Draft ESA Section 4(a)(3)(B)(i) and 4(b)(2) Report

for the Designation of Marine Critical Habitat for Six Distinct Population Segments of Green Sea Turtle (*Chelonia mydas*)

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Office of Protected Resources
National Marine Fisheries Service

Executive Summary

Section 4 of the Endangered Species Act of 1973 (ESA) requires the designation of critical habitat for threatened and endangered species to the maximum extent prudent and determinable, based on the best scientific data available and after taking into consideration national security, economic, and other relevant impacts (16 U.S.C. 1533). This section also precludes us from designating critical habitat in areas owned, controlled, or designated for use by the Department of Defense (DoD) if that area is subject to an Integrated Natural Resource Management Plan (INRMP) that benefits the species. We applied these requirements to the designation of critical habitat for green turtle DPSs under U.S. jurisdiction: North Atlantic, South Atlantic, East Pacific, Central North Pacific, Central South Pacific, and Central West Pacific.

To evaluate INRMPs that overlap with areas meeting the definition of critical habitat, we requested information on INRMPs from DoD. We reviewed their responses to determine whether a benefit is provided, following the implementing regulations (81 FR 7413; February 11, 2016). At this time, we did not find that any INRMP would "protect the habitat from the types of effects that would be addressed through a destruction-or-adverse-modification analysis (81 FR 7413; February 11, 2016)." However, we are working with DoD to add relevant elements to their INRMPs.

We weighed the economic impacts against the benefits of designating critical habitat for each DPS. If we designated all areas that meet the definition of critical habitat, the annualized cost would be $1.3 million over the next 10 years. This included areas determined to be of high ($800,000), moderate ($98,000), and low ($420,000) conservation benefit to the DPSs. The benefit of designating high and moderate conservation benefit areas outweighed the costs. For areas of low conservation benefit, the costs of designation outweighed the benefits. Therefore, we recommend excluding all areas of low conservation benefit. The failure to designate these areas of low conservation benefit will not result in the extinction of any DPS.

To evaluate the national security impacts against the benefits of designating critical habitat, we requested information from DoD and the Department of Homeland Security (DHS), specifically the U.S. Coast Guard (USCG). USCG did not request any national security exclusions. We reviewed DoD responses to determine whether they provided reasonably specific justification for the assertion that there is an incremental impact on national security that would result from the designation of that specific area as critical habitat (81 FR 7226; February 11, 2016). At this time, none of the responses included reasonably specific information with which to weigh the impacts of designation against the benefits. However, we are working with DoD to provide reasonably specific information.

We did not identify any additional impacts of a critical habitat designation at this time. We will review any information that becomes available prior to the publication of the final rule designating critical habitat.

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1.0 Background

Section 4 of the Endangered Species Act of 1973 (ESA) requires the designation of critical habitat for threatened and endangered species to the maximum extent prudent and determinable, based on the best scientific data available and after taking into consideration national security, economic, and other relevant impacts (16 U.S.C. 1533). The listing of threatened and endangered green turtle DPSs under the ESA in 2016 triggered the requirement to designate critical habitat. To meet this statutory requirement, we followed a four-step process: 1) identification of areas that meet the definition of critical habitat; 2) review of Department of Defense Integrated Natural Resources Management Plans (INRMPs) under section 4(a)(3); 3) weighing economic, national security, and other impacts against the benefit of designation under section 4(b)2; and 4) proposing areas for critical habitat designation, based on the previous three steps. The Critical Habitat Biological Review Team (the Team) completed the first step, as described in the Draft Biological Report (NMFS 2023a). Our economist evaluated economic impacts of designating critical habitat, as described in the Draft Economic Impact Analysis (NMFS 2023b). This report focuses on steps 2 (reviewing INRMP) and 3 (weighing economic, national security, and other impacts against the benefits of designation).

2.0 Application of ESA Section 4(a)(3)(B)(i)

Section 4(a)(3)(B)(i) of the ESA was amended by the National Defense Authorization Act (NDAA) of 2004 to preclude the Secretary from designating as critical habitat any lands or other geographical areas owned or controlled by the Department of Defense (DoD), or designated for its use, that are subject to a DoD Integrated Natural Resource Management Plan (INRMP) under the Sikes Act Improvement Act of 1997 (16 U.S.C. §670a), provided that the Secretary certifies in writing that the plan benefits the listed species.

Neither the ESA nor the 2004 NDAA defines the term "benefit." However, the Congressional report on the 2004 NDAA (Report 108–354) instructed the Secretary to "assess an INRMP's potential contribution to species conservation, giving due regard to those habitat protection, maintenance, and improvement projects . . . that address the particular conservation and protection needs of the species for which critical habitat would otherwise be proposed." Because a finding of benefit would result in an exemption from critical habitat designation and, given the specific mention of "habitat protection, maintenance, and improvement" in the conference report, we infer that Congress intended that an INRMP provide a conservation benefit to the habitat (e.g., essential features) of the species, in addition to the species.

Our regulations (81 FR 7413; February 11, 2016) further refine these instructions from Congress: "In determining whether such a benefit is provided, the Secretary will consider: (1) The extent of the area and features present; (2) The type and frequency of use of the area by the species; (3) The relevant elements of the INRMP in terms of management objectives, activities covered, and

best management practices, and the certainty that the relevant elements will be implemented; and (4) The degree to which the relevant elements of the INRMP will protect the habitat from the types of effects that would be addressed through a destruction-or-adverse-modification analysis.

To evaluate INRMPs that overlap with areas meeting the definition of critical habitat, we requested information on INRMPs from DoD. We reviewed 44 signed INRMPs that were submitted to us in response to our information request, and determined that 38 INRMPs apply to installations that co-occur with areas considered for proposed green turtle critical habitat designation. Our determination of whether each INRMP is likely to benefit the green sea turtle or its habitat are provided below, by DPS. When considering the degree to which the relevant elements of the INRMP will protect the habitat from the types of effects that would be addressed through a destruction-or-adverse-modification analysis, we focused on the essential features contained in that area (see the Draft Biological Report, NMFS 2023a). For areas containing the essential reproductive feature, we reviewed the INRMP for elements that would protect nearshore waters from obstruction and light pollution. For areas containing the essential migratory feature, we reviewed the INRMP for elements that would protect the migratory corridor from obstruction. For areas containing essential foraging and resting features, we reviewed the INRMP for elements that would protect foraging resources (e.g., seagrass, algal, and invertebrate communities) and underwater refugia from destruction or adverse modification. As explained for each INRMP, we did not identify any that addressed the four considerations identified in our regulations (81 FR 7413; February 11, 2016).

North Atlantic DPS

1. *Joint Expeditionary Base Little Creek-Fort Story* (JEBLCFS)
    a. The extent of the area includes waters from the mean high water line to 20 m depth surrounding the installation in Virginia. This area contains foraging and resting features.
    b. The type of use includes benthic foraging and resting. The use is seasonal, and relatively few green turtles use this area.
    c. Many of the elements of the INRMP apply to terrestrial areas and turtles' use of nesting beaches (e.g., minimizing excavation during sea turtle nesting season, minimizing driving on the beach at night during sea turtle nesting season, and sea turtle nest surveys). Green turtles' in-water habitat requirements are not included in the INRMP. Although not specific to green turtles, some elements are relevant to green turtles' essential marine features. Small dune restoration projects such as installation of sand fencing and recycled Christmas trees have been implemented to reduce erosion and improve sand accretion, thereby reducing turbidity and sedimentation of in-water habitat. Management actions implemented at JEB Fort Story that directly support the goals of the Chesapeake Bay agreements include

restoring and protecting water quality and wetlands, establishing riparian buffers, implementing dune restoration and shoreline stabilization measures, and promoting education and outreach. There is high certainty that these elements will be implemented.

d. The degree to which the relevant elements will protect the habitat from the types of effects that would be addressed during a destruction or adverse modification analysis is incomplete. Foraging (seagrass and macroalgae) and resting (hard substrate) features are protected from turbidity and sedimentation, but not from removal or damage. During a destruction or adverse modification analysis, we would address the effects of dredging and filling operations, vessel activities (e.g., prop scarring), and oil spills on seagrass, algal, and coral communities (i.e., foraging and resting features). For these reasons, we do not conclude that the INRMP provides a conservation benefit to the species for which critical habitat is being designated.

2. *Naval Weapons Station Yorktown*

a. The extent of the area includes waters from the mean high water line to 20 m depth surrounding the installation in Virginia at Yorktown and along the York River. This area contains foraging and resting features.

b. The type of use includes benthic foraging and resting. The use is seasonal, and relatively few green turtles use this area.

c. Green turtles' in-water habitat requirements are not included in the INRMP. Although not specific to green turtles, some elements are relevant to green turtles' essential marine features. Such activities include riparian forest buffer enhancements, shoreline protection, reduced mowing, invasive species control, and habitat restoration directly support the goals of the Chesapeake Bay agreements and help ensure water quality. There is high certainty that these elements will be implemented.

d. The degree to which the relevant elements will protect the habitat from the types of effects that would be addressed during a destruction or adverse modification analysis is incomplete. Foraging (seagrass and macroalgae) and resting (hard substrate) features are protected to some degree from turbidity and sedimentation, but not from removal or damage. During a destruction or adverse modification analysis, we would address the effects of dredging and filling operations, vessel activities (e.g., prop scarring), and oil spills on seagrass, algal, and coral communities (i.e., foraging and resting features). For these reasons, we do not conclude that the INRMP provides a conservation benefit to the species for which critical habitat is being designated.

3. *Naval Station Norfolk*

a. The extent of the area includes waters from the mean high water line to 20 m depth surrounding the installation in Virginia. This area contains foraging and resting features.
b. The type of use includes benthic foraging and resting. The use is seasonal, and relatively few green turtles use this area.
c. Green turtles' in-water habitat requirements are not included in the INRMP. Although not specific to green turtles, some elements are relevant to green turtles' essential marine features. Such activities include riparian forest buffer enhancements, shoreline protection, reduced mowing, invasive species control, and habitat restoration, which directly support the goals of the Chesapeake Bay agreements and help ensure water quality. There is high certainty that these elements will be implemented.
d. The degree to which the relevant elements will protect the habitat from the types of effects that would be addressed during a destruction or adverse modification analysis is incomplete. Foraging (seagrass and macroalgae) and resting (hard substrate) features are protected to some degree from turbidity and sedimentation, but not from removal or damage. During a destruction or adverse modification analysis, we would address the effects of dredging and filling operations, vessel activities (e.g., prop scarring), and oil spills on seagrass, algal, and coral communities (i.e., foraging and resting features). For these reasons, we do not conclude that the INRMP provides a conservation benefit to the species for which critical habitat is being designated.

4. Naval Station Newport

a. The extent of the area includes waters from the mean high water line to 20 m depth surrounding the installation in Rhode Island. This area contains foraging and resting features.
b. The type of use includes benthic foraging and resting. The use is seasonal, and relatively few green turtles use this area.
c. Green turtles' in-water habitat requirements are not included in the INRMP. Although not specific to green turtles, some elements are relevant to green turtles' essential marine features. Such activities include wetland restoration, living shoreline restoration, and restoration of eroded coastal areas identified as a high restoration priority. These projects will provide a benefit to water quality. There is high certainty that these elements will be implemented.
d. The degree to which the relevant elements will protect the habitat from the types of effects that would be addressed during a destruction or adverse modification analysis is incomplete. Foraging (seagrass and macroalgae) and resting (hard substrate) features are protected to some degree from turbidity and sedimentation, but not from removal or damage. During a destruction or adverse modification

analysis, we would address the effects of dredging and filling operations, vessel activities (e.g., prop scarring), and oil spills on seagrass, algal, and coral communities (i.e., foraging and resting features). For these reasons, we do not conclude that the INRMP provides a conservation benefit to the species for which critical habitat is being designated.

