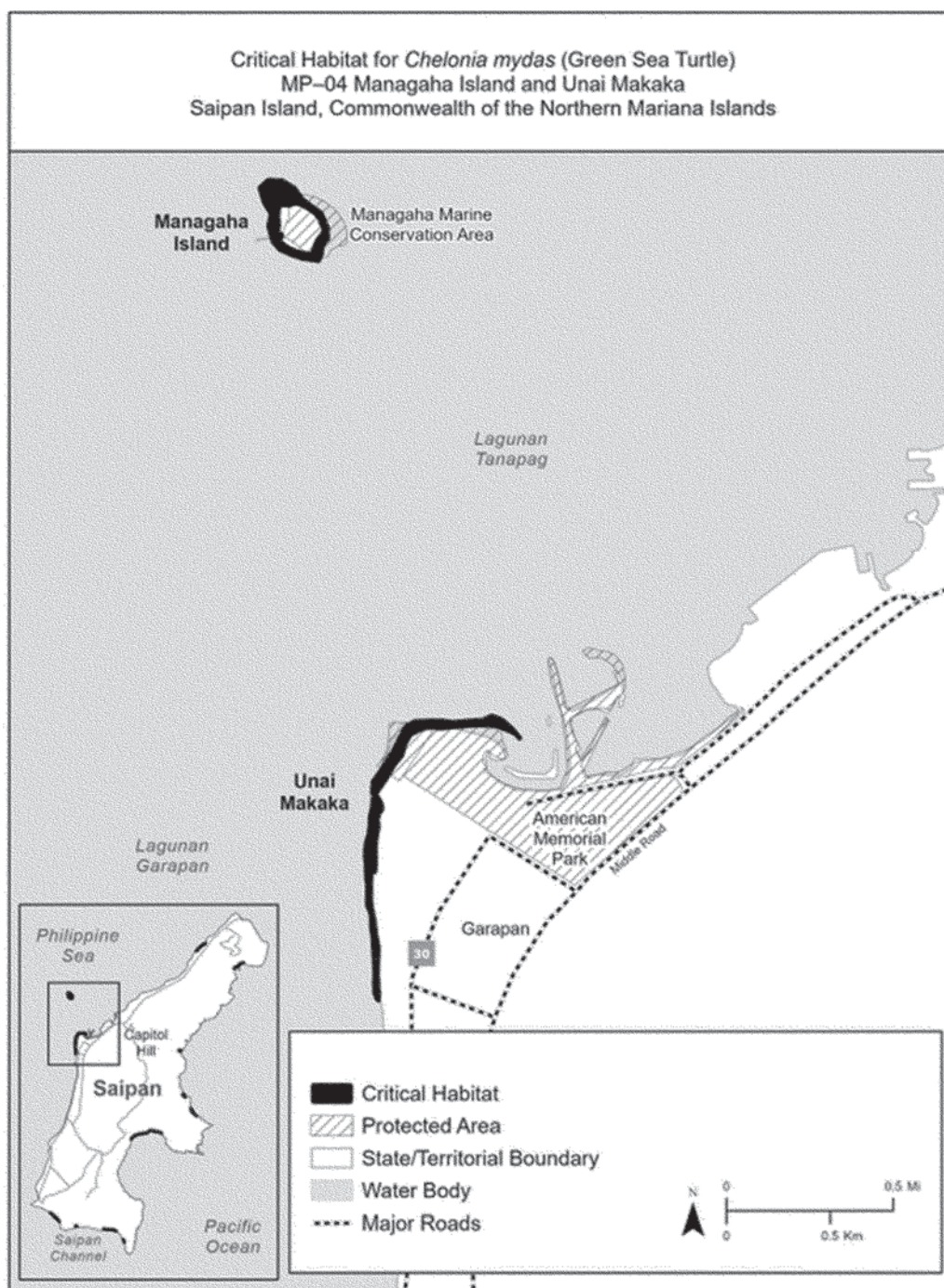
(i) Unit MP-04 consists of 21 ac (9 ha) on the western coast of Saipan and is located approximately 3 mi (5 km) northwest of Capitol Hill, Saipan. This unit includes beach, coastal vegetation,

and atoll forest from the MHWL to the line indicating the beginning of dense vegetation, cliff, or hardened or developed structures. This unit includes two segments in two areas: beach surrounding Managaha Island (directly north of Unai Makaka) and Lagunan Garapan on Unai Makaka. Lands within this unit include approximately 5 ac (2

ha) in Commonwealth ownership, less than 1 ac (less than 1 ha) in private ownership, and 16 ac (6 ha) that are uncategorized.

(ii) Map of Unit MP-04 follows:

Figure 18 to Green Sea Turtle (*Chelonia mydas*), Central West Pacific DPS paragraph (23)(ii)



(24) Unit MP-05: Eastern Saipan, Saipan Island, Commonwealth of the Northern Mariana Islands.

(i) Unit MP-05 consists of 18 ac (7 ha) along the east coast of Saipan and is located approximately 2 mi (3 km) southeast of Capitol Hill, Saipan. This unit includes beach and coastal vegetation from the MHWL to the line indicating the beginning of dense

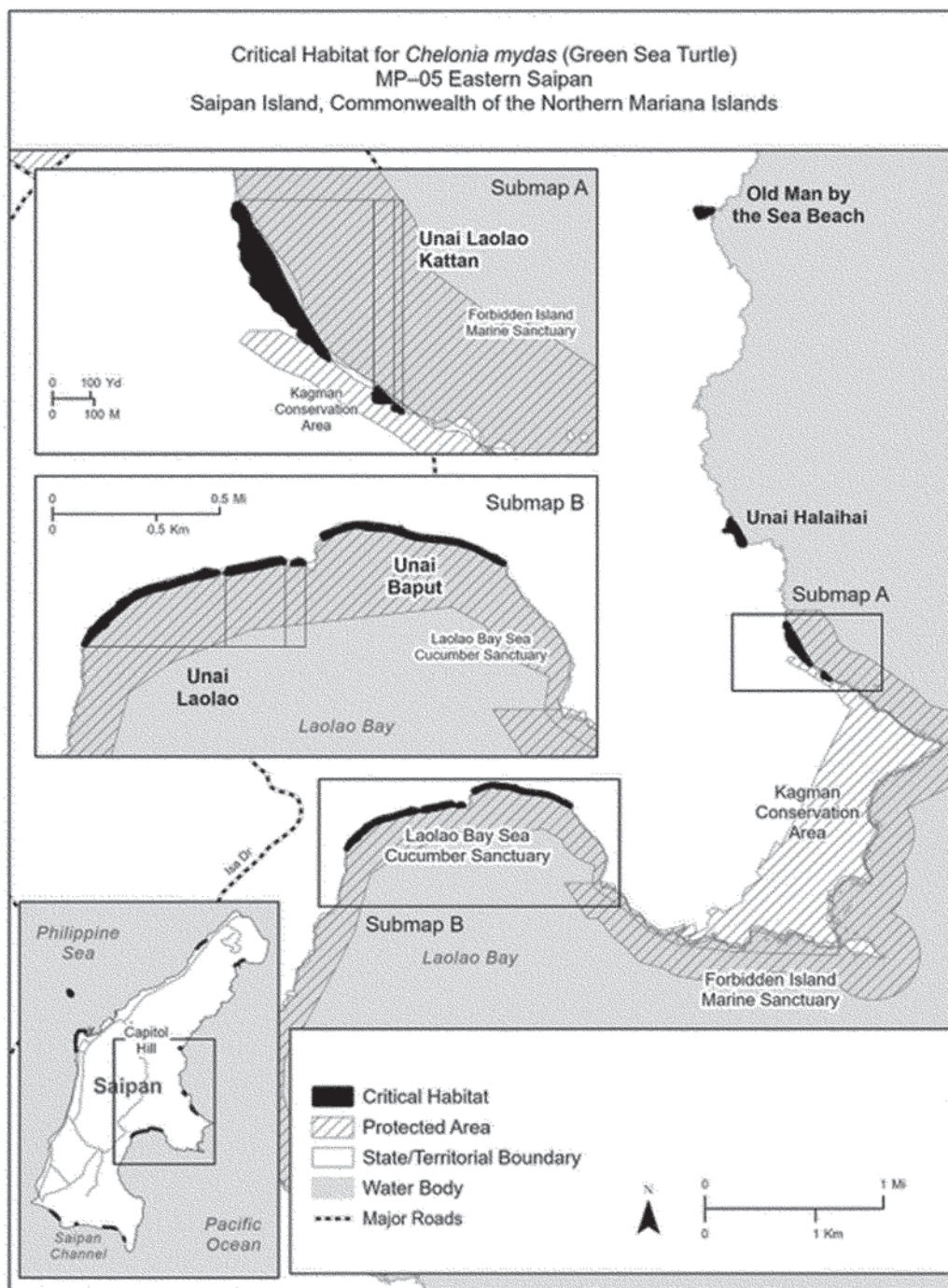
vegetation, cliff, or hardened or developed structures. This unit comprises nine segments in two areas: one segment each on Old Man by the Sea Beach, Unai Halaihai (a.k.a. Marine Beach), and Unai Laolao Kattan (a.k.a. Tank Beach), as well as two segments south of Tank Beach on Tank Pocket Beach; and four segments in Laolao Bay at Unai Laolao and Unai Baput. Lands

within this unit include approximately 9 ac (4 ha) in Commonwealth ownership, 1 ac (less than 1 ha) in private ownership, and 8 ac (3 ha) that are uncategorized.

(ii) Map of Unit MP-05 follows:

Figure 19 to Green Sea Turtle (*Chelonia mydas*), Central West Pacific DPS paragraph (24)(ii)





(25) Unit MP-06: Southern Saipan, Saipan Island, Commonwealth of the Northern Mariana Islands.

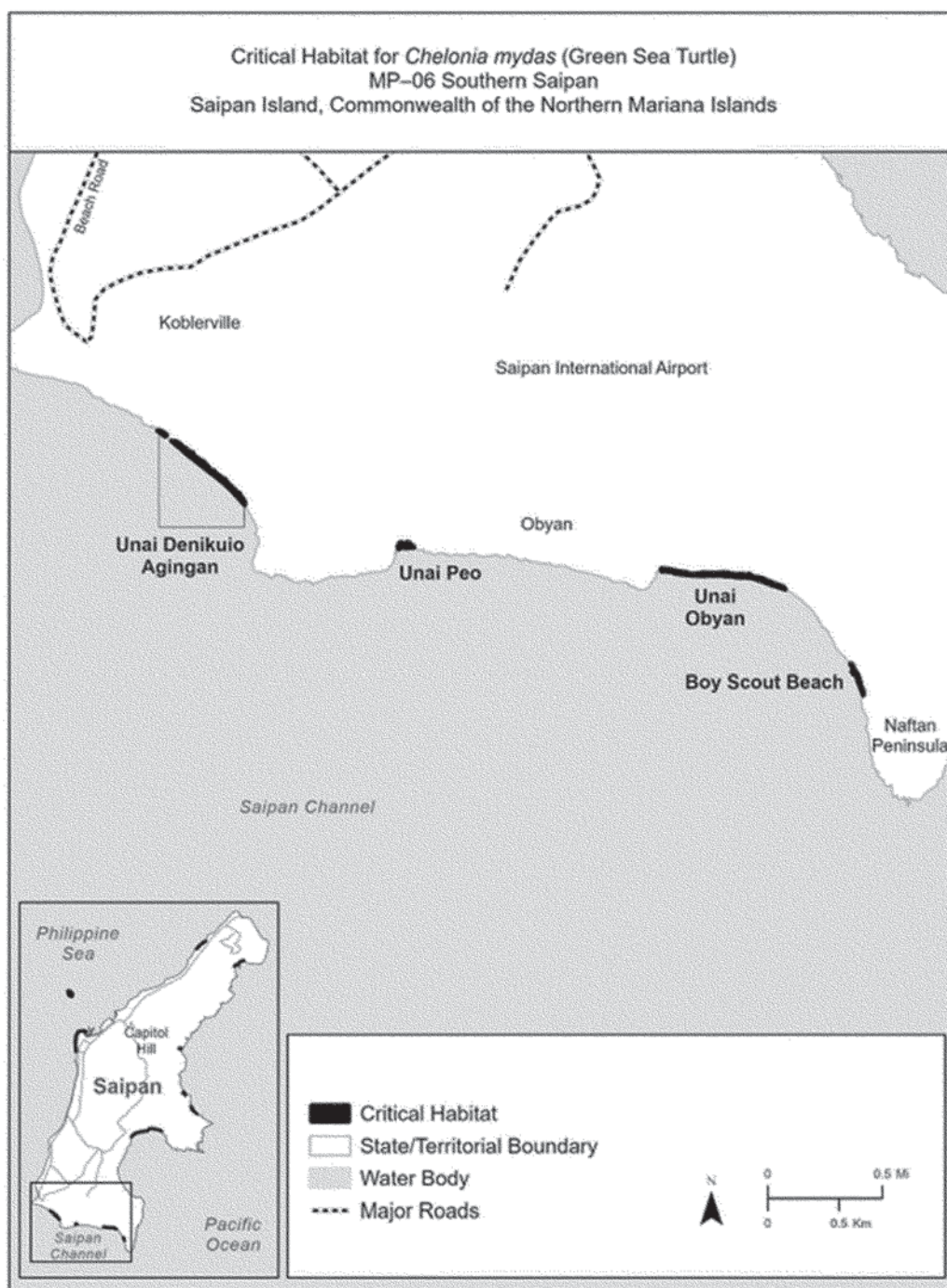
(i) Unit MP-06 consists of 8 ac (3 ha) along the southern coast of Saipan and is located approximately 8 mi (13 km) northeast of Capitol Hill, Saipan. This unit includes beach and coastal vegetation from the MHWL to the line indicating the beginning of dense

vegetation, cliff, or hardened or developed structures. This unit comprises five segments in three areas: two segments near the west end of the Saipan Airport runway at Unai Denikuio Agingan (a.k.a. Coral Ocean Point), two segments along the south coast of Saipan at Unai Peo (a.k.a. Ladder Beach) and Unai Obyan, and one segment at Boy Scout Beach along the

west coast of the Naftan Peninsula. Lands within this unit include approximately 1 ac (less than 1 ha) in Commonwealth ownership and 7 ac (3 ha) that are uncategorized.

(ii) Map of Unit MP-06 follows:

Figure 20 to Green Sea Turtle (*Chelonia mydas*), Central West Pacific DPS paragraph (25)(ii)



(26) Unit MP-07: Western Tinian, Tinian Island, Commonwealth of the Northern Mariana Islands.

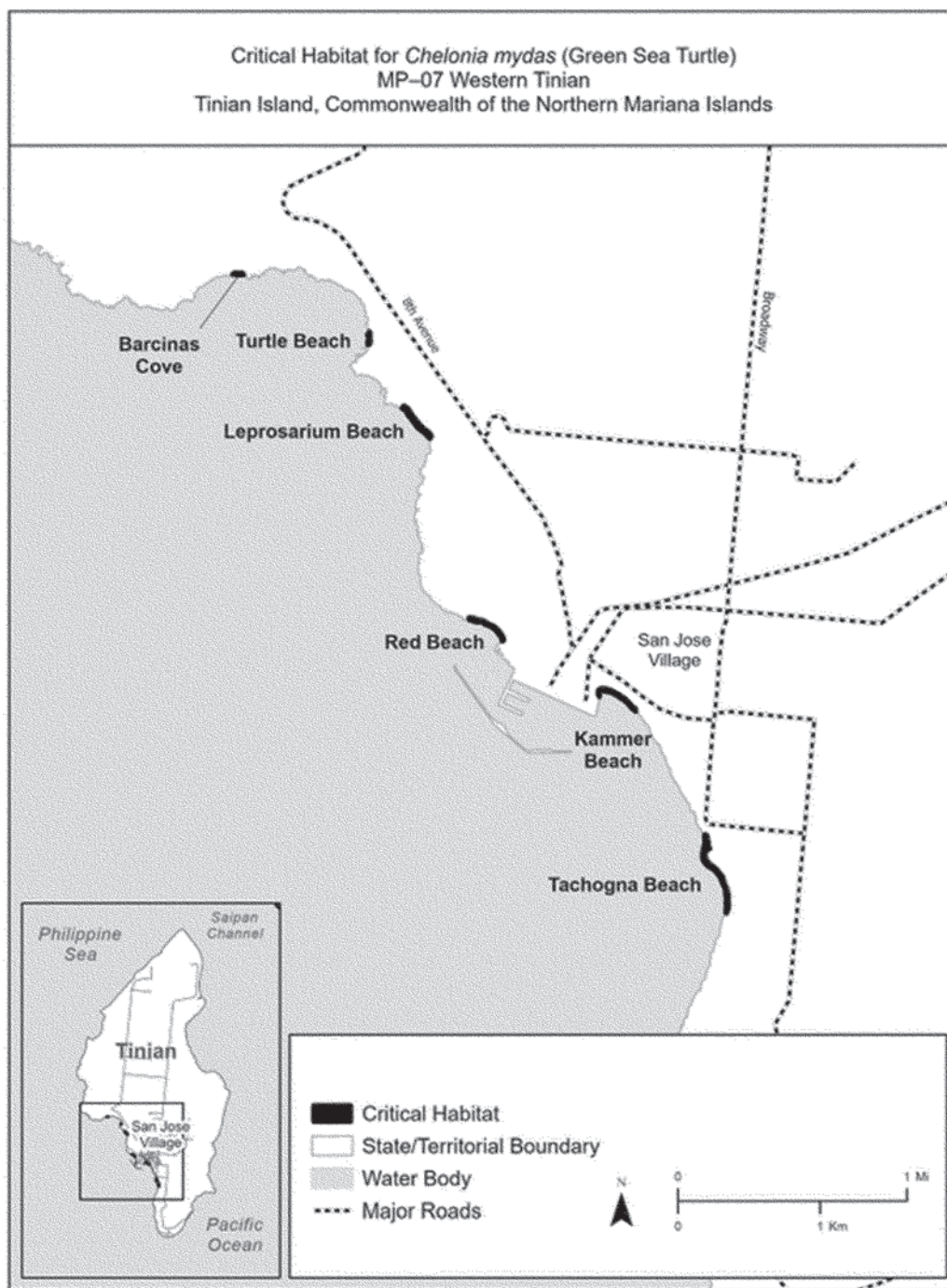
(i) Unit MP-07 consists of 6 ac (3 ha) along the western coast of Tinian Island and is located approximately 2 mi (2 km) northwest of San Jose Village. This unit includes beach and coastal

vegetation from the MHWL to the line indicating the beginning of dense vegetation, cliff, or hardened or developed structures. This unit is comprised of six segments, one each at Barcinas Cove, Turtle Beach, Leprosarium Beach, Red Beach, Kammer Beach, and Tachogna Beach.

Lands within this unit include approximately 3 ac (1 ha) in Commonwealth ownership and 4 ac (1 ha) that are uncategorized.

(ii) Map of Unit MP-07 follows: Figure 21 to Green Sea Turtle (*Chelonia mydas*), Central West Pacific DPS paragraph (26)(ii)





(27) Unit MP-08: Northern Rota, Rota Island, Commonwealth of the Northern Mariana Islands.

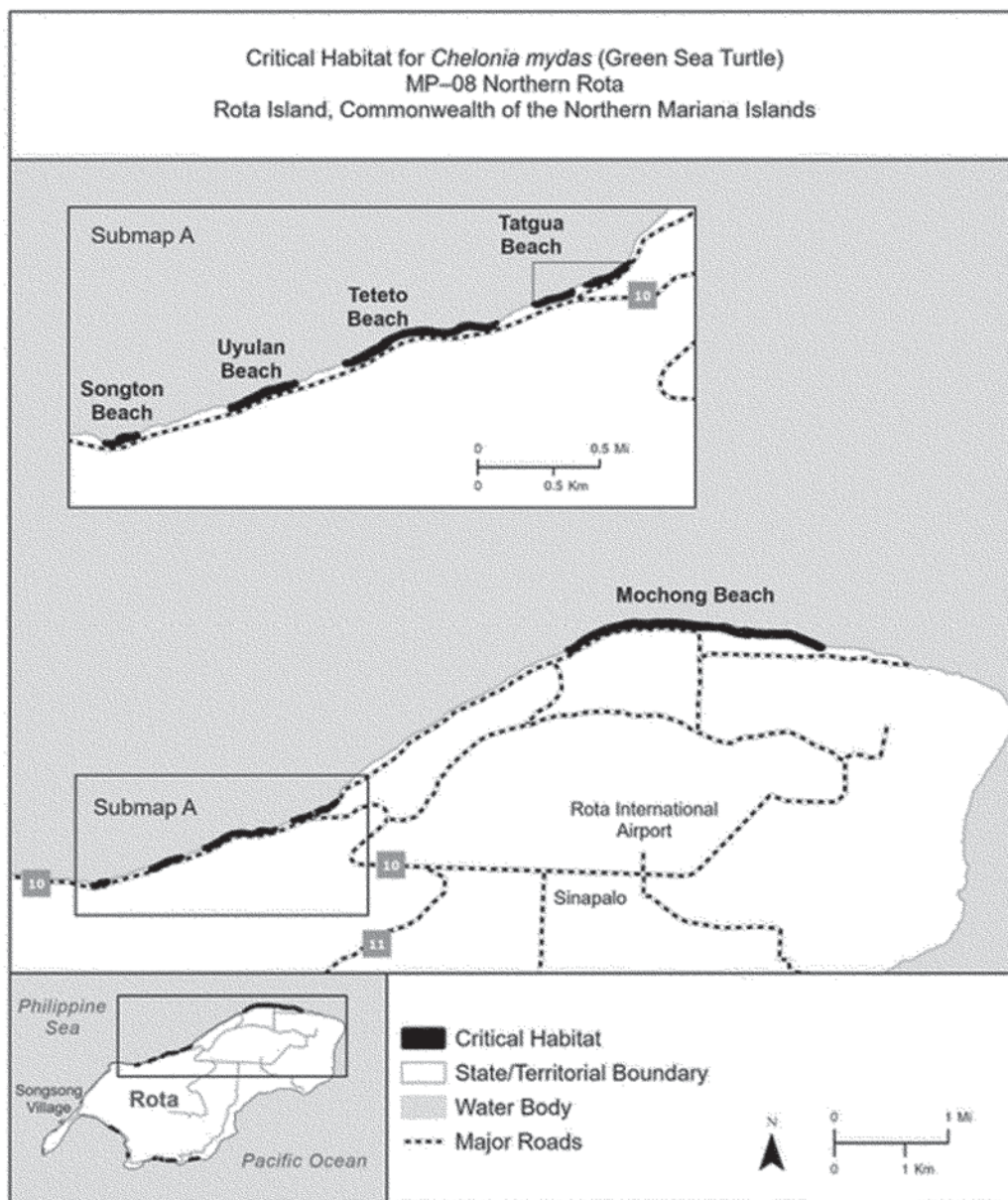
(i) Unit MP-08 consists of 54 ac (22 ha) on northern Rota Island, the second-most southern island in the Mariana archipelago, and is located approximately 3 mi (5 km) to 7 mi (11 km) northeast of Songsong Village. This unit includes beach and coastal

vegetation from the MHWL to the line indicating the beginning of dense vegetation, cliff, or hardened or developed structures. This unit comprises six segments in two areas: one segment north of Rota International Airport along Mochong Beach; and five segments west of Rota International Airport along Tatgua Beach, Teteto Beach, Uyulan Beach, and Songton

Beach. Lands within this unit include approximately 44 ac (18 ha) in Commonwealth ownership, 2 ac (1 ha) in private ownership, and 9 ac (4 ha) that are uncategorized.

(ii) Map of Unit MP-08 follows:

Figure 22 to Green Sea Turtle (*Chelonia mydas*), Central West Pacific DPS paragraph (27)(ii)



(28) Unit MP-09: Southern Rota, Rota Island, Commonwealth of the Northern Mariana Islands.

