

Designation of Critical Habitat for  
the Southern Distinct Population Segment of  
Green Sturgeon

*Final ESA Section 4(b)(2) Report*

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**NATIONAL MARINE FISHERIES SERVICE**  
*Southwest Region*  
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## Background and Summary

This report contains the National Oceanic Atmospheric Administration (NOAA), National Marine Fisheries Service (NMFS), Southwest Region's recommendations for designating critical habitat under section 4 of the Endangered Species Act (ESA) for the Southern Distinct Population Segment of green sturgeon (hereafter "Southern DPS"), which we listed under the ESA on April 7, 2006 (71 FR 17757). A proposed rule to designate critical habitat for the Southern DPS was published in the *Federal Register* on September 8, 2008 (73 FR 52084), with a technical correction published on October 7, 2008 (73 FR 58527). A draft ESA section 4(b)(2) report was prepared and published for public comment in support of the proposed rule. This final report incorporates revisions to the ESA section 4(b)(2) analysis based on public comments received and describes the methods used, process followed, and conclusions reached for each step leading to the final critical habitat designation.

We considered various alternatives to the critical habitat designation for the green sturgeon. The alternative of not designating critical habitat for the green sturgeon would impose no economic, national security, or other relevant impacts, but would not provide any conservation benefit to the species. This alternative was considered and rejected because such an approach does not meet the legal requirements of the ESA and would not provide for the conservation of green sturgeon. The alternative of designating all potential critical habitat areas (i.e., no areas excluded) also was considered and rejected because, for a number of areas, the economic benefits of exclusion outweighed the benefits of inclusion, and NMFS did not determine that exclusion of these areas would significantly impede conservation of the species or result in extinction of the species. The total estimated annualized economic impact associated with the designation of all potential critical habitat areas would be \$64 million to \$578 million (discounted at 7 percent) or \$63.9 million to \$578 million (discounted at 3 percent).

An alternative to designating critical habitat within all of the units considered for designation is the designation of critical habitat within a subset of these units. Under section 4(b)(2) of the ESA, NMFS must consider the economic impacts, impacts to national security, and other relevant impacts of designating any particular area as critical habitat. NMFS has the discretion to exclude an area from designation as critical habitat if the benefits of exclusion (i.e., the impacts that would be avoided if an area were excluded from the designation) outweigh the benefits of designation (i.e., the conservation benefits to the Southern DPS if an area were designated), so long as exclusion of the area will not result in extinction of the species. Exclusion under section 4(b)(2) of the ESA of one or more of the units considered for designation would reduce the total impacts of designation. The determination of which units and how many to exclude depends on NMFS' ESA 4(b)(2) analysis, which is conducted for each unit and described in detail in this report. Under this preferred alternative, NMFS originally proposed to exclude 13 out of 40 units considered. The total estimated economic impact associated with the proposed rule was \$22.5 million to \$76.4 million (discounted at 7 percent) or \$22.5 million to \$76.3 million (discounted at 3 percent). In response to public comments and additional information received, this final rule excludes 14 units out of 41 units considered where the economic benefits of exclusion outweighed the conservation benefits of designation. NMFS

determined that the exclusion of these 14 units would not significantly impede the conservation of the Southern DPS. The total estimated economic impact associated with this final rule is \$20.2 million to \$74.1 million (discounted at 7 percent) or \$20.1 million to \$74 million (discounted at 3 percent). NMFS selected this alternative because it results in a critical habitat designation that provides for the conservation of the Southern DPS while reducing the economic impacts on entities. This alternative also meets the requirements under the ESA and our joint NMFS-USFWS regulations concerning critical habitat.

## I. Statute and Regulations

We developed our recommendations consistent with statutory requirements and agency regulations, which are summarized below.

### ***Findings and purposes of the Act emphasize habitat conservation***

In section 1 of the ESA, “Findings,” (16 U.S.C. 1531(a)(1)) Congress declared that:

Various species of fish, wildlife and plants in the United States have been rendered extinct as a consequence of economic growth and development untempered by adequate concern and conservation.

Section 2 of the ESA sets forth the purposes of the Act, beginning with habitat protection:

The purposes of this chapter are to provide a means whereby *the ecosystems upon which endangered species and threatened species depend may be conserved*, to provide a program for the conservation of such endangered species and threatened species, and to take such steps as may be appropriate to achieve the purposes of the treaties and conventions set forth in subsection (a) of this section. [emphasis added]

### ***“Critical Habitat” is specifically defined***

Section 3(5)(A) of the ESA (16 U.S.C. 1532 (5)) defines critical habitat in some detail.

(5)(A) The term “critical habitat” for a threatened or endangered species means –

(i) the specific areas within the geographical area occupied by the species, at the time it is listed in accordance with the provisions of section 1533 of this title, on which are found those physical or biological features (I) essential to the conservation of the species and (II) which may require special management considerations or protection; and

(ii) specific areas outside the geographical area occupied by the species at the time it is listed in accordance with the provisions of section 1533 of this title, upon a determination by the Secretary that such areas are essential for the conservation of the species.

(B) Critical habitat may be established for those species now listed as threatened or endangered species for which no critical habitat has heretofore been established as set forth in subparagraph (A) of this paragraph.

(C) Except in those circumstances determined by the Secretary, critical habitat shall not

include the entire geographical area which can be occupied by the threatened or endangered species.

***“Conservation” is specifically defined***

Section 3(3) of the Act defines conservation (16 U.S.C. 1532(3)):

(3) The terms "conserve", "conserving", and "conservation" mean to use and the use of all methods and procedures which are necessary to bring any endangered species or threatened species to the point at which the measures provided pursuant to this chapter are no longer necessary.

***Certain military lands are precluded from designation***

In 2003 Congress amended section 4(b)(1) of the ESA to limit the designation of land controlled by the Department of Defense (National Defense Authorization Act, P.L. No. 108-136):

The Secretary shall not designate as critical habitat any lands or other geographical areas owned or controlled by the Department of Defense, or designated for its use, that are subject to an integrated natural resources management plan prepared under section 101 of the Sikes Act (16 U.S.C. 670a), if the Secretary determines in writing that such plan provides a benefit to the species for which critical habitat is proposed for designation.

***Specific information required for making designations***

Section 4(a)(3) requires NOAA Fisheries to make critical habitat designations concurrently with the listing determination, to the maximum extent prudent and determinable:

(3) The Secretary, by regulation promulgated in accordance with subsection (b) of this section and to the maximum extent prudent and determinable -

(A) shall, concurrently with making a determination under paragraph (1) that a species is an endangered species or a threatened species, designate any habitat of such species which is then considered to be critical habitat.

***Impacts of designation must be considered and areas may be excluded***

Specific areas that fall within the definition of critical habitat are not automatically designated as critical habitat. Section 4(b)(2) (16 U.S.C. 1533(b)(1)(A)) requires the Secretary to first consider the impact of designation and permits the Secretary to exclude areas from designation under certain circumstances. Exclusion is not required for any areas.

The Secretary shall designate critical habitat, and make revisions thereto, under subsection (a)(3) of this section on the basis of the best scientific data available and after

taking into consideration the economic impact, the impact to national security and any other relevant impact, of specifying any particular area as critical habitat. The Secretary may exclude any area from critical habitat if he determines that the benefits of such exclusion outweigh the benefits of specifying such area as part of the critical habitat, unless he determines, based on the best scientific and commercial data available, that the failure to designate such area as critical habitat will result in the extinction of the species concerned.

***Federal agencies must ensure their actions are not likely to destroy or adversely modify critical habitat***

Once critical habitat is designated, section 7(a)(2) provides that federal agencies must ensure any actions they authorize, fund or carry out are not likely to result in the destruction or adverse modification of designated critical habitat (16 U.S.C. 1536(a)(2)). Section 7 also requires federal agencies to ensure such actions do not jeopardize the continued existence of the listed species:

Each Federal agency shall, in consultation with and with the assistance of the Secretary, insure that any action authorized, funded, or carried out by such agency (hereinafter in this section referred to as an "agency action") is not likely to jeopardize the continued existence of any endangered species or threatened species or result in the destruction or adverse modification of habitat of such species which is determined by the Secretary, after consultation as appropriate with affected States, to be critical, unless such agency has been granted an exemption for such action by the Committee pursuant to subsection (h) of this section. In fulfilling the requirements of this paragraph each agency shall use the best scientific and commercial data available.

***Authority to designate critical habitat is delegated to NOAA Fisheries***

The authority to designate critical habitat, including the authority to consider the impacts of designation, the authority to weigh those impacts against the benefit of designation, and the authority to exclude particular areas, has been delegated to the Assistant Administrator of the National Marine Fisheries Service (Department Organization Order 10-15 (5/24/04). NOAA Organization Handbook, Transmittal #34, May 31, 1993).

***Joint regulations govern designation***

Joint regulations of the Services elaborate on those physical and biological features essential to conservation, and set criteria for the delineation of critical habitat.

50 CFR Sec. 424.12 Criteria for designating critical habitat.

(b) In determining what areas are critical habitat, the Secretary shall consider those physical and biological features that are essential to the conservation of a given species and that may require special management considerations or protection. Such requirements include, but are not limited to, the following:

- (1) Space for individual and population growth, and for normal behavior;
- (2) Food, water, air, light, minerals, or other nutritional or physiological requirements;
- (3) Cover or shelter;
- (4) Sites for breeding, reproduction, rearing of offspring, germination, or seed dispersal; and generally;
- (5) Habitats that are protected from disturbance or are representative of the historic geographical and ecological distributions of a species.

When considering the designation of critical habitat, the Secretary shall focus on the principal biological or physical constituent elements within the defined area that are essential to the conservation of the species. Known primary constituent elements shall be listed with the critical habitat description. Primary constituent elements may include, but are not limited to, the following: roost sites, nesting grounds, spawning sites, feeding sites, seasonal wetland or dryland, water quality or quantity, host species or plant pollinator, geological formation, vegetation type, tide, and specific soil types.

(c) Each critical habitat will be defined by specific limits using reference points and lines as found on standard topographic maps of the area. Each area will be referenced to the State(s), county(ies), or other local governmental units within which all or part of the critical habitat is located. Unless otherwise indicated within the critical habitat descriptions, the names of the State(s) and county(ies) are provided for information only and do not constitute the boundaries of the area. Ephemeral reference points (e.g., trees, sand bars) shall not be used in defining critical habitat.

(d) When several habitats, each satisfying the requirements for designation as critical habitat, are located in proximity to one another, an inclusive area may be designated as critical habitat.

The regulations confine designation to areas within United States jurisdiction:

h) Critical habitat shall not be designated within foreign countries or in other areas outside of United States jurisdiction. Sec. 424.12

The regulations define “special management considerations or protection.”

(j) Special management considerations or protection means any methods or procedures useful in protecting physical and biological features of the environment for the conservation of listed species. Sec. 424.02

### ***Approach to designation***

Based on this statutory and regulatory direction, our approach to designation included the following steps:

1. Identify specific areas eligible for critical habitat designation
  - Identify areas meeting the definition of critical habitat
  - Identify military areas ineligible for designation

2. Conduct a Section 4(b)(2) analysis:

Determine coextensive vs. incremental impacts

Determine the benefits of designation

Determine the benefits of exclusion

Determine whether benefits of exclusion of any particular area outweigh benefits of designation and recommend exclusions if appropriate

## II. Identify Specific Areas Eligible for Critical Habitat Designation

### *Identify areas meeting the definition of critical habitat*

Areas that meet the definition of critical habitat include specific areas: 1) within the geographical area occupied by the species at the time of listing, if they contain physical or biological features essential to conservation, and those features may require special management considerations or protection; and 2) outside the geographical area occupied by the species if the agency determines that the area itself is essential for conservation. Pursuant to section 3(5)(A), our first task was to determine “the geographical area occupied by the species at the time of listing.” In a separate report, we have documented our conclusions regarding which specific areas meet the definition of critical habitat and may therefore be eligible for designation (NMFS 2009).

### *Geographical Area Occupied by the Species*

Tracking data (Kelly et al. 2007; Lindley and Moser 2007; S. Lindley and M. Moser, unpublished data) genetic mixed stock analysis (Israel et al. 2004; B. May and J. Israel, unpublished data), direct observation, records of fisheries take and incidental take, and opportunistic sightings indicate that the range of green sturgeon extends from the Bering Sea, Alaska, to Ensenada, Mexico. Within this range, Southern DPS fish are confirmed to occur from Graves Harbor, Alaska, to Monterey Bay, California. Green sturgeon observed northwest of Graves Harbor, AK, and south of Monterey Bay, CA, have not been identified to DPS and may belong to either the Northern or Southern DPS. We took an inclusive approach when determining the geographical area occupied by the Southern DPS and defined it as the entire range occupied by green sturgeon (i.e., from the Bering Sea, AK, to Ensenada, Mexico). However, we cannot designate critical habitat in areas outside of the United States. Thus, the occupied geographical area under consideration for this designation was limited to areas from the Bering Sea, AK, to the U.S.-California/Mexico border, excluding Canadian waters.

### *Physical or Biological Features Essential to Conservation*

We determined the physical or biological habitat features essential to the conservation of the Southern DPS based on their biology and life history, focusing on “primary constituent elements” as directed by our regulations. We considered the biology and life history of the Southern DPS, and regulatory direction gleaned from the ESA and the joint USFWS/NMFS regulations, to identify the physical or biological features essential to the species conservation. We recognized that the different systems occupied by green sturgeon at specific stages of their life cycle serve distinct purposes and thus may contain different PCEs. Based on the best

available scientific information, we identified PCEs for freshwater riverine systems, estuarine areas, and coastal marine waters.