5. *Naval Air Station Oceana*
    a. The extent of the area includes waters from the mean high water line to 20 m depth surrounding the installation's annex (Dam Neck) in Virginia. This area contains foraging and resting features.
    b. The type of use includes benthic foraging and resting. The use is seasonal, and relatively few green turtles use this area.
    c. Many of the elements of the INRMP apply to terrestrial areas and turtles' use of nesting beaches (e.g., installation of signs and fencing to restrict unauthorized access to the dunes and identify additional areas where fencing and signs are needed to block vehicle access roads that dissect the dune system and cause degradation). Green turtles' in-water habitat requirements are not included in the INRMP. Although not specific to green turtles, some elements are relevant to green turtles' essential marine features. These include dune restoration (e.g., Christmas Tree recycling, native plant plantings) conducted annually, as needed, to the extent that personnel and available funding allows, and wetlands, erosion and sedimentation protection. These activities provide a benefit to water quality. There is high certainty that these elements will be implemented.
    d. The degree to which the relevant elements will protect the habitat from the types of effects that would be addressed during a destruction or adverse modification analysis is incomplete. Foraging (seagrass and macroalgae) and resting (hard substrate) features are protected to some degree from turbidity and sedimentation, but not from removal or damage. During a destruction or adverse modification analysis, we would address the effects of dredging and filling operations, vessel activities (e.g., prop scarring), and oil spills on seagrass, algal, and coral communities (i.e., foraging and resting features). For these reasons, we do not conclude that the INRMP provides a conservation benefit to the species for which critical habitat is being designated.

6. *Naval Weapons Station Earle*
    a. The extent of the area includes waters from the mean high water line to 20 m depth surrounding the installation's coastal and nearshore areas in New Jersey. This area contains foraging and resting features.
    b. The type of use includes benthic foraging and resting. The use is seasonal, and relatively few green turtles use this area.

c. Green turtles' in-water habitat requirements are not included in the INRMP. Although not specific to green turtles, some elements are relevant to green turtles' essential marine features. These include oyster restoration, shoreline stabilization, and marsh restoration. These activities provide a benefit to water quality. There is high certainty that these elements will be implemented.
d. The degree to which the relevant elements will protect the habitat from the types of effects that would be addressed during a destruction or adverse modification analysis is incomplete. Foraging (seagrass and macroalgae) and resting (hard substrate) features are protected to some degree from turbidity and sedimentation, but not from removal or damage. During a destruction or adverse modification analysis, we would address the effects of dredging and filling operations, vessel activities (e.g., prop scarring), and oil spills on seagrass, algal, and coral communities (i.e., foraging and resting features). For these reasons, we do not conclude that the INRMP provides a conservation benefit to the species for which critical habitat is being designated.

7. *Naval Support Activity Hampton Roads*
   a. The extent of the area includes waters from the mean high water line to 20 m depth surrounding the installation in Virginia. This area contains foraging and resting features.
   b. The type of use includes benthic foraging and resting. The use is seasonal, and relatively few green turtles use this area.
   c. Green turtles' in-water habitat requirements are not included in the INRMP. Although not specific to green turtles, some elements are relevant to green turtles' essential marine features. These include oyster restoration and erosion control. These activities provide a benefit to water quality. There is high certainty that these elements will be implemented.
   d. The degree to which the relevant elements will protect the habitat from the types of effects that would be addressed during a destruction or adverse modification analysis is incomplete. Foraging (seagrass and macroalgae) and resting (hard substrate) features are protected to some degree from turbidity and sedimentation, but not from removal or damage. During a destruction or adverse modification analysis, we would address the effects of dredging and filling operations, vessel activities (e.g., prop scarring), and oil spills on seagrass, algal, and coral communities (i.e., foraging and resting features). For these reasons, we do not conclude that the INRMP provides a conservation benefit to the species for which critical habitat is being designated.

8. *Naval Submarine Base King's Bay*

a. The extent of the area includes waters from the mean high water line to 20 m depth surrounding the installation in Georgia. This area contains foraging and resting features.
b. The type of use includes benthic foraging and resting. We do not have much data on this area; however, the data we have indicates relatively infrequent use and relatively few green turtles in the area.
c. Green turtles' in-water habitat requirements are not included in the INRMP. Although not specific to green turtles, some elements are relevant to green turtles' essential marine features. These elements are relevant to wetland protections, soil erosion control, and stormwater control. The INRMP also specifies mitigation measures to sea turtles during dredging operations (e.g., scheduling dredging operations during periods of low sea turtle occurrence, minimizing lighting on all dredge and waterfront operations during turtle nesting season), although protection or mitigation of negative effects on in-water habitat is not included in these measures. There is high certainty that these elements will be implemented.
d. The degree to which the relevant elements will protect the habitat from the types of effects that would be addressed during a destruction or adverse modification analysis is incomplete. Foraging (seagrass and macroalgae) and resting (hard substrate) features are protected to some degree from turbidity and sedimentation, but not from removal or damage. During a destruction or adverse modification analysis, we would address the effects of dredging and filling operations, vessel activities (e.g., prop scarring), and oil spills on seagrass, algal, and coral communities (i.e., foraging and resting features). For these reasons, we do not conclude that the INRMP provides a conservation benefit to the species for which critical habitat is being designated.

9. *Naval Station Mayport*
a. The extent of the area includes waters from the mean high water line to 20 m depth surrounding the installation in Florida. This area includes essential reproductive, migratory and foraging/resting features.
b. The type of use includes in-water reproductive activities, including mating, internesting, and post-hatchling swim frenzy (there is one nesting beach being considered by USFWS for proposed critical habitat designation within 30 km of the installation). Adult and juvenile green turtles forage on seagrass and macroalgae in this area. This area also contains a portion of the migratory corridor that adult turtles use to move between foraging/resting and nesting areas. The use is frequent, and many green turtles use this area.
c. Many of the elements of the INRMP apply to terrestrial areas and turtles' use of nesting beaches (e.g., controlling invasive, exotic, and noxious species; restricting vehicle traffic on beaches). Green turtles' in-water habitat requirements are not

included in the INRMP. Although not specific to green turtles, some elements are relevant to green turtles' essential marine features. A project was initiated in 2012 to manage light emissions in order to eliminate sea turtle disorientation, which is relevant to the essential reproductive feature, which includes dark waters. Water quality is managed through factors such as wetlands (i.e., controlling pesticide runoff, maintaining chemical-free vegetative buffers), erosion control (i.e, preventing sedimentation), and stormwater control (i.e., managing point and non-point source pollution). These activities provide a benefit to water quality. There is high certainty that these elements will be implemented.

d. The degree to which the relevant elements will protect the habitat from the types of effects that would be addressed during a destruction or adverse modification analysis is incomplete. Foraging (seagrass and macroalgae) and resting (hard substrate) features are protected to some degree from turbidity and sedimentation, but not from removal or damage. During a destruction or adverse modification analysis, we would address the effects of dredging and filling operations, vessel activities (e.g., prop scarring), and oil spills on seagrass, algal, and coral communities (i.e., foraging and resting features). The reproductive features are protected from light pollution, but neither the reproductive or migratory features are protected from obstructions. During a destruction or adverse modification analysis, we would address the effects of in-water activities on unobstructed waters (i.e., whether such activities would impede or disturb mating, reovulation, access to/from nesting beaches, hatchling swim frenzy, and migration). For these reasons, we do not conclude that the INRMP provides a conservation benefit to the species for which critical habitat is being designated.

10. Naval Air Station Key West

a. The extent of the area includes waters from the mean high water line to 20 m depth surrounding the installation in Florida Bay and the Atlantic Ocean. This area includes essential reproductive, migratory and foraging/resting features.

b. The type of use includes in-water reproductive activities, including mating, internesting, and post-hatchling swim frenzy (there are two nesting beaches being considered by USFWS for proposed critical habitat designation within 20 km of the installation). Adult and juvenile green turtles forage on seagrass and macroalgae in this area, which is especially important to post-nesting females and post-mating males, who are the most productive individuals of the DPS. This area also contains a portion of the migratory corridor that adult turtles use to move between foraging/resting and nesting areas. The use is frequent, and many green turtles use this area.

c. Many of the elements of the INRMP apply to terrestrial areas and turtles' use of nesting beaches. Green turtles' in-water habitat requirements are not included in

the INRMP. Although not specific to green turtles, some elements are relevant to green turtles' essential marine features. Project 15 reduces the emission of light that may disorient nesting sea turtles and hatchlings, which is relevant to the essential reproductive feature, which includes dark waters. To protect seagrass habitat, Coastal and Marine Management Objectives require the use of BMPs for any project to ensure that turbidity is not created from storm water drainage systems or sedimentation from earthwork and construction. Project 2 restores hydrodynamics at Boca Chica Key to provide tidal flushing and nutrient delivery to seagrasses. There is high certainty that these elements will be implemented.

d. The degree to which the relevant elements will protect the habitat from the types of effects that would be addressed during a destruction or adverse modification analysis is incomplete. Seagrass habitats are protected from turbidity and sedimentation but not removal or damage. During a destruction or adverse modification analysis, we would address the effects of dredging and filling operations, vessel activities (e.g., prop scarring), and oil spills on seagrass, algal, and coral communities (i.e., foraging and resting features). The reproductive features are protected from light pollution, but neither the reproductive or migratory features are protected from obstructions. During a destruction or adverse modification analysis, we would address the effects of in-water activities on unobstructed waters (i.e., whether such activities would impede or disturb mating, reovulation, access to/from nesting beaches, hatchling swim frenzy, and migration). For these reasons, we do not conclude that the INRMP provides a conservation benefit to the species for which critical habitat is being designated.

11. Naval Support Activity Panama City

a. The extent of the area includes waters from the mean high water line to 20 m depth surrounding the installation in Florida. This area includes essential reproductive, migratory and foraging/resting features.

b. The type of use includes in-water reproductive activities, including mating, internesting, and post-hatchling swim frenzy (there are nesting beaches being considered by USFWS for proposed critical habitat designation within 30 km of the installation). Adult and juvenile green turtles forage on seagrass and macroalgae in this area. This area also contains a portion of the migratory corridor that adult turtles use to move between foraging/resting and nesting areas. The use is frequent, and many green turtles use this area.

c. Green turtles' in-water habitat requirements are not included in the INRMP. Although not specific to green turtles, some elements are relevant to green turtles' essential marine features. Water quality is managed through factors such as wetlands (i.e., no net loss of wetlands, developing and maintaining vegetative buffers), soil conservation and erosion control (i.e, preventing turbidity), and

stormwater control (i.e., managing point and non-point source pollution). These activities provide a benefit to water quality. There is high certainty that these elements will be implemented.

d. The degree to which the relevant elements will protect the habitat from the types of effects that would be addressed during a destruction or adverse modification analysis is incomplete. Foraging (seagrass and macroalgae) and resting (hard substrate) features are protected to some degree from turbidity and sedimentation, but not from removal or damage. During a destruction or adverse modification analysis, we would address the effects of dredging and filling operations, vessel activities (e.g., prop scarring), and oil spills on seagrass, algal, and coral communities (i.e., foraging and resting features). The reproductive features are protected from light pollution, but neither the reproductive or migratory features are protected from obstructions. During a destruction or adverse modification analysis, we would address the effects of in-water activities on unobstructed waters (i.e., whether such activities would impede or disturb mating, reovulation, access to/from nesting beaches, hatchling swim frenzy, and migration). For these reasons, we do not conclude that the INRMP provides a conservation benefit to the species for which critical habitat is being designated.