(i) Unit MP-09 consists of 9 ac (4 ha) on southern Rota Island and is located approximately 2 mi (3 km) southeast of Songsong Village. This unit includes beach, coastal vegetation, and atoll forest from the MHWL to the line indicating the beginning of dense

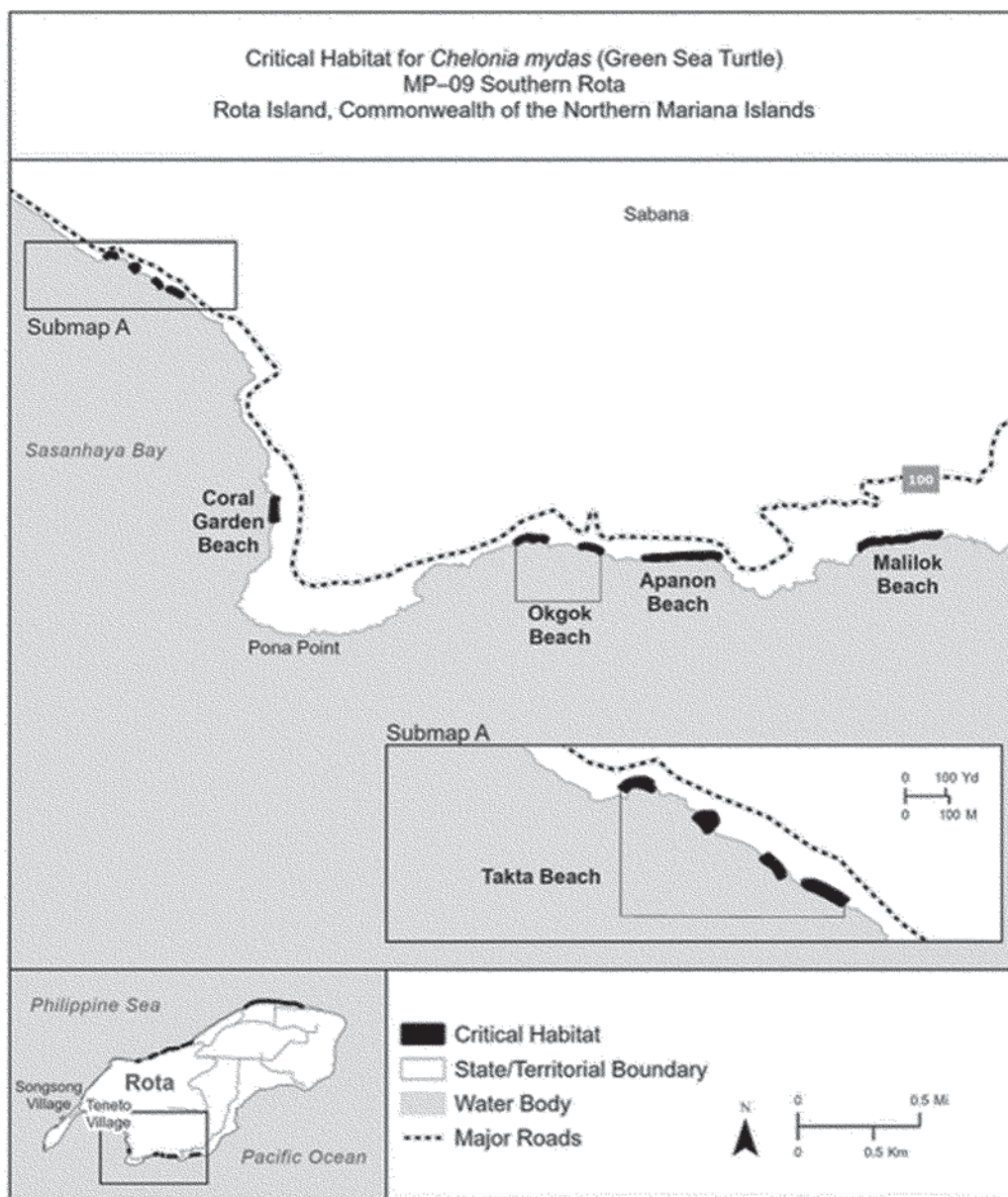
vegetation, cliff, or hardened or developed structures. This unit comprises nine segments in four areas: four segments southeast of Teneto Village along Tatka Beach in Sasanhaya Bay, one segment at Coral Garden Beach, two segments on Okgok Beach and one segment on Apanon Beach, and one segment on Malilok Beach. Lands within this unit include approximately

8 ac (3 ha) in Commonwealth ownership, less than 1 ac (less than 1 ha) in private ownership, and 1 ac (1 ha) that is uncategorized.

(ii) Map of Unit MP-09 follows:

Figure 23 to Green Sea Turtle (*Chelonia mydas*), Central West Pacific DPS paragraph (28)(ii)



**BILLING CODE 4333-15-C****Green Sea Turtle (*Chelonia mydas*),  
North Atlantic DPS**

(1) Within the North Atlantic distinct population segment (DPS) of the green sea turtle, critical habitat units are depicted for Brevard, Broward, Charlotte, Escambia, Flagler, Franklin, Gulf, Indian River, Lee, Martin, Monroe, Palm Beach, Sarasota, St. Johns, St. Lucie, Volusia, and Walton Counties in the State of Florida; and on Mona Island, Vieques Island, and the Municipalities of Guayama and Maunabo in the Commonwealth of Puerto Rico on the maps in this entry.

(2) Within these areas, the physical or biological features essential to the conservation of green sea turtle consist of the following components:

(i) Extra-tidal or dry sandy beaches from the mean high water line—the line on a chart or map that represents the intersection of the land with the water surface at the elevation of mean high water line—to areas of beach landward of the mean high water line and which contain the characteristics set forth in paragraphs (2)(i) through (iii) of this entry. These beaches include:

(A) Habitat for green turtles to transit across beaches and for nest placement that includes:

(1) Relatively unimpeded wet and dry sand or nearshore access areas from the ocean to the beach for nesting females and from the beach to the ocean for both post-nesting females and hatchlings; and

(2) Drier sand areas located above mean high water in the supralittoral

zone to avoid being inundated frequently by high tides.

(B) Sand substrate that:

(1) Allows for suitable nest construction;

(2) Is suitable for facilitating gas diffusion conducive to embryo development;

(3) Can develop and maintain temperatures and a moisture content conducive to embryo development; and

(4) Allows for emergence of hatchlings from eggshells, through sand substrate to the beach surface.

(ii) Nesting beach habitat with sufficient darkness such that nesting turtles are not deterred from emerging onto the beach and hatchlings and post-nesting females can orient to the sea.

(iii) Natural coastal processes or artificially created or maintained habitat

mimicking natural conditions. This includes artificial habitat types that mimic natural conditions described in paragraphs (2)(i) and (ii) of this entry for beach access, nest site selection, nest construction, egg deposition and incubation, and hatchling emergence and movement to the sea.

(3) Critical habitat does not include manmade structures (such as buildings, aqueducts, runways, roads and other paved areas, abandoned military structures, and hardened shorelines) and the land on which they are located existing within the legal boundaries on the effective date of the final rule.

(4) Data layers defining map units were created using green sea turtle

distribution data provided by multiple local and regional sources as available (*e.g.*, published data, unpublished reports, databases, and State data maintained by the Florida Fish and Wildlife Coastal Commission, universities, local governments, and nonprofit organizations across the range of the species). Landforms were primarily delineated based on the most current available aerial maps. The maps in this entry, as modified by any accompanying regulatory text, establish the boundaries of the terrestrial critical habitat designation. The coordinates or plot points or both on which each map is based are available to the public at the

USFWS's internet site at <https://www.fws.gov/office/florida-ecological-services/library/green-sea-turtle>, at <https://www.regulations.gov> under Docket No. FWS-R4-ES-2022-0164, and at the two field offices responsible for this designation. You may obtain field office location information by contacting one of the USFWS regional offices, the addresses of which are listed at 50 CFR 2.2.

(5) Three index maps follow:

**BILLING CODE 4333-15-P**

Figure 1 to Green Sea Turtle (*Chelonia mydas*), North Atlantic DPS paragraph (5)





Figure 2 to Green Sea Turtle (*Chelonia mydas*), North Atlantic DPS paragraph (5)



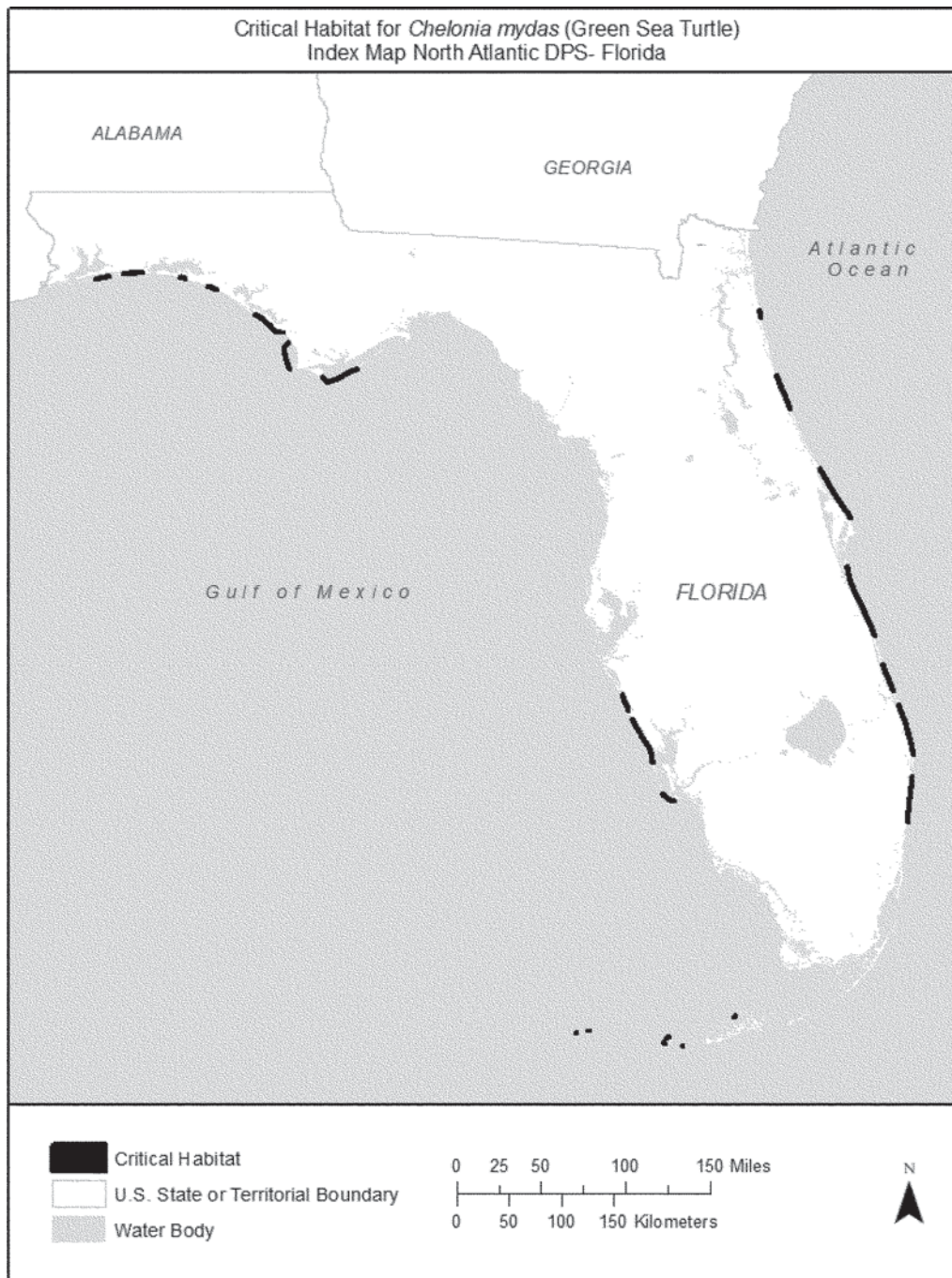
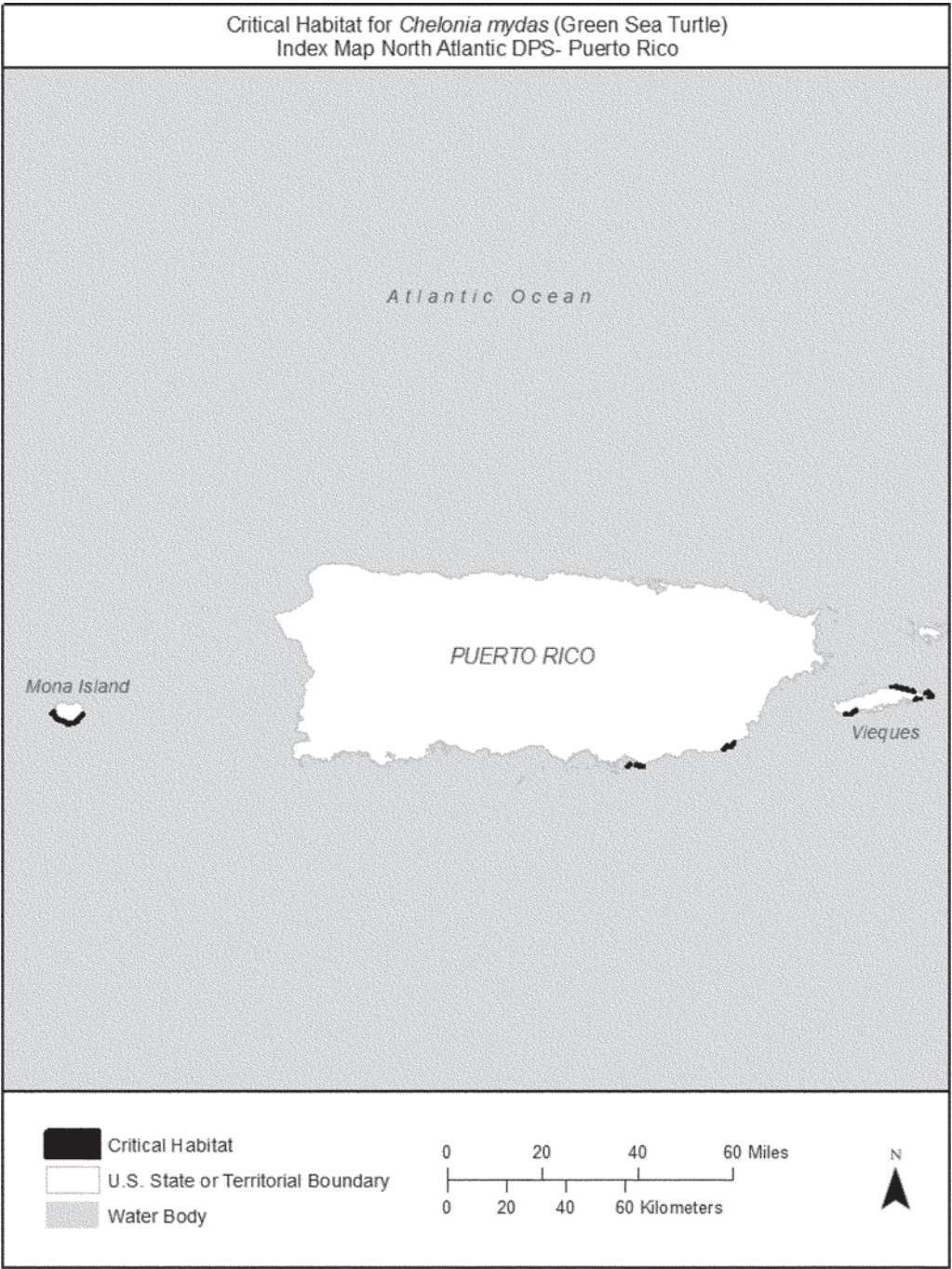


Figure 3 to Green Sea Turtle (*Chelonia mydas*), North Atlantic DPS paragraph (5)





(6) Unit FL-01: Guana Tolomato Matanzas National Estuarine Research Reserve—Guana River Site, St. Johns County, Florida.

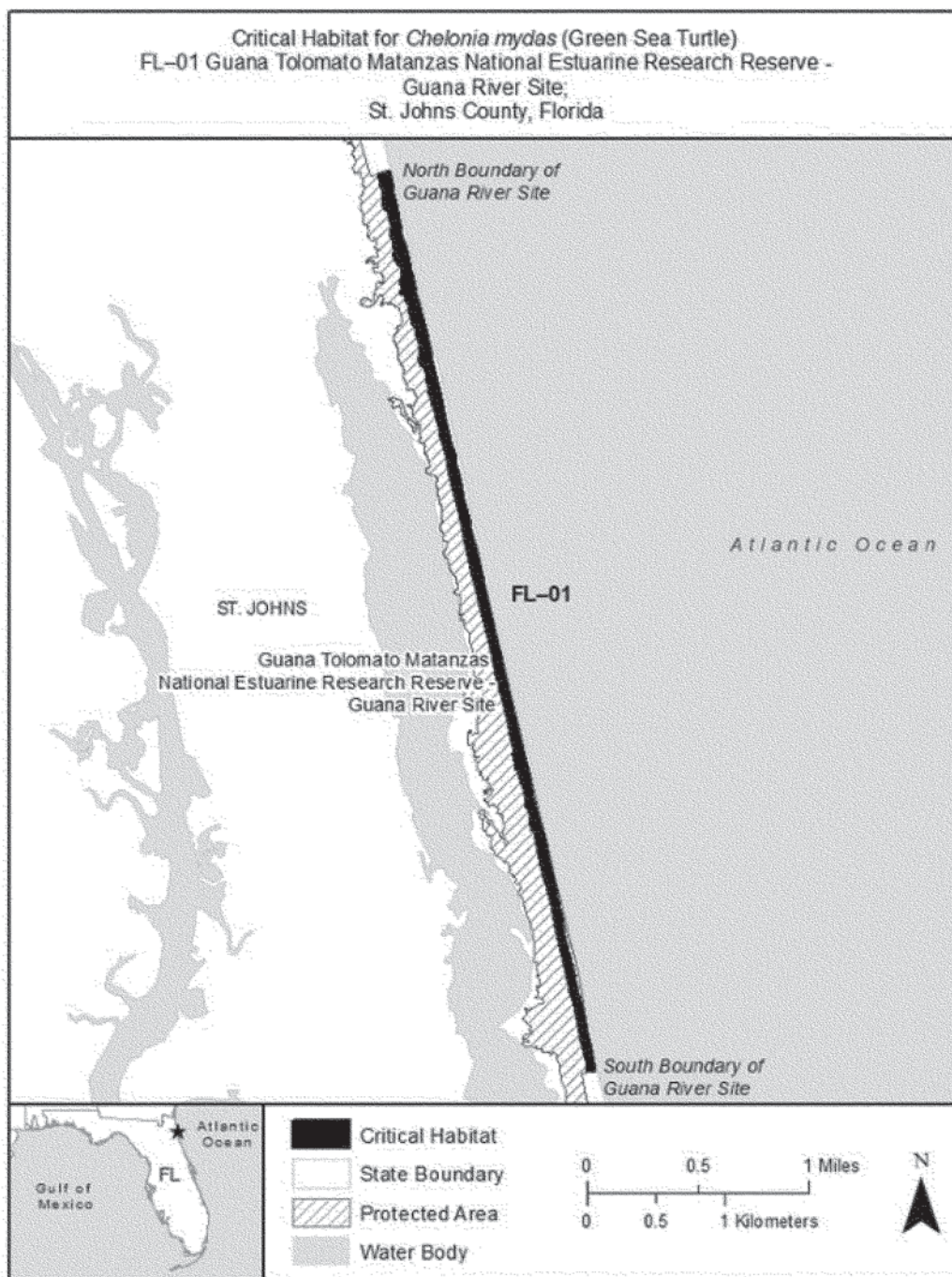
(i) Unit FL-01 consists of approximately 112 acres (ac) (45 hectares (ha)) of Atlantic Ocean

shoreline that includes beach, dune, and coastal vegetation within the boundaries of the Guana Tolomato Matanzas National Estuarine Research Reserve—Guana River Site. The unit includes lands from the mean high water line (MHWL) to the toe of the secondary

dune or developed structures. Lands within this unit are entirely within State ownership.

(ii) Map of Unit FL-01 follows: Figure 4 to Green Sea Turtle (*Chelonia mydas*), North Atlantic DPS paragraph (6)(ii)





(7) Unit FL-02: Washington Oaks Gardens State Park to North Peninsula State Park, Flagler and Volusia Counties, Florida.

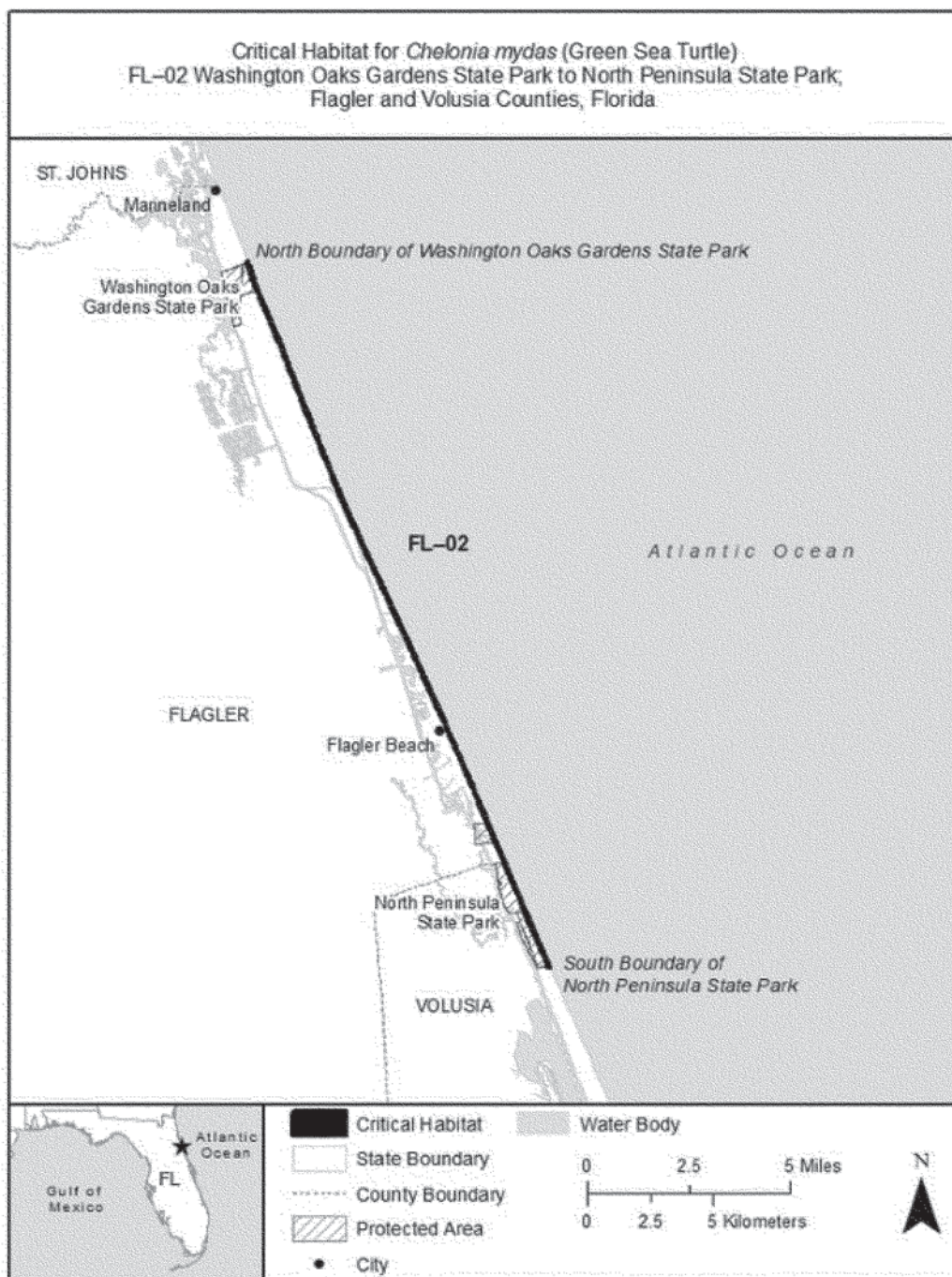
(i) Unit FL-02 consists of approximately 307 ac (124 ha) of Atlantic Ocean shoreline that includes beach, dune, and coastal vegetation. The

unit extends from the northern boundary of Washington Oaks Gardens State Park in Flagler County to the southern boundary of North Peninsula State Park in Volusia County and includes lands from the MHWL to the toe of the secondary dune or developed structures. Lands within this unit

include approximately 77 ac (31 ha) in State ownership, 61 ac (25 ha) in local government ownership, and 169 ac (68 ha) in private/other ownership.