The specific PCEs essential for the conservation of the Southern DPS in freshwater riverine systems are: food resources, substrate type or size, water flow, water quality, migratory corridors, water depth, and sediment quality. The specific PCEs essential for the conservation of the Southern DPS in estuarine areas are: food resources, water flow, water quality, migratory corridors, water depth, and sediment quality. The specific PCEs essential for the conservation of the Southern DPS in coastal marine areas include: migratory corridors, water quality, and food resources. Full descriptions of the PCEs can be found in the Final Rule published in the *Federal Register* and the final Biological Report (NMFS 2009). Both documents are available at the Southwest Regional Office Web site at <http://swr.nmfs.noaa.gov>, or at the Federal eRulemaking Web site at <http://www.regulations.gov>.

### ***“Specific Areas” within the Occupied Geographical Area***

We identified specific areas within the geographical area occupied by the species by examining whether each specific area is presently occupied by the Southern DPS and contains at least one PCE that may require special management considerations or protection. To satisfy the first criterion, we determined for each specific area whether the presence of the Southern DPS was: (1) confirmed; (2) likely, based on the presence of Northern DPS fish or green sturgeon of unknown DPS; or (3) possible, based on best professional judgment. We included all specific areas within freshwater riverine systems, bays and estuaries, and coastal marine waters for which we had evidence of confirmed or likely Southern DPS presence. We then verified that each area contained at least one PCE and that the PCE(s) may require special management considerations or protection. More detailed information on the specific areas, the PCEs present within each, and activities that may affect the PCEs such that special management considerations or protection may be required can be found in the Final Rule and the final Biological Report (NMFS 2009).

The following specific areas were delineated in freshwater riverine systems, bypasses, and the Delta: (1) the upper Sacramento River; (2) the lower Sacramento River; (3) the Yolo Bypass; (4) the Sutter Bypass; (5) the lower Feather River; (6) the lower Yuba River; and (7) the Sacramento-San Joaquin Delta. The following specific areas were delineated in coastal bays and estuaries, including rivers to the head of the tide: (1) Elkhorn Slough, CA; (2) Suisun Bay, CA; (3) San Pablo Bay, CA; (4) San Francisco Bay, CA; (5) Tomales Bay, CA; (6) Noyo Harbor, CA; (7) Humboldt Bay, CA; (8) Eel River estuary, CA; (9) Klamath/Trinity river estuary, CA; (10) Rogue River estuary, OR; (11) Coos Bay, OR; (12) Winchester Bay, OR; (13) Siuslaw River estuary, OR; (14) Alsea River estuary, OR; (15) Yaquina Bay, OR; (16) Tillamook Bay, OR; (17) Willapa Bay, WA; (18) Grays Harbor, WA; and (19) Puget Sound, WA. Based on public comments received, one new specific area was delineated in Nehalem Bay, OR, and the lower Columbia River and estuary specific area was divided into two specific areas, one called the lower Columbia River estuary (from the river mouth to river kilometer (RKM 74)) and one called the lower Columbia River (from RKM 74 to the Bonneville Dam at RKM 146). The following specific areas were delineated in coastal marine waters within 60 fathoms depth: (1)

from the U.S.-CA/Mexico border to Monterey Bay, CA; (2) from Monterey Bay, CA, to San Francisco Bay, CA (including Monterey Bay); (3) from San Francisco Bay, CA, to Humboldt Bay, CA; (4) from Humboldt Bay, CA, to Coos Bay, OR; (5) from Coos Bay, OR, to Winchester Bay, OR; (6) from Winchester Bay, OR, to the Columbia River estuary, OR and WA; (7) from the Columbia River estuary, OR and WA, to Willapa Bay, WA; (8) from Willapa Bay, WA, to Grays Harbor, WA; (9) from Grays Harbor, WA, to the U.S.-WA/Canada border; (10) the Strait of Juan de Fuca, WA; (11) from the U.S.-AK/Canada border to Yakutat Bay, AK; and (12) coastal Alaskan waters northwest of Yakutat Bay, AK, to the Bering Strait (including the Bering Sea). Based on public comments received, the shoreward boundary for coastal marine areas was changed from the extreme high tide line to the mean lower low water line and the offshore boundary was changed from the 60 fathoms depth contour line to the 60 fathom (109.75 m) contour line. Descriptions of the specific areas and the revisions based on the public comments are provided in the Final Rule and final Biological Report (NMFS 2009).

### ***Special Management Considerations or Protection***

Agency regulations define "special management considerations or protection" to mean "any methods or procedures useful in protecting physical and biological features of the environment for the conservation of listed species." Based on discussions with the critical habitat review team (CHRT) and the economic report, we verified that at least one activity in each specific area may threaten at least one PCE such that special management considerations or protection may be required, as defined by our regulations. Major categories of habitat-related activities include: (1) dams; (2) water diversions; (3) dredging and disposal of dredged material; (4) in-water construction or alterations, including channel modifications/diking, sand and gravel mining, road building and maintenance, forestry, grazing, agriculture, and urbanization; (5) National Pollutant Discharge Elimination System (NPDES) activities and activities generating non-point source pollution; (6) power plants; (7) commercial shipping; (8) aquaculture; (9) desalination plants; (10) proposed alternative energy hydrokinetic projects; (11) Liquefied Natural Gas (LNG) projects; (12) habitat restoration; and (13) bottom trawl fisheries. These activities may have an effect on one or more PCE(s) via their alteration of one or more of the following: stream hydrology, water level and flow, water temperature, dissolved oxygen levels, erosion and sediment input/transport, physical habitat structure, vegetation, soils, nutrients and chemicals, fish passage, and stream/estuarine/marine benthic biota and prey resources. The final Biological Report (NMFS 2009) and final Economic Analysis Report (Industrial Economics, Inc. (IEc) 2009) provide a description of the potential effects of each category of activities on the PCEs.

### ***Unoccupied Areas***

Section 3(5)(A)(ii) of the ESA authorizes the designation of "specific areas outside the geographical area occupied at the time [the species] is listed" if these areas are essential for the conservation of the species. Regulations at 50 CFR 424.12(e) emphasize that the agency "shall designate as critical habitat areas outside the geographical area presently occupied by a species only when a designation limited to its present range would be inadequate to ensure the conservation of the species." The CHRT determined that a critical habitat designation limited to presently occupied areas may not be sufficient for conservation, because such a designation

would not address one of the major threats to the population identified by the Status Review Team - the concentration of spawning into one spawning river (i.e., the Sacramento River), and, as a consequence, the high risk of extirpation due to catastrophic events. The CHRT identified seven unoccupied areas in the Central Valley, California, that may provide additional spawning habitat for the Southern DPS of green sturgeon and *may be essential* for conservation of the species. At the time of the proposed rule, however, the CHRT did not have sufficient data to determine if any of these seven unoccupied areas actually *are essential* for conservation of the Southern DPS. Thus, the rule did not propose to designate any of the seven unoccupied areas as critical habitat, but instead solicited additional information from the public to inform the CHRT's evaluation.

The seven unoccupied areas include areas behind dams that are currently inaccessible to green sturgeon and areas below dams that are not currently occupied by green sturgeon. The areas include: 1) reaches upstream of Oroville Dam on the Feather River; 2) reaches upstream of Daguerre Dam on the Yuba River; 3) areas on the Pit River upstream of Keswick and Shasta dams; 4) areas on the McCloud River upstream of Keswick and Shasta dams; 5) areas on the upper Sacramento River upstream of Keswick and Shasta dams; 6) reaches on the American River; and 7) reaches on the San Joaquin River. Of these seven areas, the CHRT identified reaches upstream of Daguerre Dam on the Yuba River as the most important for conserving the species because: (1) the current habitat conditions are likely to support spawning; (2) adult Southern DPS fish currently occupy habitat just below the Daguerre Dam; (3) although the Yuba River is part of the Sacramento River drainage basin, it is separated spatially from the current, single spawning population on the upper Sacramento River such that if a catastrophic mortality event were to occur in the upper Sacramento River, a Yuba River population could safeguard the species from extinction; and (4) there is a greater potential for removal of the Daguerre Dam or restoration of fish passage at the dam in the near future than for any of the other dams located within the unoccupied areas identified by the CHRT. The CHRT also felt that reaches on the San Joaquin River, from the South Delta to the Goodwin Dam on the Stanislaus River, are important for conserving the Southern DPS for some of the same reasons mentioned above, particularly that the San Joaquin and Stanislaus rivers are part of an entirely different drainage basin than the current single spawning area in the upper Sacramento River. However, the CHRT was less certain regarding the prospects for reestablishing a spawning population in this area.

Several public comments were received in agreement with the CHRT's determination that there is currently insufficient data to determine that any of the seven unoccupied areas are essential for conservation of the Southern DPS. Public comments were also received recommending that at least one unoccupied area be designated as critical habitat to provide an additional spawning area for the Southern DPS. The public comments did not, however, provide the additional information needed to make a determination that an area is essential for conservation. That information includes: (1) the historical use of the currently unoccupied areas by green sturgeon; and (2) the likelihood that habitat conditions within these unoccupied areas will be restored to levels that would support green sturgeon presence and spawning (e.g., restoration of fish passage and sufficient water flows and water temperatures). Without such information, the CHRT maintained its determination that, while the seven unoccupied areas may be essential for conservation, there is currently insufficient data to conclude that any of the areas actually are

essential for conservation. We encourage studies of the presently unoccupied areas and their historical, current, and potential use by green sturgeon, as well as actions that would protect, conserve, and/or enhance habitat conditions for the Southern DPS (e.g., habitat restoration, removal of dams, and the establishment of fish passage) within these areas. Additional information would inform our consideration of these areas for future revisions to the critical habitat designation as well as future recovery planning for the Southern DPS.

### ***Military areas ineligible for designation***

Recent amendments to the ESA preclude the Secretary from designating military lands as critical habitat if those lands are subject to an Integrated Natural Resource Management Plan (INRMP) under the Sikes Act and the Secretary certifies in writing that the plan benefits the listed species (Section 4(a)(3), Public Law. No. 108-136). Prior to publication of the proposed rule, we contacted the Department of Defense (DOD) and requested information on all INRMPs for DOD facilities that overlap with the specific areas considered for designation as critical habitat and that might provide benefits to green sturgeon. The INRMPs for one facility in California (Camp San Luis Obispo) and for nine facilities in Puget Sound, WA, were provided to us. Of these, six facilities with INRMPs (Bremerton Naval Hospital; Naval Air Station, Everett; Naval Magazine Indian Island; Naval Fuel Depot, Manchester; Naval Undersea Warfare Center, Keyport; and Naval Air Station, Whidbey Island) were determined to overlap with the specific areas under consideration for critical habitat designation. All of these areas are located in Puget Sound, WA. Each of the INRMPs contain measures for listed salmon and bull trout, or measures that benefit fish species, that would also benefit green sturgeon. Thus, we determined that the areas within these six DOD facilities in Puget Sound, WA, were not eligible for designation as critical habitat.

During the public comment period, the DOD provided information on two additional facilities in California with INRMPs that may overlap with the specific areas considered for designation as critical habitat. These were: (1) Mare Island U.S. Army Reserve facility, located on Mare Island in San Pablo Bay; and (2) Military Ocean Terminal Concord (MOTCO), a facility owned by the U.S. Army with lands in Suisun Bay. We determined that the INRMP for the Mare Island U.S. Army Reserve facility did not provide sufficient protection for Southern DPS green sturgeon. Thus, the area of overlap between the facility and the San Pablo Bay specific area was eligible for designation as critical habitat (but was later excluded based on impacts on national security, as described in the section of this report titled “Exclusions based on national security”). We also determined that the MOTCO facilities in Suisun Bay do not overlap with the Suisun Bay specific area and thus were not included in the areas considered for designation as critical habitat.

### **III. Conduct a Section 4(b)(2) Analysis**

Section 4(b)(2) of the ESA requires us to use the best scientific information available in designating critical habitat. It also requires that before we may designate any “particular” area, we must consider the economic impact, impact on national security, and any other relevant impact. Once impacts are determined, the agency is to weigh the benefits of excluding any particular area (that is, avoiding the economic, national security, or other costs) against the benefits of designating it (that is, the conservation benefits to the species). If the agency

concludes that the benefits of exclusion outweigh the benefits of designation, it has discretion to exclude, so long as exclusion will not result in extinction of the species.

### ***Identify “Particular” Areas***

The first step in conducting the ESA section 4(b)(2) analysis is to identify the “particular areas” to be analyzed. The “particular areas” considered for exclusion are defined based on the impacts identified. Where we considered economic impacts and weighed the economic benefits of exclusion against the conservation benefits of designation, we used the same biologically-based “specific areas” we had identified under section 3(5)(A) (e.g., the upper Sacramento River, the lower Sacramento River, the Delta, etc.). Delineating the “particular areas” as the same units as the “specific areas” allowed us to most effectively consider the conservation value of the different areas when balancing conservation benefits of designation against economic benefits of designation. We also considered exclusions based on impacts on national security and other relevant impacts (i.e., for this designation, impacts on Indian lands). Delineating particular areas based on impacts on national security or impacts on tribes was based on land ownership or control (e.g., land controlled by the DOD within which national security impacts may exist, or Indian lands).