12. Naval Air Station Pensacola

a. The extent of the area includes waters from the mean high water line to 20 m depth surrounding the installation in Florida. This area includes essential reproductive, migratory and foraging/resting features.

b. The type of use includes in-water reproductive activities, including mating, internesting, and post-hatchling swim frenzy (there is one nesting beach being considered by USFWS for proposed critical habitat designation within 20 km of the installation). Adult and juvenile green turtles forage on seagrass and macroalgae in this area. This area also contains a portion of the migratory corridor that adult turtles use to move between foraging/resting and nesting areas. The use is frequent, and many green turtles use this area.

c. Green turtles' in-water habitat requirements are not included in the INRMP. Although not specific to green turtles, some elements are relevant to green turtles' essential marine features. Water quality is managed through factors such as wetlands (i.e., no net loss of wetlands, developing and maintaining vegetative buffers), soil conservation and erosion control (i.e, preventing turbidity), stormwater control (i.e., managing point and non-point source pollution), and marine coastal management (avoid construction or management practices that will adversely affect the attenuation capacity of the 100-year floodplain). These activities provide a benefit to water quality. There is high certainty that these elements will be implemented.

d. The degree to which the relevant elements will protect the habitat from the types of effects that would be addressed during a destruction or adverse modification analysis is incomplete. Foraging (seagrass and macroalgae) and resting (hard substrate) features are protected to some degree from turbidity and sedimentation, but not from removal or damage. During a destruction or adverse modification analysis, we would address the effects of dredging and filling operations, vessel activities (e.g., prop scarring), and oil spills on seagrass, algal, and coral communities (i.e., foraging and resting features).The reproductive features are protected from light pollution, but neither the reproductive or migratory features are protected from obstructions. During a destruction or adverse modification analysis, we would address the effects of in-water activities on unobstructed waters (i.e., whether such activities would impede or disturb mating, reovulation, access to/from nesting beaches, hatchling swim frenzy, and migration). For these reasons, we do not conclude that the INRMP provides a conservation benefit to the species for which critical habitat is being designated.

13. Naval Air Station Corpus Christi

a. The extent of the area includes waters from the mean high water line to 20 m depth surrounding the installation in Texas. This area includes essential foraging and resting features.
b. The type of use includes benthic foraging on seagrass and macroalgae in this area and resting under hard substrates. The use is frequent, and many green turtles use this area.
c. Green turtles' in-water habitat requirements are not included in the INRMP. Although not specific to green turtles, some elements are relevant to green turtles' essential marine features. Water quality is managed through factors such as water resources (i.e., wetland, watershed, and water quality management), coastal zone management (i.e., minimize impacts of construction activities in the coastal zone), fisheries and aquatic species (i.e., minimize impacts of fertilizers and pesticides, minimize impacts of construction activities, incorporate stormwater, erosion and sediment controls), and educational outreach. These activities provide a benefit to water quality. There is high certainty that these elements will be implemented.
d. The degree to which the relevant elements will protect the habitat from the types of effects that would be addressed during a destruction or adverse modification analysis is incomplete. Foraging (seagrass and macroalgae) and resting (hard substrate) features are protected to some degree from turbidity and sedimentation, but not from removal or damage. During a destruction or adverse modification analysis, we would address the effects of dredging and filling operations, vessel activities (e.g., prop scarring), and oil spills on seagrass, algal, and coral communities (i.e., foraging and resting features). For these reasons, we do not

conclude that the INRMP provides a conservation benefit to the species for which critical habitat is being designated.

14. Naval Air Station Patuxent River

a. The extent of the area includes waters from the mean high water line to 20 m depth surrounding the installation in Maryland. This area contains foraging and resting features.
b. The type of use includes benthic foraging and resting. The use is seasonal, and relatively few green turtles use this area.
c. Green turtles' in-water habitat requirements are not included in the INRMP.
d. Because there are no relevant elements addressing green turtles' in-water habitat requirements, there is no protection from the types of effects that would be addressed during a destruction or adverse modification analysis. Therefore, we do not conclude that the INRMP provides a conservation benefit to the species for which critical habitat is being designated.

15. Eglin Air Force Base

a. The extent of the area includes waters from the mean high water line to 20 m depth surrounding the installation in Florida. This area includes essential reproductive, migratory and foraging/resting features.
b. The type of use includes in-water reproductive activities, including mating, internesting, and post-hatchling swim frenzy (there is one nesting beach being considered by USFWS for proposed critical habitat designation within 10 km of the installation). Adult and juvenile green turtles forage on seagrass and macroalgae in this area. This area also contains a portion of the migratory corridor that adult turtles use to move between foraging/resting and nesting areas. The use is frequent, and many green turtles use this area.
c. Many of the elements of the INRMP apply to terrestrial areas and turtles' use of nesting beaches (e.g., minimizing beachfront activities during nesting season, predator control, beach driving restrictions, and dune restoration). Green turtles' in-water habitat requirements are not included in the INRMP. Low-pressure sodium vapor lighting has been installed at all test sites along Santa Rosa Island and Cape San Blas, which allows for sufficiently dark reproductive habitat. Although not specific to green turtles, some elements are relevant to green turtles' essential marine features. To improve water quality, the INRMP includes activities such as wetlands conservation, erosion and sedimentation control, use of riparian buffers, floodplain preservation, pollution control, and sound grounds maintenance procedures. There is high certainty that these elements will be implemented.

d. The degree to which the relevant elements will protect the habitat from the types of effects that would be addressed during a destruction or adverse modification analysis is incomplete. Foraging (seagrass and macroalgae) and resting (hard substrate) features are protected to some degree from turbidity and sedimentation, but not from removal or damage. During a destruction or adverse modification analysis, we would address the effects of dredging and filling operations, vessel activities (e.g., prop scarring), and oil spills on seagrass, algal, and coral communities (i.e., foraging and resting features). The reproductive features are protected from light pollution, but neither the reproductive or migratory features are protected from obstructions. During a destruction or adverse modification analysis, we would address the effects of in-water activities on unobstructed waters (i.e., whether such activities would impede or disturb mating, reovulation, access to/from nesting beaches, hatchling swim frenzy, and migration). For these reasons, we do not conclude that the INRMP provides a conservation benefit to the species for which critical habitat is being designated.

16. Tyndall Air Force Base

a. The extent of the area includes waters from the mean high water line to 20 m depth surrounding the installation in Florida. This area includes essential reproductive, migratory and foraging/resting features.
b. The type of use includes in-water reproductive activities, including mating, internesting, and post-hatchling swim frenzy (there are several nesting beaches being considered by USFWS for proposed critical habitat designation at the installation). Adult and juvenile green turtles forage on seagrass and macroalgae in this area. This area also contains a portion of the migratory corridor that adult turtles use to move between foraging/resting and nesting areas. The use is frequent, and many green turtles use this area.
c. Many of the elements of the INRMP apply to terrestrial areas and turtles' use of nesting beaches (e.g., protect and restore beach habitats for sea turtles, provide nest location information for mission avoidance, conduct predator control, avoid off-road vehicle use during nesting season, construct and maintain elevated boardwalks to eliminate pedestrian traffic in and around dunes and prevent erosion). Green turtles' in-water habitat requirements are not included in the INRMP. Lights and fires are prohibited on beaches, and wildlife friendly lighting is required on the Support Side of the installation as part of the Installation Lighting Management Plan being updated and developed in relation to the post-hurricane infrastructure rebuild. This allows for sufficiently dark reproductive habitat. Although not specific to green turtles, some elements are relevant to green turtles' essential marine features. To improve water quality, the INRMP includes

activities such as wastewater and stormwater management and wetland protection and mitigation. There is high certainty that these elements will be implemented.

d. The degree to which the relevant elements will protect the habitat from the types of effects that would be addressed during a destruction or adverse modification analysis is incomplete. Foraging (seagrass and macroalgae) and resting (hard substrate) features are protected to some degree from turbidity and sedimentation, but not from removal or damage. During a destruction or adverse modification analysis, we would address the effects of dredging and filling operations, vessel activities (e.g., prop scarring), and oil spills on seagrass, algal, and coral communities (i.e., foraging and resting features). The reproductive features are protected from light pollution, but neither the reproductive or migratory features are protected from obstructions. During a destruction or adverse modification analysis, we would address the effects of in-water activities on unobstructed waters (i.e., whether such activities would impede or disturb mating, reovulation, access to/from nesting beaches, hatchling swim frenzy, and migration). For these reasons, we do not conclude that the INRMP provides a conservation benefit to the species for which critical habitat is being designated.

17. Patrick Space Force Base and Cape Canaveral Space Force Station

a. The extent of the area includes waters from the mean high water line to 20 m depth surrounding the installation in Florida. This area includes essential reproductive, migratory and foraging/resting features.

b. The type of use includes in-water reproductive activities, including mating, internesting, and post-hatchling swim frenzy (there are nesting beaches being considered by USFWS for proposed critical habitat designation adjacent to the installation). Adult and juvenile green turtles forage on seagrass and macroalgae in this area. This area also contains a portion of the migratory corridor that adult turtles use to move between foraging/resting and nesting areas. The use is frequent, and many green turtles use this area.

c. Many of the elements of the INRMP apply to terrestrial areas and turtles' use of nesting beaches (e.g., aggressive nuisance wildlife removal program, beach clean-ups, prevention of destruction of dune vegetation, restriction of off-road vehicle use). Green turtles' in-water habitat requirements are not included in the INRMP. Installation Light Management Plans are in place to reduce exterior lighting impacts to sea turtles and therefore allow for sufficiently dark reproductive habitat. Although not specific to green turtles, some elements are relevant to green turtles' essential marine features. To improve water quality, the INRMP includes activities such as soil conservation and erosion management, riparian buffers, stormwater management, and wetland protection. There is high certainty that these elements will be implemented.

d. The degree to which the relevant elements will protect the habitat from the types of effects that would be addressed during a destruction or adverse modification analysis is incomplete. Foraging (seagrass and macroalgae) and resting (hard substrate) features are protected to some degree from turbidity and sedimentation, but not from removal or damage. During a destruction or adverse modification analysis, we would address the effects of dredging and filling operations, vessel activities (e.g., prop scarring), and oil spills on seagrass, algal, and coral communities (i.e., foraging and resting features). The reproductive features are protected from light pollution, but neither the reproductive or migratory features are protected from obstructions. During a destruction or adverse modification analysis, we would address the effects of in-water activities on unobstructed waters (i.e., whether such activities would impede or disturb mating, reovulation, access to/from nesting beaches, hatchling swim frenzy, and migration). For these reasons, we do not conclude that the INRMP provides a conservation benefit to the species for which critical habitat is being designated.

18. Hurlburt Field

a. The extent of the area includes waters from the mean high water line to 20 m depth surrounding the installation in Florida. This area includes essential reproductive, migratory and foraging/resting features.
b. The type of use includes in-water reproductive activities, including mating, internesting, and post-hatchling swim frenzy (there is one nesting beach being considered by USFWS for proposed critical habitat designation within 20 km of the installation). Adult and juvenile green turtles forage on seagrass and macroalgae in this area. This area also contains a portion of the migratory corridor that adult turtles use to move between foraging/resting and nesting areas. The use is frequent, and many green turtles use this area.
c. Green turtles' in-water habitat requirements are not included in the INRMP. Although not specific to green turtles, some elements are relevant to green turtles' essential marine features. To improve water quality, the INRMP includes activities such as wetland protection (i.e., mitigating for construction impacts in wetland areas by protecting and restoring wetland and salt marsh habitat) and erosion control. There is high certainty that these elements will be implemented.
d. The degree to which the relevant elements will protect the habitat from the types of effects that would be addressed during a destruction or adverse modification analysis is incomplete. Foraging (seagrass and macroalgae) and resting (hard substrate) features are protected to some degree from turbidity and sedimentation, but not from removal or damage. During a destruction or adverse modification analysis, we would address the effects of dredging and filling operations, vessel activities (e.g., prop scarring), and oil spills on seagrass, algal, and coral

communities (i.e., foraging and resting features). For these reasons, we do not conclude that the INRMP provides a conservation benefit to the species for which critical habitat is being designated.