(ii) Map of Unit FL-02 follows: Figure 5 to Green Sea Turtle (*Chelonia mydas*), North Atlantic DPS paragraph (7)(ii)





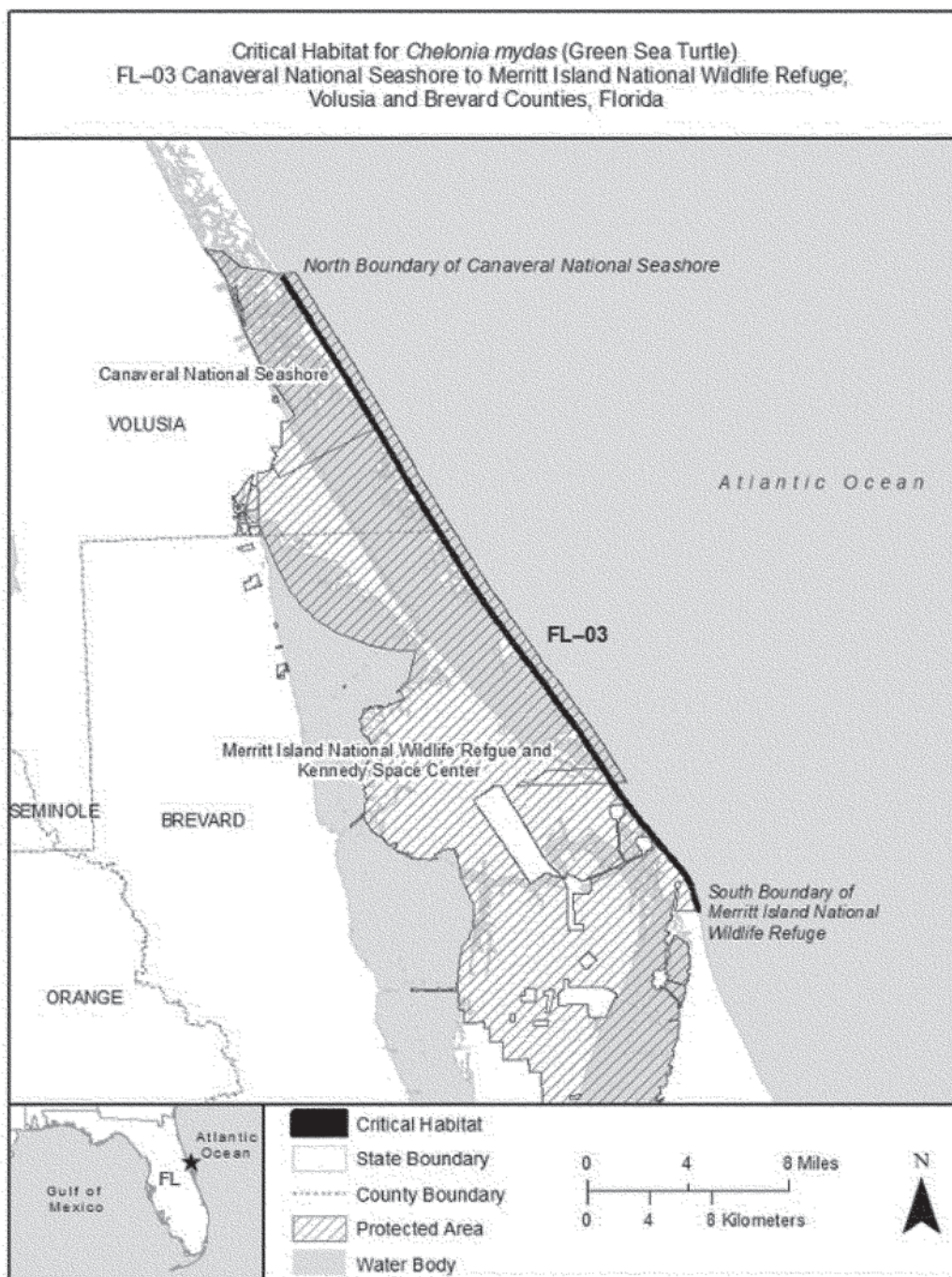
(8) Unit FL-03: Canaveral National Seashore to Merritt Island National Wildlife Refuge, Volusia and Brevard Counties, Florida.

(i) Unit FL-03 consists of approximately 558 ac (226 ha) of Atlantic Ocean shoreline that includes

beach, dune, and coastal vegetation. The unit extends from the northern boundary of Canaveral National Seashore to the southern boundary of Merritt Island National Wildlife Refuge (NWR)—Kennedy Space Center and includes lands from the MHWL to the

toe of the secondary dune or developed structures. Lands within this unit are entirely in Federal ownership.

(ii) Map of Unit FL-03 follows: Figure 6 to Green Sea Turtle (*Chelonia mydas*), North Atlantic DPS paragraph (8)(ii)



(9) Unit FL-04: Satellite Beach to Indian River Shores, Brevard and Indian River Counties, Florida.

(i) Unit FL-04 consists of approximately 644 ac (261 ha) of Atlantic Ocean shoreline that includes beach, dune, and coastal vegetation. The unit is divided into two segments split by Sebastian Inlet and includes lands from the MHWL to the toe of the

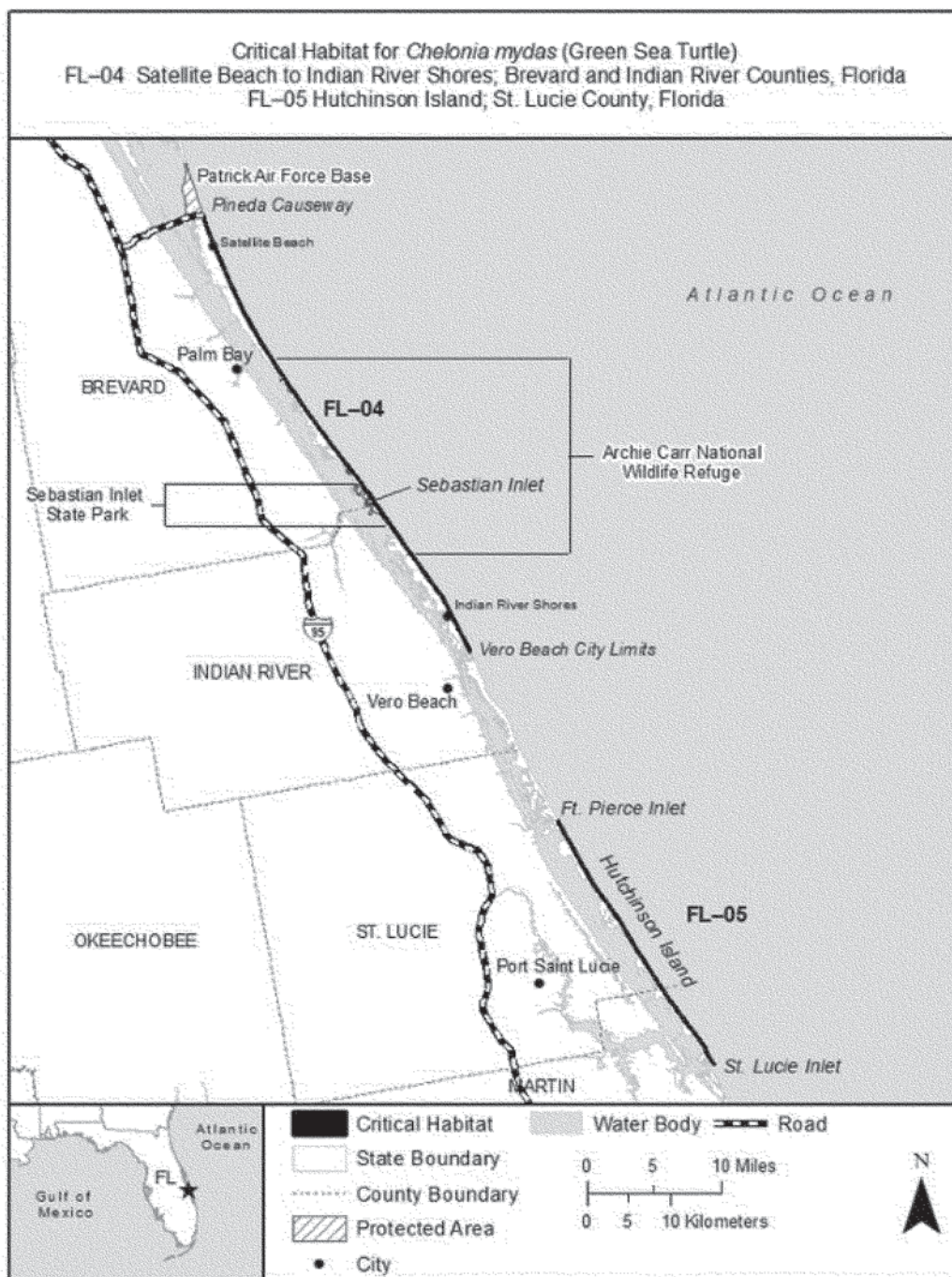
secondary dune or developed structures. The northern segment extends from the southern boundary of Patrick Space Force Base in Brevard County near the Pineda Causeway to the northern side of the Sebastian Inlet in Indian River County. The southern segment extends from the southern side of Sebastian Inlet to the Indian River Shores—Vero Beach city limits line. Lands within this unit

include approximately 52 ac (21 ha) in Federal ownership, 72 ac (29 ha) in State ownership, 120 ac (48 ha) in local government ownership, and 400 ac (163 ha) in private/other ownership.

(ii) Map of Units FL-04 and FL-05 follows:

Figure 7 to Green Sea Turtle (*Chelonia mydas*), North Atlantic DPS paragraph (9)(ii)





(10) Unit FL-05: Hutchinson Island, St. Lucie County, Florida.

(i) Unit FL-05 consists of approximately 336 ac (136 ha) of Atlantic Ocean shoreline that includes beach, dune, and coastal vegetation on Hutchinson Island from the southern side of the Ft. Pierce Inlet to the northern side of the St. Lucie Inlet. The unit includes lands from the MHWL to the toe of the secondary dune or developed structures. Lands within this unit include 119 ac (48 ha) in local

government ownership and 217 ac (88 ha) in private/other ownership.

(ii) Map of Unit FL-05 is provided at paragraph (9)(ii) of this entry.

(11) Unit FL-06: St. Lucie Inlet to Jupiter Inlet, Martin and Palm Beach Counties, Florida.

(i) Unit FL-06 consists of approximately 324 ac (131 ha) of Atlantic Ocean shoreline that includes beach, dune, and coastal vegetation. The unit extends from the southern side of the St. Lucie Inlet in Martin County to the northern side of the Jupiter Inlet in

Palm Beach County and includes lands from the MHWL to the toe of the secondary dune or developed structures. Lands within this unit include approximately 69 ac (28 ha) in Federal ownership, 49 ac (20 ha) in State ownership, 11 ac (5 ha) in local government ownership, and 195 ac (78 ha) in private/other ownership.

(ii) Map of Units FL-06 and FL-07 follows:

Figure 8 to Green Sea Turtle (*Chelonia mydas*), North Atlantic DPS paragraph (11)(ii)





(12) Unit FL-07: Jupiter Inlet to Lake Worth Inlet, Palm Beach County, Florida.

(i) Unit FL-07 consists of approximately 214 ac (87 ha) of Atlantic Ocean shoreline that includes beach, dune, and coastal vegetation. The unit extends from the southern side of the Jupiter Inlet to the northern side of the Lake Worth Inlet and includes lands from the MHWL to the toe of the secondary dune or developed structures. Lands within this unit include approximately 25 ac (10 ha) in State

ownership, 85 ac (35 ha) in local government ownership, and 104 ac (42 ha) in private/other ownership.

(ii) Map of Unit FL-07 is provided at paragraph (11)(ii) of this entry.

(13) Unit FL-08: Palm Beach to Boynton Inlet, Palm Beach County, Florida.

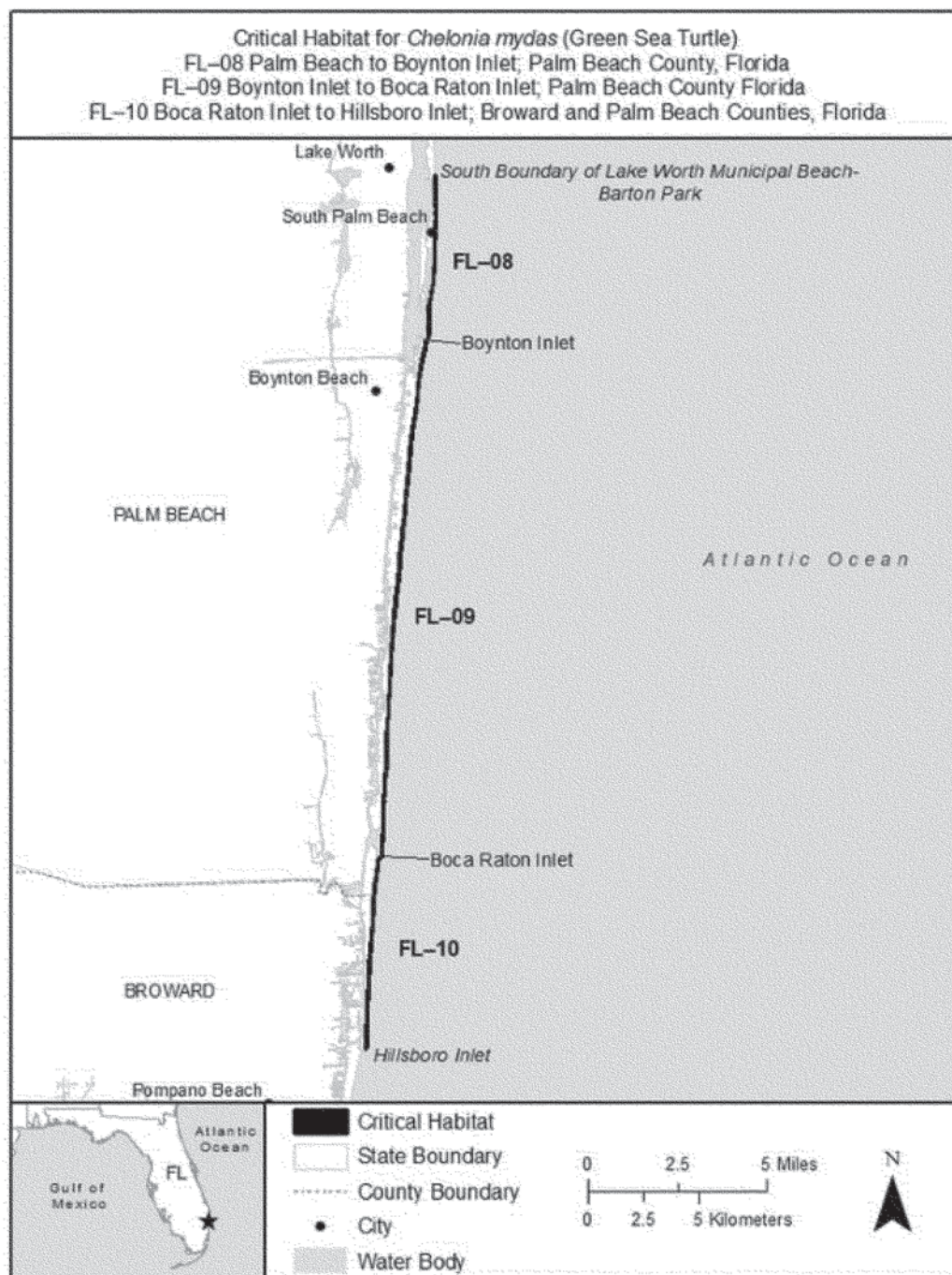
(i) Unit FL-08 consists of approximately 42 ac (17 ha) of Atlantic Ocean shoreline that includes beach, dune, and coastal vegetation. The unit extends from the southern boundary of the Lake Worth Municipal Beach-

Barton Park to the northern side of the Boynton Inlet and includes lands from the MHWL to the toe of the secondary dune or developed structures. Lands within this unit include approximately 1 ac (0.4 ha) in local government ownership and 41 ac (17 ha) in private/other ownership.

(ii) Map of Units FL-08, FL-09, and FL-10 follows:

Figure 9 to Green Sea Turtle (*Chelonia mydas*), North Atlantic DPS paragraph (13)(ii)



**BILLING CODE 4333-15-C**

(14) Unit FL-09: Boynton Inlet to Boca Raton Inlet, Palm Beach County, Florida.

(i) Unit FL-09 consists of approximately 214 ac (87 ha) of Atlantic Ocean shoreline that includes beach, dune, and coastal vegetation. The unit extends from the southern side of the Boynton Inlet to the northern side of Boca Raton Inlet and includes lands from the MHWL to the toe of the secondary dune or developed structures. Lands within this unit include approximately 66 ac (27 ha) in local

government ownership and 148 ac (60 ha) in private/other ownership.

(ii) Map of Unit FL-09 is provided at paragraph (13)(ii) of this entry.

(15) Unit FL-10: Boca Raton Inlet to Hillsboro Inlet, Palm Beach and Broward Counties, Florida.

(i) Unit FL-10 consists of approximately 82 ac (34 ha) of Atlantic Ocean shoreline that includes beach, dune, and coastal vegetation. The unit extends from the southern side of Boca Raton Inlet in Palm Beach County to the northern side of the Hillsboro Inlet in

Broward County and includes lands from the MHWL to the toe of the secondary dune or developed structures. Lands within this unit include approximately 1 ac (less than 1 ha) in Federal ownership, 16 ac (7 ha) in local government ownership, and 65 ac (26 ha) in private/other ownership.

(ii) Map of Unit FL-10 is provided at paragraph (13)(ii) of this entry.

(16) Unit FL-11: Sawyer Key, Monroe County, Florida.

(i) Unit FL-11 consists of approximately 6 ac (3 ha) of the Gulf of



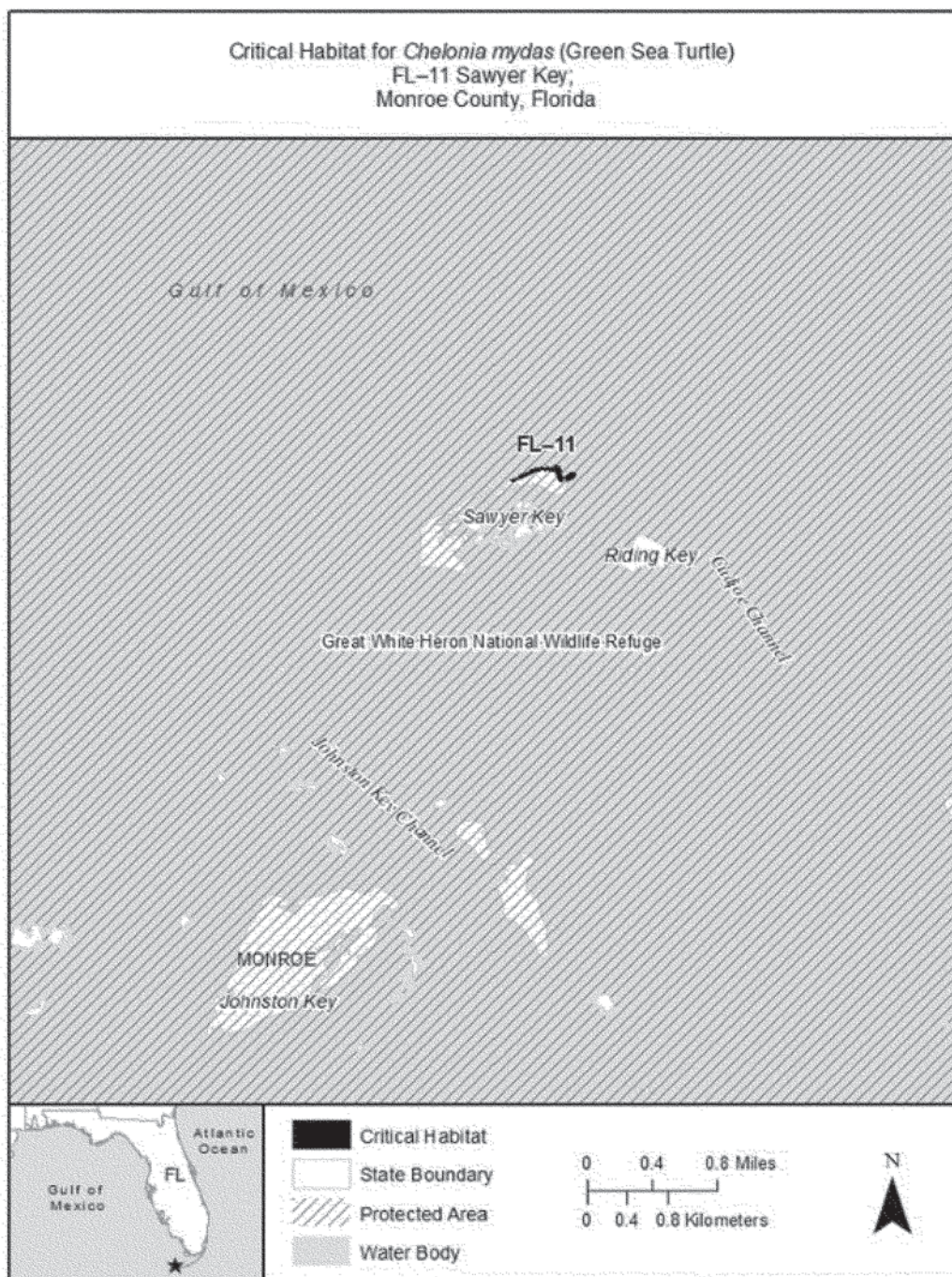
Mexico shoreline on the northeastern-most portion of Sawyer Key, which is part of a multi-island complex between the Johnston Key and Cudjoe Channel. This unit includes beach, dune, and

coastal vegetation from the MHWL to the toe of the secondary dune. Lands within this unit are entirely federally owned.

(ii) Map of Unit FL-11 follows:

BILLING CODE 4333-15-P

Figure 10 to Green Sea Turtle (*Chelonia mydas*), North Atlantic DPS paragraph (16)(ii)



(17) Unit FL-12: Boca Grande and Marquesas Keys, Monroe County, Florida.

(i) Unit FL-12 consists of approximately 28 ac (11 ha) of the Gulf of Mexico shoreline and includes beach, dune, and coastal vegetation from the

MHWL to the toe of the secondary dune. The unit includes lands on two keys. The portion of the unit on Boca Grande Key (one of the outlying islands of the Florida Keys located about 12 miles (mi) (19 kilometers (km)) west of Key West) includes the western shore of the key.

The portion of the unit on Marquesas Key (one of eight uninhabited islands that comprise "the Marquesas Keys," which is part of a small group of islands located at the end of the Florida Keys about 18 mi (29 km) west of Key West) includes three beach segments along the

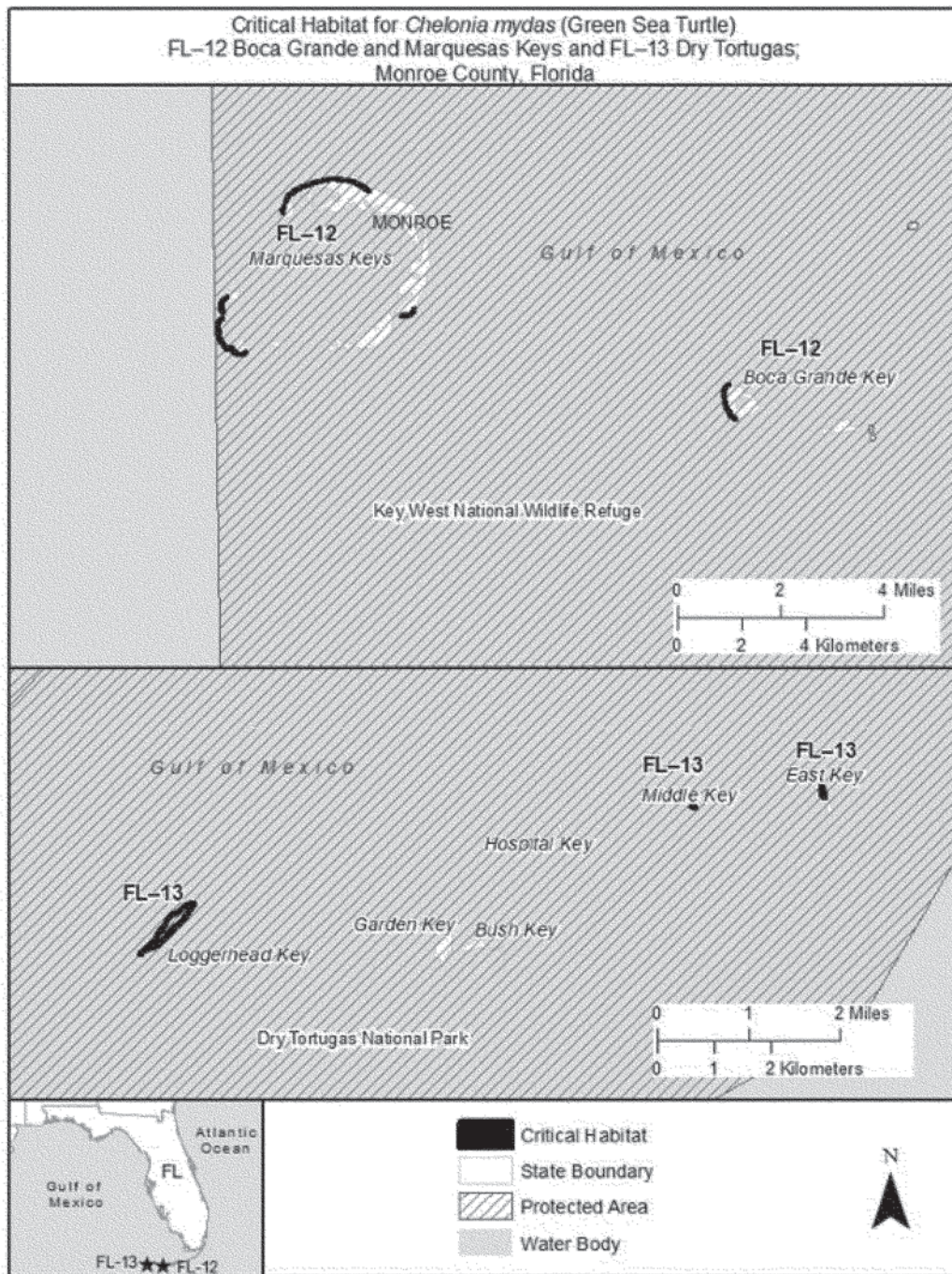


largest northern-most key and three beach segments along unnamed keys to the southwest of the largest key. Lands

within this unit are entirely federally owned.