### ***Determine Co-extensive Impacts vs. Incremental Impacts***

Section 4(b)(2) of the ESA provides that the Secretary shall consider “the economic impact, impact to national security, and any other relevant impact of specifying any particular area as critical habitat.” The primary impact of a critical habitat designation stems from the requirement under section 7(a)(2) of the ESA that Federal agencies ensure their actions are not likely to result in the destruction or adverse modification of critical habitat. Determining this impact is complicated by the fact that section 7(a)(2) contains the overlapping requirement that Federal agencies must also ensure their actions are not likely to jeopardize the species’ continued existence. The true impact of designation is the extent to which Federal agencies modify their actions to insure their actions are not likely to destroy or adversely modify the critical habitat of the species, beyond any modifications they would make because of the listing and the jeopardy requirement. Additional impacts of designation include state and local protections that may be triggered as a result of the designation and the benefits from educating the public about the importance of each area for species conservation. We discuss the benefits of designation in the “Benefits of Designation” section below.

In determining the impacts of designation, we predicted the incremental change in Federal agency actions as a result of critical habitat designation and the adverse modification prohibition, beyond the changes predicted to occur as a result of listing and the jeopardy provision. In recent critical habitat designations for salmon and steelhead and for Southern Resident killer whales, the “coextensive” impact of designation was considered in accordance with a Tenth Circuit Court decision (*New Mexico Cattle Growers Association v. U.S. Fish and Wildlife Service*, 248 F.3d 1277 (10<sup>th</sup> Cir. 2001)) (NMCA). The Service had determined there would be no economic impact from the designation because the impacts associated with jeopardy determinations and adverse modification determinations were co-extensive. The Tenth Circuit found the Service’s approach rendered meaningless Congress’s requirement that economic impacts be considered in

the designation process. The Court concluded that, to give “effect to Congressional directive,” the Service must analyze the full impacts of designation, regardless of whether those impacts are coextensive with other impacts (such as the impact of the jeopardy avoidance requirement). The “coextensive” impact of designation considers the predicted change in the Federal agency action resulting from the critical habitat designation and the adverse modification prohibition (whereby the action’s effect on the PCEs of the species’ habitat and value of the habitat is analyzed), even if the same change would result from application of the listing and the jeopardy provision (whereby the action’s effect on the species itself and individual members of the species is analyzed).

Shortly after the NMCA decision, however, the Court of Appeals for the Fifth Circuit (*Sierra Club v. U.S. Fish and Wildlife Service*, 243 F.3d 434 (5<sup>th</sup> Cir. 2001) (*Sierra Club*)) and the Court of Appeals for the Ninth Circuit (*Gifford Pinchot Task Force v. FWS*, 378 F. 3d 1059 (9<sup>th</sup> Cir. 2004) (*Gifford Pinchot*) invalidated our regulatory definition of “adverse modification” of critical habitat. The Court’s decision did not address the regulatory definition of jeopardy. Shortly following that decision, a District Court in Washington, D.C. issued a decision involving the U.S. Fish and Wildlife Service’s critical habitat designation for the piping plover. *Cape Hatteras Access Preservation Alliance v. Norton*, 344 F. Supp. 2d 1080 (D.D.C. 2004) (*Cape Hatteras*). In that decision the Court reasoned that the impact of a regulation should be based on a comparison of the world with and without the action and citing guidance from the Office of Management and Budget in support of that proposition. The *Case Hatteras* Court concluded that the problem with the Service’s analysis of economic impacts resulted from its treatment of “adverse modification” and “jeopardy” as being functionally equivalent. The Court ordered the Fish and Wildlife Service “to clarify or modify its position [regarding functional equivalence] on remand,” implying that the *Gifford Pinchot* Court’s holding might have an effect on the agency’s historical treatment of the jeopardy and adverse modification requirements as providing coextensive protections.

In the analysis of economic impacts (see final Economic Analysis Report, IEc 2009), we attempted to estimate and analyze the incremental economic impacts of designation beyond the impacts that would result from the listing and jeopardy provision, consistent with the Cape Hatteras decision. Uncertainties exist, however, with regard to future management actions associated with green sturgeon critical habitat, because of the short consultation history for green sturgeon and overlap with protections provided under the listing. Due to these uncertainties, it was difficult to exclude potential impacts that may already occur under the baseline (i.e., protections already afforded green sturgeon under its listing or under other Federal, State, and local regulations, such as protections for other listed species). Thus, the analysis included some costs that would have occurred under the baseline regardless of the critical habitat rule. As such, the economic impacts are more correctly characterized as green sturgeon conservation impacts as opposed to exclusively incremental impacts of the critical habitat designation. Our methods for estimating the impacts of designation for economic impacts are summarized in the section below titled “Determining the Benefits of Excluding Particular Areas.”

In the consideration of impacts on national security and impacts on Indian lands, we also attempted to focus on the incremental effects of the critical habitat rule, beyond the baseline

protections afforded green sturgeon. However, it is difficult to separate the potential conservation efforts expected under the critical habitat rule from those that would already be expected to occur for green sturgeon due to the listing of the species or to other Federal, State, and local regulations (e.g., protections for other listed species). As a result, our consideration of impacts on national security and impacts on Indian lands cannot be characterized as exclusively incremental impacts of the critical habitat designation. As described above, the impacts are more correctly characterized as green sturgeon conservation impacts.

Because section 4(b)(2) requires a balancing of competing considerations, we have concluded that we must uniformly consider impacts and benefits. We recognize that excluding an area from designation will not likely avoid all of the impacts because the jeopardy provision under section 7 still applies. Similarly, much of the section 7 benefit would still apply because the jeopardy provision still applies.

The final Economic Analysis Report (IEc 2009) and final Biological Report (NMFS 2009) describe in more detail the types of activities that may be affected by the designation, the potential range of changes we might seek in those actions, and the estimated relative level of economic impacts that might result from such changes. Appendices I to II provide more detail regarding the areas considered for exclusion based on impacts on national security and Indian lands and the weighing of benefits for these areas.

### ***Determine the benefits of designation***

The primary benefit of designation is the protection afforded under section 7 of the ESA, requiring all Federal agencies to ensure their actions are not likely to destroy or adversely modify designated critical habitat. This is in addition to the requirement that all Federal agencies ensure their actions are not likely to jeopardize the continued existence of the species. In addition, the designation may provide education and outreach benefits by informing the public about areas and features important to species conservation. By delineating areas of high conservation value, the designation may help focus and contribute to conservation efforts for green sturgeon and their habitats.

These benefits are not directly comparable to the costs of designation for purposes of conducting the section 4(b)(2) analysis described below. Ideally the benefits should be monetized. With sufficient information, it may be possible to monetize the benefits of a critical habitat designation by first quantifying the benefits expected from an ESA section 7 consultation and translating that into dollars. We are not aware, however, of any available data to monetize the benefits of designation (e.g., estimates of the monetary value of the PCEs within areas designated as critical habitat, or of the monetary value of education and outreach benefits). As an alternative approach, we used the CHRT's final conservation value ratings (High, Medium Low and Ultra-low) to represent the qualitative conservation benefits of designation for each of the specific areas identified as critical habitat for the Southern DPS. The CHRT considered a number of factors to determine the conservation value of an area for the Southern DPS, including the PCEs present and their condition, the life stages supported, and whether the occurrence of Southern DPS green sturgeon within the specific area was confirmed or likely. These conservation value

ratings represent the estimated conservation benefit of designating critical habitat for the species. As described above, we attempted to focus on the incremental benefits of the critical habitat designation beyond the benefits already afforded to the Southern DPS under its listing and under other Federal, State, and local regulations. It is difficult, however, to isolate conservation efforts resulting solely from critical habitat. The estimated conservation benefits of designation may overlap with some benefits that are already expected to occur due to the baseline protections and cannot be characterized as exclusively incremental benefits of the critical habitat designation. In evaluating the conservation value of each specific area, the CHRT focused on the habitat features present in, habitat functions provided by each area, and the importance of protecting the habitat for the overall conservation of the species. The final Biological Report (NMFS 2009) provides detailed information on the CHRT's evaluation of the specific areas and the qualitative conservation benefits for each area.

### ***Determine the benefits of exclusion***

To determine the benefits of excluding particular areas from designation, we considered the Federal activities that may be subject to a section 7 consultation and the range of potential changes that may be required for each of these activities under the adverse modification provision. Where possible, we focused on changes beyond those that may be required under the jeopardy provision. These consultation and project modification impacts represent the benefits of excluding each particular area (that is, the impacts that would be avoided if an area were excluded from the designation).

The CHRT identified and examined the types of Federal activities that occur within each of the specific areas and that may affect Southern DPS green sturgeon and the critical habitat. Because the Southern DPS was recently listed under the ESA in 2006, we lack an extensive consultation history. Thus, we relied on the NMFS' experience in conducting ESA section 7 consultations and their best professional judgment to identify the types of Federal activities that might trigger a section 7 consultation. These include: (1) the installation and operation of dams; (2) the installation and operation of water diversions; (3) in-water construction or alterations; (4) dredging operations and disposal of dredge material; (5) NPDES activities and activities generating non-point source pollution, such as agricultural runoff; (6) power plant operations; (7) operations of liquefied natural gas (LNG) projects; (8) discharges from desalination plants; (9) commercial shipping (e.g., discharges, oil spills); (10) aquaculture; (11) alternative energy hydrokinetic projects; (12) bottom trawl fisheries; and (13) habitat restoration.

We then considered the range of modifications we might seek in these activities to avoid destroying or adversely modifying critical habitat of the Southern DPS. Because of the limited consultation history, we relied on information from consultations conducted for salmon and steelhead, comments received during green sturgeon public scoping workshops conducted for the development of protective regulations, and information from green sturgeon and section 7 biologists to determine the types of activities and potential range of changes. For each potential impact, we tried to provide information on whether the impact is more closely associated with adverse modification or with jeopardy, to distinguish the impacts of applying the jeopardy provision versus the adverse modification provision. We recognize that differences exist

between the biology of green sturgeon and listed salmonids, but that there is also overlap in the types of habitat they use, their life history strategies, and their behavior. As discussed in the final Economic Analysis Report (IEc 2009), the occupied geographical range and proposed critical habitat designation for green sturgeon largely overlaps with that of listed salmonids. Every consultation of the approximately 49 completed formal consultations addressing impacts on green sturgeon in California, Oregon, and Washington through May 2009 also address impacts to one or more listed salmon or steelhead species. In several consultations, the recommended conservation measures to address effects on green sturgeon and listed salmonids were the same or similar. It is important to note, however, that differences do exist between green sturgeon and salmonids that may require different conservation measures. For example, juvenile green sturgeon occupy the Delta and the San Francisco, San Pablo, and Suisun bays in California throughout all months of the year, for as long as one to three years before they outmigrate to marine waters. In contrast, the presence of juvenile salmon or steelhead in the Delta and bays is limited to certain months of the year. In addition, the feeding behavior and spawning requirements of green sturgeon subadults and adults may differ from that of listed salmonids. For example, subadult and adult green sturgeon make extensive use of summer feeding habitats in coastal estuaries in California, Oregon, and Washington. During their spawning migrations, adult green sturgeon likely have different water flow, temperature, and passage requirements compared to listed salmonids. We recognized these differences, but, given the limited amount of direct information regarding the types of modifications we might seek to avoid adverse modification of Southern DPS critical habitat, we also recognized that the information available for analog species (i.e., the listed salmonids) was the best information available to guide our decision-making. As demonstrated by our recent consultation history, the conservation measures implemented for green sturgeon in the early stages of its listing history are likely to be the same or similar to those implemented for listed salmonids. Additional information on differences in habitat needs, life history strategies, and behavior of these species, particularly as they relate to potential project modifications, may allow us to refine our analysis.

We were able to monetize estimates of the economic impacts resulting from a critical habitat designation; however, because of the limited consultation history for green sturgeon and uncertainty about specific management actions likely to be required under a consultation, there was a great degree of uncertainty in the cost estimates for some specific areas. Several factors were considered in developing the estimated economic impacts, including the level of economic activity within each area, the level of baseline protection afforded to green sturgeon by existing regulations for each economic activity within each area, and the estimated economic impact (in dollars) associated with each activity type. The baseline included the protections afforded to green sturgeon by the listing and jeopardy provision, as well as protections provided for salmon and steelhead and their critical habitat including existing laws, regulations, and initiatives. Estimates of the economic costs were based on project modifications that might be required during consultation to avoid the destruction or adverse modification of critical habitat (see final Economic Analysis Report (IEc 2009) for additional details). However, as described above, we did not have a defensible method for isolating the impacts resulting solely from critical habitat. Thus, the estimated economic impacts are more correctly characterized as green sturgeon conservation impacts rather than exclusively incremental impacts of the designation. Our determination of these economic impacts was based on the best available information and

incorporated additional information provided during the public comment period as well as acquired during the development of the final rule. The final Economic Analysis Report (IEc 2009) provides detailed information on the economic impacts of designating particular areas as critical habitat, as well as consultation costs anticipated as a result of this proposed designation.

### ***Exclusions Based on Economic Impacts***

The final Economic Analysis Report (IEc 2009) describes in detail the actions we identified that may be affected by the critical habitat designation, the potential range of changes we might seek in those actions, and the estimated level of economic impacts that might result from those changes.