19. Joint Base Charleston

a. The extent of the area includes waters from the mean high water line to 20 m depth surrounding the installation in South Carolina. This area contains foraging and resting features.
b. The type of use includes benthic foraging and resting. We do not have much data on this area; however, the data we have indicates relatively infrequent use and few green turtles in the area.
c. Green turtles' in-water habitat requirements are not included in the INRMP. Although not specific to green turtles, some elements are relevant to green turtles' essential marine features. To improve water quality, the INRMP includes activities such as wetland protection (i.e., vegetative buffer maintenance and/or development to filter sediments and pollutants) and stormwater management. There is high certainty that these elements will be implemented.
d. The degree to which the relevant elements will protect the habitat from the types of effects that would be addressed during a destruction or adverse modification analysis is incomplete. Foraging (seagrass and macroalgae) and resting (hard substrate) features are protected to some degree from turbidity and sedimentation, but not from removal or damage. During a destruction or adverse modification analysis, we would address the effects of dredging and filling operations, vessel activities (e.g., prop scarring), and oil spills on seagrass, algal, and coral communities (i.e., foraging and resting features). For these reasons, we do not conclude that the INRMP provides a conservation benefit to the species for which critical habitat is being designated.

20. Joint Base Langley-Eustis (Langley)

a. The extent of the area includes waters from the mean high water line to 20 m depth surrounding the installation in Virginia. This area contains foraging and resting features.
b. The type of use includes benthic foraging and resting. The use is seasonal, and relatively few green turtles use this area.
c. Green turtles' in-water habitat requirements are not included in the INRMP. Although not specific to green turtles, some elements are relevant to green turtles' essential marine features. To improve water quality, the INRMP includes activities such as water resource protection (i.e., pollution and stormwater control) and enhancement and restoration of wetlands. There is high certainty that these elements will be implemented.

d. The degree to which the relevant elements will protect the habitat from the types of effects that would be addressed during a destruction or adverse modification analysis is incomplete. Foraging (seagrass and macroalgae) and resting (hard substrate) features are protected to some degree from turbidity and sedimentation, but not from removal or damage. During a destruction or adverse modification analysis, we would address the effects of dredging and filling operations, vessel activities (e.g., prop scarring), and oil spills on seagrass, algal, and coral communities (i.e., foraging and resting features). For these reasons, we do not conclude that the INRMP provides a conservation benefit to the species for which critical habitat is being designated.

21. Joint Base Langley-Eustis (Eustis)

a. The extent of the area includes waters from the mean high water line to 20 m depth surrounding the installation in Virginia. This area contains foraging and resting features.
b. The type of use includes benthic foraging and resting. The use is seasonal, and relatively few green turtles use this area.
c. Green turtles' in-water habitat requirements are not included in the INRMP. Although not specific to green turtles, some elements are relevant to green turtles' essential marine features. To improve water quality, the INRMP includes activities such as wetland protection. There is high certainty that these elements will be implemented.
d. The degree to which the relevant elements will protect the habitat from the types of effects that would be addressed during a destruction or adverse modification analysis is incomplete. Foraging (seagrass and macroalgae) and resting (hard substrate) features are protected to some degree from turbidity and sedimentation, but not from removal or damage. During a destruction or adverse modification analysis, we would address the effects of dredging and filling operations, vessel activities (e.g., prop scarring), and oil spills on seagrass, algal, and coral communities (i.e., foraging and resting features). For these reasons, we do not conclude that the INRMP provides a conservation benefit to the species for which critical habitat is being designated.

22. MacDill Air Force Base

a. The extent of the area includes waters from the mean high water line to 20 m depth surrounding the installation in Florida. This area includes essential migratory and foraging/resting features.
b. The type of use includes foraging on seagrass and macroalgae and resting under hard substrates in this area. This area also contains a portion of the migratory

corridor that adult turtles use to move between foraging/resting and nesting areas. The use is frequent, and many green turtles use this area.

c. Green turtles' in-water habitat requirements are not included in the INRMP. Although not specific to green turtles, some elements are relevant to green turtles' essential marine features. The Surface Water Improvement Management program focuses on water quality and habitat restoration, and allows for greater biological filtration/treatment prior to discharge into intertidal creeks and ditches. Wetland management is undertaken with the goal of at minimum, no net loss of wetland quality and quantity. Any project that affects wetlands is required to restore, on the installation, the acreage impacted. Oyster reef and living shoreline restoration work has been ongoing at the installation since 2004 and provides biological water filtration through an increase in oyster biomass, thereby promoting stabilization of sediments which can lead to increases in seagrass growth adjacent to the reefs. There is high certainty that these elements will be implemented.

d. The degree to which the relevant elements will protect the habitat from the types of effects that would be addressed during a destruction or adverse modification analysis is incomplete. Foraging (seagrass and macroalgae) and resting (hard substrate) features are protected to some degree from turbidity and sedimentation, but not from removal or damage. During a destruction or adverse modification analysis, we would address the effects of dredging and filling operations, vessel activities (e.g., prop scarring), and oil spills on seagrass, algal, and coral communities (i.e., foraging and resting features). For these reasons, we do not conclude that the INRMP provides a conservation benefit to the species for which critical habitat is being designated.

23. Muñiz Air National Guard Base (ANGB) Punta Salinas (Muniz ANGB)

a. The extent of the area includes waters from the mean high water line to 20 m depth surrounding the installation in Puerto Rico. This area includes essential foraging and resting features.

b. The type of use includes foraging on seagrass and macroalgae and resting under hard substrates in this area. The use is frequent, and a moderate number of green turtles use this area.

c. Green turtles' in-water habitat requirements are not included in the INRMP. Although not specific to green turtles, some elements are relevant to green turtles' essential marine features, including water and wetland resource protection (i.e., the use of vegetative buffers to improve stormwater runoff quality by slowing down the rate of flow, trapping sediment and other pollutants, and increasing infiltration into the ground) and soil conservation and sediment management. There is high certainty that these elements will be implemented.

d. The degree to which the relevant elements will protect the habitat from the types of effects that would be addressed during a destruction or adverse modification analysis is incomplete. Foraging (seagrass and macroalgae) and resting (hard substrate) features are protected to some degree from turbidity and sedimentation, but not from removal or damage. During a destruction or adverse modification analysis, we would address the effects of dredging and filling operations, vessel activities (e.g., prop scarring), and oil spills on seagrass, algal, and coral communities (i.e., foraging and resting features). For these reasons, we do not conclude that the INRMP provides a conservation benefit to the species for which critical habitat is being designated.

24. Marine Corps Base Camp Lejeune

a. The extent of the area includes waters from the mean high water line to 20 m depth surrounding the installation in North Carolina. This area includes essential foraging and resting features.
b. The type of use includes foraging on seagrass and macroalgae and resting under hard substrates in this area. The use is frequent, and a moderate number of green turtles use this area.
c. Many of the elements of the INRMP apply to terrestrial areas and turtles' use of nesting beaches (e.g., nest relocation, predator control, beach training and driving restrictions). Green turtles' in-water habitat requirements are not included in the INRMP. Although not specific to green turtles, some elements are relevant to green turtles' essential marine features. These include factors such as wetland buffers and mitigation banking, oyster restoration, shoreline stabilization, and soil conservation to reduce erosion, all of which will provide a benefit to water quality. There is high certainty that these elements will be implemented.
d. The degree to which the relevant elements will protect the habitat from the types of effects that would be addressed during a destruction or adverse modification analysis is incomplete. Foraging (seagrass and macroalgae) and resting (hard substrate) features are protected to some degree from turbidity and sedimentation, but not from removal or damage. During a destruction or adverse modification analysis, we would address the effects of dredging and filling operations, vessel activities (e.g., prop scarring), and oil spills on seagrass, algal, and coral communities (i.e., foraging and resting features). For these reasons, we do not conclude that the INRMP provides a conservation benefit to the species for which critical habitat is being designated.

25. Marine Corps Air Station Cherry Point

a. The extent of the area includes waters from the mean high water line to 20 m depth surrounding the installation in North Carolina. This area includes essential foraging and resting features.
b. The type of use includes foraging on seagrass and macroalgae and resting under hard substrates in this area. The use is frequent, and many green turtles use this area.
c. Green turtles' in-water habitat requirements are not included in the INRMP. Although not specific to green turtles, some elements are relevant to green turtles' essential marine features. There is high certainty that these elements will be implemented.
d. The degree to which the relevant elements will protect the habitat from the types of effects that would be addressed during a destruction or adverse modification analysis is incomplete. Foraging (seagrass and macroalgae) and resting (hard substrate) features are protected to some degree from turbidity and sedimentation, but not from removal or damage. During a destruction or adverse modification analysis, we would address the effects of dredging and filling operations, vessel activities (e.g., prop scarring), and oil spills on seagrass, algal, and coral communities (i.e., foraging and resting features). For these reasons, we do not conclude that the INRMP provides a conservation benefit to the species for which critical habitat is being designated.

26. Marine Corps Recruit Depot Parris Island

a. The extent of the area includes waters from the mean high water line to 20 m depth surrounding the installation in South Carolina. This area contains foraging and resting features.
b. The type of use includes benthic foraging and resting. We do not have much data on this area; however, the data we have indicates relatively infrequent use and relatively few green turtles in the area.
c. Green turtles' in-water habitat requirements are not included in the INRMP. Although not specific to green turtles, some elements are relevant to green turtles' essential marine features, including long-term wetland management to improve water quality. There is high certainty that these elements will be implemented.
d. The degree to which the relevant elements will protect the habitat from the types of effects that would be addressed during a destruction or adverse modification analysis is incomplete. Foraging (seagrass and macroalgae) and resting (hard substrate) features are protected to some degree from turbidity and sedimentation, but not from removal or damage. During a destruction or adverse modification analysis, we would address the effects of dredging and filling operations, vessel activities (e.g., prop scarring), and oil spills on seagrass, algal, and coral communities (i.e., foraging and resting features). For these reasons, we do not

conclude that the INRMP provides a conservation benefit to the species for which critical habitat is being designated.

Eastern Pacific DPS

27. San Diego Bay (this INRMP includes Naval Base San Diego, Naval Base Coronado, and Naval Base Point Loma)

a. The extent of the area includes waters within San Diego Bay and, outside of the Bay, from the mean high water line to 10 km offshore. This area includes essential migratory and foraging/resting features.
b. The types of use includes in-water migration, foraging on eelgrass, invertebrates, and macroalgae, and resting on hard surfaces. This area contains a portion of the migratory corridor that adult turtles use to move between foraging/resting areas within San Diego Bay and nesting/reproductive areas in Mexico. The use is year-round, frequent, and many green turtles use North San Diego Bay (and outside of the Bay) to transit to foraging/resting areas in Central and South San Diego Bay.
c. Green turtles' in-water habitat requirements are included in the INRMP, and there are several elements relevant to green turtles' essential features. Regarding their foraging and resting features, the INRMP requires mitigation for any impacts to eelgrass beds, such that there is no net loss of seagrass. Construction and dredging projects require BMPs to minimize turbidity and disturbance. Vessel activity is evaluated for conflicts with green turtle use of eelgrass beds. A Navy Eelgrass Mitigation Bank has been established. The Navy has funded research to track green turtles within and outside of San Diego Bay; this study supports the importance of the migratory corridor to link foraging/resting areas in the South Bay with nesting/reproductive areas in Mexico. Many of these elements have been implemented, and there is high certainty that they will continue to be implemented.
d. The degree to which the relevant elements will protect the habitat from the types of effects that would be addressed during a destruction or adverse modification analysis is high. Foraging (seagrass and macroalgae) and resting (hard substrate) features are protected from turbidity and sedimentation as well as loss or damage. However, the INRMP does not provide protection for the migratory feature (i.e., unobstructed waters for transit). During a destruction or adverse modification analysis, we would address the effects of in-water activities on unobstructed waters (i.e., whether such activities would impede, disrupt, or delay migration). For these reasons, we do not conclude that the INRMP provides a conservation benefit to the species for which critical habitat is being designated.