(ii) Map of Units FL-12 and FL-13 follows:

Figure 11 to Green Sea Turtle (*Chelonia mydas*), North Atlantic DPS paragraph (17)(ii)



(18) Unit FL-13: Dry Tortugas, Monroe County, Florida.

(i) Unit FL-13 consists of approximately 21 ac (8 ha) of Gulf of Mexico shoreline within the Dry Tortugas, which comprises seven islands located at the end of the Florida Keys about 67 mi (108 km) west of Key

West. The unit occurs on the East, Middle, and Loggerhead Keys of the Dry Tortugas, including beach, dune, and coastal vegetation from the MHWL to the toe of the secondary dune. Lands within this unit are entirely federally owned.

(ii) Map of Unit FL-13 is provided at paragraph (17)(ii) of this entry.

(19) Unit FL-14: Sanibel Island West, Lee County, Florida.

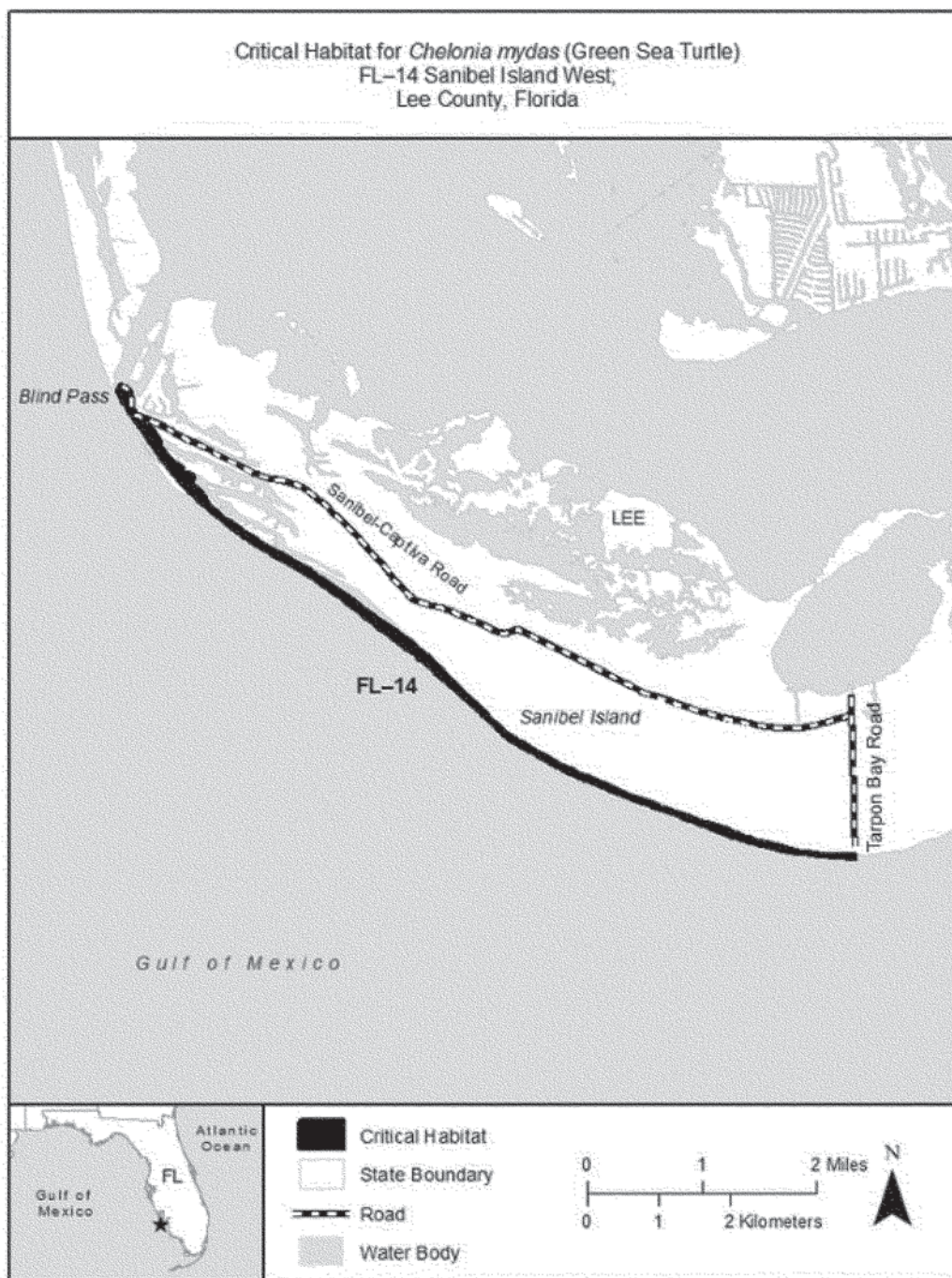
(i) Unit FL-14 consists of approximately 189 ac (76 ha) of the Gulf of Mexico shoreline that includes beach, dune, and coastal vegetation on Sanibel Island from the southern side of Blind



Pass to Tarpon Bay Road. This unit includes lands from the MHWL to the toe of the secondary dune or developed structures. Lands within this unit

include approximately 76 ac (31 ha) in local government ownership and 113 ac (45 ha) in private/other ownership.  
(ii) Map of Unit FL-14 follows:

Figure 12 to Green Sea Turtle (*Chelonia mydas*), North Atlantic DPS paragraph (19)(ii)



(20) Unit FL-15: Gasparilla Island, Lee and Charlotte Counties, Florida.

(i) Unit FL-15 consists of approximately 155 ac (63 ha) of the Gulf of Mexico shoreline that includes beach, dune, and coastal vegetation on Gasparilla Island from the southern side

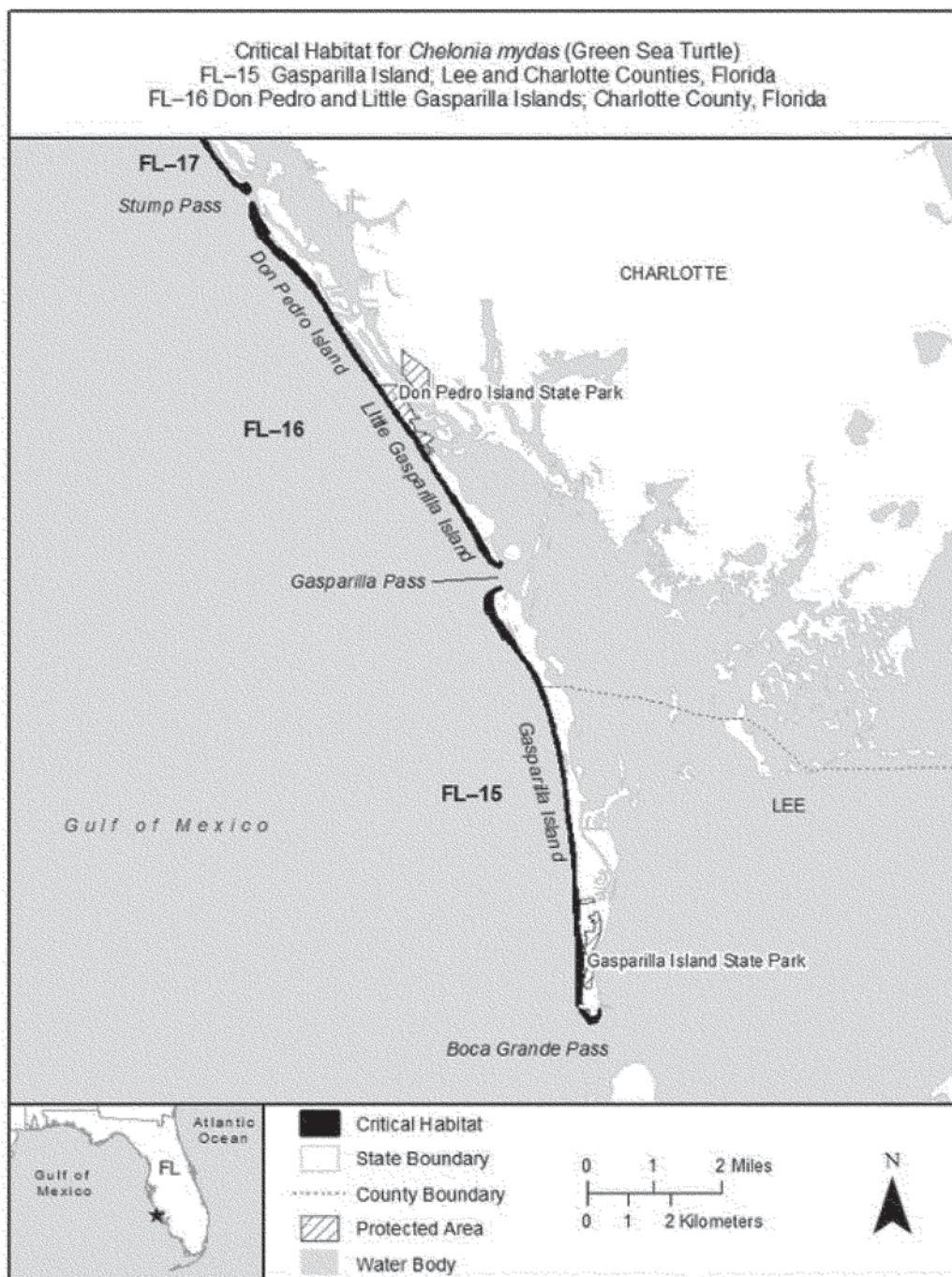
of Gasparilla Pass to the northern side of Boca Grande Pass. This unit includes lands from the MHWL to the toe of the secondary dune or developed structures. Lands within this unit include approximately 5 ac (2 ha) in Federal ownership, 25 ac (10 ha) in State

ownership, and 125 ac (51 ha) in private/other ownership.

(ii) Map of Units FL-15 and FL-16 follows:

Figure 13 to Green Sea Turtle (*Chelonia mydas*), North Atlantic DPS paragraph (20)(ii)



**BILLING CODE 4333-15-C**

(21) Unit FL-16: Don Pedro and Little Gasparilla Islands, Charlotte County, Florida.

(i) Unit FL-16 consists of approximately 186 ac (75 ha) of Gulf of Mexico shoreline of beach, dune, and coastal vegetation on Don Pedro and Little Gasparilla Islands. The unit extends from the southern side of Stump Pass to the northern side of Gasparilla Pass and includes lands from the MHWL to the toe of the secondary dune or developed structures. Lands within this unit include approximately

20 ac (8 ha) in State ownership and 166 ac (67 ha) in private/other ownership.

(ii) Map of Unit FL-16 is provided at paragraph (20)(ii) of this entry.

(22) Unit FL-17: Manasota Key, Charlotte and Sarasota Counties, Florida.

(i) Unit FL-17 consists of approximately 164 ac (66 ha) of the Gulf of Mexico shoreline that includes beach, dune, and coastal vegetation on Manasota Key from the MHWL to the toe of the secondary dune or developed structures. The unit comprises three

segments (excluding intervening areas with primarily hardened structures that lack sand features) from approximately 0.1 mi (0.2 km) south of Harbor Drive South to the northern side of Stump Pass. The northern segment extends from approximately 0.1 mi (0.2 km) south of Harbor Drive South to approximately 6.4 mi (10.3 km) south. The middle segment begins approximately 0.5 mi (0.8 km) north of the parking area at Blind Pass Park and extends south to approximately 170 feet (52 meters) south of the Charlotte-



Sarasota County boundary. The southern segment begins approximately 2.9 mi (4.7 km) north of Stump Pass and extends south to the northern side of Stump Pass. Lands within this unit include approximately 25 ac (10 ha) in

State ownership, 46 ac (19 ha) in local government ownership, and 93 ac (37 ha) in private/other ownership.

(ii) Map of Units FL-17 and FL-18 follows:

BILLING CODE 4333-15-P

Figure 14 to Green Sea Turtle (*Chelonia mydas*), North Atlantic DPS paragraph (22)(ii)



BILLING CODE 4333-15-C

(23) Unit FL-18: Casey and Siesta Keys, Sarasota County, Florida.

(i) Unit FL-18 consists of approximately 114 ac (46 ha) of Gulf of Mexico shoreline of beach, dune, and coastal vegetation from approximately

0.9 mi (1.4 km) south of the Point O'Rocks southward to the northern side of Venice Inlet. The unit includes lands from the MHWL to the toe of the secondary dune or developed structures and is divided into three segments to

exclude areas with primarily hardened structures that lack sand features. The northern segment begins at approximately 0.9 mi (1.4 km) south of the Point O'Rocks and continues southward approximately 3.8 mi (6.1



km) to the northern side of Venice Inlet. The middle segment begins approximately 0.35 mi (0.56 km) north of Blackburn Point Road and extends south for 0.15 mi (0.24 km). The southern segment begins approximately 0.3 mi (0.5 km) south of Blackburn Point Road and extends southward to the northern side of Venice Inlet. Lands within this unit include approximately 30 ac (12 ha) in local government ownership and 84 ac (34 ha) in private/other ownership.

(ii) Map of Unit FL-18 is provided at paragraph (22)(ii) of this entry.

(24) Unit FL-19: Cape St. George and St. George Island, Franklin County, Florida.

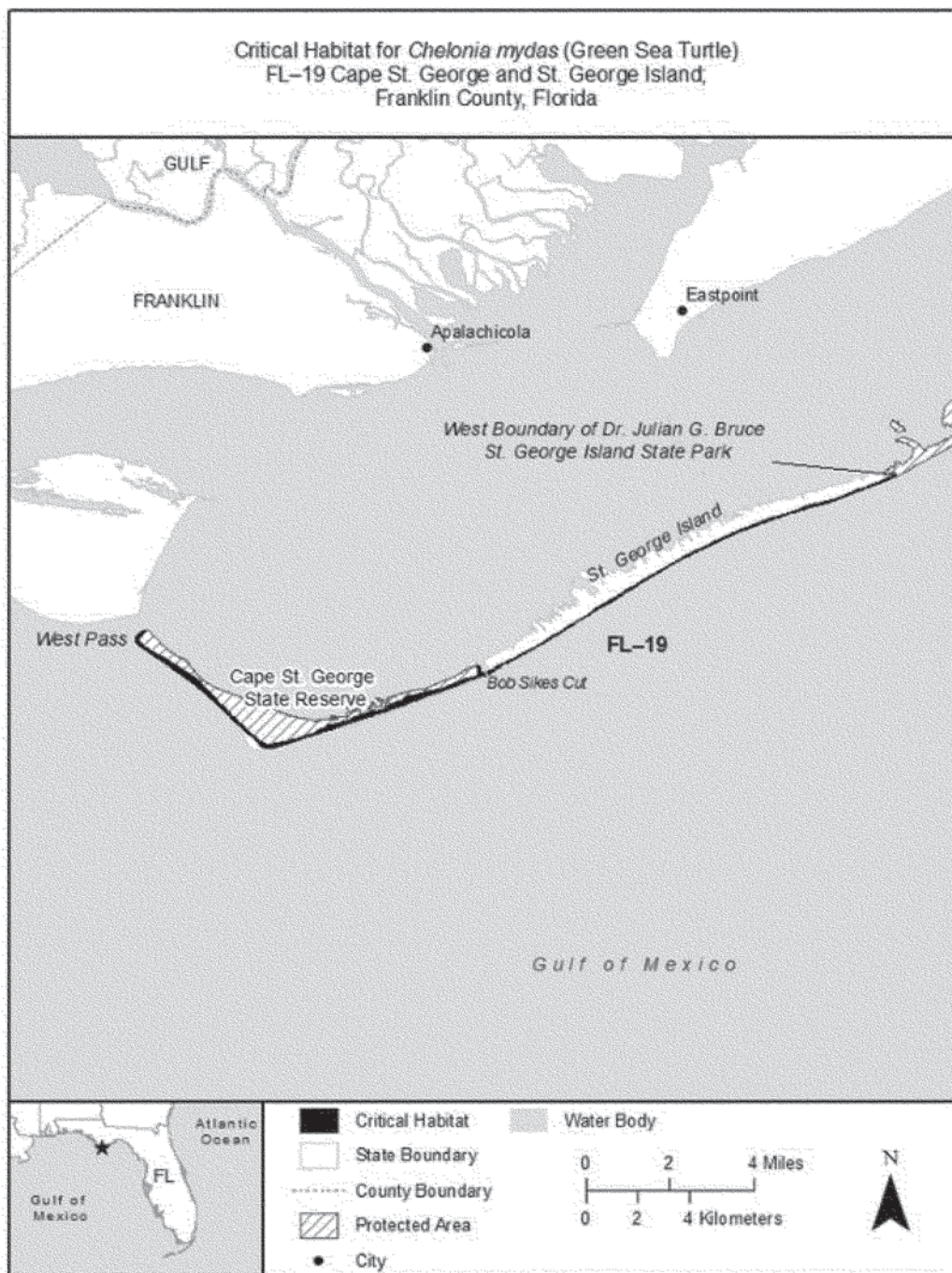
(i) Unit FL-19 consists of approximately 815 ac (330 ha) of the Gulf of Mexico shoreline that includes beach, dune, and coastal vegetation on Cape St. George and St. George Island from the eastern side of West Pass to the western boundary of Dr. Julian G. Bruce St. George Island State Park. This unit

includes lands from the MHWL to the toe of the secondary dune or developed structures. Lands within this unit include approximately 545 ac (221 ha) in State ownership and 270 ac (109 ha) in private/other ownership.

(ii) Map of Unit FL-19 follows:

BILLING CODE 4333-15-P

Figure 15 to Green Sea Turtle (*Chelonia mydas*), North Atlantic DPS paragraph (24)(ii)





(25) Unit FL-20: St. Joseph Peninsula, Gulf County, Florida.

(i) Unit FL-20 consists of approximately 622 ac (252 ha) of the Gulf of Mexico shoreline that includes beach, dune, and coastal vegetation from the northern end of the island at

St. Joe Point south to the boundary of Eglin Air Force Base on Cape San Blas. This unit includes lands from the MHWL to the toe of the secondary dune or developed structures. Lands within this unit include approximately 466 ac (189 ha) in State ownership, 2 ac (1 ha)

in local government ownership, and 154 ac (62 ha) in private/other ownership.

(ii) Map of Unit FL-20 follows:

Figure 16 to Green Sea Turtle (*Chelonia mydas*), North Atlantic DPS paragraph (25)(ii)



(26) Unit FL-21: Inlet Beach, Walton County, Florida.

(i) Unit FL-21 consists of approximately 93 ac (37 ha) of the Gulf of Mexico shoreline that includes beach,

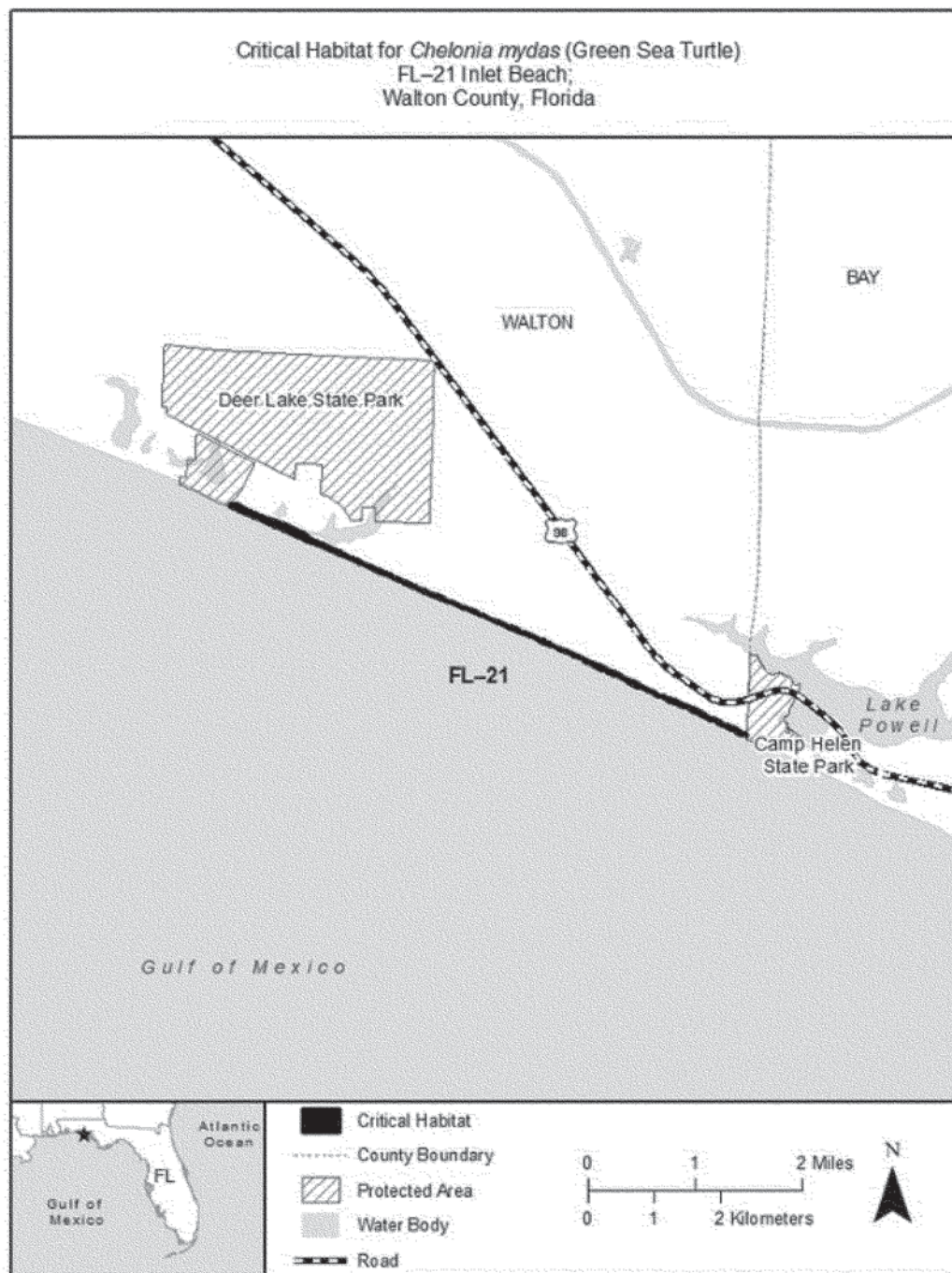
dune, and coastal vegetation from the eastern boundary of Deer Lake State Park to the western boundary of Camp Helen State Park. This unit includes lands from the MHWL to the toe of the

secondary dune or developed structures. Lands in this unit include 7 ac (3 ha) in local government ownership and 86 ac (34 ha) in private/other ownership.