The conservation benefit to the species resulting from the designation of a particular area as critical habitat is not directly comparable to the economic benefit, benefit to national security, or other relevant benefit resulting from the exclusion of a particular area from designation. We had sufficient information to monetize the economic benefits of excluding an area, but were not able to monetize the conservation benefits of designating an area. Thus, to weigh the benefits of designation against the benefits of exclusion, we compared the conservation value ratings with the range of low to high annualized economic cost estimates (discounted at 7%; see Economic Report for additional details) for each area (Table 1 and Figure 1). We selected dollar thresholds representing the levels at which the potential economic impact associated with a specific area appeared to outweigh the potential conservation benefits of designating that area. These thresholds varied depending on the conservation value of the area, such that areas with a higher conservation value rating had a higher dollar threshold value. To determine these threshold values, we examined the range in economic impacts across all areas within a conservation value rating category, determined where the breakpoint occurred between relatively low economic impacts and relatively high economic impacts, and selected a value within the range of that breakpoint where the economic impacts may outweigh the conservation benefits for that area. The following four decision rules were established based on these dollar thresholds and applied to identify areas eligible for exclusion: (1) all areas with a conservation value rating of “High” were not eligible for exclusion regardless of the level of economic impact because of the threatened status of the green sturgeon; (2) areas with a conservation value rating of “Medium” were eligible for exclusion if the high annualized economic impact estimate exceeded \$100K; (3) areas with a conservation value rating of “Low” were eligible for exclusion if the high annualized economic impact estimate exceeded \$10K; and (4) areas with a conservation value rating of “Ultra-low” were eligible for exclusion if the high annualized economic impact estimate exceeded \$0. These dollar thresholds do not represent an objective judgment that Medium-value areas are worth no more than \$100,000, Low-value areas are worth no more than \$10,000, or Ultra-Low value areas are worth \$0. Under the ESA, we are to weigh dissimilar impacts given limited time and information. The statute emphasizes that the decision to exclude is discretionary. Thus, the economic impact level at which the economic benefits of exclusion outweigh the conservation benefits of designation is a matter of discretion and depends on the policy context. For critical habitat, the ESA directs us to consider exclusions to avoid high economic impacts, but also requires that the areas designated as critical habitat are sufficient to support the conservation of the species and to avoid extinction. In this policy context, we

selected dollar thresholds representing the levels at which we believe the economic impact associated with a specific area would outweigh the conservation benefits of designating that area. These dollar thresholds and decision rules provided a relatively simple process to identify, in a limited amount of time, specific areas warranting consideration for exclusion.

Based on this analysis, 18 areas were identified preliminarily as eligible for exclusion (Table 1), including all of the same areas that were considered eligible for exclusion in the proposed designation and three additional areas. The areas include:

Six areas with a Medium conservation value rating:

- (1) Yolo Bypass, CA;
- (2) Lower Feather River, CA;
- (3) Lower Yuba River, CA;
- (4) Coos Bay, OR;
- (5) Puget Sound, WA; and
- (6) Coastal marine waters within 60 fathoms depth from the U.S.-Alaska/Canada border to Yakutat Bay, AK

Three areas with a Low conservation value rating:

- (1) Tomales Bay, CA;
- (2) Tillamook Bay, OR; and
- (3) Lower Columbia River (from RKM 74 to the Bonneville Dam at RKM 146).

Nine areas with an Ultra-Low conservation value rating:

- (1) Elkhorn Slough, CA;
- (2) Noyo Harbor, CA;
- (3) Eel River estuary, CA;
- (4) Klamath River estuary, CA;
- (5) Rogue River estuary, OR;
- (6) Siuslaw River estuary, OR;
- (7) Alsea River estuary, OR;
- (8) Coastal marine waters within 60 fathoms depth from the U.S.-CA/Mexico border to Monterey Bay, CA; and
- (9) Coastal marine waters within 60 fathoms depth northwest of Yakutat Bay, AK, to the Bering Strait (including the Bering Sea)

We presented the 18 areas to the CHRT to help us further characterize the benefits of designation by determining whether excluding any of these areas would significantly impede conservation of the Southern DPS, reasoning that if exclusion of an area would significantly impede conservation, then the benefits of excluding that area from the designation would likely not outweigh the benefits of designating that area as critical habitat. The CHRT considered this question in the context of all of the areas eligible for exclusion as well as the information they had developed in providing the conservation value ratings. If the CHRT determined that exclusion of an area would significantly impede conservation of the Southern DPS, the conservation benefits of designation were increased one level in the weighing process.

The CHRT determined, and we concur, that exclusion of the following 13 areas eligible for exclusion would not significantly impede conservation of the Southern DPS (Table 1) and that the economic benefit of excluding these areas from the designation outweigh the conservation benefits afforded to the species through designation: (1) coastal marine waters within 60 fathoms depth northwest of Yakutat Bay, AK, to the Bering Strait (including the Bering Sea); (2) Puget Sound, WA; (3) Tillamook Bay, OR; (4) lower Columbia River from RKM 74 to the Bonneville Dam at RKM 146; (5) Siuslaw River estuary, OR; (6) Alsea River estuary, OR; (7) Rogue River estuary, OR; (8) Klamath/Trinity River estuary, CA; (9) Eel River estuary, CA; (10) Noyo Harbor, CA; (11) Tomales Bay, CA; (12) Elkhorn Slough, CA; and (13) coastal marine waters within 60 fathoms depth from the CA-Mexico border to Monterey Bay, CA. The CHRT based their determinations on the limited extent to which these areas appear to be used by Southern DPS fish relative to other areas. Many of these areas were assigned Low or Ultra-Low conservation values in large part because Southern DPS fish have not been documented in these systems. The bays and estuaries listed above, including one that received a Medium conservation value (i.e., Puget Sound, WA), are used by Southern DPS fish infrequently and do not appear to be part of the coastal migratory corridor used by the Southern DPS to reach overwintering grounds off Vancouver Island and further north (S. Lindley and M. Moser, NMFS, 2008, pers. comm.). Many of these bays and estuaries are small in size compared to other bays and estuaries that are used extensively by green sturgeon and that consequently received higher conservation ratings. In addition, Southern DPS fish are not believed to use Northern DPS spawning systems extensively (i.e., the Klamath/Trinity River and the Rogue River). The CHRT also recognized that few green sturgeon (of unknown DPS) have been observed in coastal marine waters within 60 fathoms depth from the California/Mexico border to Monterey Bay, CA, and northwest of Yakutat Bay, AK, to the Bering Strait (including the Bering Sea), indicating low use of the area by the Southern DPS. For these reasons, the CHRT concluded that excluding the bays, estuaries, and coastal marine areas mentioned above from the designation would not significantly hinder the conservation of the Southern DPS. We recognize that the lack of documented evidence of Southern DPS in these areas may be because these areas are not adequately monitored for green sturgeon. Directed surveys in these areas are encouraged.

The CHRT was unable to determine whether exclusion of one area eligible for exclusion, coastal marine waters within 60 fathoms depth from the U.S.-Alaska/Canada border to Yakutat Bay, AK, would significantly impede conservation of the species: Some CHRT members said that because presence of Southern DPS fish in this area has been confirmed despite the fact that the detection system in Graves Harbor, AK, is not designed to detect green sturgeon (i.e. the spatial arrangement and coverage of the array is not ideal for detecting green sturgeon) and data has only been collected from 2005-2006 and not beyond because of unresolved data coordination issues, that the use of habitat in southeast Alaska by Southern DPS fish is likely higher than what the data indicate and that the exclusion of this area from the designation might impede conservation of the Southern DPS. Other CHRT members stated that the relatively low number of Southern DPS detections in the area in combination with the uncertainty surrounding the activities occurring in southeast Alaska suggests that excluding this area from the designation would not significantly impede conservation of the species. Some CHRT members abstained from commenting on whether the exclusion of southeast Alaska from the designation would

significantly impede conservation of the species. We solicited the public for more information regarding: (1) the presence of green sturgeon in Southeast AK; (2) the spatial distribution of aforementioned PCEs in Southeast AK; (3) activities occurring in Southeast AK that may affect the aforementioned PCEs; (4) the types of changes that might be proposed for these activities in order to avoid impacts on Southern DPS PCEs; and (5) estimated costs associated with making these changes, during the proposed ruling phase, but did not receive any additional information. Given the uncertainty regarding whether exclusion of this area would impede conservation of the Southern DPS, and the much higher certainty that the cost of the designation would exceed \$100,000 (Table 1), we conclude that the economic benefit of excluding the coastal marine area within 60 fathoms depth from the Alaska/Canada border to Yakutat Bay, AK from the designation outweigh the conservation benefits associated with designating this area as critical habitat for the Southern DPS.

The CHRT determined, and we concur, that exclusion of the following 4 areas preliminarily eligible for exclusion would significantly impede conservation of the Southern DPS (Table 1): (1) Yolo Bypass, CA; (2) lower Yuba River, CA; (3) lower Feather River; and (4) Coos Bay, OR. These areas had been assigned Medium conservation values prior to analyzing whether their exclusion would significantly impede conservation of the species (NMFS 2009). When the CHRT further examined the conservation values of these areas, this time paying special attention to their potential value given certain characteristics of the habitat, PCEs, and logistically and economically feasible management efforts that could improve habitat within these areas, the CHRT determined that conservation of the species could not be achieved without including them in the designation. The CHRT reasoned that at least one additional spawning area, besides the only known spawning area in the Sacramento River, must be established to conserve the species and the lower Feather and lower Yuba rivers are the best candidates for fulfilling this need. The Yolo Bypass, lower Feather and lower Yuba rivers currently do serve as rearing habitat and their conservation values increase if their habitats are protected and improved in the future. All four areas currently serve as feeding and migration areas and again their conservation values increase if their habitats are protected and improved in the future. Therefore, the CHRT determined, and we concur, that the conservation values of these areas should be raised by one level (i.e., from Mediums to Highs), rendering the areas ineligible for exclusion (see “*Exclusions Based on Economic Impacts*” above and NMFS 2009).

In summary, we propose to exclude the following 14 areas from the final critical habitat designation: (1) coastal marine waters within 60 fathoms depth northwest of Yakutat Bay, AK, to the Bering Strait (including the Bering Sea); (2) coastal marine waters within 60 fathoms depth from the U.S.-Alaska/Canada Border to Yakutat Bay, AK; (3) Puget Sound, WA; (4) Tillamook Bay, OR; (5) lower Columbia River from RKM 74 to the Bonneville Dam at RKM 146; (6) Siuslaw River estuary, OR; (7) Alsea River estuary, OR; (8) Rogue River estuary, OR; (9) Klamath/Trinity River estuary, CA; (10) Eel River estuary, CA; (11) Noyo Harbor, CA; (12) Tomales Bay, CA; (13) Elkhorn Slough, CA; and (14) coastal marine waters within 60 fathoms depth from the CA-Mexico border to Monterey Bay, CA. Based on the best scientific and commercial data currently available, we have determined that the exclusion of these areas will not impede the conservation of the Southern DPS, nor will it result in the extinction of the

species. See Figure 2 for the map depicting the final designation of critical habitat for the Southern DPS of green sturgeon.

### ***Exclusions Based on National Security***

At the time of the proposed rule, we had not yet received any information from the DOD regarding impacts on national security within the specific areas considered for designation as critical habitat. The proposed rule solicited information pertaining to whether the designation of the proposed critical habitat areas would result in national security impacts that would outweigh the benefits of designation. During the public comment period, the DOD identified several areas that may warrant exclusion based on national security impacts, including:

- (1) Mare Island U.S. Army Reserve Center on Mare Island, San Pablo Bay, CA;
- (2) Coastal marine waters adjacent to Camp Rilea, OR, delineated as an area one-half mile north to one-half mile south of Camp Rilea, to a distance of two miles offshore of Camp Rilea;
- (3) Strait of Juan de Fuca and Whidbey Island naval restricted areas, adjacent to Naval Air Station (NAS) Whidbey Island, WA;
- (4) Strait of Juan de Fuca Naval Air-to-Surface Weapon Range Restricted Area, WA;
- (5) Admiralty Inlet naval restricted area in the Strait of Juan de Fuca, WA;
- (6) Navy 3 Operating Area (OPAREA) in the Strait of Juan de Fuca, WA;
- (7) Navy 7/Admiralty Bay Restricted Area 6701 in Puget Sound, WA; and
- (8) The surf zone portion of the Quinault Underwater Tracking Range (QUTR), located in the coastal marine area delineated from Grays Harbor, WA, to the U.S.-WA/Canada border.

We corresponded with representatives of the DOD throughout the analysis of the impacts on national security to delineate the particular areas requested for exclusion and to identify the potential impacts on national security that may occur if the areas are designated as critical habitat. Unlike the economic impact analysis, we are unable to quantify the impacts on national security in monetary terms or in terms of some other quantitative measure. Instead, we based our analysis on an evaluation of the following factors for each particular area: (1) the relative proportion of the specific area requested for exclusion; (2) the likelihood of a consultation with the DOD in this area, based on our ESA consultation history; (3) the intensity of use of the area by the DOD; (4) the likelihood that DOD activities would destroy or adversely modify critical habitat, based on the DOD's activities within the area; (5) the level of protection provided to one or more PCEs by existing DOD safeguards (e.g., restrictions on public access); and (6) the likelihood that other Federal actions may occur in the particular area that would no longer be subject to the critical habitat provision if the particular area were excluded from the designation. Each of these factors was given a qualitative rating of High or Low. These were then weighed against the benefits of designating the particular area, which was based on the final conservation value rating for the specific area within which the particular area occurred, as well as the best

available information regarding green sturgeon use of the particular area. Appendix I provides more information regarding our analysis and determination for each area. See Figure 2 for the map depicting the final designation of critical habitat for the Southern DPS of green sturgeon.

### ***Exclusions for Indian Lands***

The longstanding and distinctive relationship between the Federal and tribal governments is defined by treaties, statutes, executive orders, judicial decisions, and agreements, which differentiate tribal governments from the other entities that deal with, or are affected by, the Federal government. This relationship has given rise to a special Federal trust responsibility involving the legal responsibilities and obligations of the United States toward Indian Tribes and the application of fiduciary standards of due care with respect to Indian lands, tribal trust resources, and the exercise of tribal rights. Pursuant to these authorities lands have been retained by Indian Tribes or have been set aside for tribal use. These lands are managed by Indian Tribes in accordance with tribal goals and objectives within the framework of applicable treaties and laws. E.O. 13175, Consultation and Coordination with Indian Tribal Governments, outlines the responsibilities of the Federal Government in matters affecting tribal interests.