28. Naval Base San Diego (responses included in San Diego Bay, above)

29. Naval Base Coronado (responses included in San Diego Bay, above)

30. Naval Base Point Loma (responses included in San Diego Bay, above)

31. Naval Weapons Station Seal Beach

a. The extent of the area includes waters from the mean high water line to 20 m depth surrounding the installation in California. This area includes essential foraging and resting features.
b. The type of use includes foraging on seagrass, macroalgae, and invertebrates and resting under hard substrates in this area. The use is frequent, and many green turtles use this area. It is one of the most important foraging and resting areas for green turtles in California.
c. The INRMP contains some elements that address green turtles' in-water habitat requirements. Under Objective 24 (inventory and determine the health and trend of amphibian and reptile populations, emphasizing those that may indicate ecosystem trends or may become federally listed, and control exotics that threaten this health) and Objective 35 (Objective 35: Protect the listed green sea turtle population at NAVWPNSTA Seal Beach and seek to contribute to its recovery), one task is to perform periodic inspections of culverts to ensure that they remain free of marine growth to provide access to green sea turtles. Although not specific to green turtles, there are also several elements relevant to green turtles' essential features, including wetland mitigation, salt marsh restoration and enhancement. Under Objective 15 (achieve a long-term net gain in the area, function, value, and permanence of vegetated shallows, the physical conditions that support this habitat, and populations of associated target species), one task is to perform periodic eelgrass surveys and mapping. Under Objective 18 (identify and then protect the abundance, biomass, and diversity of algal functional groups that reflect the Seal Beach bay and wetland ecosystem's health), one task is long-term monitoring of these algal species. There is high certainty that these elements will be implemented.
d. The degree to which the relevant elements will protect the habitat from the types of effects that would be addressed during a destruction or adverse modification analysis is incomplete. Foraging (seagrass and macroalgae) and resting (hard substrate) features are protected to some degree from turbidity and sedimentation, but not from removal or damage. During a destruction or adverse modification analysis, we would address the effects of dredging and filling operations, vessel activities (e.g., prop scarring), and oil spills on seagrass, algal, and coral communities (i.e., foraging and resting features). For these reasons, we do not

conclude that the INRMP provides a conservation benefit to the species for which critical habitat is being designated.

32. Naval Base Ventura County San Nicolas Island

a. The extent of the area includes waters from the mean high water line to 20 m depth surrounding the installation in California. This area includes essential foraging and resting features.
b. The type of use includes foraging on seagrass, macroalgae, and invertebrates and resting under hard substrates in this area. We do not have much data on this area; however, the data we have indicates relatively infrequent use and relatively few green turtles in the area.
c. Green turtles' in-water habitat requirements are not included in the INRMP. Although not specific to green turtles, some elements are relevant to green turtles' essential marine features, including management actions for water resources and water quality (i.e., best management practices to prevent sedimentation and erosion, pollutant source controls) and nearshore marine habitats (i.e., encourage the preservation of eelgrass habitat through supporting baseline surveys and mapping efforts, comply with regulations to avoid this essential fish habitat area and establish buffer zones for protection). There is high certainty that these elements will be implemented.
d. The degree to which the relevant elements will protect the habitat from the types of effects that would be addressed during a destruction or adverse modification analysis is incomplete. Foraging (seagrass and macroalgae) and resting (hard substrate) features are protected to some degree from turbidity and sedimentation, but not from removal or damage. During a destruction or adverse modification analysis, we would address the effects of dredging and filling operations, vessel activities (e.g., prop scarring), and oil spills on seagrass, algal, and coral communities (i.e., foraging and resting features). For these reasons, we do not conclude that the INRMP provides a conservation benefit to the species for which critical habitat is being designated.

33. Naval Auxiliary Landing Field San Clemente Island

a. The extent of the area includes waters from the mean high water line to 20 m depth surrounding the installation in California. This area includes essential foraging and resting features.
b. The type of use includes foraging on seagrass, macroalgae, and invertebrates and resting under hard substrates in this area. We do not have much data on this area; however, the data we have indicates relatively infrequent use and relatively few green turtles in the area.

c. Although not specific to green turtles, some elements are relevant to green turtles' essential marine features. The INRMP contains actions to conserve and manage eelgrass through guidance detailed in the California Eelgrass Mitigation Policy, including allowing no net loss of eelgrass beds in terms of area and biological values, conducting eelgrass surveys and mapping, and avoiding construction and military activities near eelgrass beds to the extent feasible. There is high certainty that these elements will be implemented.
d. The degree to which the relevant elements will protect the habitat from the types of effects that would be addressed during a destruction or adverse modification analysis is incomplete. Foraging (seagrass and macroalgae) and resting (hard substrate) features are protected to some degree from turbidity and sedimentation, but not from removal or damage. During a destruction or adverse modification analysis, we would address the effects of dredging and filling operations, vessel activities (e.g., prop scarring), and oil spills on seagrass, algal, and coral communities (i.e., foraging and resting features). For these reasons, we do not conclude that the INRMP provides a conservation benefit to the species for which critical habitat is being designated.

Central North Pacific DPS

34. Joint Base Pearl Harbor-Hickam

a. The extent of the area includes waters from the mean high water line to 20 m depth surrounding the installation on O'ahu. This area includes essential reproductive and foraging/resting features.
b. The type of use includes in-water reproductive activities, including mating, internesting, and post-hatchling swim frenzy (there are nesting beaches being considered by USFWS for proposed critical habitat designation at and adjacent to the installation). Adult and juvenile green turtles forage on seagrass and macroalgae and rest under hard substrates in this area. The use is frequent, and many green turtles use this area.
c. Green turtles' in-water habitat requirements are not included in the INRMP. Although not specific to green turtles, some elements are relevant to green turtles' essential marine features. These include factors such as wetland buffers and mitigation banking, oyster restoration, shoreline stabilization, and soil conservation to reduce erosion, all of which will provide a benefit to water quality. There is high certainty that these elements will be implemented.
d. The degree to which the relevant elements will protect the habitat from the types of effects that would be addressed during a destruction or adverse modification analysis is incomplete. Foraging (seagrass and macroalgae) and resting (hard substrate) features are protected to some degree from turbidity and sedimentation,

but not from removal or damage. During a destruction or adverse modification analysis, we would address the effects of dredging and filling operations, vessel activities (e.g., prop scarring), and oil spills on seagrass, algal, and coral communities (i.e., foraging and resting features). The reproductive features are not protected from light pollution, and neither the reproductive or migratory features are protected from obstructions. During a destruction or adverse modification analysis, we would address the effects of in-water activities on unobstructed waters (i.e., whether such activities would impede or disturb mating, reovulation, access to/from nesting beaches, hatchling swim frenzy, and migration). For these reasons, we do not conclude that the INRMP provides a conservation benefit to the species for which critical habitat is being designated.

35. Pacific Missile Range Facility

a. The extent of the area includes waters from the mean high water line to 20 m depth surrounding the installation on Kaua‘i. This area includes essential reproductive and foraging/resting features.
b. The type of use includes in-water reproductive activities, including mating, internesting, and post-hatchling swim frenzy (there are nesting beaches being considered by USFWS for proposed critical habitat designation at and adjacent to the installation). Adult and juvenile green turtles forage on seagrass and macroalgae and rest under hard substrates in this area. The use is frequent, and many green turtles use this area.
c. Green turtles' in-water habitat requirements are not included in the INRMP. Although not specific to green turtles, some elements are relevant to green turtles' essential marine features. These include factors such as marine debris cleanup, wetlands maintenance, and erosion control through dune vegetation restoration, which will provide a benefit to water quality. There is high certainty that these elements will be implemented.
d. The degree to which the relevant elements will protect the habitat from the types of effects that would be addressed during a destruction or adverse modification analysis is incomplete. Foraging (seagrass and macroalgae) and resting (hard substrate) features are protected to some degree from turbidity and sedimentation, but not from removal or damage. During a destruction or adverse modification analysis, we would address the effects of dredging and filling operations, vessel activities (e.g., prop scarring), and oil spills on seagrass, algal, and coral communities (i.e., foraging and resting features). The reproductive features are not protected from light pollution, and neither the reproductive or migratory features are protected from obstructions. During a destruction or adverse modification analysis, we would address the effects of in-water activities on unobstructed waters (i.e., whether such activities would impede or disturb mating,

reovulation, access to/from nesting beaches, hatchling swim frenzy, and migration). For these reasons, we do not conclude that the INRMP provides a conservation benefit to the species for which critical habitat is being designated.

36. Marine Corps Base Hawaii

a. The extent of the area includes waters from the mean high water line to 20 m depth surrounding the installation on O‘ahu. This area includes essential reproductive and foraging/resting features.
b. The type of use includes in-water reproductive activities, including mating, internesting, and post-hatchling swim frenzy (there are nesting beaches being considered by USFWS for proposed critical habitat designation at the installation). Adult and juvenile green turtles forage on seagrass and macroalgae and rest under hard substrates in this area. The use is frequent, and many green turtles use this area.
c. Green turtles' in-water habitat requirements are not included in the INRMP. Although not specific to green turtles, some elements are relevant to green turtles' essential marine features, such as shoreline revegetation projects to stabilize and restore dunes, initiating a shoreline erosion-monitoring program for all properties with beaches, minimizing digging, restricting vehicle access to endangered species habitat, as well as restricting other destructive activities. There is high certainty that these elements will be implemented.
d. The degree to which the relevant elements will protect the habitat from the types of effects that would be addressed during a destruction or adverse modification analysis is incomplete. Foraging (seagrass and macroalgae) and resting (hard substrate) features are protected to some degree from turbidity and sedimentation, but not from removal or damage. During a destruction or adverse modification analysis, we would address the effects of dredging and filling operations, vessel activities (e.g., prop scarring), and oil spills on seagrass, algal, and coral communities (i.e., foraging and resting features). The reproductive features are not protected from light pollution, and neither the reproductive or migratory features are protected from obstructions. During a destruction or adverse modification analysis, we would address the effects of in-water activities on unobstructed waters (i.e., whether such activities would impede or disturb mating, reovulation, access to/from nesting beaches, hatchling swim frenzy, and migration). For these reasons, we do not conclude that the INRMP provides a conservation benefit to the species for which critical habitat is being designated.

<u>Central West Pacific DPS</u>

37. Joint Region Marianas

a. The extent of the area includes waters from the mean high water line to 20 m depth surrounding the installations in Guam and Tinian. These areas include essential reproductive, foraging, and resting features.
b. The type of use includes in-water reproductive activities, including mating, internesting, and post-hatchling swim frenzy (there are several nesting beaches being considered by USFWS for proposed critical habitat designation). Adult and juvenile green turtles forage and rest in these areas. The use is frequent, and many green turtles use these areas.
c. The elements of the INRMP that apply to green turtles focus on terrestrial areas and nesting beaches. At this time, green turtles' in-water habitat requirements are not included in the INRMP; however, the INRMP states, "At this time critical habitat has not been designated for any listed marine species on Guam. The DON will continue to coordinate closely with NMFS during this process and will update the INRMP, as necessary, to incorporate appropriate information regarding critical habitat." Once that coordination is completed, we will evaluate the certainty that elements relevant to green turtles' essential marine features will be implemented.
d. The degree to which the relevant elements will protect the habitat from the types of effects that would be addressed during a destruction or adverse modification analysis is incomplete. We look forward to working with DoD to provide the information necessary to update the INRMP. During a destruction or adverse modification analysis, we would address the effects of construction, runoff (e.g., turbidity and sedimentation), dredging and filling operations, vessel activities (e.g., prop scarring), and oil spills on seagrass, algal, and coral communities (i.e., foraging and resting features). The reproductive features are protected from light pollution, but neither the reproductive or migratory features are protected from obstructions. During a destruction or adverse modification analysis, we would address the effects of in-water activities on dark, unobstructed waters (i.e., whether such activities would impede or disturb mating, reovulation, access to/from nesting beaches, or hatchling swim frenzy). At this time, we do not conclude that the INRMP provides a conservation benefit to the species for which critical habitat is being designated.