(ii) Map of Unit FL-21 follows:



Figure 17 to Green Sea Turtle (*Chelonia mydas*), North Atlantic DPS paragraph (26)(ii)



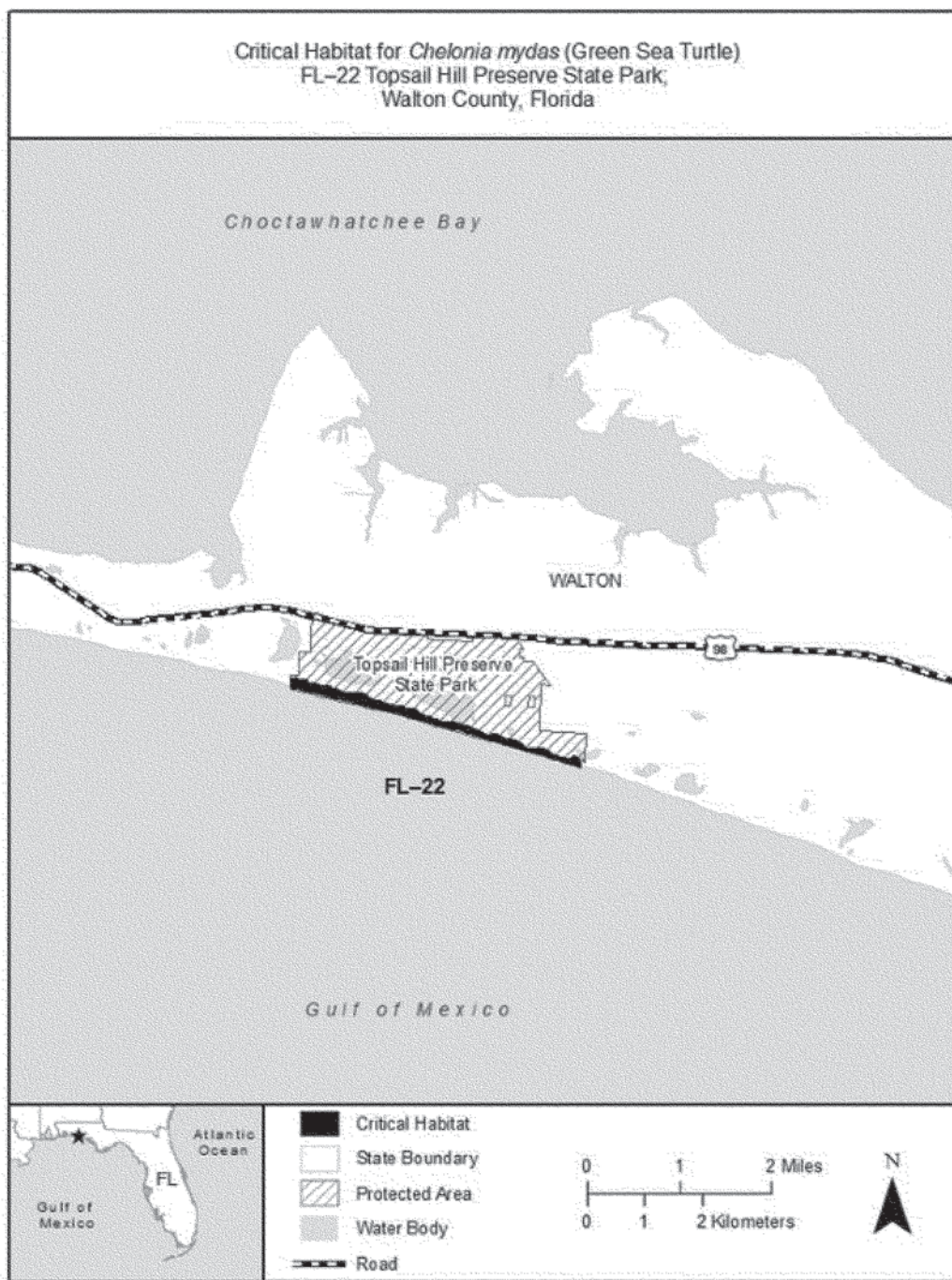
(27) Unit FL-22: Topsail Hill Preserve State Park, Walton County, Florida.

(i) Unit FL-22 consists of approximately 165 ac (67 ha) of the Gulf of Mexico shoreline that includes beach, dune, and coastal vegetation within the

boundaries of Topsail Hill Preserve State Park. This unit includes lands from the MHWL to the toe of the secondary dune or developed structures. Lands within this unit are entirely in State ownership.

(ii) Map of Unit FL-22 follows:

Figure 18 to Green Sea Turtle (*Chelonia mydas*), North Atlantic DPS paragraph (27)(ii)



(28) Unit FL-23: Gulf Islands National Seashore, Escambia County, Florida.

(i) Unit FL-23 consists of approximately 334 ac (135 ha) of the Gulf of Mexico shoreline that includes beach, dune, and coastal vegetation from the western boundary of the University of West Florida beach

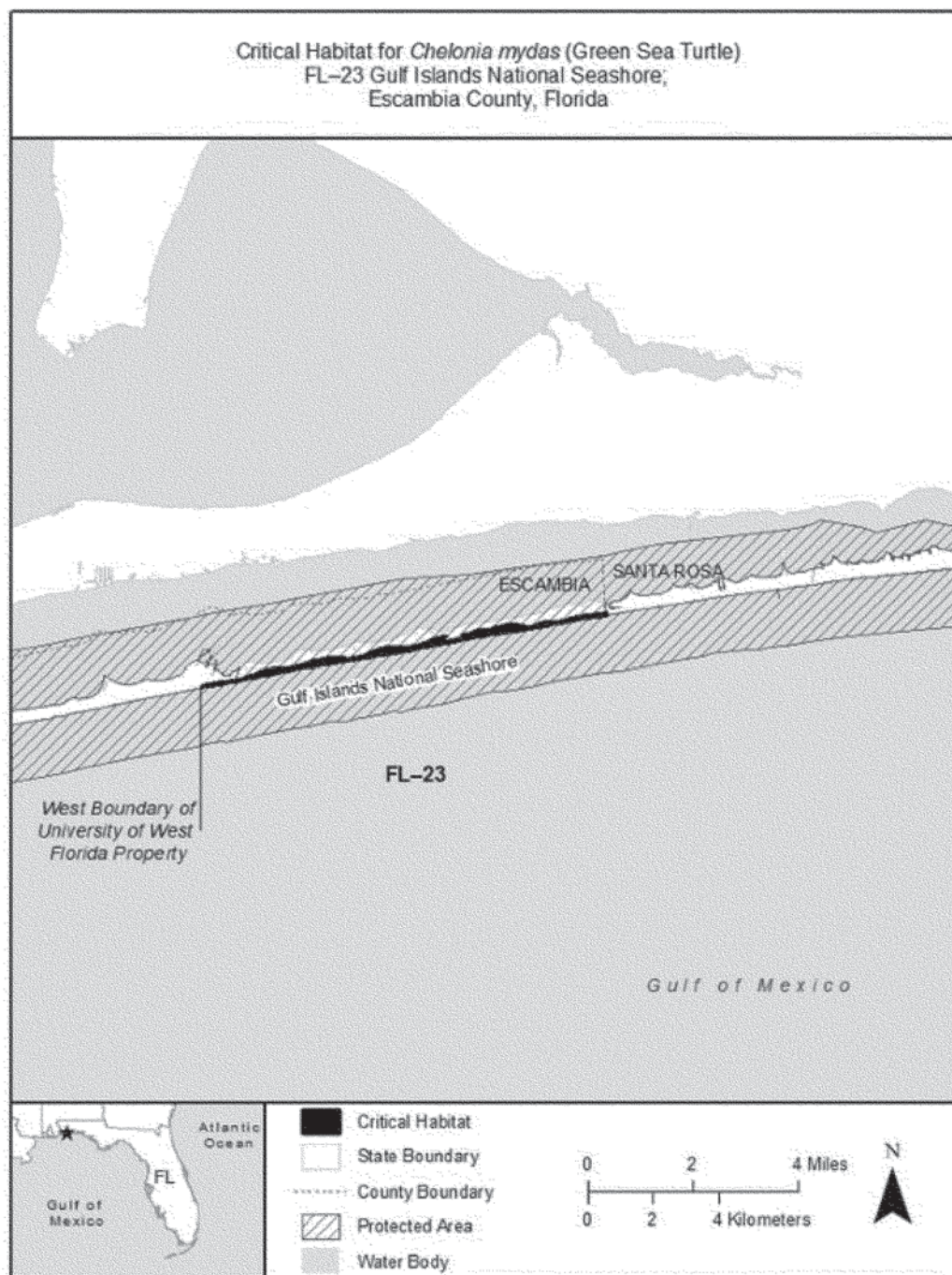
property to the eastern boundary of the Gulf Islands National Seashore at the Escambia-Santa Rosa County boundaries. This unit includes lands from the MHWL to the toe of the secondary dune or developed structures. Lands within this unit include approximately 316 ac (128 ha) in

Federal ownership and 17 ac (7 ha) in State ownership.

(ii) Map of Unit FL-23 follows:

Figure 19 to Green Sea Turtle (*Chelonia mydas*), North Atlantic DPS paragraph (28)(ii)





(29) Unit PR-01: Mona Island, Puerto Rico.

(i) Unit PR-01 consists of approximately 66 ac (27 ha) of beach and coastal vegetation along the southern half shoreline of Mona Island, Puerto Rico, in the Caribbean Sea. The

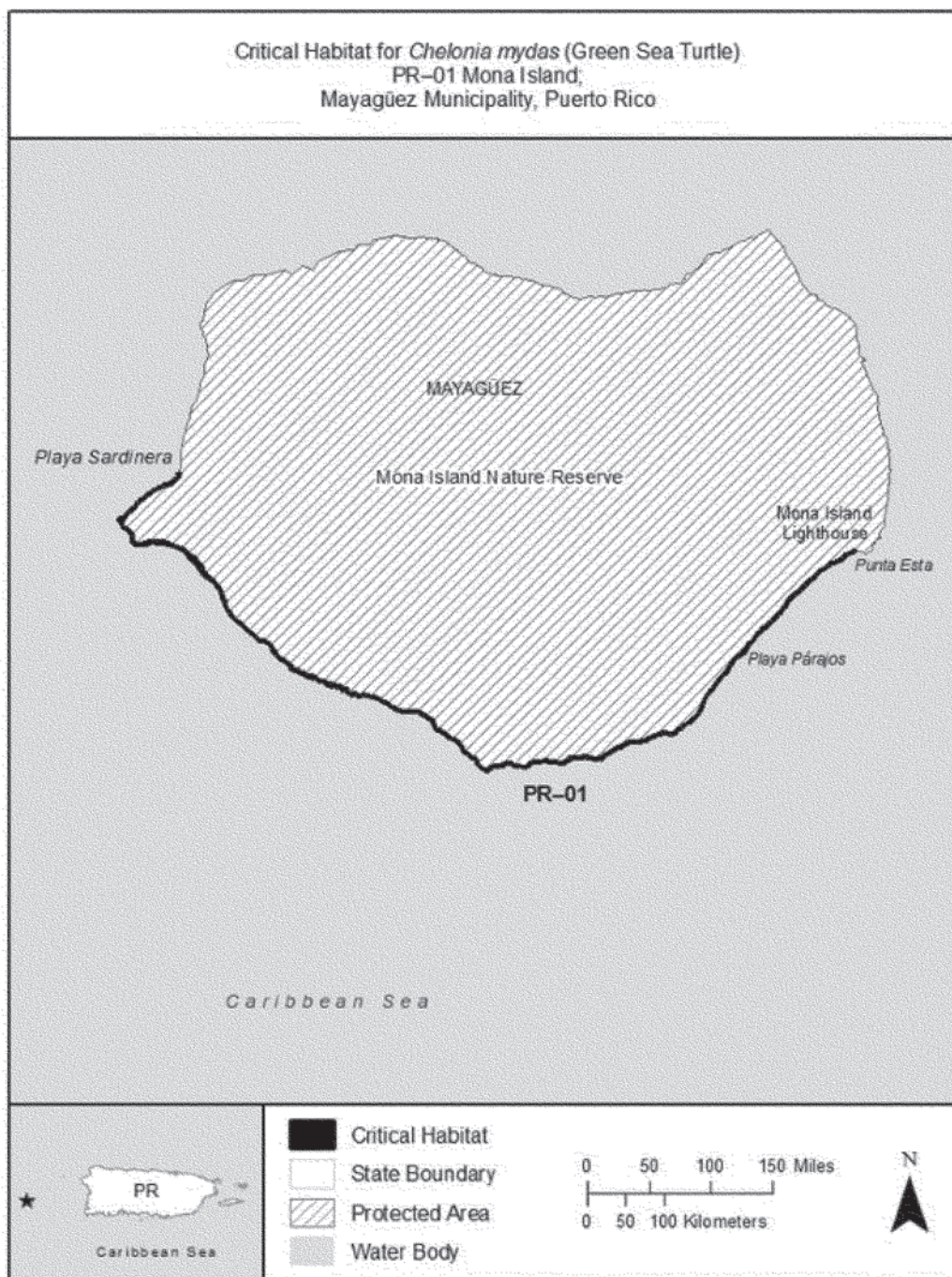
unit begins at the Playa Sardinera camp area in the west, moving south and then east to Playa Pajaros, just south of the Mona Island Lighthouse. The unit includes lands from the MHWL to the toe of the secondary dune or developed

structures. Lands within this unit are entirely commonwealth-owned.

(ii) Map of Unit PR-01 follows:

Figure 20 to Green Sea Turtle (*Chelonia mydas*), North Atlantic DPS paragraph (29)(ii)





(30) Unit PR-02: Guayama, Puerto Rico.

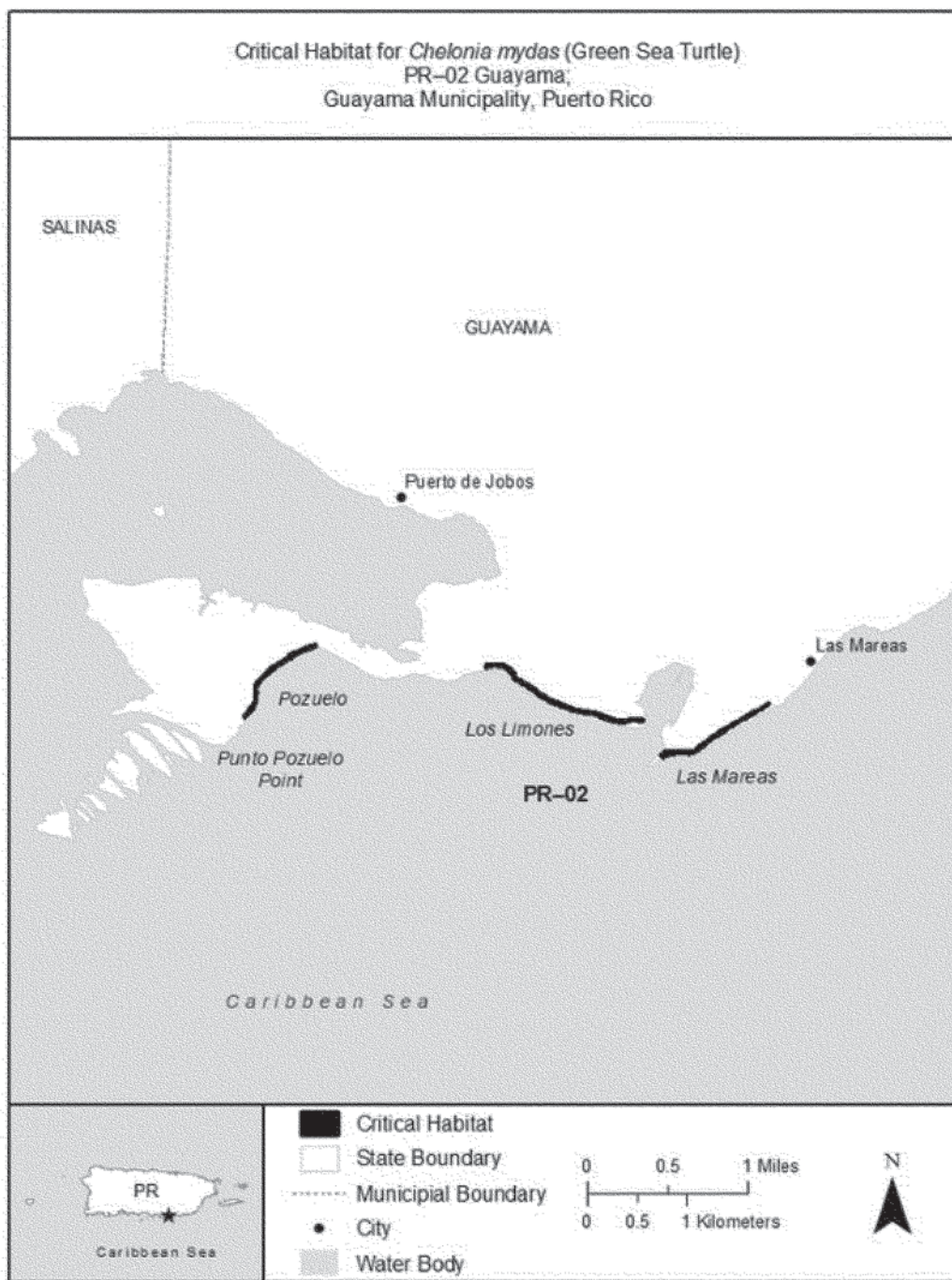
(i) Unit PR-02 consists of approximately 23 ac (9 ha) of beach and coastal vegetation along the southern coastline on the Guayama Municipality of Puerto Rico on the Caribbean Sea. This unit includes three separate beach

segments (from east to west)—Las Mareas, Los Limones, and Pozuelo—along the shoreline of Punta Ola Grande (i.e., Las Mareas) and moving west towards Punto Pozuelo Point along the coast. The unit includes lands from the MHWL to the toe of the secondary dune or developed structures. All lands

within this unit are under commonwealth ownership, although a small amount of the upland area may be under private ownership.

(ii) Map of Unit PR-02 follows: Figure 21 to Green Sea Turtle (*Chelonia mydas*), North Atlantic DPS paragraph (30)(ii)





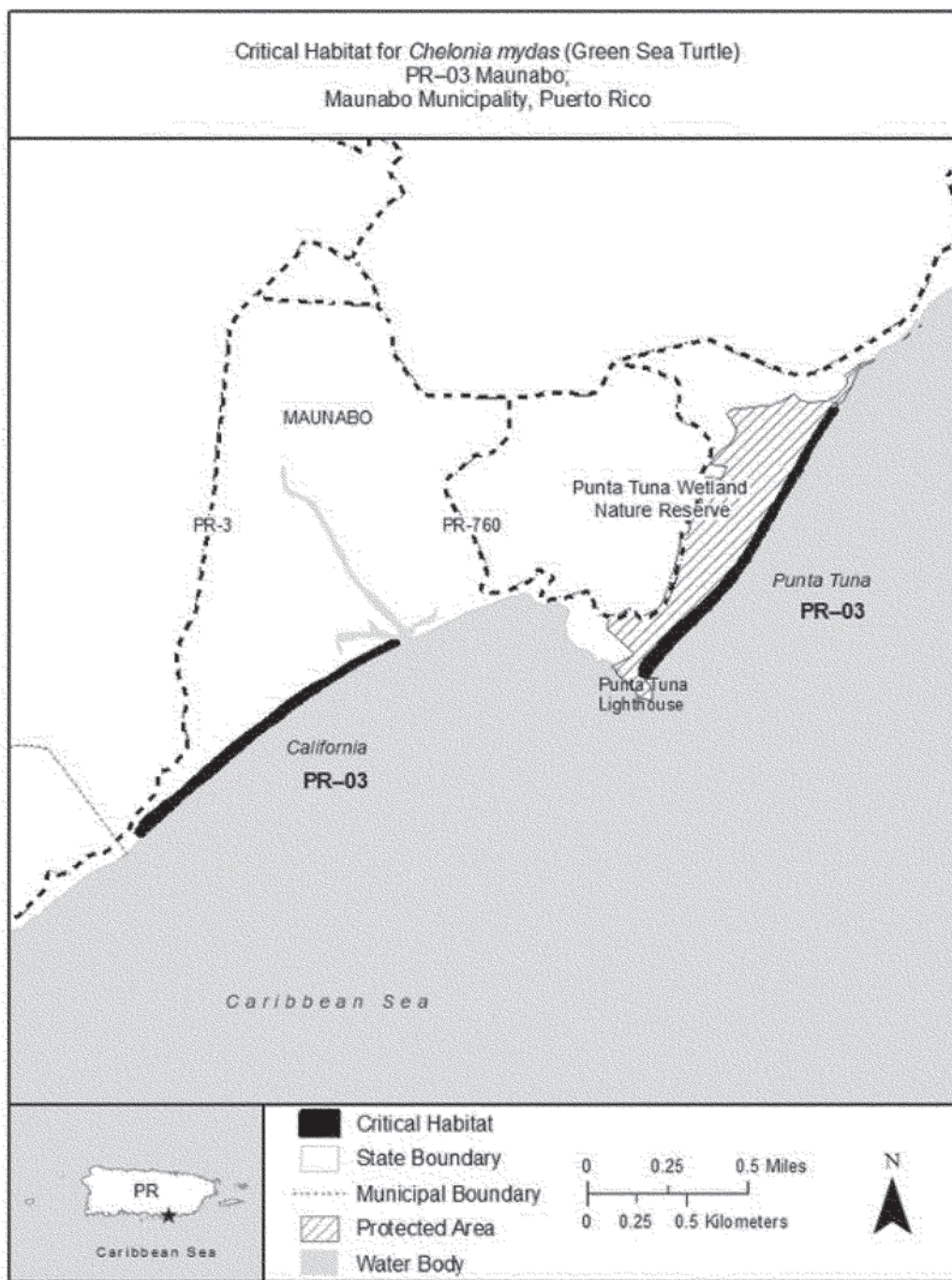
(31) Unit PR-03: Maunabo, Puerto Rico.

(i) Unit PR-03 consists of approximately 24 ac (10 ha) of beach and coastal vegetation along the southeastern coastline on the Maunabo Municipality of Puerto Rico on the Caribbean Sea. This unit includes two

separate beach segments—California and Punta Tuna—just west (*i.e.*, California) and east (*i.e.*, Punta Tuna) of the Punta Tuna Lighthouse at the end of Road PR-760. The unit includes lands from the MHWL to the toe of the secondary dune or developed structures. All lands within this unit are under

commonwealth ownership, although a small amount of the upland area of the California Beach segment may be under private ownership.

(ii) Map of Unit PR-03 follows: Figure 22 to Green Sea Turtle (*Chelonia mydas*), North Atlantic DPS paragraph (31)(ii)



(32) Unit VPR-01: Campana, Vieques Island, Puerto Rico.