There is a broad array of activities on Indian lands that may trigger ESA section 7 consultations. For this proposed critical habitat designation for Southern DPS green sturgeon, we reviewed maps indicating that very few if any areas under consideration as critical habitat actually overlap with Indian lands. Nearshore coastal areas comprised the vast majority of these possible overlap areas, but it was unclear which if any Indian lands were subject to consideration for possible exclusion. In particular, we lacked information regarding where Indian land boundaries lie in relation to shoreline tidal boundaries used to identify the lateral extent in the proposed rule. Our preliminary assessment indicated that the following federally-recognized tribes (73 FR 18553, April 4, 2008) have lands that may be in close proximity to areas under consideration for designation as critical habitat for Southern DPS green sturgeon: the Hoh, Jamestown S'Klallam, Lower Elwha, Makah, Quileute, Quinault, and Shoalwater Bay tribes in Washington; the Confederated Tribes of Coos Lower Umpqua and Siuslaw Indians and the Coquille Tribe in Oregon; and the Cachil DeHe Band of Wintun Indians of the Colusa Indian Community, Cher-Ae Heights Trinidad Rancheria, Wiyot Tribe, and Yurok Tribe in California.

In the proposed rule, we solicited comments regarding these areas and any additional Indian lands that may overlap and may warrant exclusion from critical habitat for Southern DPS green sturgeon. Indian lands are those defined in the Secretarial Order "American Indian Tribal Rights, Federal-Tribal Trust Responsibilities, and the Endangered Species Act" (June 5, 1997), including: (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. We also sought information from affected tribes concerning other tribal activities that may be affected in areas other than tribal lands (i.e., bottom trawling and alternative energy projects in marine areas).

During the public comment period, we received comments from several tribes in Washington and Oregon requesting the exclusion of Indian lands from the critical habitat designation for the Southern DPS. We corresponded with these tribes to discuss and better understand their concerns regarding the critical habitat designation. The tribes were primarily concerned with the potential impact of the critical habitat designation on tribal fisheries, particularly within usual and accustomed fishing areas located in coastal estuaries and coastal marine waters. Based on the information provided by the tribes, we would expect the critical habitat designation to have minimal effects on tribal fisheries. Tribal fisheries may cause take of Southern DPS green sturgeon and thus are more likely to be affected by take prohibitions as established in the proposed ESA 4(d) Rule for green sturgeon (74 FR 23822; May 21, 2009) than by the proposed critical habitat designation. In addition, and as described below, usual and accustomed fishing areas are not necessarily coextensive with areas defined as “Indian lands” in various Federal policies, orders, and memoranda. Thus, we concluded that exclusion of usual and accustomed fishing areas outside those identified as Indian lands is not warranted.

To assess the exclusion of Indian lands under section 4(b)(2) of the ESA, we first examined the benefits of designation. The principal benefit of designation is the protection provided under section 7 of the ESA, requiring every Federal agency to ensure that any action it authorizes, funds, or carries out is not likely to result in the destruction or adverse modification of the designated critical habitat. This complements the provision under section 7 of the ESA requiring Federal agencies to ensure their actions are not likely to jeopardize the continued existence of a listed species. Other benefits of designation include educating the public regarding the potential conservation value of an area, which may help to focus and contribute to conservation efforts by more clearly delineating areas important to species conservation.

The benefits of exclusion include: (1) the furtherance of established national policies, our Federal trust obligations and our deference to the tribes in management of natural resources on their lands; (2) the maintenance of effective long-term working relationships to promote species conservation on an ecosystem-wide basis; (3) the allowance for continued meaningful collaboration and cooperation in scientific work to learn more about the conservation needs of the species on an ecosystem-wide basis; and (4) continued respect for tribal sovereignty over management of natural resources on Indian lands through established tribal natural resource programs.

Given that the affected Indian lands represent a small proportion of the total critical habitat area and, moreover, the high benefits of exclusion, we determined that the benefits of exclusion outweigh the benefits of designation for the following Tribes’ lands:

- Cachil DeHe Band of Wintun Indians of the Colusa Indian Community (California)
- Cher-Ae Heights Trinidad Rancheria (California)
- Confederated Tribes of the Coos, Lower Umpqua, and Siuslaw (Oregon)
- Coquille Indian Tribe (Oregon)
- Hoh Tribe (Washington)
- Jamestown S’Klallam Tribe (Washington)

- Lower Elwha Tribe (Washington)
- Makah Tribe (Washington)
- Quileute Tribe (Washington)
- Quinault Tribe (Washington)
- Shoalwater Bay Tribe (Washington)
- Wiyot Tribe (California)
- Yurok Tribe (California)

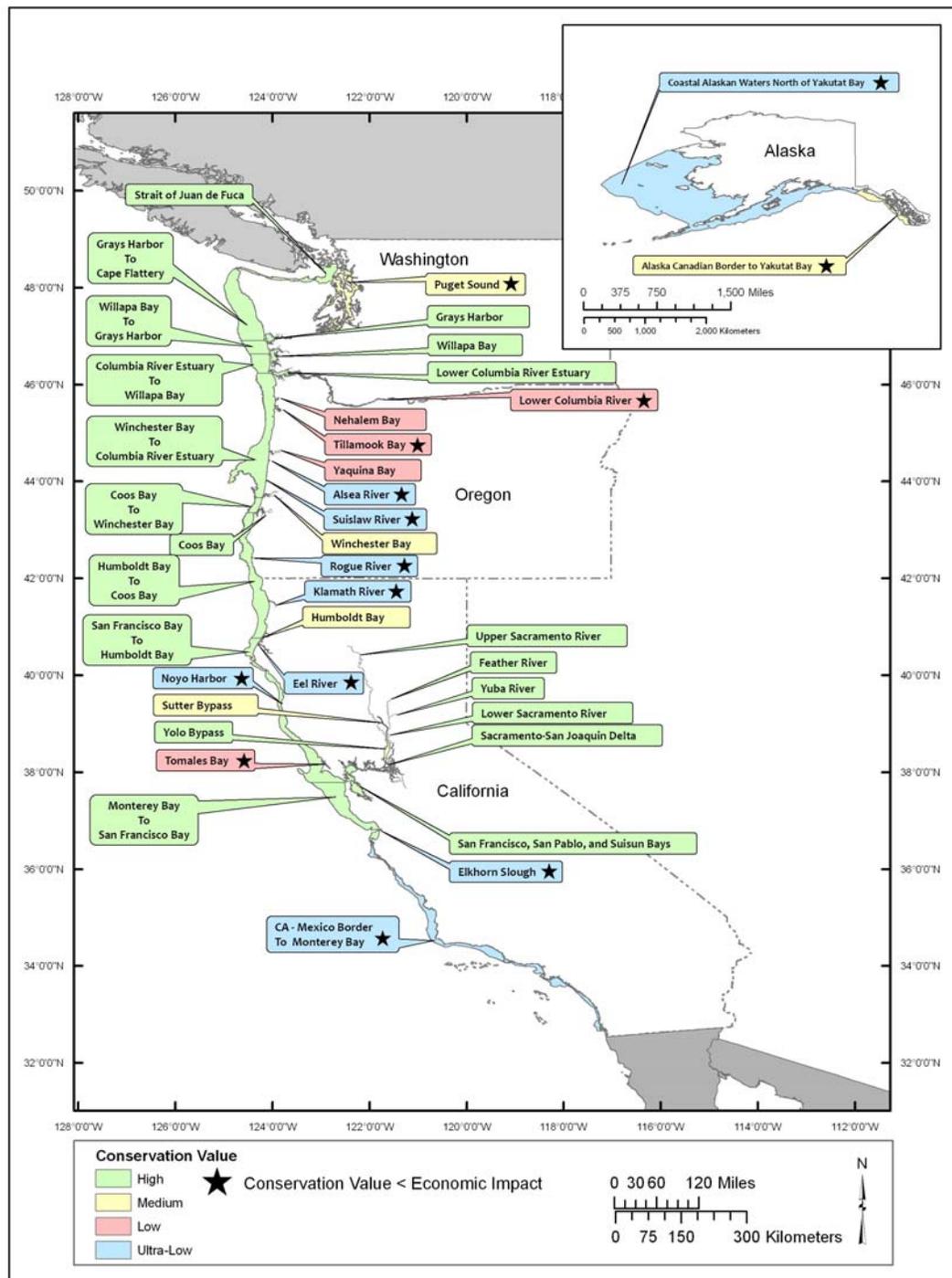
We also determined that exclusion will not result in extinction of Southern DPS green sturgeon. Therefore, we recommend the exclusion of the identified Indian lands from the final critical habitat designation for the Southern DPS. Appendix II provides a more detailed description of our assessment and determination for Indian lands. See Figure 2 for the map depicting the final designation of critical habitat for the Southern DPS of green sturgeon.

## IV. Tables and Figures

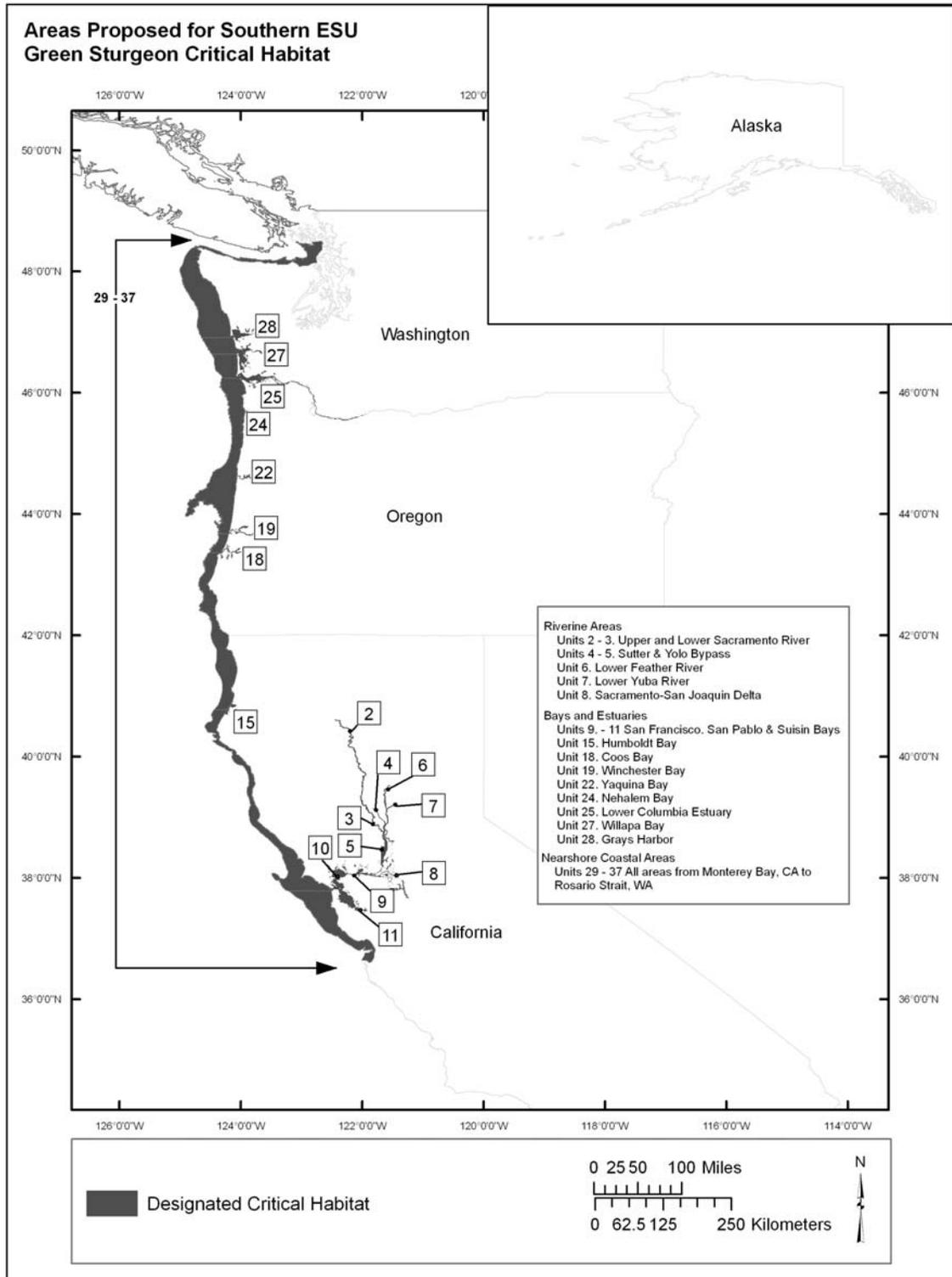
**Table 1.** Comparison of conservation ratings (High-highlighted in green, Medium-highlighted in yellow, Low-highlighted in red, and Ultra-low-highlighted in blue) and economic impact estimates for Specific Areas occupied by the Southern Distinct Population Segment of green sturgeon. Preliminary and final eligibility for exclusion (Y or N), and whether exclusion of the area will significantly impede conservation (Y or N) are shown. Those areas eligible for exclusion preliminarily, but ultimately not excluded because the economic benefits of exclusion do not outweigh the conservation benefits of designation, are highlighted in light green. Those areas excluded from the final critical habitat designation for the Southern DPS, based on economic impacts, are highlighted in magenta.