38. Wake Island Airfield, Kōke`e Air Force Station, Mount Ka`ala Air Force Station

a. The extent of the area includes waters from the mean high water line to 20 m depth surrounding the installation on Wake Island. This area includes essential foraging and resting features.
b. The type of use includes foraging on seagrass, macroalgae, and invertebrates and resting under hard substrates in this area. We do not have much data on this area;

however, the data we have indicates relatively infrequent use and relatively few green turtles in the area.

c. Green turtles' in-water habitat requirements are not included in the INRMP. Although not specific to green turtles, some elements are relevant to green turtles' essential marine features. These include factors such as water resources protection through a Stormwater Pollution Prevention Management Plan and planned wetland delineation updates, which will provide a benefit to water quality. There is high certainty that these elements will be implemented.
d. The degree to which the relevant elements will protect the habitat from the types of effects that would be addressed during a destruction or adverse modification analysis is incomplete. Foraging (seagrass and macroalgae) and resting (hard substrate) features are protected to some degree from turbidity and sedimentation, but not from removal or damage. During a destruction or adverse modification analysis, we would address the effects of dredging and filling operations, vessel activities (e.g., prop scarring), and oil spills on seagrass, algal, and coral communities (i.e., foraging and resting features). For these reasons, we do not conclude that the INRMP provides a conservation benefit to the species for which critical habitat is being designated.

3.0 Application of ESA Section 4(b)(2)

Section 4(b)(2) of the ESA requires that we consider the economic impact, impact on national security, and any other relevant impact, of designating any particular area as critical habitat. Additionally, the Secretary has the discretion to consider excluding any area from critical habitat if he or she determines that the benefits of exclusion (that is, avoiding some or all of the impacts that would result from designation) outweigh the benefits of designation based upon the best scientific and commercial data available. The Secretary may not exclude an area from designation if exclusion will result in the extinction of the species. Because the authority to exclude is discretionary, exclusion is not required for any particular area under any circumstances. The ESA provides the USFWS and NMFS (the Services) with broad discretion in how to consider impacts. (See, H.R. Rep. No. 95-1625, at 17, reprinted in 1978 U.S.C.C.A.N. 9453, 9467 (1978). "Economics and any other relevant impact shall be considered by the Secretary in setting the limits of critical habitat for such a species. The Secretary is not required to give economics or any other "relevant impact" predominant consideration in his specification of critical habitat...The consideration and weight given to any particular impact is completely within the Secretary's discretion."). Courts have noted the ESA does not contain requirements for any particular methods or approaches (See, e.g., Bldg. Indus. Ass'n of the Bay Area et al. v. U.S. Dept. of Commerce et al., 792 F.3d 1027 (9th Cir. 2015) (upholding district court's ruling that the ESA does not require the agency to follow a specific methodology when designating critical habitat under Section 4(b)(2)). The following sub-sections describe the economic, national security, and other relevant impacts that we projected would result from including the

specific areas described above in the proposed critical habitat designation. We considered these impacts when deciding whether to exercise our discretion to propose excluding particular areas from the designation. Both positive and negative impacts were identified and considered (these terms are used interchangeably with benefits and costs, respectively). Impacts were evaluated in quantitative terms where feasible, but qualitative appraisals were used where that is more appropriate.

3.1 Application of ESA Section 4(b)(2): Economic Impacts

The primary impact of a critical habitat designation stems from the ESA section 7(a)(2) requirement that Federal agencies ensure their actions are not likely to result in the destruction or adverse modification of critical habitat. Determining the extent of this impact in practical terms is complicated by the fact that section 7(a)(2) contains the associated but distinct requirement that Federal agencies must also ensure their actions are not likely to jeopardize the species' continued existence. The incremental economic impacts of a critical habitat designation stem from the additional effort to engage in consultation regarding potential adverse effects to the critical habitat as part of section 7 consultations (often referred to as administrative costs), and any conservation measures that may be necessary to avoid adverse modification and that would not otherwise be implemented (often referred to as project modification costs). Thus, the incremental impacts attributable to critical habitat stem from conservation efforts that would not already be required due to the need to avoid jeopardy to green turtle DPSs or due to other existing protections (*e.g.*, for other listed species, other Federal, state, or local regulations). Additional economic impacts of designation would include any state and local protections that are likely to be triggered as a result of designation. However, as discussed in the Draft Economic Analysis (NMFS 2023b), we did not identify state or local protections that may be triggered by proposed green turtle critical habitat designations.

To quantify the economic impacts associated with designating critical habitat, we followed the following general steps:

(1) Identify the baseline of economic activity and the statutes and regulations that constrain that activity in the absence of the critical habitat designation;
(2) Identify the types of activities that are likely to be affected by critical habitat designation;
(3) Estimate the costs of administrative effort and, where applicable, conservation efforts recommended for the activity to comply with the ESA's critical habitat provisions;
(4) Project over space and time the occurrence of the activities and the likelihood they will in fact need to be modified; and
(5) Aggregate the costs to the particular area and provide economic impacts as present value impacts and annualized impacts.

The first step in the economic analysis involved identifying the baseline level of protection already afforded green turtles in the areas being considered for designation as critical habitat. The baseline for this analysis is the existing state of regulation prior to the designation of critical habitat, including protections afforded due to the listing of the species under the ESA, and other Federal, state and local laws and guidelines, such as the Clean Water Act, and state environmental quality laws. Next, in order to complete steps 2-4, we searched the NMFS consultation database (for 2012-2021) to compile a list of Federal actions and the projected number of those actions occurring in each area under consideration as critical habitat. We also conducted outreach to some Federal agencies to obtain additional information about planned activities. As applicable and appropriate, NMFS biologists were also consulted to verify the nature and number of consultations expected to occur over the next 10 years.

The following categories of activities with a Federal nexus were identified as having the potential to affect the essential features and as being expected to occur within the specific critical habitat areas under consideration: (1) Federal fisheries; (2) oil and gas activities including construction, maintenance, operations, oil spills, and clean-up; (3) alternative energy development including the construction, maintenance, and operation of wind farms; (4) in-water construction including dredging and offshore mining; (5) vessel traffic, specifically, activities related to establishment of the shipping lanes established by the USCG; (6) aquaculture; (7) military activities; (8) space vehicle and missile launches; (9) water quality management (including pesticide registration, establishment of water quality standards, and Clean Water Act general permits); and (10) any activity resulting in run-off, pollution, or contamination into waters occupied by green turtles. These activities have the potential to affect the features essential to the conservation of green turtle DPSs.

The primary benefit of critical habitat designation - and the only regulatory consequence - stems from the ESA section 7(a)(2) requirement that all Federal agencies ensure that their actions are not likely to destroy or adversely modify the designated habitat. Species may also benefit by identification of areas important to their conservation that may trigger additional protections under state or local regulations.

In addition to the benefits of critical habitat designation to green turtle DPSs, there may be ancillary benefits. These other benefits may be economic in nature, or they may result in improvement of the ecological functioning of the designated areas. The Draft Economic Analysis (NMFS 2023b) discusses other forms of benefits that may be attributed to the conservation and recovery of green turtles (although not specifically attributed to the designation of critical habitat), including use benefits (*e.g.*, for wildlife viewing), non-use benefits (*e.g.*, existence values), and ancillary ecosystem service benefits (*e.g.*, water quality improvements and enhanced habitat conditions for other marine and coastal species). Although green turtles have value to people nationally and serve as an economic engine regionally where they are valued as a tourist attraction, we are unable to apply the available literature to quantify or monetize associated use

and non-use economic benefits that would be attributable to a critical habitat designation. It would be ideal if the best available information allowed the benefits of designation to be monetized so they could be directly compared to the economic benefits of excluding a particular area. However, sufficient and relevant data are not available to monetize the benefits of designation (*e.g.*, estimates of the monetary value of the protecting the feature within areas designated as critical habitat, or the monetary value of education and outreach benefits). For this reason, the ESA regulations recognize that benefits may be quantitatively or qualitatively described (50 CFR 424.19(b)). Further, we cannot isolate and quantify the effect that a critical habitat designation would have on recovery of green turtle DPSs separate from other ongoing or planned conservation actions. In addition, it is difficult to accurately predict the future harm to the habitat that would otherwise have been realized in the absence of a critical habitat designation. Ultimately, given these challenges and lack of sufficient information, the associated incremental use and non-use economic benefits of designating particular areas of the potential designation cannot be quantified. As an alternative approach, we assessed the conservation benefits of designation using a biologically-based qualitative analysis of the specific areas (see criteria provided above under the heading, "Conservation Benefit").

The detailed economic impacts and methods used to estimate such impacts are described in the Draft Economic Analysis (NMFS 2023b). We do not repeat this process here, but rather incorporate this information by reference. The results from these analyses are provided in Table 1.

Table 1. Annual incremental economic costs for areas containing the features essential to the conservation of green turtle DPSs.

DPS	**Region, State, or Island**	**Area (Mean high water line to 20 m, unless otherwise indicated)**	**Essential Features**	**Conservation Benefit**	**Economic Cost**
North Atlantic	Texas-North Carolina	Sargassum (Gulf of Mexico and Atlantic, 10 m depth to U.S. EEZ)	Surface-pelagic foraging and resting	High	$55,000

DPS	Region, State, or Island	Area (Mean high water line to 20 m, unless otherwise indicated)	Essential Features	Conservation Benefit	Economic Cost
North Atlantic	Texas	Mexico border to Lavaca-Matagorda Bay (including Laguna Madre and Lavaca-Matagorda Bay)	Benthic foraging and resting	High	$14,000
North Atlantic	Texas	Lavaca-Matagorda Bay to Galveston Bay	Benthic foraging and resting	Moderate	$9,800
North Atlantic	Texas	All other areas	Benthic foraging and resting	Low	$14,000
North Atlantic	Louisiana	All areas	Benthic foraging and resting	Low	$15,000
North Atlantic	Mississippi	All areas	Benthic foraging and resting	Low	$15,000
North Atlantic	Alabama	All areas	Benthic foraging and resting	Low	$16,000

DPS	Region, State, or Island	Area (Mean high water line to 20 m, unless otherwise indicated)	Essential Features	Conservation Benefit	Economic Cost
North Atlantic	Florida	NW Florida (Panhandle)	Reproductive, migratory, and benthic foraging and resting	High	$510,000
North Atlantic	Florida	NW Florida (Big Bend)	Reproductive, migratory, and benthic foraging and resting	High	
North Atlantic	Florida	SW Florida	Reproductive, migratory, and benthic foraging and resting	High	
North Atlantic	Florida	Monroe County	Reproductive, migratory, and benthic foraging and resting	High	
North Atlantic	Florida	SE Florida (from Cape Canaveral to Monroe County) including:	Reproductive, migratory, and benthic foraging and resting	High	

DPS	Region, State, or Island	Area (Mean high water line to 20 m, unless otherwise indicated)	Essential Features	Conservation Benefit	Economic Cost
North Atlantic	Florida	NE Florida (from Georgia border to Cape Canaveral)	Reproductive, migratory, and benthic foraging and resting	High	
North Atlantic	Georgia	All areas	Benthic foraging and resting	Low	$18,000
North Atlantic	South Carolina	All areas	Benthic foraging and resting	Low	$18,000
North Atlantic	North Carolina	Pamlico Sound	Benthic foraging and resting	High	$10,000
North Atlantic	North Carolina	Core Sound	Benthic foraging and resting	High	
North Atlantic	North Carolina	Back Sound	Benthic foraging and resting	High	
North Atlantic	North Carolina	Bogue Sound	Benthic foraging and resting	Moderate	$14,000

DPS	Region, State, or Island	Area (Mean high water line to 20 m, unless otherwise indicated)	Essential Features	Conservation Benefit	Economic Cost
North Atlantic	North Carolina	White Oak River	Benthic foraging and resting	Moderate	
North Atlantic	North Carolina	New River	Benthic foraging and resting	Moderate	
North Atlantic	North Carolina	Cape Fear River	Benthic foraging and resting	Moderate	
North Atlantic	North Carolina	All other areas	Benthic foraging and resting	Low	$7,600
North Atlantic	Virginia	All areas	Benthic foraging and resting	Low	$48,000
North Atlantic	Maryland	All areas	Benthic foraging and resting	Low	$14,000
North Atlantic	Delaware	All areas	Benthic foraging and resting	Low	$14,000