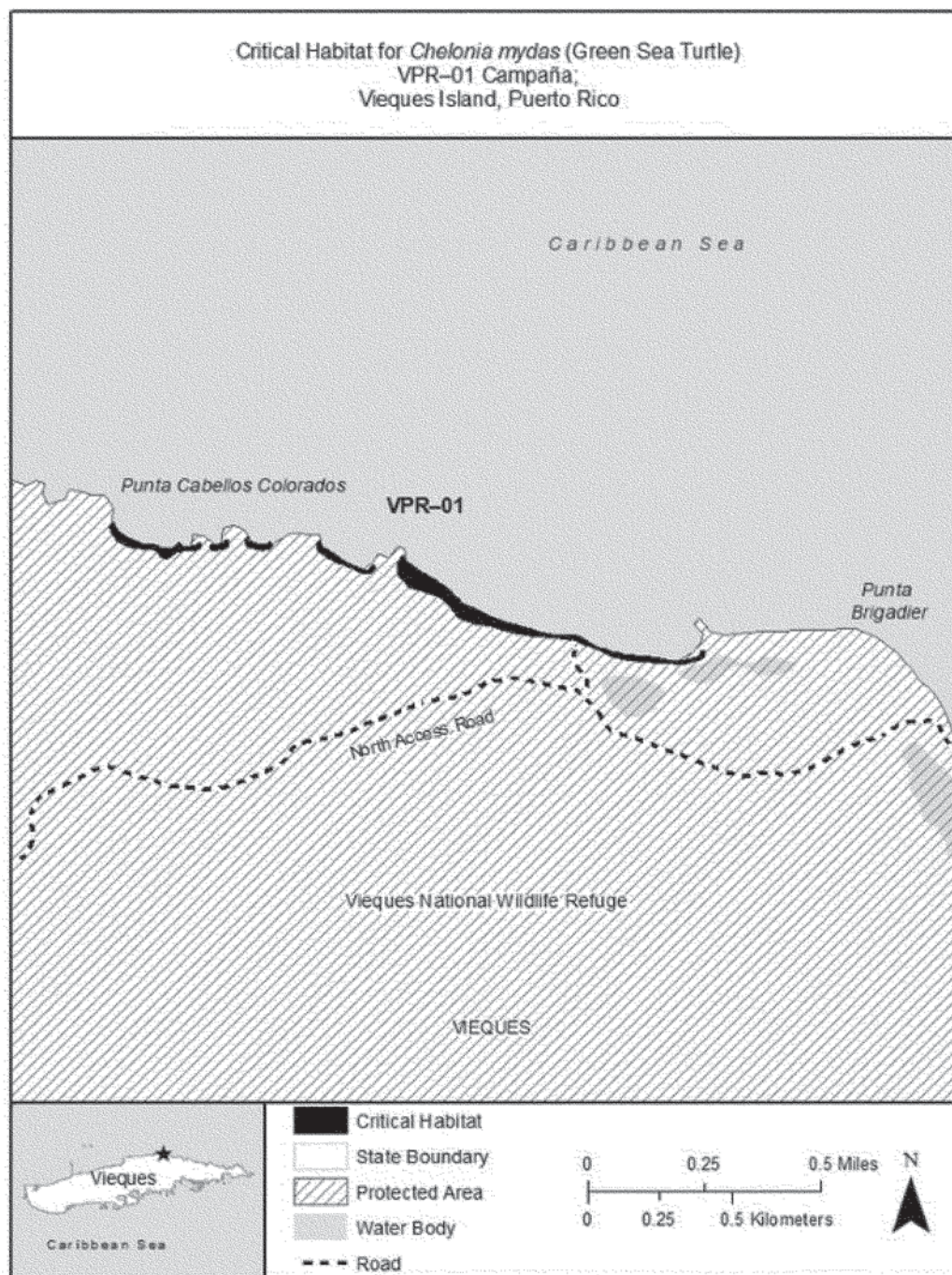
(i) Unit VPR-01 consists of approximately 11 ac (4 ha) of beach and coastal vegetation along the north shoreline of Vieques Island, Puerto Rico,

on the Caribbean Sea. This unit includes five beach segments in between Punta Cabellos Colorados and just west of Punta Brigadier. The unit includes lands from the MHWL to the toe of the secondary dune or developed structures.

All lands within this unit are under Federal ownership.

(ii) Map of Unit VPR-01 follows: Figure 23 to Green Sea Turtle (*Chelonia mydas*), North Atlantic DPS paragraph (32)(ii)





(33) Unit VPR-02: Puerto Diablo, Vieques Island, Puerto Rico.

(i) Unit VPR-02 consists of approximately 15 ac (6 ha) of beach and coastal vegetation along the north shoreline of Vieques Island, Puerto Rico, on the Caribbean Sea. This unit includes

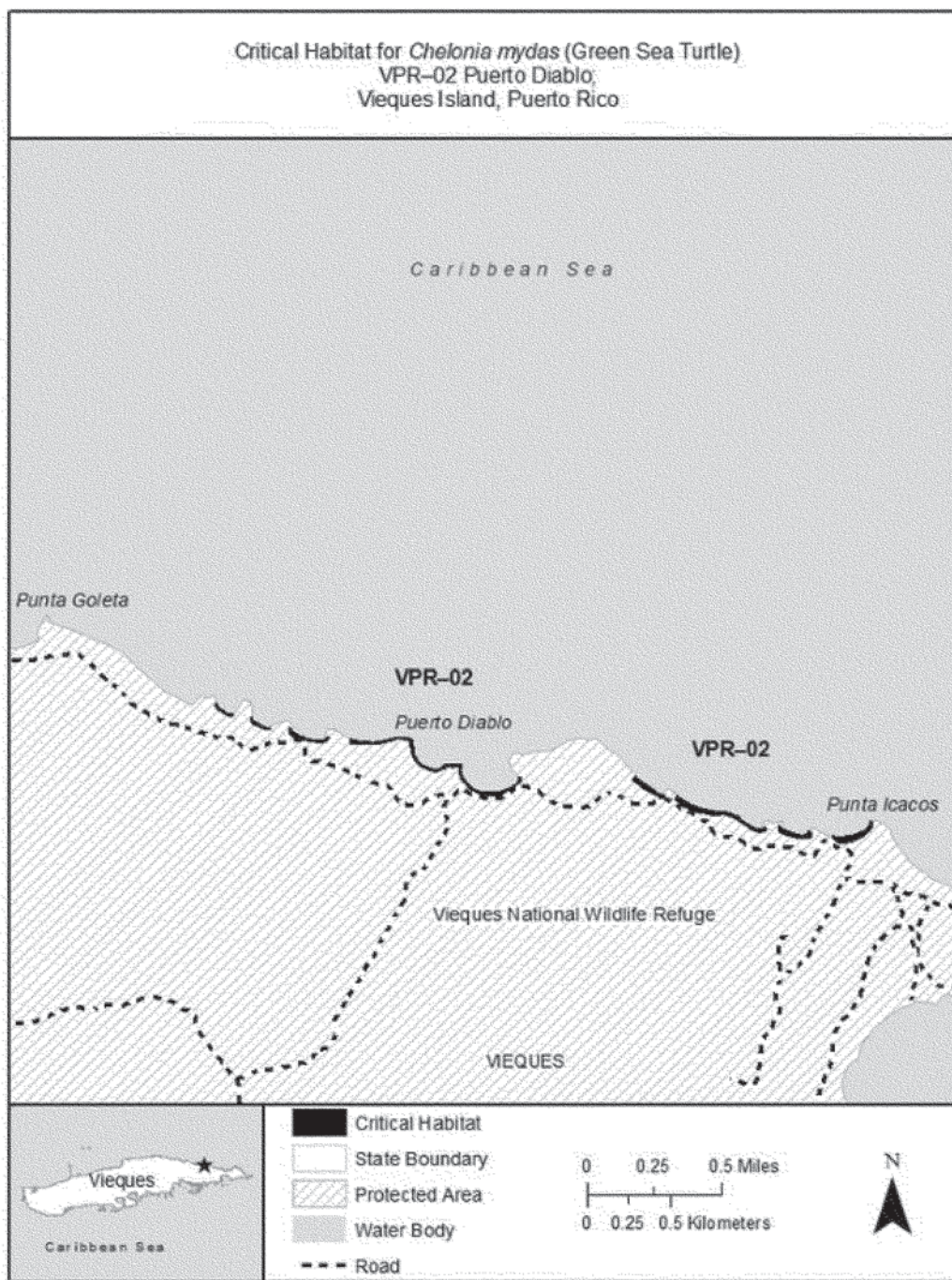
eight beach segments starting approximately 1 mi (1.6 km) east of Punta Goleta and along Puerto Diablo and continuing up to Punta Icacos. The unit includes lands from the MHWL to the toe of the secondary dune or

developed structures. All lands within this unit are under Federal ownership.

(ii) Map of Unit VPR-02 follows:

Figure 24 to Green Sea Turtle (*Chelonia mydas*), North Atlantic DPS paragraph (33)(ii)





(34) Unit VPR-03: Vieques East, Vieques Island, Puerto Rico.

(i) Unit VPR-03 consists of approximately 17 ac (7 ha) of beach and coastal vegetation along the northeast to southeast shoreline of Vieques Island, Puerto Rico, on the Caribbean Sea. This unit includes six beach segments (from

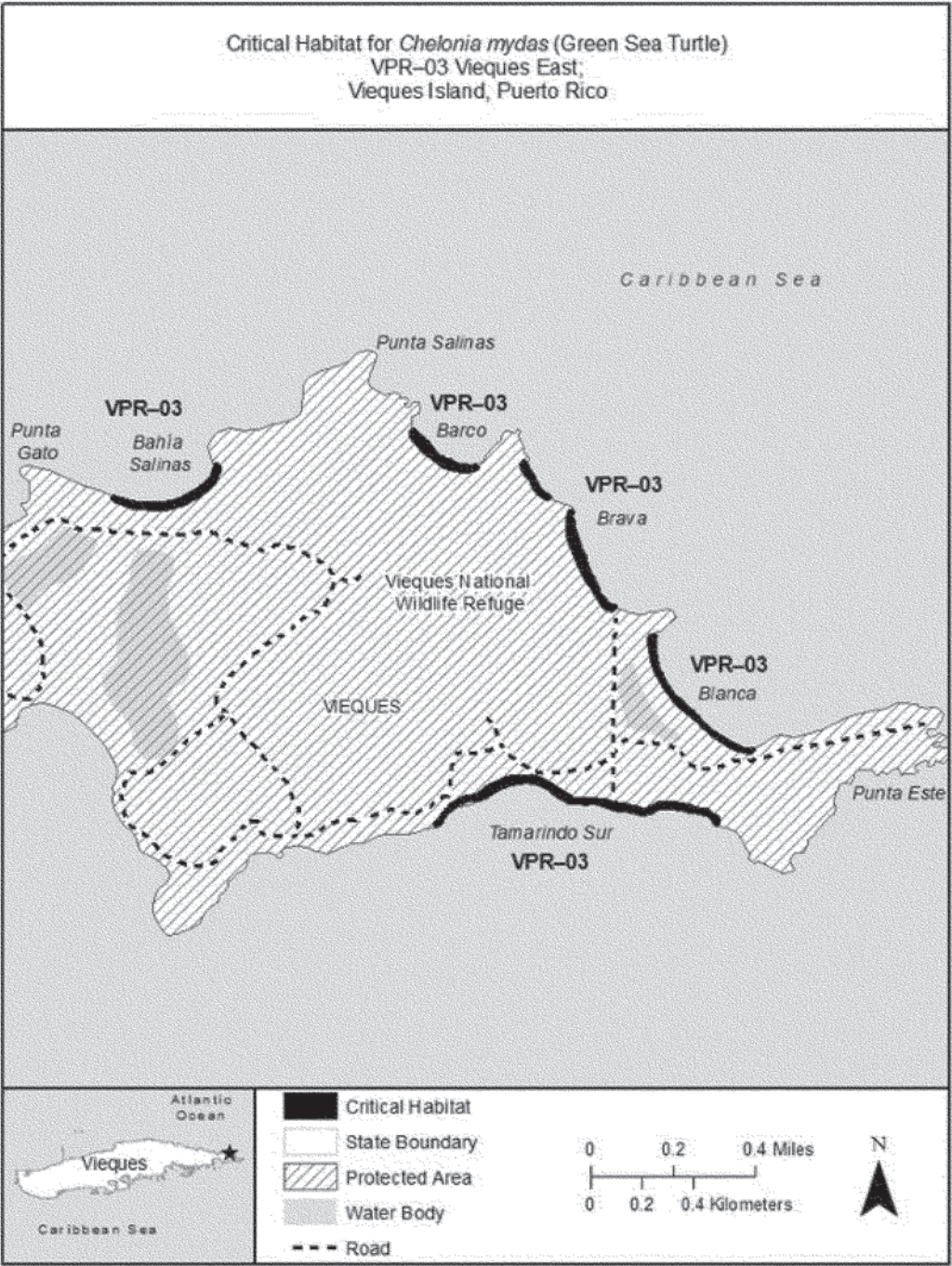
west to east) along Bahía Salinas (Fossil Beach); east of Punta Salinas, including Barco Beach, Brava Beach, and Blanca Beach; and approximately less than 1 mi (1.6 km) south towards Tamarindo Sur Beach. The unit includes lands from the MHWL to the toe of the secondary dune or developed structures. All lands

within this unit are under Federal ownership.

(ii) Map of Unit VPR-03 follows:

Figure 25 to Green Sea Turtle (*Chelonia mydas*), North Atlantic DPS paragraph (34)(ii)





(35) Unit VPR-04: Fanduca to Conejo, Vieques Island, Puerto Rico.

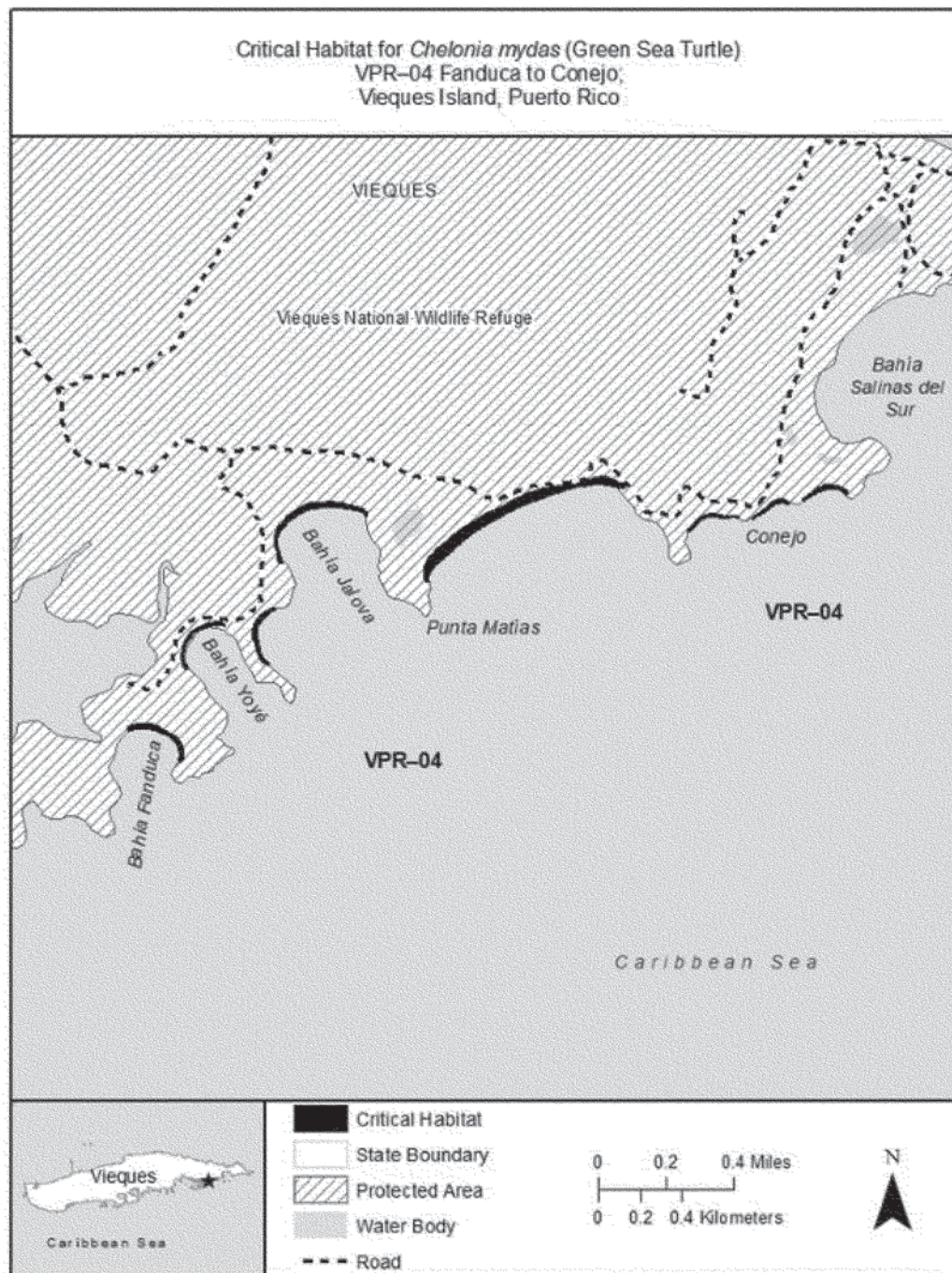
(i) Unit VPR-04 consists of approximately 23 ac (9 ha) of beach and coastal vegetation along the southeast shoreline of Vieques Island, Puerto Rico, on the Caribbean Sea. This unit

comprises eight segments (west to east) including at Bahia Fanduca Beach, Bahia Yoye Beach, two segments at Bahia Jalova Beach, Punta Matias Beach, and three segments along Conejo Beach just west of Bahia Salinas del Sur. The unit includes lands from the MHWL to

the toe of the secondary dune or developed structures. All lands within this unit are under Federal ownership.

(ii) Map of Unit VPR-04 follows: Figure 26 to Green Sea Turtle (*Chelonia mydas*), North Atlantic DPS paragraph (35)(ii)





(36) Unit VPR-05: La Chiva, Vieques Island, Puerto Rico.

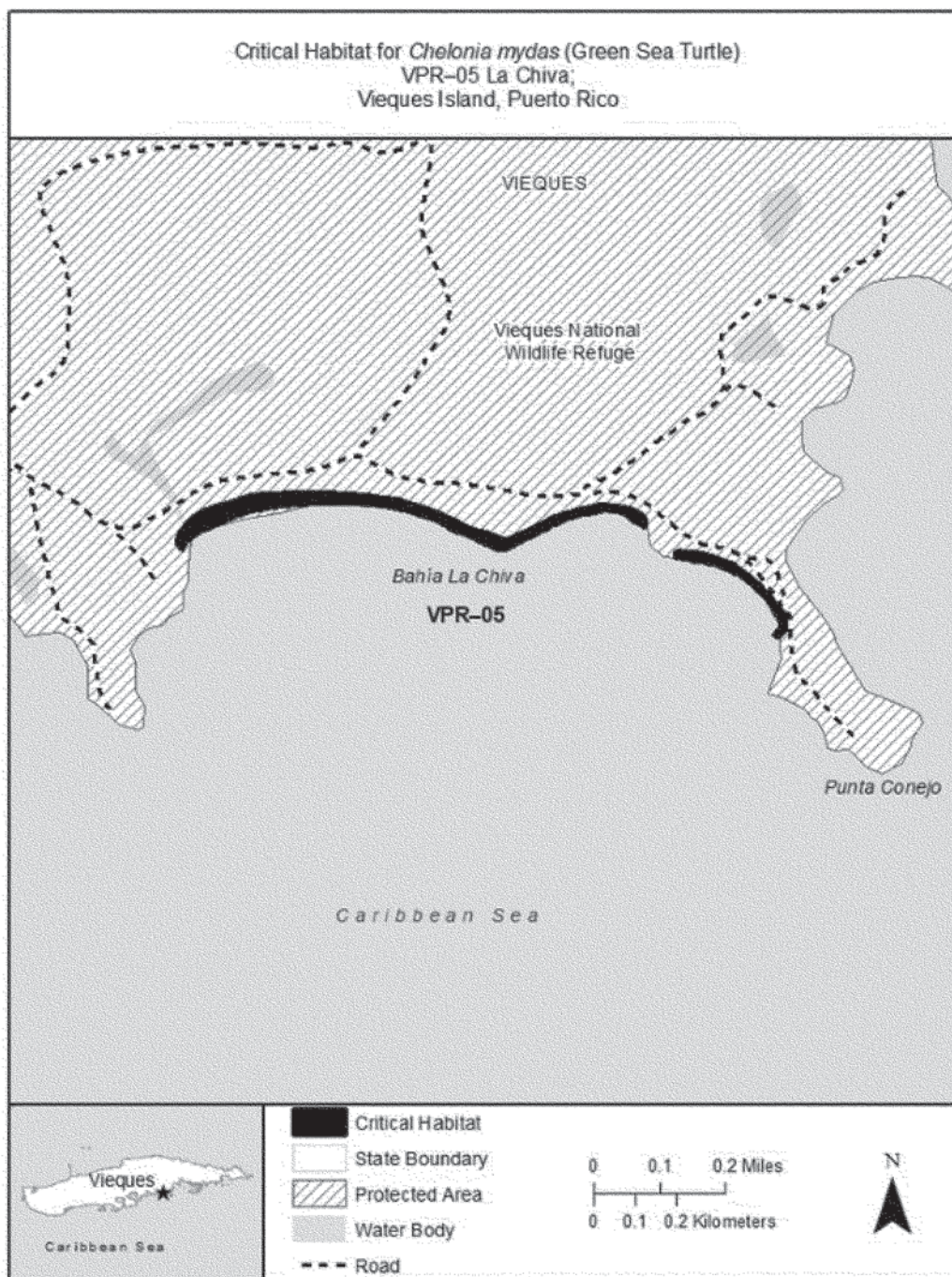
(i) Unit VPR-05 consists of approximately 10 ac (4 ha) of beach and coastal vegetation along the south shoreline of Vieques Island, Puerto Rico,

on the Caribbean Sea. This unit comprises two beach segments within Bahía La Chiva just west of Punta Conejo. The unit includes lands from the MHWL to the toe of the secondary dune or developed structures. All lands

within this unit are under Federal ownership.

(ii) Map of Unit VPR-05 follows: Figure 27 to Green Sea Turtle (*Chelonia mydas*), North Atlantic DPS paragraph (36)(ii)





(37) Unit VPR-06: Sun Bay, Vieques Island, Puerto Rico.

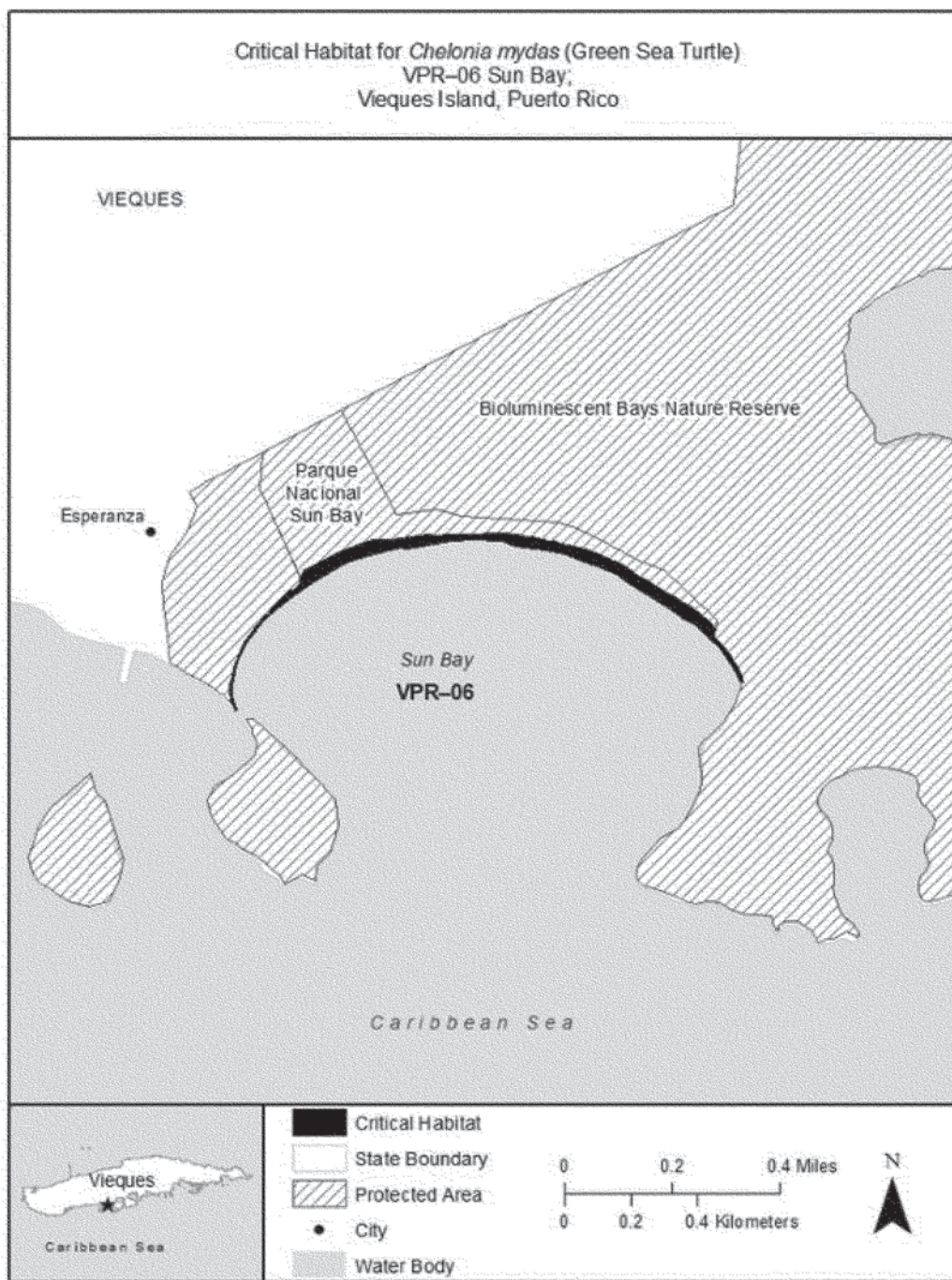
(i) Unit VPR-06 consists of approximately 13 ac (5 ha) of beach and coastal vegetation along the south shoreline of Vieques Island, just east of

the town of Esperanza within Sun Bay on Vieques Island, Puerto Rico, on the Caribbean Sea. The unit includes lands from the MHWL to the toe of the secondary dune or developed structures.