UNIT NUMBER	SPECIFIC AREA	INITIAL CONSERVATION VALUE	LOW ANNUALIZED IMPACTS (7 PERCENT)	HIGH ANNUALIZED IMPACTS (7 PERCENT)	LOW ANNUALIZED IMPACTS (3 PERCENT)	HIGH ANNUALIZED IMPACTS (3 PERCENT)	Eligible for Exclusion?	Would exclusion significantly impede conservation?	FINAL CONSERVATION VALUE	EXCLUDED?
2	Upper Sacramento River, CA	High	\$3,900,000	\$3,900,000	\$3,900,000	\$3,900,000	No	N/A	High	No
3	Lower Sacramento River, CA	High	\$4,700,000	\$4,700,000	\$4,700,000	\$4,700,000	No	N/A	High	No
8	Sacramento-San Joaquin Delta, CA	High	\$2,700,000	\$2,800,000	\$2,700,000	\$2,800,000	No	N/A	High	No
9	Suisun Bay, CA	High	\$150,000	\$200,000	\$150,000	\$200,000	No	N/A	High	No
10	San Pablo Bay, CA	High	\$320,000	\$4,100,000	\$310,000	\$4,100,000	No	N/A	High	No
11	San Francisco Bay, CA	High	\$970,000	\$1,100,000	\$940,000	\$1,100,000	No	N/A	High	No
25	Willapa Bay, WA	High	\$110,000	\$110,000	\$110,000	\$110,000	No	N/A	High	No
26	Grays Harbor, WA	High	\$30,000	\$30,000	\$29,000	\$29,000	No	N/A	High	No
29	Monterey Bay, CA, to San Francisco Bay, CA *	High	\$200,000	\$8,400,000	\$190,000	\$8,300,000	No	N/A	High	No
30	San Francisco Bay, CA, to Humboldt Bay, CA *	High	\$520,000	\$1,200,000	\$520,000	\$1,200,000	No	N/A	High	No
31	Humboldt Bay, CA, to Coos Bay, OR *	High	\$710,000	\$1,400,000	\$700,000	\$1,400,000	No	N/A	High	No
32	Coos Bay, OR, to Winchester Bay, OR *	High	\$220,000	\$550,000	\$220,000	\$550,000	No	N/A	High	No
33	Winchester Bay, OR, to Columbia R. estuary *	High	\$460,000	\$890,000	\$460,000	\$890,000	No	N/A	High	No
34	Columbia R. estuary to Willapa Bay, WA *	High	\$540,000	\$2,700,000	\$540,000	\$2,700,000	No	N/A	High	No
35	Willapa Bay, WA, to Grays Harbor, WA *	High	\$0	\$0	\$0	\$0	No	N/A	High	No
36	Grays Harbor, WA, to U.S.-Washington/Canada Border *	High	\$470,000	\$2,100,000	\$470,000	\$2,100,000	No	N/A	High	No
37	Strait of Juan de Fuca, WA	High	\$220,000	\$220,000	\$220,000	\$220,000	No	N/A	High	No
24a	Lower Columbia River estuary (from RKM0 to 74)	High	\$710,000	\$20,000,000	\$710,000	\$20,000,000	No	N/A	High	No
4	Yolo Bypass, CA	Medium	\$550,000	\$550,000	\$550,000	\$550,000	Yes	Yes	High	No
5	Sutter Bypass, CA	Medium	\$13,000	\$13,000	\$13,000	\$13,000	No	N/A	Medium	No
6	Lower Feather River, CA	Medium	\$2,000,000	\$2,000,000	\$2,000,000	\$2,000,000	Yes	Yes	High	No
7	Lower Yuba River, CA	Medium	\$600,000	\$610,000	\$600,000	\$610,000	Yes	Yes	High	No
15	Humboldt Bay, CA	Medium	\$14,000	\$14,000	\$13,000	\$13,000	No	N/A	Medium	No
18	Coos Bay, OR	Medium	\$73,000	\$16,000,000	\$72,000	\$16,000,000	Yes	Yes	High	No
19	Winchester Bay, OR	Medium	\$12,000	\$12,000	\$12,000	\$12,000	No	N/A	Medium	No
27	Puget Sound, WA	Medium	\$3,000,000	\$3,000,000	\$3,000,000	\$3,000,000	Yes	No	Medium	Yes
38	U.S.-Alaska/Canada Border to Yakutat Bay, AK *	Medium	\$270,000	\$270,000	\$270,000	\$270,000	Yes	?	Medium	Yes
12	Tomales Bay, CA	Low	\$120,000	\$270,000	\$120,000	\$270,000	Yes	No	Low	Yes
22	Yaquina River estuary, OR	Low	\$3,300	\$3,300	\$3,000	\$3,000	No	N/A	Low	No
23	Tillamook Bay, OR	Low	\$16,000	\$16,000	\$15,000	\$15,000	Yes	No	Low	Yes
40	Nehalem Bay, OR	Low	\$300	\$300	\$300	\$300	No	N/A	Low	No
24b	Lower Columbia River (from RKM 74 to 146)	Low	\$2,300,000	\$2,300,000	\$2,300,000	\$2,300,000	Yes	No	Low	Yes
1	Elkhorn Slough, CA	Ultra-low	\$220,000	\$220,000	\$220,000	\$220,000	Yes	No	Ultra-low	Yes
13	Noyo Harbor, CA	Ultra-low	\$23,000	\$23,000	\$23,000	\$23,000	Yes	No	Ultra-low	Yes
14	Eel River estuary, CA	Ultra-low	\$16,000	\$16,000	\$15,000	\$15,000	Yes	No	Ultra-low	Yes
16	Klamath River estuary, CA	Ultra-low	\$8,900	\$8,900	\$8,900	\$8,900	Yes	No	Ultra-low	Yes
17	Rogue River estuary, OR	Ultra-low	\$2,100	\$2,100	\$2,100	\$2,100	Yes	No	Ultra-low	Yes
20	Siuslaw River estuary, OR	Ultra-low	\$8,600	\$8,600	\$8,600	\$8,600	Yes	No	Ultra-low	Yes
21	Alesea River estuary, OR	Ultra-low	\$9,300	\$9,300	\$9,300	\$9,300	Yes	No	Ultra-low	Yes
28	U.S.-California/Mexico border to Monterey Bay, CA *	Ultra-low	\$1,300,000	\$190,000,000	\$1,300,000	\$190,000,000	Yes	No	Ultra-low	Yes
39	Yakutat Bay, AK, northwest to the Bering Strait *	Ultra-low	\$36,000,000	\$310,000,000	\$36,000,000	\$310,000,000	Yes	No	Ultra-low	Yes

**Figure 1.** Map depicting each specific area and its final conservation value rating (High=green, Medium = yellow, Low=red, and Ultra-low=blue). These final conservation ratings were arrived at after weighing the initial conservation ratings against the economic costs associated with designating them as critical habitat and considering whether exclusion of the areas would significantly impede conservation of the species (see Table 1). Specific areas where the cost of designating critical habitat outweighed the final conservation benefit that would come from designating it are signified with a solid star.



**Figure 2.** Map depicting the areas proposed for the Southern Distinct Population Segment of green sturgeon critical habitat designation.



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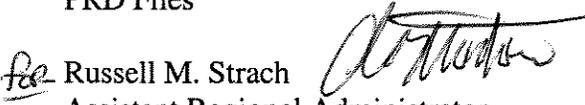
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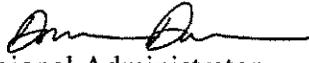
## VI. Appendices

MEMO

August 31, 2009

To: PRD Files

From:  Russell M. Strach  
Assistant Regional Administrator  
Protected Resources Division, Southwest Region

Donna Darm   
Assistant Regional Administrator  
Protected Resources Division, Northwest Region

Subject: Designating Critical Habitat for the Threatened Southern Distinct Population Segment of North American Green Sturgeon – Considerations for Department of Defense Lands and Impacts on National Security

As required under section 4(b)(2) of the federal Endangered Species Act (ESA), NMFS considered the impacts on national security in the development of the final critical habitat designation for the threatened Southern Distinct Population Segment of North American green sturgeon (*Acipenser medirostris*; hereafter “Southern DPS”). This memorandum summarizes NMFS’ consideration of the impacts on national security and determination on areas eligible for exclusion from designation based on impacts on national security.

## BACKGROUND

Section 3(5)(A) defines critical habitat as the specific areas within the geographical area occupied by the species on which are found physical biological features essential for conservation, and specific areas outside the geographical area occupied if the area is essential for conservation. Agency regulations describe physical and biological features as being the “primary constituent elements” (PCE) of the species’ habitat. Section 4(b)(2) of the ESA provides that the Secretary shall designate critical habitat “after taking into consideration the economic impact, **the impact on national security**, and any other relevant impact, of specifying any particular area as critical habitat.” [emphasis added] The Secretary has discretion to exclude an area from critical habitat if the benefits of exclusion outweigh the benefits of designation, so long as the failure to designate such area as critical habitat will result not in the extinction of the species.

On September 8, 2008, we published a proposed rule designating critical habitat for the Southern DPS of green sturgeon (73 FR 52084). The rule identified the species’ PCEs as suitable substrate, food resources, migratory corridors, and water flow, depth, and quality. It also identified 39 specific areas occupied by the species as areas where the PCEs are found, and proposed designation of those areas, comprising approximately 13,000 square miles of marine habitat. At the time of the proposed rule, we did not propose to exclude any areas because of impacts on national security because we had not

received any information from the Department of Defense (DOD) regarding impacts. The proposed rule solicited information as to whether the designation of critical habitat would result in national security impacts and whether such impacts would outweigh the benefits of designation. Subsequently, during the public comment period, the DOD identified 7 military sites that may warrant exclusion based on national security impacts (Table 1 and Figure 1).

In keeping with recent agency practice when designating critical habitat for salmonids (70 FR 52630, September 2, 2005) and killer whales (71 FR 69054, November 29, 2006), we consulted with DOD on several occasions to better understand the activities taking place at these sites and the potential impact of designating critical habitat there. Most of the DOD sites identified were excluded from designation for these other species due to impacts on national security or the existence of an Integrated Natural Resource Management Plan<sup>1</sup>. DOD confirmed that all 7 of these military sites are actively used by the Navy or Army, identified the types of activities that take place there, and assessed the potential for critical habitat designation to adversely affect their ability to conduct operations, tests, training, and other essential military activities. Both military agencies concluded that critical habitat designation at any of these sites could impact national security by diminishing military readiness. The possible impacts include: preventing, restricting, or delaying training or testing exercises or access to sites; restricting or delaying activities associated with vessel/facility maintenance and ordnance loading; and delaying response times for ship deployments and overall operations.

The following describes what is known about green sturgeon use of each military site, DOD's description of activities and national security impacts, and our recommendations as to whether such impacts outweigh the benefits of designating the site as critical habitat. We based our recommendation on an evaluation of the following factors for each military site: (1) the relative proportion of the site to the specific area in which it occurs; (2) the likelihood of a consultation with the DOD in this site, based on our ESA consultation history; (3) the intensity of use of the site by the DOD; (4) the likelihood that DOD activities would destroy or adversely modify critical habitat, based on the DOD's activities within the site; (5) the level of protection provided to one or more PCEs by existing DOD safeguards (e.g., best management practices associated with dredging); and (6) what other Federal actions may occur in the site that would no longer be subject to the critical habitat provision if the particular area were excluded from the designation. Each of these factors was given a qualitative rating of High or Low. These were then weighed against the benefits of designating the site (Table 2), which was based on the final conservation value rating for the specific area within which the site occurred, as well as the best available information regarding green sturgeon use of the site.

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<sup>1</sup> In 2003 Congress amended the ESA to provide that “[t]he Secretary shall not designate as critical habitat any lands or other geographical areas owned or controlled by the Department of Defense, or designated for its use, that are subject to an integrated natural resources management plan prepared under section 101 of the Sikes Act (16 U.S.C. 670a), if the Secretary determines in writing that such plan provides a benefit to the species for which critical habitat is proposed for designation.”

## ASSESSMENT of DOD AREAS

### **Site #1: Mare Island US Army Reserve (USAR) Center, California**

*Southern DPS green sturgeon use of area:* This DOD site is located in Mare Strait, California, within the San Pablo Bay specific area considered for critical habitat designation. The NMFS Critical Habitat Review Team (CHRT) rated San Pablo Bay as a high conservation value for Southern DPS. The area of overlap consists of the waters contiguous to the Mare Island USAR Center between and around Piers 22 and 23. San Pablo Bay provides habitat to support rearing and feeding by juvenile Southern DPS green sturgeon and to support feeding and migration of subadult and adult Southern DPS green sturgeon. Tagged Southern DPS green sturgeon have been detected at the monitors located at Piers 22 and 23 (part of the Mare Island USAR Center), indicating that subadult and adult Southern DPS fish enter Mare Strait. Data are lacking on juvenile distribution within the bay. However, the best available data indicate juveniles are distributed widely throughout the bays and are present during all months of the year. Thus, it is likely that juvenile Southern DPS green sturgeon occupy the waters adjacent to and within the boundaries of the Mare Island USAR Center.

*Description of DOD area and activities:* The Mare Island USAR Center consists of land-based facilities located on Mare Island and the waters between and around Piers 22 and 23, which extend out into Mare Strait. The area requested for exclusion is less than 0.02 percent of the affected specific area (San Pablo Bay). Mare Island USAR Center (including the waters between and around Piers 22 and 23) is covered under an INRMP with uncertain benefits to green sturgeon. Activities occurring in the waters between and around Piers 22 and 23 include: dredging operations for vessel access (typically on a 3-year cycle; dredged volume approximately 40 million to 50 million cubic yards); vessel entry and exit; vessel fueling operations; and pier maintenance (e.g., to replace piles and fenders). Disposal of dredged material typically occurs at in-bay disposal sites outside of the boundaries of the Mare Island USAR Center. Upland or deep-water disposal sites may be used if financially feasible.