DPS	Region, State, or Island	Area (Mean high water line to 20 m, unless otherwise indicated)	Essential Features	Conservation Benefit	Economic Cost
North Atlantic	New Jersey	All areas	Benthic foraging and resting	Low	$37,000
North Atlantic	New York	All areas	Benthic foraging and resting	Low	$65,000
North Atlantic	Connecticut	All areas	Benthic foraging and resting	Low	$25,000
North Atlantic	Rhode Island	All areas	Benthic foraging and resting	Low	$11,000
North Atlantic	Massachusetts	All areas	Benthic foraging and resting	Low	$32,000
North Atlantic	Puerto Rico	Culebra Island	Benthic foraging and resting	High	$5,600
North Atlantic	Puerto Rico	Vieques Island (South)	Reproductive, foraging and resting	High	$2,300

DPS	Region, State, or Island	Area (Mean high water line to 20 m, unless otherwise indicated)	Essential Features	Conservation Benefit	Economic Cost
North Atlantic	Puerto Rico	Vieques Island (East)	Reproductive, foraging and resting	High	$1,700
North Atlantic	Puerto Rico	Puerto Rico Island (Maunabo)	Reproductive, foraging and resting	High	$1,200
North Atlantic	Puerto Rico	Puerto Rico Island (Guayama)	Reproductive, foraging and resting	High	$2,100
North Atlantic	Puerto Rico	Puerto Rico Island (north coast including Punta Salinas, Escambron, and Arrecifes Isla Verde Natural Reserve)	Benthic foraging and resting	Moderate	$12,000
North Atlantic	Puerto Rico	Mona Island (south coast)	Reproductive, foraging and resting	High	$800
North Atlantic	Puerto Rico	All other areas		Low	$25,700

DPS	Region, State, or Island	Area (Mean high water line to 20 m, unless otherwise indicated)	Essential Features	Conservation Benefit	Economic Cost
South Atlantic	USVI	St. Croix: East including Buck Island and East End Marine Park; West including Sandy Point NWR; South	Reproductive, foraging and resting	High	$5,500
South Atlantic	USVI	St. Croix: all other areas	Foraging and resting	Moderate	$1,000
South Atlantic	USVI	Little St. James	Foraging and resting	Moderate	$460
South Atlantic	USVI	Great St. James	Foraging and resting	Moderate	$460
South Atlantic	USVI	St. Thomas: Druif Bay, Brewers Bay, Magens Bay, Bolongo Bay, Sapphire Bay/Smith Bay/Red Hook	Foraging and resting	High	$4,800
South Atlantic	USVI	St. Thomas: all other areas	Foraging and resting	Moderate	$8,200

DPS	Region, State, or Island	Area (Mean high water line to 20 m, unless otherwise indicated)	Essential Features	Conservation Benefit	Economic Cost
South Atlantic	USVI	St. John: Saltpond Bay, Great Lameshur Bay, Watermelon Bay, Maho/ Francis/Leinster Bays, Hawksnest/Honeymoon/ Caneel/Scott Bays, Chocolate Hole, Hurricane Hole/Coral/Round Bays	Foraging and resting	High	$1,700
South Atlantic	USVI	St. John: All other areas	Foraging and resting	Moderate	$3,000
East Pacific	California	United States/Mexico border to San Diego Bay including North San Diego Bay	Migratory, foraging and resting	High	$10,000
East Pacific	California	South San Diego Bay	Foraging and resting	High	$28,000
East Pacific	California	Central San Diego Bay	Foraging and resting	High	

DPS	Region, State, or Island	Area (Mean high water line to 20 m, unless otherwise indicated)	Essential Features	Conservation Benefit	Economic Cost
East Pacific	California	Mission Bay (San Diego)	Foraging and resting	Moderate	$1,900
East Pacific	California	Point Loma to (but not including) La Jolla Shores	Foraging and resting	Moderate	$430
East Pacific	California	La Jolla Shores/Cove	Foraging and resting	Moderate-high	$430
East Pacific	California	La Jolla Shores to Oceanside (including Oceanside)	Foraging and resting	Moderate	$4,000 to $7,400
East Pacific	California	Agua Hedionda Lagoon	Foraging and resting	Moderate–high	$2,300
East Pacific	California	Oceanside to San Onofre	Foraging and resting	Data deficient	
East Pacific	California	San Onofre	Foraging and resting	Moderate-High	$3,000
East Pacific	California	San Onofre to Newport (including Newport Bay)	Foraging and resting	Moderate	$34,000 to $37,000

DPS	Region, State, or Island	Area (Mean high water line to 20 m, unless otherwise indicated)	Essential Features	Conservation Benefit	Economic Cost
East Pacific	California	Newport to Huntington Beach	Foraging and resting	Moderate	$1,100
East Pacific	California	Bolsa Chica Lowlands	Foraging and resting	Moderate	$1,700
East Pacific	California	Seal Beach Wetland and Nearshore Complex: including San Pedro Bay, San Gabriel River, Alamitos Bay, Anaheim Bay, Huntington Harbor, Bolsa Chica (excluding lowlands), Seal Beach NWR, 7th Street Basin, and offshore waters	Foraging and resting	High	$26,000
East Pacific	California	LA and Long Beach Harbors	Foraging and resting	Moderate-Low	$13,000
East Pacific	California	LA and Long Beach Breakwater	Foraging and resting	Moderate	$1,100
East Pacific	California	Palos Verdes	Foraging and resting	Moderate	$1,100

DPS	Region, State, or Island	Area (Mean high water line to 20 m, unless otherwise indicated)	Essential Features	Conservation Benefit	Economic Cost
East Pacific	California	Santa Monica Bay	Foraging and resting	Moderate	$7,400
East Pacific	California	Catalina Island	Foraging and resting	Moderate	$2,000
East Pacific	California	Channel Islands	Foraging and resting	Low	$1,700
East Pacific	California	Santa Monica Bay to Point Conception	Foraging and resting	Low	$12,000
Central North Pacific	Johnston Atoll	All areas	Foraging and resting	Low	$940
Central North Pacific	Hawai‘i	Hawai‘i Island	Reproductive, foraging, and resting	High	$6,900
Central North Pacific	Hawai‘i	Maui	Reproductive, foraging, and resting	High	$7,900
Central North Pacific	Hawai‘i	Kaho‘olawe	Reproductive, foraging, and resting	High	$1,000

DPS	Region, State, or Island	Area (Mean high water line to 20 m, unless otherwise indicated)	Essential Features	Conservation Benefit	Economic Cost
Central North Pacific	Hawai‘i	Lana‘i	Reproductive, foraging, and resting	High	$2,900
Central North Pacific	Hawai‘i	Moloka‘i	Reproductive, foraging, and resting	High	$1,300
Central North Pacific	Hawai‘i	O‘ahu	Reproductive, foraging, and resting	High	$31,000
Central North Pacific	Hawai‘i	Kaua‘i	Reproductive, foraging, and resting	High	$4,000
Central North Pacific	Hawai‘i	Ni‘ihau	Foraging and resting	Low	$1,100
Central North Pacific	Hawai‘i	Nihoa	Foraging and resting	Low	$1,900
Central North Pacific	Hawai‘i	Mokumanamana/ Necker Island	Foraging and resting	Low	$1,700

DPS	Region, State, or Island	Area (Mean high water line to 20 m, unless otherwise indicated)	Essential Features	Conservation Benefit	Economic Cost
Central North Pacific	Hawai‘i	Lalo/French Frigate Shoals	Reproductive, foraging, and resting	High	$2,800
Central North Pacific	Hawai‘i	Kamole/Laysan Island	Reproductive, foraging, and resting	High	$1,600
Central North Pacific	Hawai‘i	Kapou/Lisianski Island	Reproductive, foraging, and resting	High	$2.600
Central North Pacific	Hawai‘i	Manawai/Pearl and Hermes Atoll	Reproductive, foraging, and resting	High	$1,600
Central North Pacific	Hawai‘i	Kuaihelani/Midway Atoll	Reproductive, foraging, and resting	High	$5,500
Central North Pacific	Hawai‘i	Hōlanikū/Kure Atoll	Reproductive, foraging, and resting	High	$1,600
Central South Pacific	American Samoa	Rose Atoll/Motu o Manu	Reproductive, foraging, and resting	High	$1,500

DPS	Region, State, or Island	Area (Mean high water line to 20 m, unless otherwise indicated)	Essential Features	Conservation Benefit	Economic Cost
Central South Pacific	American Samoa	Swains Island	Reproductive, foraging, and resting	High	$1,500
Central South Pacific	American Samoa	Ta'u Island	Reproductive, foraging, and resting	High	$2,000
Central South Pacific	American Samoa	Tutuila Island	Foraging and resting	High	$8,200
Central South Pacific	American Samoa	Ofu and Olosega Island (Airport, Matasina, Vaoto, Fatauana, Toaga, Asagatai, Mafafa, Tuafanua, Olosega and Faiava/Sili/Lalomoana Beaches)	Reproductive, foraging, and resting	High	$1,700
Central South Pacific	American Samoa	Ofu and Olosega (other areas)	Foraging and resting	Low	$60
Central South Pacific	Pacific Remote Island Areas	Baker Island	Foraging and resting	High	$400

DPS	Region, State, or Island	Area (Mean high water line to 20 m, unless otherwise indicated)	Essential Features	Conservation Benefit	Economic Cost
Central South Pacific	Pacific Remote Island Areas	Howland Island	Foraging and resting	High	$400
Central South Pacific	Pacific Remote Island Areas	Jarvis Island	Foraging and resting	High	$250
Central South Pacific	Pacific Remote Island Areas	Kingman Reef	Foraging and resting	Low	$560
Central South Pacific	Pacific Remote Island Areas	Palmyra Atoll	Reproductive, foraging, and resting	High	$1,800
Central West Pacific	Guam	Guam	Reproductive, foraging, and resting	High	$19,000
Central West Pacific	CNMI	Saipan	Reproductive, foraging, and resting	High	$4,200
Central West Pacific	CNMI	Tinian	Reproductive, foraging, and resting	High	$2,200

DPS	Region, State, or Island	Area (Mean high water line to 20 m, unless otherwise indicated)	Essential Features	Conservation Benefit	Economic Cost
Central West Pacific	CNMI	Rota	Reproductive, foraging, and resting	High	$810
Central West Pacific	CNMI	Pagan	Foraging and resting	High	$370
Central West Pacific	CNMI	Aguijan	Foraging and resting	High	$370
Central West Pacific	CNMI	Alamagan	Foraging and resting	High	$370
Central West Pacific	CNMI	Sarigan	Foraging and resting	High	$370
Central West Pacific	CNMI	Agrihan (nesting beach)	Reproductive	High	$370
Central West Pacific	CNMI	Other areas	Foraging and resting	Low	$480

DPS	Region, State, or Island	Area (Mean high water line to 20 m, unless otherwise indicated)	Essential Features	Conservation Benefit	Economic Cost
	Wake	All areas	Foraging and resting	Low	$1,600

Economic impacts to Federal agencies and non-federal entities of designating all of the areas is low: the total annualized impact for all areas was estimated to be $1.3 million over the next 10 years (NMFS 2023b). This estimated economic impact is well below what is typically considered to be "economically significant," which was defined by Executive Order 12866 (September 30, 1993) as having an annual effect of $100 million or more. high or significant in terms of economic value or impacts – a high economic value is typically one that is above several million dollars (sometimes tens of millions), and a medium value may fall between several hundred thousand and millions of dollars. It is important to note that this total cost applies to six DPSs of green turtles, which range throughout tropical, subtropical, and temperate waters of the United States. Therefore, the total annual estimated costs of designating all areas containing the features essential to conservation is somewhat higher than designations for other species. The estimated annual incremental costs of designating all areas range from $18,000 to $1 million for each DPS.