All lands within this unit are commonwealth-owned.

(ii) Map of Unit VPR-06 follows: Figure 28 to Green Sea Turtle (*Chelonia mydas*), North Atlantic DPS paragraph (37)(ii)





(38) Unit VPR-07: Vieques Southwest, Vieques Island, Puerto Rico.

(i) Unit VPR-07 consists of approximately 48 ac (19 ha) of beach and coastal vegetation along the southwest shoreline of Vieques Island, Puerto Rico, on the Caribbean Sea. This unit comprises two segments in the southwestern edge of the Vieques NWR, one extending approximately 3 mi (5

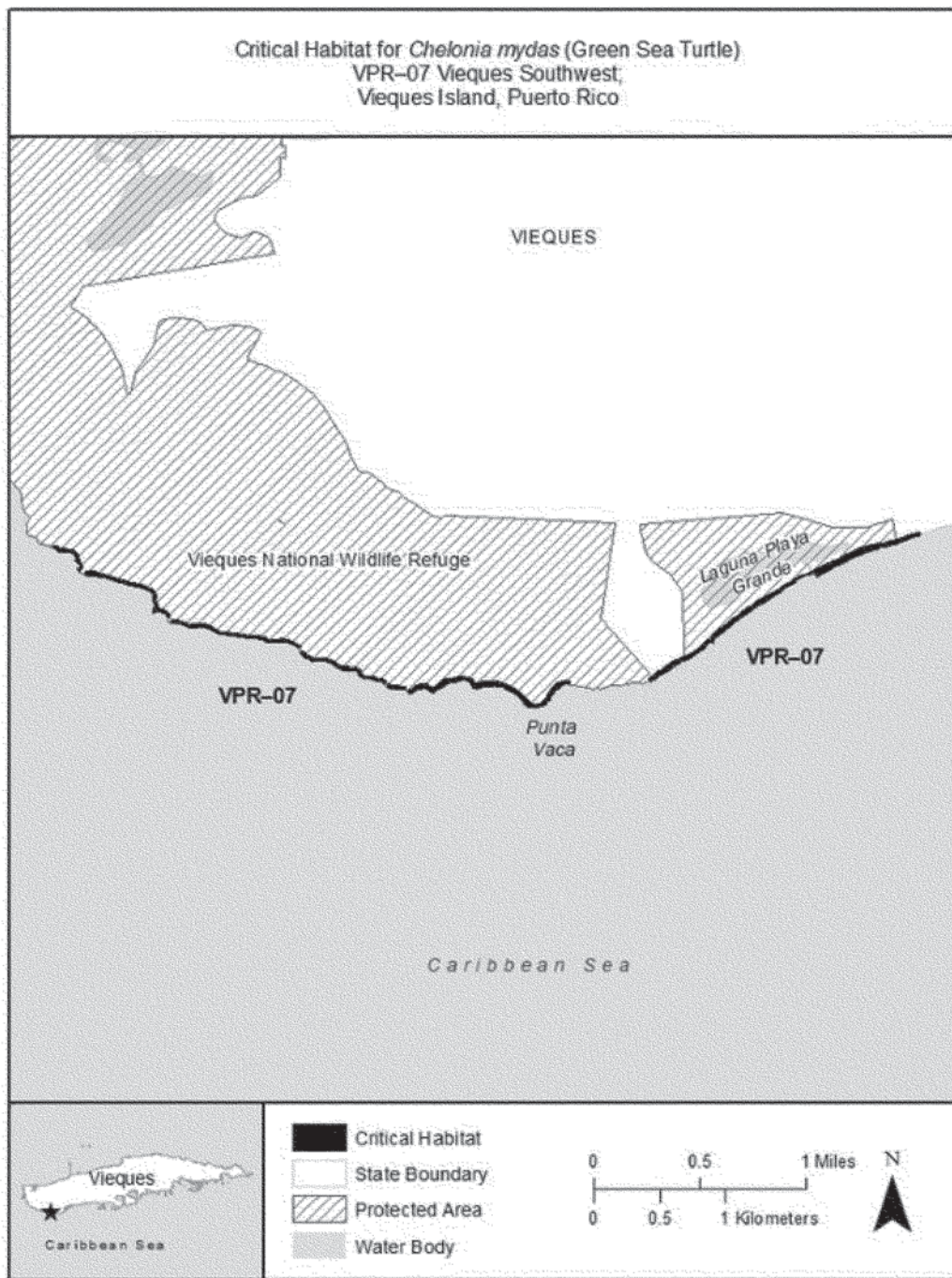
km) west of Punta Vaca, and a second segment starting less than 1 mi (less than 1 km) east of Punta Vaca and extending approximately 2 mi (3 km) east just south of Laguna Playa Grande. The unit includes lands from the MHWL to the toe of the secondary dune or developed structures. Approximately 44 ac (18 ha) of lands within this unit are under Federal ownership, and

approximately 4 ac (1 ha) are under commonwealth ownership, although a small amount of the upland area may be under private ownership.

(ii) Map of Unit VPR-07 follows:

Figure 29 to Green Sea Turtle (*Chelonia mydas*), North Atlantic DPS paragraph (38)(ii)



**BILLING CODE 4333-15-C****Green Sea Turtle (*Chelonia mydas*),  
South Atlantic DPS**

(1) Within the South Atlantic distinct population segment (DPS) of the green sea turtle, critical habitat units are depicted for the Island of St. Croix within the Territory of the U.S. Virgin Islands on the maps in this entry.

(2) Within these areas, the physical or biological features essential to the conservation of green sea turtle consist of the following components:

(i) Extra-tidal or dry sandy beaches from the mean high water line—the line on a chart or map that represents the intersection of the land with the water surface at the elevation of mean high water line—to areas of beach landward of the mean high water line and which contain the characteristics set forth in paragraphs (2)(i) through (iii) of this entry. These beaches include:

(A) Habitat for green turtles to transit across beaches and for nest placement that includes:

(1) Relatively unimpeded wet and dry sand or nearshore access areas from the ocean to the beach for nesting females and from the beach to the ocean for both post-nesting females and hatchlings; and

(2) Drier sand areas located above mean high water in the supralittoral zone to avoid being inundated frequently by high tides.

(B) Sand substrate that:

(1) Allows for suitable nest construction;

(2) Is suitable for facilitating gas diffusion conducive to embryo development;

(3) Can develop and maintain temperatures and a moisture content conducive to embryo development; and

(4) Allows for emergence of hatchlings from eggshells, through sand substrate to the beach surface.

(ii) Nesting beach habitat with sufficient darkness such that nesting turtles are not deterred from emerging onto the beach and hatchlings and post-nesting females can orient to the sea.

(iii) Natural coastal processes or artificially created or maintained habitat mimicking natural conditions. This includes artificial habitat types that mimic natural conditions described in paragraphs (2)(i) and (ii) of this entry for beach access, nest site selection, nest construction, egg deposition and

incubation, and hatchling emergence and movement to the sea.

(3) Critical habitat does not include manmade structures (such as buildings, aqueducts, runways, roads and other paved areas, abandoned military structures, and hardened shorelines) and the land on which they are located existing within the legal boundaries on the effective date of the final rule.

(4) Data layers defining map units were created using green sea turtle distribution data provided by multiple local and regional sources as available (e.g., reports, databases, and data submitted by State and Federal partners and nonprofit organizations across the range of the species). Landforms were primarily delineated based on the most current available aerial maps. The maps in this entry, as modified by any

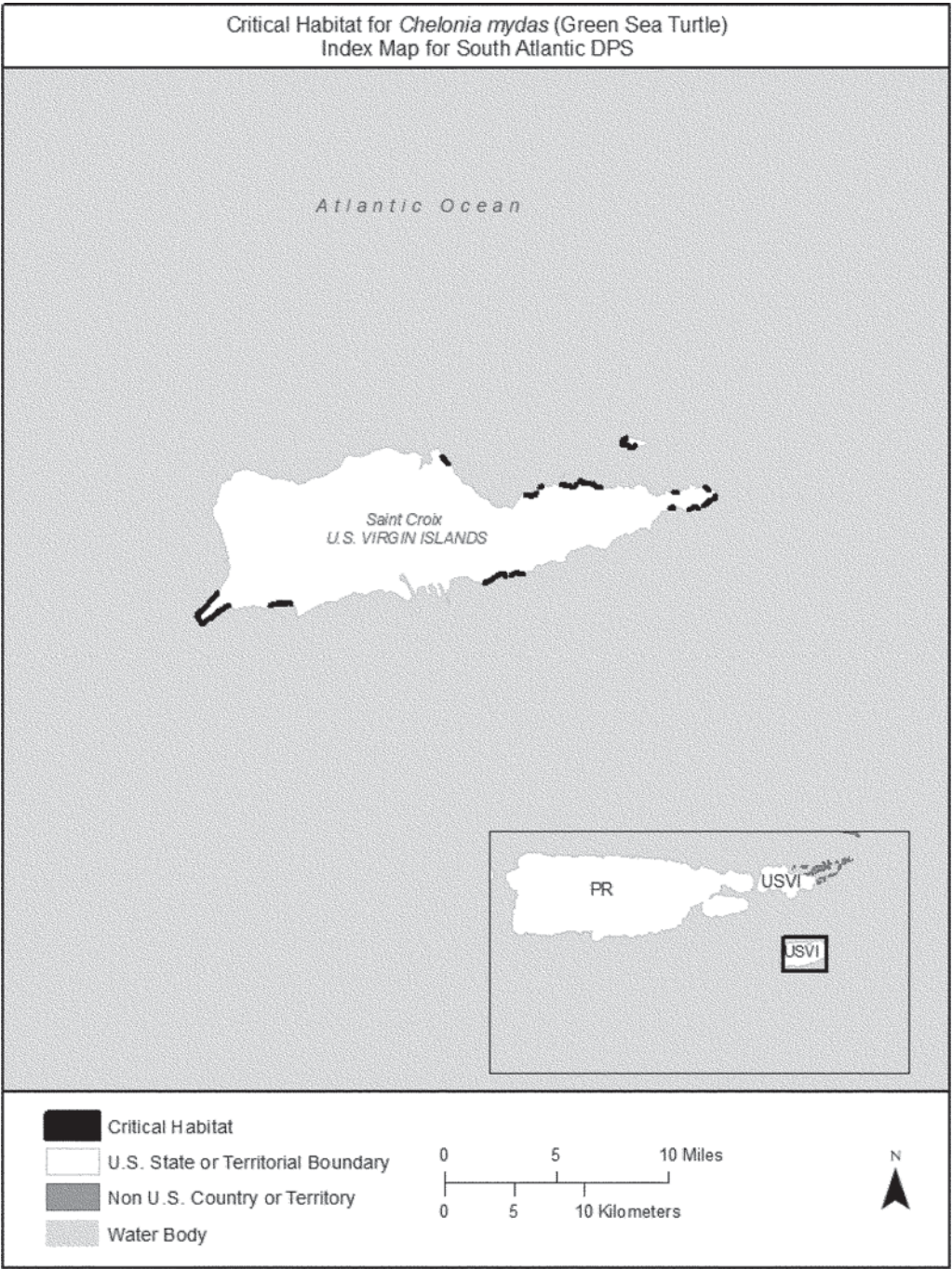
accompanying regulatory text, establish the boundaries of the terrestrial critical habitat designation. The coordinates or plot points or both on which each map is based are available to the public at the USFWS's internet site at <https://www.fws.gov/office/florida-ecological-services/library/green-sea-turtle>, at <https://www.regulations.gov> under Docket No. FWS-R4-ES-2022-0164, and at the two field offices responsible for this designation. You may obtain field office location information by contacting one of the USFWS regional offices, the addresses of which are listed at 50 CFR 2.2.

(5) Index map follows:

**BILLING CODE 4333-15-P**

Figure 1 to Green Sea Turtle (*Chelonia mydas*), South Atlantic DPS paragraph (5)





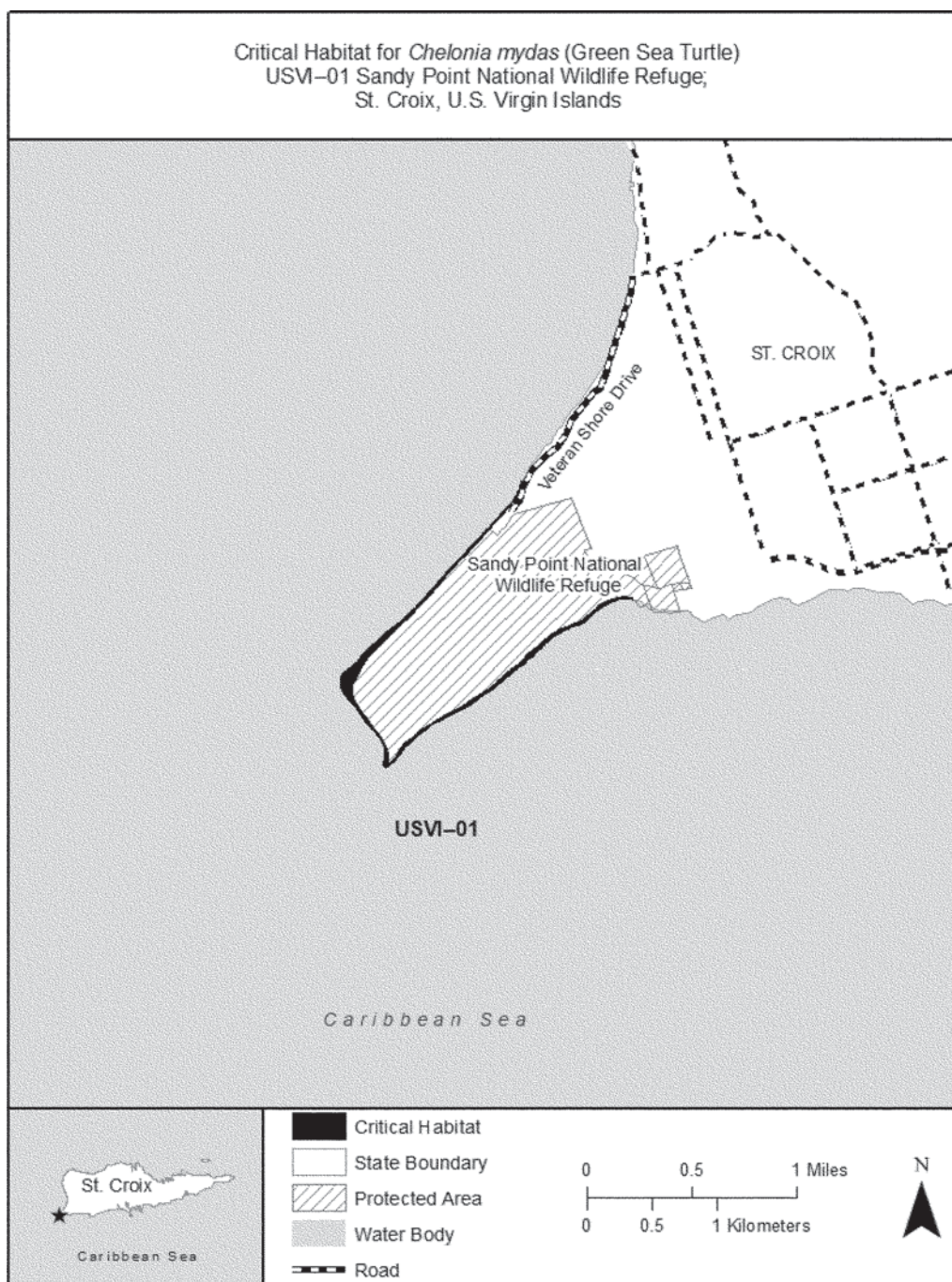
(6) Unit USVI-01: Sandy Point National Wildlife Refuge, St. Croix, U.S. Virgin Islands.

(i) Unit USVI-01 consists of approximately 37 acres (ac) (15 hectares (ha)) of beach and coastal vegetation along the Westend Peninsula shoreline within the Sandy Point National Wildlife Refuge (NWR) on the southwest point of St. Croix, U.S. Virgin Islands, in the Caribbean Sea. It also includes a contiguous beach area just outside of the NWR on the northernmost boundary, on the shore of the Fredericksted pool area at the end of Veterans Shore Drive. The unit includes lands from the mean high water line (MHWL) to the toe of the secondary dune or developed structures.

Lands within this unit include approximately 35 ac (14 ha) in Federal ownership and 2 ac (1 ha) in territory ownership.

(ii) Map of Unit USVI-01 follows: Figure 2 to Green Sea Turtle (*Chelonia mydas*), South Atlantic DPS paragraph (6)(ii)





(7) Unit USVI-02: Long Point Bay, St. Croix, U.S. Virgin Islands.

(i) Unit USVI-02 consists of approximately 9 ac (4 ha) of mostly undeveloped beach and coastal vegetation along the southwestern shoreline of Long Point Bay just west of

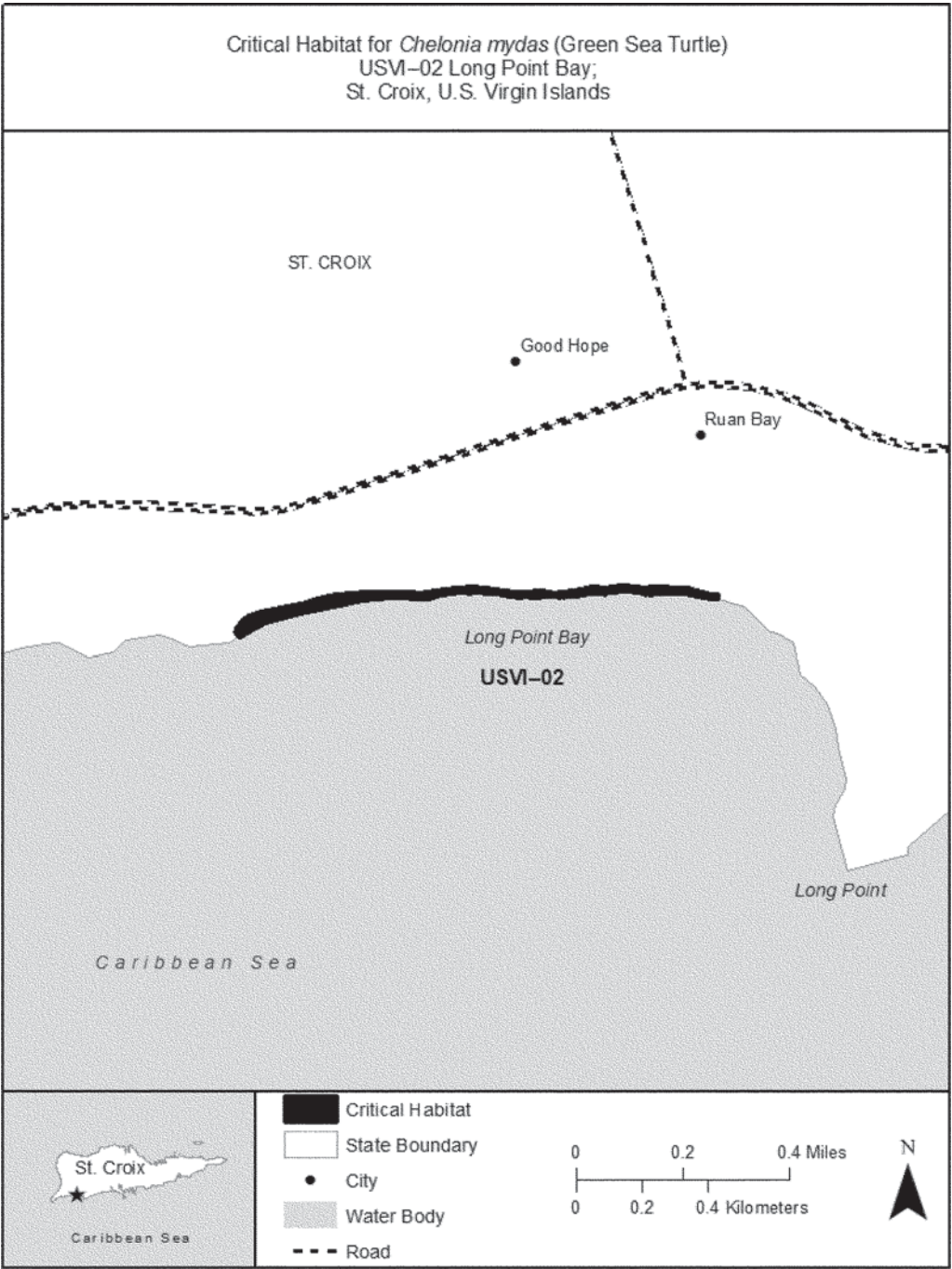
Long Point on St. Croix, U.S. Virgin Islands, in the Caribbean Sea, and east of the Sandy Point NWR (Unit USVI-01) along the southern shoreline. The unit includes lands from the MHWL to the toe of the secondary dune or developed structures. All lands within this unit are

in territory ownership, although a small amount of the upland area may be under private ownership.

(ii) Map of Unit USVI-02 follows:

Figure 3 to Green Sea Turtle (*Chelonia mydas*), South Atlantic DPS paragraph (7)(ii)





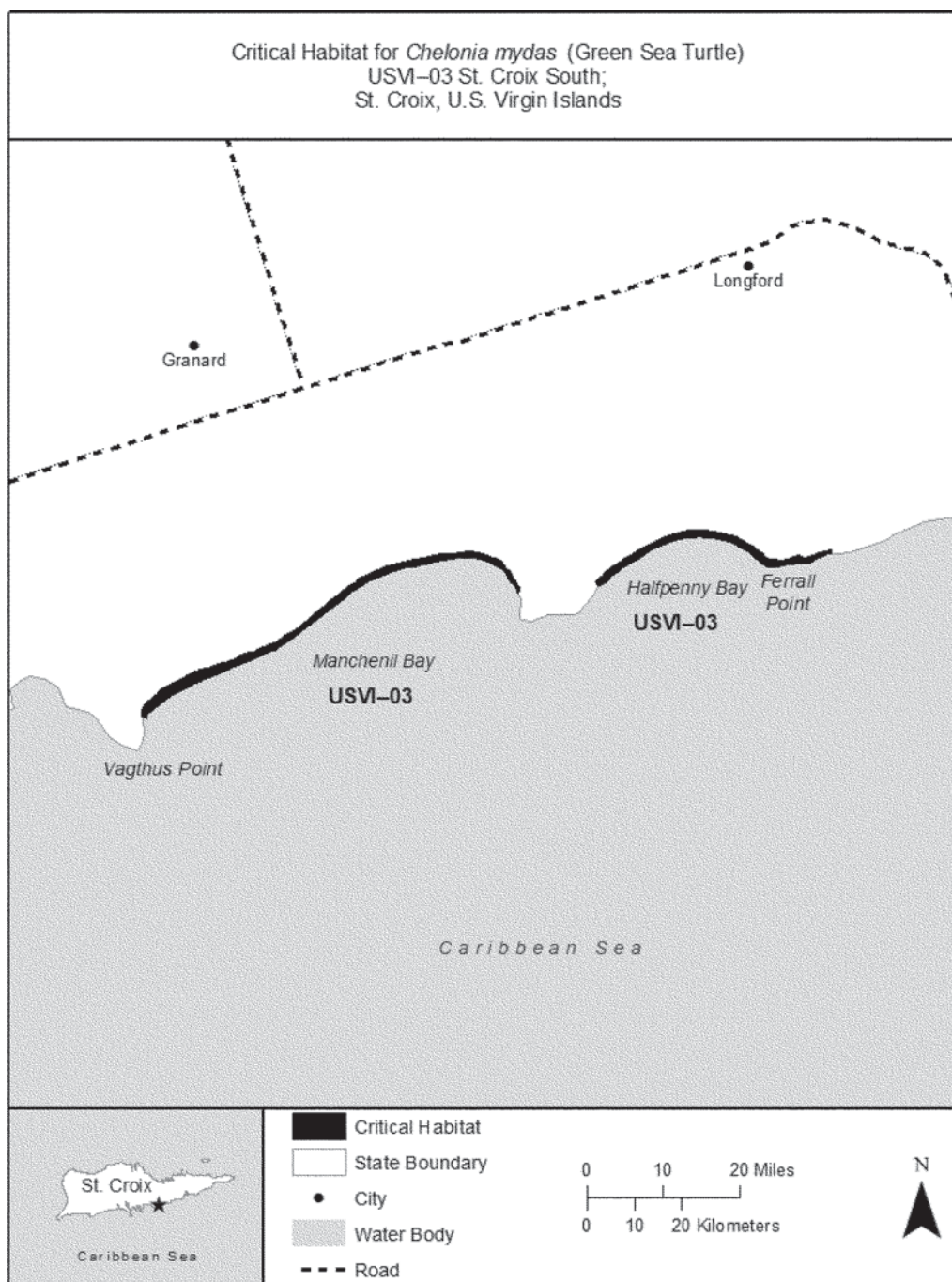
(8) Unit USVI-03: St. Croix South, St. Croix, U.S. Virgin Islands.