*National security concerns:* The DOD dredging and vessel operations may affect green sturgeon PCEs, in particular food resources, depth, and water and substrate quality. The USAR's primary concern is that the critical habitat designation may restrict or prohibit dredging operations between and around Piers 22 and 23. Limitations on dredging operations pose a national security risk because vessels may get stuck in the sediment or may not be able to enter or exit the piers.

*Recommendation:* We conclude that the benefit to national security of excluding this area outweighs the conservation benefit of designation, and recommend that the Mare Island USAR Center be excluded from the critical habitat designation. While DOD must still ensure that activities in this area do not jeopardize the continued existence of Southern DPS green sturgeon, it will not be required to ensure that its activities do not

adversely modify the critical habitat. Exclusion will thus benefit national security by restricting military activities at this site only to the extent necessary to avoid jeopardizing the species' continued existence. Although it is within a critical habitat area with high conservation value (San Pablo Bay), the USAR site has limited conservation value because the overlap is extremely small (.02 percent). Also because the area is very small and access is restricted, there are unlikely to be other federal activities occurring there that would have the potential to adversely modify the PCEs.

Other factors reduce the benefit of designating this site as critical habitat. The USAR is already implementing measures to reduce effects on benthic habitat by using a small clam-shell dredge and dredging infrequently (every 3 years). Although in-bay disposal of dredged material is a concern, in-bay disposal is not conducted within the area being recommended for exclusion and would be subject to the adverse modification requirements under section 7 of the ESA if conducted within designated critical habitat areas for the Southern DPS. Also, we recommended to DOD that additional information be incorporated into the INRMP to adequately address green sturgeon and its critical habitat.

#### **Site #2: Camp Rilea, Oregon**

*Southern DPS green sturgeon use of area:* This DOD site is located along the northern Oregon coast, within the coastal marine area considered for designation between Winchester Bay and the lower Columbia River. This nearshore specific area was rated a high conservation value and provides passage for subadult and adult Southern DPS green sturgeon on their migration to and from the lower Columbia River estuary as well as nearshore habitats along the coasts of Washington and Vancouver Island, B.C. Data are not available to provide a more fine-scale description of green sturgeon distribution within coastal marine waters. However, data from telemetry studies and genetic analyses indicate that a large number of Southern DPS green sturgeon migrate to summer habitats in the lower Columbia River estuary, Willapa Bay, and Grays Harbor each year. Thus, a large number of Southern DPS green sturgeon likely migrate through the coastal marine waters adjacent to Camp Rilea each year on their way to and from over-summering habitats to the north. This area's close proximity to one of the largest West Coast estuaries increases the likelihood that it supports subadult/adult aggregations and important feeding habitat.

*Description of DOD area and activities:* The area requested for exclusion is defined as an area from one-half mile north to one-half mile south of Camp Rilea, to a distance of two miles offshore of Camp Rilea. This amounts to less than 1 percent of the coastal marine area considered for designation between Winchester Bay and the lower Columbia River. The DOD area requested for exclusion is not part of Camp Rilea, but encompasses the surface danger zone for the weapons training ranges on the Camp. The Camp includes a variety of training and support facilities, including utility systems, billeting and mess facilities, operations and support offices and shops, equipment storage compounds and maintenance shops, training simulators, weapons training ranges, and maneuver areas. A 2001 INRMP for the Camp has very limited information on fish

inhabiting the Camp's surface waters (e.g., ponds) and does not address marine fish. The INRMP management objectives are focused on terrestrial areas/plants/wildlife and do not provide a basis for concluding that there would be benefits to green sturgeon.

*National security concerns:* The Oregon Military Department (OMD) commented that the ESA consultations associated with critical habitat designation may affect ongoing military operations and training activities, especially weapons training at the Camp's firing ranges.

*Recommendation:* We recommend that this area not be excluded because the critical habitat designation is not likely to result in impacts on national security. Thus there would be no benefit of exclusion. During a conference call with OMD on April 3, 2009, OMD stated that a primary concern was that stray bullets from their firing ranges could land in the ocean, lodge in/contaminate the substrate, and be ingested by green sturgeon. However, stray bullets are a rare event and would not affect the PCEs in a significant way. The nearshore marine zone is an extremely dynamic environment and a rare projectile landing in the water – comparable to having a fisherman's lead weight dropped into the water – would not affect the safe and timely passage of green sturgeon through this area nor would it have a measurable impact on benthic prey items that may accidentally be struck. Similarly, any water quality impacts associated with lead leaching from bullets would not be measurable and would be subject to swift dilution due to nearshore wave action and currents. Even if sediment quality had been identified as a PCE in nearshore marine areas (i.e., as it was for freshwater and estuarine areas) it is difficult to see how an occasional stray bullet would diminish the “sediment quality (*i.e.*, chemical characteristics) necessary for normal behavior, growth, and viability of all [green sturgeon] life stages.” Also, our ESA consultation history shows that other Federal activities occur in the vicinity of this DOD site (e.g., submarine telecommunications cable siting; Public Consultation Tracking System query August 4, 2009) and exclusion would allow those activities to adversely modify the critical habitat (so long as the activities did not also jeopardize continued existence of the species). Therefore, we conclude that the benefits of excluding this site do not outweigh the benefits of designation.

### **Site #3: Admiralty Inlet Naval Restricted Area, Washington**

*Southern DPS green sturgeon use of area:* This DOD site is located in the eastern/inner Strait of Juan de Fuca at the entrance to Puget Sound. The Strait of Juan de Fuca nearshore specific area contains food resources that support summer feeding and provides a migratory corridor for Southern DPS subadults and adults (from San Francisco Bay, CA, to Vancouver Island, BC). Tagging studies of Southern DPS fish in the vicinity of this DOD site revealed that: (1) the majority of fish likely enter and migrate some distance through the deep, outer, western portion of the Strait of Juan de Fuca, but turn around and migrate along the western coast of Vancouver Island up to overwintering habitats off of Brooks Peninsula on Vancouver Island, rather than migrating through the eastern portion of the Strait of Juan de Fuca and the Strait of Georgia; and (2) a much smaller number of fish migrate to Puget Sound, based on very low detection rates at a

monitor within the Sound (NMFS 2009). The CHRT rated the area as one of medium conservation value, but rated the migratory/ connectivity corridor, especially that provided by the western portion of the Strait, as one of high value. Thus, the overall conservation score for the area was a High. However, detection data for Southern DPS fish in the eastern portion of the Strait, which includes the Admiralty Inlet restricted area, indicate a low frequency of occurrence relative to the western portion of the Strait.

*Description of DOD area and activities:* The Admiralty Inlet Naval restricted area, described in federal regulations at 33 CFR 334.1210, covers an area that is approximately 11 percent of the total area of the Strait of Juan de Fuca specific area. Federal regulations prohibit the use of any equipment such as anchors, fishing gear, grapnels, etc., which may foul underwater installations within the restricted area. Dumping of any non-buoyant objects in this area is also prohibited.

*National security concerns:* The Navy is concerned that the designation of critical habitat within this area could result in restrictions or prohibitions on military training, operations, and testing activities, and that such restrictions could impair the Navy's readiness and ability to perform its mission (i.e., to maintain, train and equip combat-ready Naval forces capable of winning wars, deterring aggression and maintaining freedom of the seas). The Navy believes that any degradation of the site's capacity or capability to support the Fleet represents a significant impact on the installation's military readiness function. Explosive ordnance training and other training, operation, and testing activities may affect one or more of the PCEs in the area (i.e., food resources, migratory corridors and water quality) because the military installations and operations in this area occur at or near the ocean floor for possibly extended periods of time. Thus, if the area were designated as critical habitat, DOD would be required to consult on potential effects to critical habitat. Although our consultation history suggests that DOD activities are unlikely to result in adverse modification of critical habitat, we acknowledge that the requirement to ensure activities do not adversely modify critical habitat, and the process of consulting on adverse modification of critical habitat, may extend the time required for consultation and may result in additional restrictions on activities beyond those required to avoid jeopardy.

*Recommendation:* We conclude that the benefit to national security of excluding this site outweighs the conservation benefit of designation, and recommend that the Admiralty Inlet Naval restricted area be excluded from the critical habitat designation. While DOD must still ensure that activities in this area do not jeopardize the continued existence of Southern DPS green sturgeon, it will not be required to ensure its activities do not adversely modify critical habitat. Exclusion will benefit national security by avoiding the need for DOD to consult on adverse modification of critical habitat and by restricting military activities at this site only to the extent necessary to avoid jeopardizing the species' continued existence. Although it is within a critical habitat area with high conservation value (Strait of Juan de Fuca), and has a sizable overlap with that area (11 percent), the Admiralty Inlet site has less conservation value than other portions of the specific area because Southern DPS fish are thought to use this eastern portion infrequently. The benefit of designating this site as critical habitat is also reduced by the

fact that there is a low likelihood of non-DOD federal actions in this restricted area (as indicated by our consultation history). We also conclude that excluding this particular area, which is likely to be less utilized and small relative to all areas being designated, will not result in extinction of the species.

**Sites #4 and #5: Naval Air Station (NAS) Whidbey Island, and Strait of Juan de Fuca and Whidbey Island Naval Restricted Areas, Washington**

*Southern DPS green sturgeon use of area:* These DOD sites are adjacent to one another and located in the eastern/inner portion of the Strait of Juan de Fuca specific area considered for designation as critical habitat. As with the Admiralty Inlet restricted area, tagging studies of Southern DPS fish in the vicinity of these DOD sites revealed that: (1) the majority of fish likely enter and migrate some distance through the deep, outer, western portion of the Strait of Juan de Fuca, but turn around and migrate along the western coast of Vancouver Island up to overwintering habitats off of Brooks Peninsula on Vancouver Island, rather than migrating through the eastern portion of the Strait of Juan de Fuca and the Strait of Georgia; and (2) a much smaller number of fish migrate to Puget Sound, based on very low detection rates at a monitor within the Sound (NMFS 2009). The CHRT rated the area as one of medium conservation value, but rated the migratory/connectivity corridor, especially that provided by the western portion of the Strait, as one of high value. Thus, the overall conservation score for the area was high. However, detection data for Southern DPS fish in the eastern portion of the Strait, which includes the restricted areas adjacent to the NAS at Whidbey Island, indicate a low frequency of occurrence relative to the western portion of the Strait.

*Description of DOD area and activities:* The Strait of Juan de Fuca and Whidbey Island naval restricted areas are adjacent to the Ault Field property within NAS Whidbey Island, but are not included within the boundaries of the NAS Whidbey Island. The areas requested for exclusion cover an approximately 0.3 percent of the total area of the Strait of Juan de Fuca specific area. Designation as a naval restricted area means that the areas are used to conduct activities that require restriction of access (often for safety reasons). The areas are governed by specific regulations established at 33 CFR § 334.1200 stating that “[p]ersons and vessels shall not enter these areas except at their own risk” and that persons and vessels entering these areas must comply with orders from the Navy. The naval restricted areas encompass two Accident Potential Zones that represent areas where airplane crashes are most likely to occur. The primary activities of concern identified by the Navy within the naval restricted areas are rescue operations conducted in the event of an airplane crash. Rescue operations involve increased ship traffic (e.g., bringing in a barge to retrieve the aircraft) and fuel containment measures.

*National security concerns:* The Navy is concerned that designation of critical habitat within the Strait of Juan de Fuca and Whidbey Island naval restricted areas would potentially affect their rescue operations in the event of an airplane crash within the naval restricted areas. Thus, if the area were designated as critical habitat, DOD would be required to consult on potential effects to critical habitat which in turn may cause: (a) a delay in rescue operations if consultation is required prior to conducting certain activities

associated with the rescue operations; or (b) additional costs to the Navy if consultation is required after rescue operations are completed.

*Recommendation:* We conclude that the benefit to national security of excluding this site outweighs the conservation benefit of designation, and recommend that the Strait of Juan de Fuca and Whidbey Island Naval Restricted Areas be excluded from the critical habitat designation. While DOD must still ensure that activities in these areas do not jeopardize the continued existence of Southern DPS green sturgeon, it will not be required to ensure its activities do not adversely modify critical habitat. Exclusion will benefit national security by avoiding the need for DOD to consult on adverse modification of critical habitat and by restricting military activities at this site only to the extent necessary to avoid jeopardizing the species' continued existence. Although they are within a critical habitat area with high conservation value (Strait of Juan de Fuca), the sites have limited conservation value because the overlap is extremely small (0.3 percent). Also because the area is very small and access is restricted, there are unlikely to be other federal activities occurring there that would have the potential to adversely modify the PCEs. The conservation value of these sites is also limited because Southern DPS green sturgeon utilize the eastern portion of the Strait much less frequently than areas in the western portion of the Strait. The benefit of designation is also reduced because the main activity of concern, rescue operations and subsequent fuel containment measures in the event of an airplane crash<sup>2</sup>, has a low likelihood of occurring and consultations are likely to be rare. We also conclude that excluding this particular area, which is likely to be less utilized and very small relative to all areas being designated, will not result in extinction of the species.