Because all areas do not provide the same conservation benefit to a DPS, we weighed the economic costs of designation against the conservation benefit of each area, as determined by the critical habitat review team, or the Team. We did this overall and for each DPS.

Some areas provide a low conservation benefit relative to others. Low conservation benefit areas contain the foraging and resting features essential to the conservation of the DPS, but these areas support a relatively small abundance or low density of foraging and resting green turtles. The total projected annual incremental costs of designating all low conservation benefit areas was $420,000 (Table 1). The projected annual incremental of designating all low conservation benefit areas range from $620 to $380,000 for each DPS. We consider these costs to be low relative to Federal agency annual operating budgets; however, we considered whether this cost outweighed the low conservation benefit of designating such areas. We asked the Team to consider the biological impact of excluding areas providing a low conservation benefit. They found that the impact would be low and failure to designate such areas would not result in the extinction of any DPS. Their response reflects the numerous, large high and moderate benefit areas containing the essential foraging and resting features that would be designated and the relatively low abundance

or density of turtles foraging and resting in low conservation benefit areas. Essentially, each DPS relies on other foraging and resting areas. Based on this input, we concluded that the costs associated with designation of low conservation benefit areas outweighs their value to each DPS.

Other areas provide a moderate conservation benefit to the DPS. These areas also contain the foraging and resting features essential to the conservation of the DPS, but unlike the low benefit areas, they support a moderate abundance of foraging and resting green turtles. The total projected annual incremental costs of designating all moderate conservation benefit areas was $98,000 (Table 1). The projected annual incremental of designating all moderate conservation benefit areas range from $13,000 to $61,000 for each DPS. We consider these costs to be low relative to Federal agency annual operating budgets; however, we considered whether this cost outweighed the moderate conservation benefit of designating such areas. We asked the Team to consider the biological impact of excluding areas providing a moderate conservation benefit. They found that the impact would be moderate because these numerous, large foraging and resting areas are used by a moderately large number or proportion of turtles within each DPS. Based on this input, we concluded that the costs associated with designation of moderate conservation benefit areas do not outweigh their value to each DPS.

Finally, some areas provide a high conservation benefit to the DPS. Many of these areas contain the reproductive and/or migratory features essential to the conservation of the DPS because they directly contribute to productivity. Some high conservation benefit areas only contain essential foraging and resting features; however, these areas support such a large abundance or density of foraging and resting turtles that the Team rated them "high." The total projected annual incremental costs of designating all high conservation benefit areas was $800,000 (Table 2). The projected annual incremental of designating all high conservation benefit areas range from $12,000 to $600,000 for each DPS. We consider these costs to be low relative to Federal agency annual operating budgets; however, we considered whether this cost outweighed the high conservation benefit of designating such areas. We asked the Team to consider the biological impact of excluding areas providing a high conservation benefit. They found that the impact would be high because these areas are essential to reproduction and/or provide energy to a large number or proportion of turtles within each DPS. Based on this input, we concluded that the costs associated with designation of high conservation benefit areas do not outweigh their value to each DPS.

Therefore, after weighing the economic costs against the conservation benefits of designating critical habitat, we exclude all areas that were rated as providing a relatively low conservation benefit. Failure to designate these low conservation benefit areas will not result in the extinction of any DPS.

3.2 Application of ESA Section 4(b)(2): National Security Impacts

Prior to proposing specific areas to be designated as critical habitat for green sea turtles, we provided maps of these areas to DoD and DHS (USCG) to solicit input on impacts to national or homeland security. USCG reviewed the maps to determine possible impacts on homeland security and whether an exclusion request was warranted. We engaged in a number of email exchanges and met to discuss the possible exclusions. The outcome of these was that USCG decided not to formally request exclusions from critical habitat due to homeland security impacts. Therefore, NMFS did not include USCG exclusion requests in this 4(b)(2) analysis.

After excluding low conservation benefit areas, we considered requests from DOD for national security impact exclusions. Under the 4(b)(2) Policy, we cannot automatically exclude requested areas, and the requesting agency must provide a reasonably specific justification for the assertion that there is an incremental impact on national security that would result from the designation of that specific area as critical habitat (81 FR 7226; February 11, 2016). Therefore, our first step in evaluating national security impact exclusions was to ask if a request was reasonably specific. If an agency provided a reasonably specific justification for their request, the next step was to review their request and rate it as a high, moderate, or low impact to compare to the conservation benefit of the area (all of which are moderate or high because low conservation areas were excluded for economic impacts). In accordance with the 4(b)(2) Policy (81 FR 7226; February 11, 2016), we defer to their expert judgment 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 by the critical habitat designation. In reviewing these exclusion requests for our 4(b)(2) analysis, we give great weight to the national-security and homeland-security concerns (81 FR 7226; February 11, 2016).

Based on the written information provided by DoD in 2022, we received 71 requests for exclusions due to national security impacts. Of these, 18 were excluded due to low economic impacts that outweighed the low conservation benefit of these areas. Of the remaining 53 requests for exclusions due to national security impacts, none were reasonably specific.
We did not consider requests that were not reasonably specific, including those that apply to all areas. For example, requesting an exclusion because an area is under DoD control, and because DoD focus on national and homeland security issues, applies to all installations. Granting such an exclusion would de facto exclude all areas within DoD installations, which is contrary to the ESA (16 U.S.C. 1533(b)(2)) and 4(b)(2) Policy (81 FR 7226; February 11, 2016). Similarly, requesting an exclusion because of the requirement to reinitiate a section 7(a)(2) consultation applies to all Federal actions (including those of DoD) that may affect designated critical habitat. To prevent a lapse in regulatory compliance, Federal agencies may request a conference on proposed critical habitat. Conference, also called early consultation, is a process which involves informal discussions between a Federal agency and the Service under section 7(a)(4) of the Act regarding the impact of an action on proposed species or proposed critical habitat and

recommendations to minimize or avoid the adverse effects (50 CFR 402.02). Once the critical habitat designation is finalized, the preliminary biological opinion may be confirmed as a biological opinion issued after formal consultation if the Service reviews the proposed action and finds that there have been no significant changes in the action as planned or in the information used during the early consultation (50 CFR 402.11(f)). Finally, the designation of critical habitat does not preclude the use of an area for national security purposes. For example, if critical habitat were designated in or near shipping lanes, DoD could still use those shipping lanes. Furthermore, any maintenance of such shipping lanes would likely require a section 7(a)(2) consultation due to effects to a DPS, in addition to designated critical habitat. In this instance, the incremental impact would simply be the analysis of effects to critical habitat, not the prohibition of shipping lane use.

We did not receive any requests that were reasonably specific enough to consider impacts to national security and to weigh those impacts against the high and moderate conservation benefits of designation. We are currently working with DoD to provide enough specificity for these analyses.

3.3 Application of ESA Section 4(b)(2): Other Impacts

Section 4(b)(2) of the ESA also allows for the consideration of other relevant impacts associated with the designation of critical habitat. In developing this proposed rule, we reviewed maps and did not find overlap between the areas under consideration as critical habitat and Indian lands. Indian lands are those defined in Secretarial Order 3206, "American Indian Tribal Rights, Federal-Tribal Trust Responsibilities, and the Endangered Species Act" (June 5, 1997), and include: (1) lands held in trust by the United States for the benefit of any Indian tribe; (2) land held in trust by the United States for any Indian tribe or individual subject to restrictions by the United States against alienation; (3) fee lands, either within or outside the reservation boundaries, owned by the tribal government; and (4) fee lands within the reservation boundaries owned by individual Indians.

Based on this, we preliminarily found that there were no Indian lands subject to consideration for possible exclusion. However, it is not clear whether there may be some nearshore areas that could be considered for possible exclusion. We will work together with the NMFS tribal coordinator and regional tribal liaisons to: provide maps and descriptions of all areas under consideration as potential critical habitat; request input regarding tribal resources and issues, usual and accustomed areas, or the exercise of tribal rights that may be impacted by critical habitat designations for green turtle DPSs; and invite consultation with potentially affected tribes and Native corporations.

Appendix I. Information request sent to Department of Defense (DoD) and Department of Homeland Security (DHS) service branches on May 17, 2022.

Section 4 of the ESA prohibits the designation of critical habitat for "any lands or other geographical areas owned or controlled by the Department of Defense, or designated for its use, that are subject to an integrated natural resources management plan (INRMP) prepared under section 101 of the Sikes Act (16 U.S.C. 670a), if [NMFS] determines in writing that such plan provides a benefit to the species for which critical habitat is proposed for designation" (16 U.S.C. 1533(a)(3)(B)(i)). In determining whether a benefit is provided, implementing regulations (50 CFR 424.12 (h)) require us to consider:

> (1) The extent of the area and features present;
> (2) The type and frequency of use of the area by the species;
> (3) The relevant elements of the INRMP in terms of management objectives, activities covered, and best management practices, and the certainty that the relevant elements will be implemented; and
> (4) The degree to which the relevant elements of the INRMP will protect the habitat from the types of effects that would be addressed through a destruction-or-adverse-modification analysis.

The INRMP must be compliant or operational (as reflected by a signed plan or letter of concurrence by the USFWS) before making an area ineligible for designation under section 4(a)(3)(B)(i) (81 FR 7414, February 11, 2016). For all other areas, we designate critical habitat based on the best scientific data available and after taking into consideration national security, economic, and other impacts of such a designation; if we determine that the benefits of exclusion outweigh the benefits of designation, we may exclude an area from critical habitat, unless we determine that doing so will result in the extinction of the species (16 U.S.C. 1533(b)(2)).

We are in the beginning stages of designating critical habitat for green sea turtle (*Chelonia mydas*) distinct population segments (DPSs). For all DPSs under U.S. jurisdiction, we have identified physical or biological features (I) essential to the conservation of the species and (II) which may require special management considerations or protection ((16 U.S.C. 1532). The following features generally apply to all DPSs in their marine habitat from the mean high water line to 20 m depth:

Reproductive: sufficiently dark and unobstructed neritic waters, directly adjacent to nesting beaches considered for proposed critical habitat by the USFWS (to be published in the Federal Register at a future date), to allow for the transit, mating, and internesting of reproductive individuals and the transit of post-hatchlings;
Foraging/resting: underwater refugia and food resources (i.e., seagrasses, macroalgae, and/or invertebrates) of sufficient condition, distribution, diversity, abundance, and density necessary to support survival, development, growth, and/or reproduction; and
Migratory: sufficiently unobstructed waters that allow for unrestricted transit between foraging/resting and reproductive areas for reproductive individuals.
We identified an additional feature for the North Atlantic DPS: Convergence zones, frontal zones, surface-water downwelling areas, the margins of major boundary currents, and other areas

that result in concentrated components of the Sargassum-dominated drift community, which provide sufficient food resources and refugia to support the survival, growth, and development of post-hatchlings and surface-pelagic juveniles, and which are located in sufficient water depth (at least 10 m) to ensure offshore transport and provide adequate forage and refugia requirements.

We have identified areas containing these features throughout the United States and its Territories (please see attached maps and spatial data). Some of these areas overlap with Department of Defense Installations, which may be subject to an INRMP.

1) For your INRMP, please provide a copy of the document, and answer the following questions, citing the page numbers where we can find the requested information.

> (a) Where does the INRMP overlap with the features and areas considered for critical habitat?
> (b) How do green turtles use these areas, and how often do green turtles use these areas?
> (c) What are the relevant elements of the INRMP in terms of management objectives, activities covered, and best management practices, and what is the certainty that the relevant elements will be implemented?
> (d) To what degree does the INRMP protect the features and areas from the types of effects that would be addressed through a destruction-or-adverse-modification analysis?

2) To request an exclusion from critical habitat on the basis of national security or homeland security impacts, please provide a reasonably specific justification of an incremental impact on national security that would result from designation. This justification must include the activities that would be impacted and how those impacts would be detrimental to national security.

We would appreciate receiving your responses as soon as possible, preferably by June 10, 2022 to allow time to schedule any follow-up discussions, if needed, and to allow us to meet our deadline for completing a determination.