(i) Unit USVI-03 consists of beach and coastal vegetation along the south-central shoreline of St. Croix, U.S. Virgin Islands, in the Caribbean Sea. This unit comprises two beach

segments: east of the oil refinery between Vagthus Point along Manchenil Bay, and along Halfpenny Bay west of Ferral Point. The unit includes lands from the MHWL to the toe of the secondary dune or developed structures. All lands within this unit are in territory

ownership, although a small amount of the upland area may be under private ownership.

(ii) Map of Unit USVI-03 follows: Figure 4 to Green Sea Turtle (*Chelonia mydas*), South Atlantic DPS paragraph (8)(ii)



(9) Unit USVI-04: East End, St. Croix, U.S. Virgin Islands.

(i) Unit USVI-04 consists of 16 ac (6 ha) of mostly undeveloped beach and coastal vegetation along the shoreline from Grapetree Point in the southeast towards the northeast to Romney Point on St. Croix, U.S. Virgin Islands, in the Caribbean Sea. The unit includes six

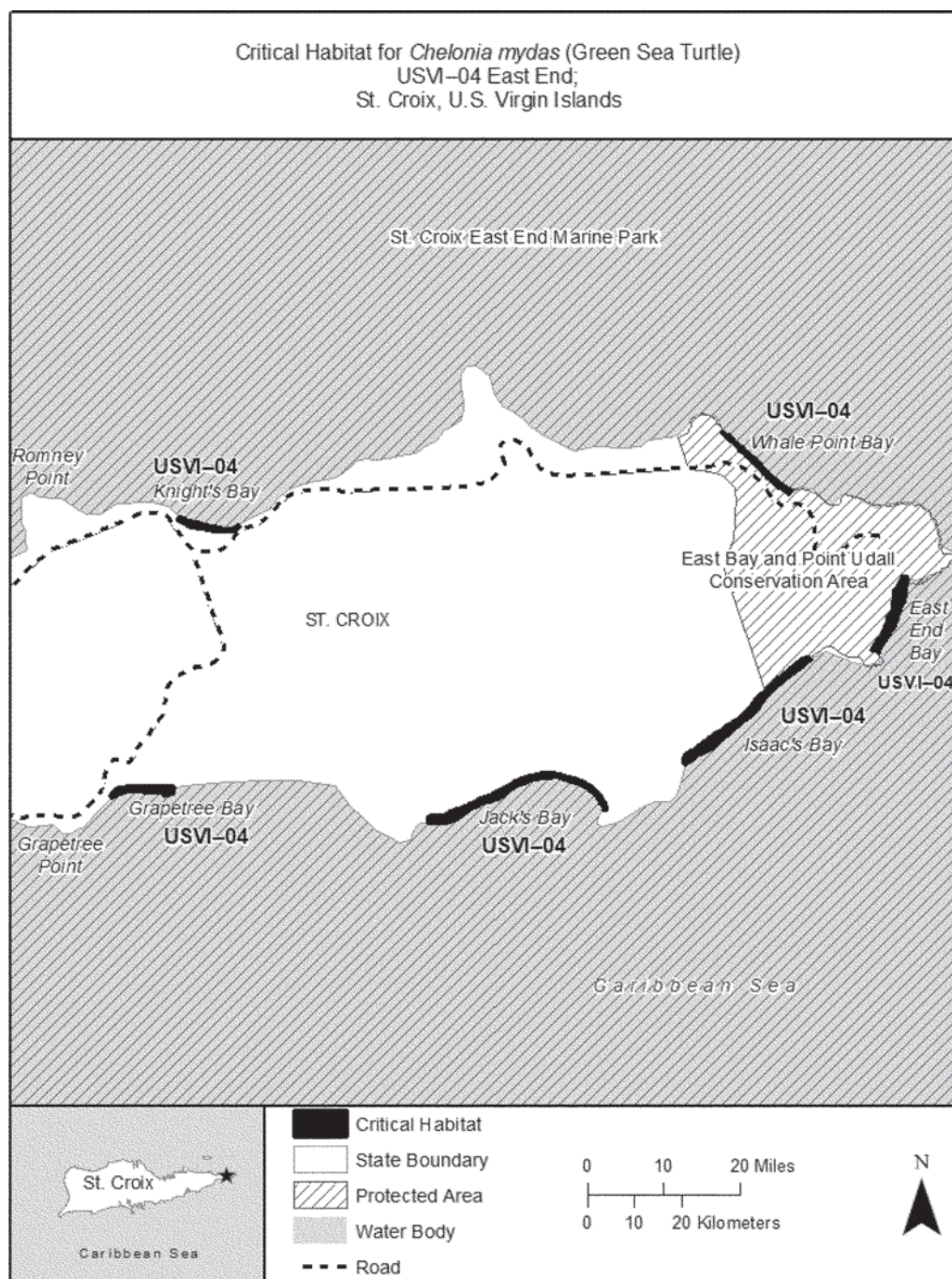
beach segments (starting on the southeast of Grapetree Point) to the west end of Grapetree Bay, along Jack's Bay, along Isaac's Bay, along East End Bay, along Whale Point Bay, and along Knight's Bay. This unit includes lands from the MHWL to the toe of the secondary dune or developed structures. All lands within this unit are in territory

ownership, although a small amount of the upland area may be under private ownership.

(ii) Map of Unit USVI-04 follows:

Figure 5 to Green Sea Turtle (*Chelonia mydas*), South Atlantic DPS paragraph (9)(ii)





(10) Unit USVI-05: Chenay to Coakley, St. Croix, U.S. Virgin Islands.

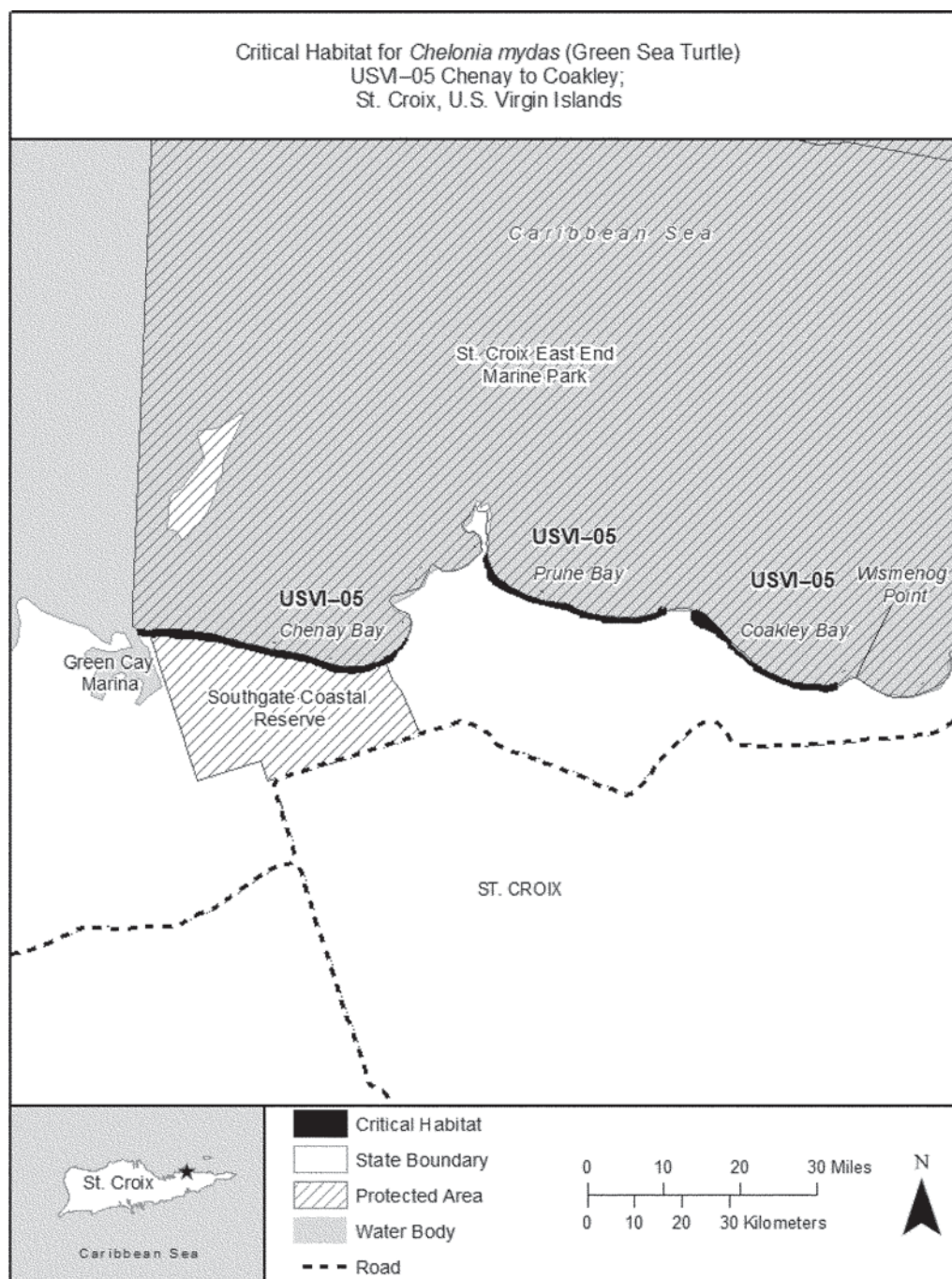
(i) Unit USVI-05 consists of 15 ac (6 ha) of mostly undeveloped beach and coastal vegetation along the shoreline from the Southgate Coastal Reserve just west of the Green Cay Marina to Wismenog Point, St. Croix, U.S. Virgin

Islands, in the Caribbean Sea. This unit comprises three beach segments along Chenay Bay, Prune Bay, and Coakley Bay. This unit includes lands from the MHWL to the toe of the secondary dune or developed structures. All lands within this unit are in territory ownership, although a small amount of

the upland area may be under private ownership.

(ii) Map of Unit USVI-05 follows:

Figure 6 to Green Sea Turtle (*Chelonia mydas*), South Atlantic DPS paragraph (10)(ii)



(11) Unit USVI-06: Buccaneer, St. Croix, U.S. Virgin Islands.

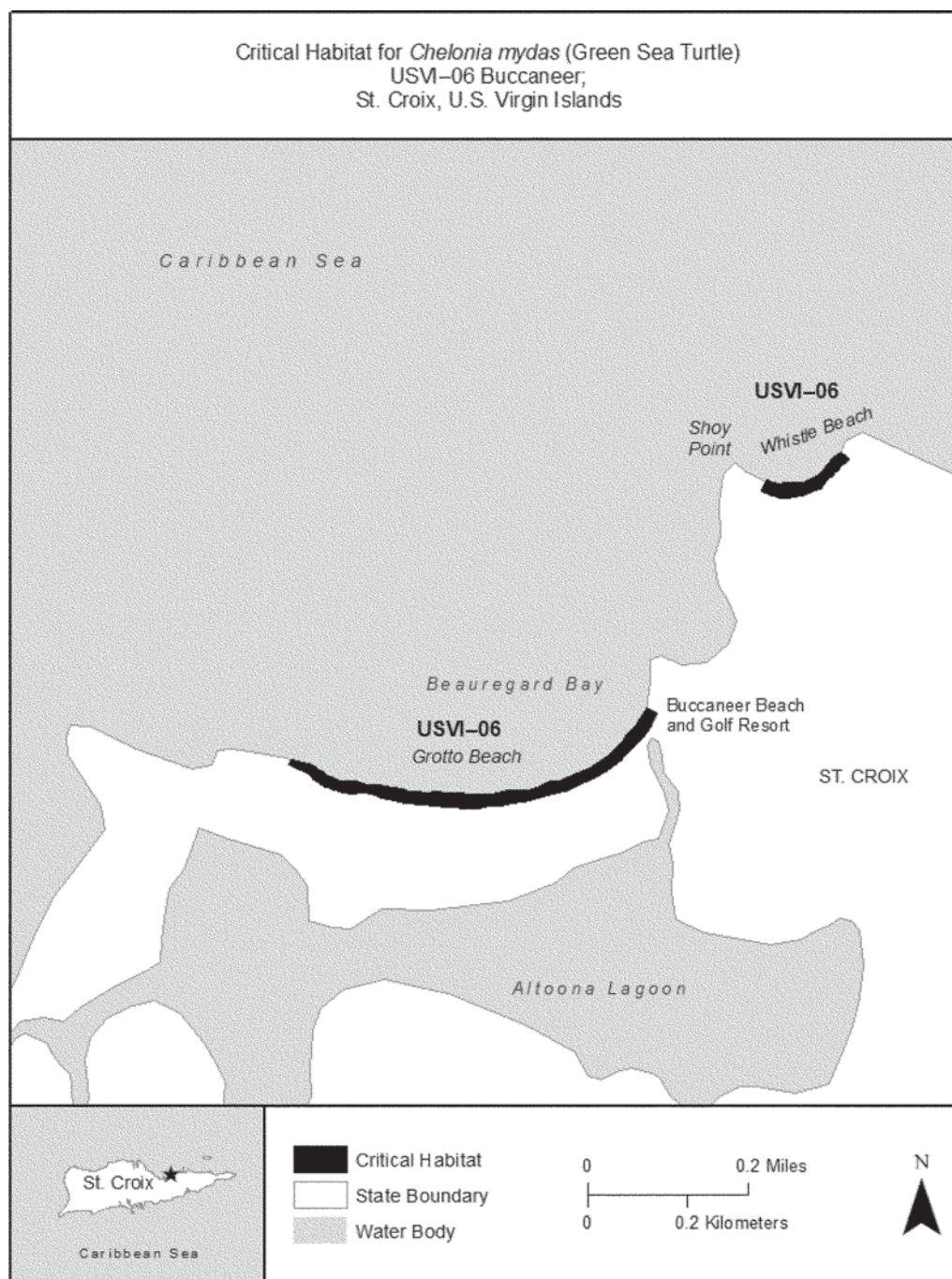
(i) Unit USVI-06 consists of 6 ac (2 ha) of beach and coastal vegetation along the shoreline on the north coast of St. Croix, U.S. Virgin Islands, in the Caribbean Sea. This unit comprises two

beach segments along Beauregard Bay just north of Altona Lagoon and along Whistle Beach just east of Shoy Point. This unit includes lands from the MHWL to the toe of the secondary dune or developed structures. All lands within this unit are in territory

ownership, although a small amount of the upland area may be under private ownership.

(ii) Map of Unit USVI-06 follows: Figure 7 to Green Sea Turtle (*Chelonia mydas*), South Atlantic DPS paragraph (11)(ii)





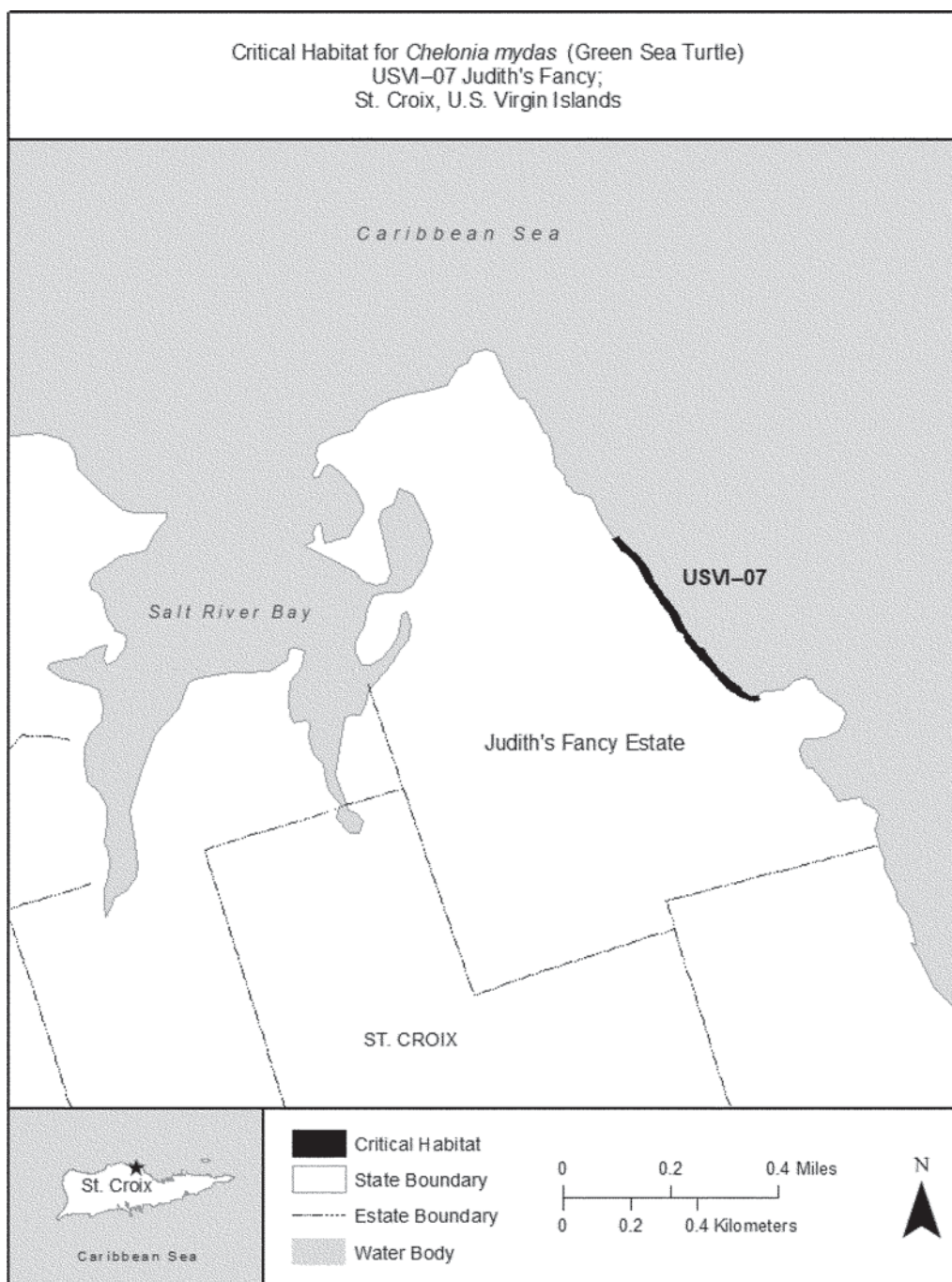
(12) Unit USVI-07: Judith's Fancy, St. Croix, U.S. Virgin Islands.

(i) Unit USVI-07 consists of 3 ac (1 ha) of beach and coastal vegetation along the north shoreline within the Judith's Fancy Estate just east of Salt

River Bay on St. Croix, U.S. Virgin Islands, in the Caribbean Sea. This unit includes lands from the MHWL to the toe of the secondary dune or developed structures. All lands within this unit are in territory ownership, although a small

amount of the upland area may be under private ownership.

(ii) Map of Unit USVI-07 follows: Figure 8 to Green Sea Turtle (*Chelonia mydas*), South Atlantic DPS paragraph (12)(ii)



(13) Unit USVI-08: Buck Island Reef National Monument, St. Croix, U.S. Virgin Islands.

(i) Unit USVI-08 consists of 12 ac (5 ha) of undeveloped beach and coastal vegetation along the shoreline of Buck Island approximately 2 mi (3 km) off the

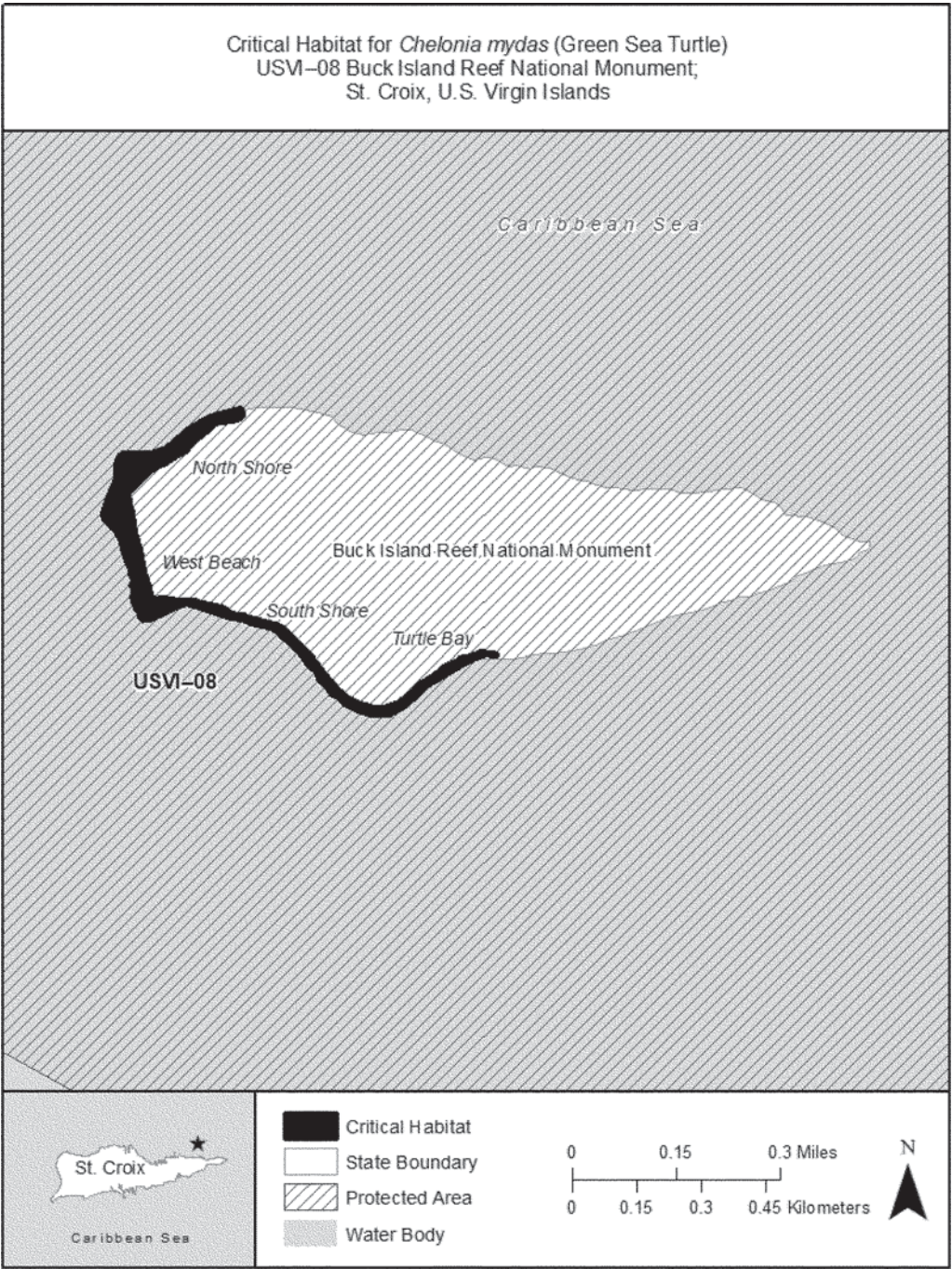
northeast coast of St. Croix, U.S. Virgin Islands, in the Caribbean Sea. The unit includes lands from the MHWL to the toe of the secondary dune or developed structures from the island's North Shore on the northwest and moving south towards West Beach, South Shore, and

Turtle Bay. Lands within this unit are all in Federal ownership.

(ii) Map of Unit USVI-08 follows:

Figure 9 to Green Sea Turtle (*Chelonia mydas*), South Atlantic DPS paragraph (13)(ii)





\* \* \* \* \*

Martha Williams,  
Director, U.S. Fish and Wildlife Service.  
[FR Doc. 2023-14225 Filed 7-18-23; 8:45 am]  
BILLING CODE 4333-15-C