#### **Sites #6 and #7: Strait of Juan de Fuca Naval Air-to-Surface Weapon Range Restricted Area; and Navy 3 Operating Area, Washington**

*Southern DPS green sturgeon use of area:* The Strait of Juan de Fuca Naval Air-to-Surface Weapon Range (ASWR) is a restricted area within the larger Navy 3 Operating Area. These sites are located in the eastern/inner portion of the Strait of Juan de Fuca specific area considered for designation as critical habitat. As with Sites #3-5 above, tagging studies of Southern DPS fish in the vicinity of these DOD sites revealed that: (1) the majority of fish likely enter and migrate some distance through the deep, outer, western portion of the Strait of Juan de Fuca, but turn around and migrate along the western coast of Vancouver Island up to overwintering habitats off of Brooks Peninsula on Vancouver Island, rather than migrating through the eastern portion of the Strait of Juan de Fuca and the Strait of Georgia; and (2) a much smaller number of fish migrate to Puget Sound, based on very low detection rates at a monitor within the Sound (NMFS 2009). The CHRT rated the area as one of medium conservation value, but rated the migratory/ connectivity corridor, especially that provided by the western portion of the Strait, as one of high value. Thus, the overall conservation score for the area was High. However, given the evidence that the eastern portion of the Strait, which includes the

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<sup>2</sup> In the event of an airplane crash, we would likely apply our regulations for emergency consultations (See 50 C.F.R. 402.05) which would allow rescue operations to go forward with consultation occurring "as soon as practicable after the emergency is under control".

Navy 3 Operating Area (and restricted ASWR within), it is likely that Southern DPS fish are using the areas requested for exclusion less frequently than areas in the western portion of the Strait.

*Description of DOD area and activities:* The Navy 3 Operating Area and its Strait of Juan de Fuca Naval ASWR cover approximately 11 percent of the total area of the Strait of Juan de Fuca specific area. Designation as a naval restricted area means that the ASWR area is used to conduct activities that require restriction of access (often for safety reasons). This particular area is governed by specific regulations established at 33 CFR § 334.1200 stating that “[p]ersons and vessels shall not enter these areas except at their own risk” and that persons and vessels entering these areas must comply with orders from the Navy. Federal regulations prohibit entry into the ASWR area between 0700 and 1200 hours daily except on specified dates during which the area is open for commercial gill net fishing or as authorized by the enforcing agency. The Navy conducts air-to-surface target practice using non-explosive training devices within this restricted area. Areas outside the ASWR and within the Navy 3 Operating Area are not governed by the same regulations, however, the Navy 3 boundaries are a prominent feature of nautical charts for this area and mariners are warned<sup>3</sup> that the navy employs “ship tactical exercises, inert ordnance, small arms fire, air to surface gunnery, night illumination, practice bombs, mines, torpedoes, rockets” in this operating area.

*National security concerns:* The training, operation, and testing activities conducted within the Navy 3 Operating Area and its Strait of Juan de Fuca ASWR support the acquisition and implementation of advanced military technology for the Navy and help sustain the readiness of ships, submarines, aviation squadrons, and other units for potential rapid deployment if needed. The Navy is concerned that the designation of critical habitat within the particular areas could result in restrictions or prohibitions on these training and testing activities, such that the Navy’s readiness and ability to perform its mission (i.e., to maintain, train and equip combat-ready Naval forces capable of winning wars, deterring aggression and maintaining freedom of the seas) is affected. Although the likelihood of an ESA Section 7 consultation with DOD occurring if critical habitat were to be designated in this area is low (given that air-to-surface target practice using non-explosive training devices has a low likelihood of affecting the PCEs), we recognize that the activities that may be carried out in restricted areas (and Navy operating areas closely associated with them) are often vital to national security and that a requirement to consult on adverse modification of critical habitat could delay or alter these activities in the future.

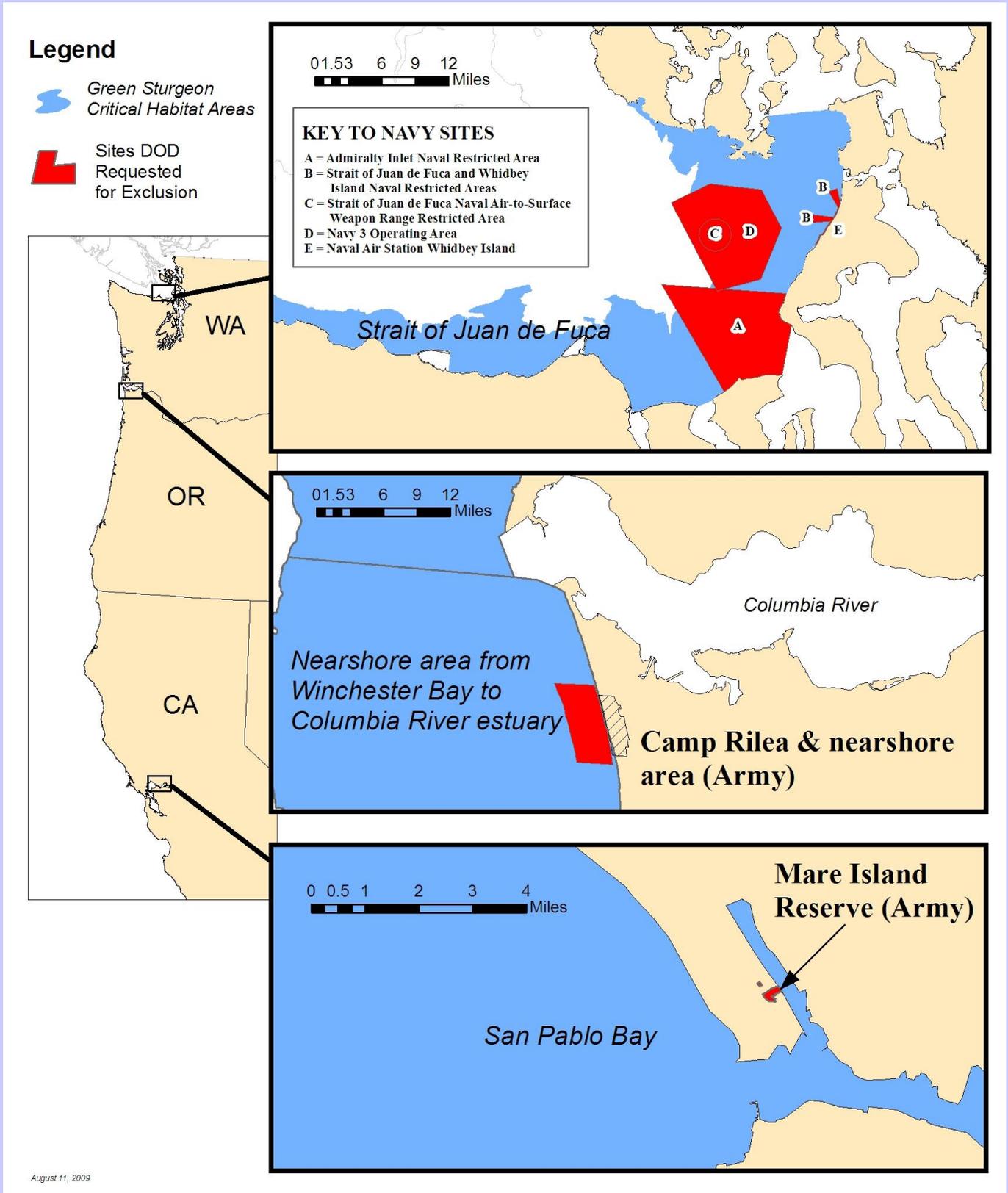
*Recommendation:* We conclude that the benefit to national security of excluding this site outweighs the conservation benefit of designation, and recommend that the Navy 3 Operating Area and its Strait of Juan de Fuca ASWR be excluded from the critical habitat designation. While DOD must still ensure that activities in this area do not jeopardize the continued existence of Southern DPS green sturgeon, it will not be required to ensure its

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<sup>3</sup> Excerpt from the April 1, 2009, Special Notice to Mariners, Chapter XI – Cautionary Situations, U.S. NAVY OPERATING AREAS.

activities do not adversely modify critical habitat. Exclusion will benefit national security by avoiding the need for DOD to consult on adverse modification of critical habitat and by restricting military activities at this site only to the extent necessary to avoid jeopardizing the species' continued existence. Although they are within a specific area with high conservation value (Strait of Juan de Fuca), and have a sizable overlap with that area (11 percent), these two sites have less conservation value than other portions of the specific area (thereby reducing the benefit of designation) because Southern DPS fish are thought to use this eastern portion infrequently. The benefit of designating this site as critical habitat is also reduced by the fact that there is a low likelihood of non-DOD federal actions in this restricted area (as indicated by our consultation history). Another factor reducing the benefit of designation is the fact that the DOD activities are expected to have minimal if any impact on the PCEs. Therefore, we conclude that the benefits of excluding these particular areas outweigh the benefits of designating these areas as critical habitat. We recognize that this exclusion, together with the exclusions in 4 and 5 above, total 22 percent of the Strait of Juan de Fuca specific area. We conclude that excluding these particular areas, which are likely to be less utilized and very small relative to all areas being designated, in combination with the exclusion of areas 4 and 5, will not result in extinction of the species.

Figure 1. DOD sites considered for exclusion from designation as critical habitat for Southern DPS green sturgeon.



August 11, 2009

Table 1. Summary of DOD sites and recommendations as to whether they warrant exclusion from designation as critical habitat for Southern DPS green sturgeon.

DOD Sites & Agency <sup>4</sup>	Overlapping Southern DPS Specific Area & Conservation value	Specific Area Size (mi <sup>2</sup> )	DOD Site Overlap (mi <sup>2</sup> )	Exclude?
(1) Mare Island Reserve (Army)	San Pablo Bay (High)	127.8	0.02	Yes
(2) Camp Rilea (Army)	Nearshore area from Winchester Bay OR, to Columbia R. estuary (High)	2,624.3	8.1	No
(3) Admiralty Inlet Naval Restricted Area (Navy)	Nearshore area in Strait of Juan de Fuca (High)	520.7	59.7	Yes
(4) Naval Air Station Whidbey Island (Navy)	Nearshore area in Strait of Juan de Fuca (High)	“	0.1	Yes
(5) Strait of Juan de Fuca and Whidbey Island Naval Restricted Areas (Navy)	Nearshore area in Strait of Juan de Fuca (High)	“	1.8	Yes
(6) Strait of Juan de Fuca Naval Air-to-Surface Weapon Range Restricted Area (Navy)	Nearshore area in Strait of Juan de Fuca (High)	“	5.0 [all within site #7]	Yes
(7) Navy 3 Operating Area (Navy)	Nearshore area in Strait of Juan de Fuca (High)	“	52.1 [includes all of site #6]	Yes
<b>DOD Exclusions as a Percentage of Each Affected Specific Area:</b>				
<ul style="list-style-type: none"> <li>• San Pablo Bay = 0.02%</li> <li>• Nearshore area in Strait of Juan de Fuca = 22%</li> </ul>				

<sup>4</sup> Several other sites were identified by DOD, including: Bremerton Naval Hospital; Naval Air Station Everett; Naval Magazine Indian Island; Naval Fuel Depot Manchester; Naval Undersea Warfare Center Keyport; Naval Air Station Whidbey Island; Navy 7/Admiralty Bay Restricted Area 6701. However, none of these sites overlap with areas proposed for designation for the Southern DPS of green sturgeon and we did not include them in this assessment of impacts on national security. Similarly, DOD identified several surf zone sites associated with the proposed extension of the Pacific Northwest Operating Area Quinault Underwater Tracking Range, but these were not analyzed for exclusion because a particular area has yet to be defined.

Table 2. Summary of likely impacts of a critical habitat designation for the Southern DPS in areas requested for exclusion by the DOD.

<b>Site #1: Mare Island US. Army Reserve (USAR) Center, CA</b>		
<b>Criteria</b>	<b>Rating</b>	<b>Notes</b>
Conservation Value of Specific Area Encompassing the Military Site (i.e., Particular Area) being requested for Exclusion (High, Medium, Low, Ultra-low)	High	Specific area containing the particular area requested for exclusion is San Pablo Bay, CA
Use of Particular Area Requested for Exclusion by the Southern DPS (Low, High)	High	Used by juveniles, subadults and adults for rearing, feeding and migration. Juveniles could be present in the area during all months of the year.
Relative Proportion of Specific Area Requested for Exclusion (Low, High)	Low	A very small percentage (0.01%) of the total area of San Pablo Bay is being requested for exclusion.
Likelihood of DOD Consultation (Low, High)	High	Dredging and pier maintenance have the potential to affect one or more of the PCEs in the area (food resources, water flow, water quality, migratory corridor, water depth and sediment quality) and therefore even through these activities are occurring infrequently, the likelihood that the DOD would have to consult with NMFS on these projects is high because the Southern DPS may be present in the area during all months of the year.
Intensity of area use by DOD	Low	The area is dredged about once every 3 years and pier maintenance occurs infrequently.
Likelihood that DOD activities would destroy or adversely modify critical habitat	Low	Only 2 informal consultations have occurred in the past for listed salmon and neither resulted in determinations that the activities would adversely modify salmon critical habitat. In these cases the USAR was able to conduct activities in such a way that the impact of the activities on critical habitat was minimized and we believe this would be the case for the Southern DPS. In addition, the activities are occurring infrequently and in a spatially limited area. It is the deposition of dredge spoil that is more likely to adversely modify critical habitat, but the dredge spoil from the DOD activities in the area requested for exclusion are not deposited in the areas being requested for exclusion. Rather other in-bay areas that are within the critical habitat boundary will be used for dredge disposal and these areas will be subject to ESA Section 7.
Level of protection provided to one or more PCEs by existing DOD safeguards	Low	The INRMP does not include conservation measures specific to the Southern DPS (e.g., commitment to dispose of dredged material outside of in-bay areas, a monitoring program to assess use of the Southern DPS in waters adjacent to the USAR Center, assessment of primary constituent elements in waters adjacent to the USAR Center).
Likelihood that other Federal nexuses could be removed from consideration if the particular area is excluded from critical habitat designation	Low	The consultation history indicates that no other federal actions, other than those conducted by the DOD, have occurred in the area being requested for exclusion and only one non-DOD federal action has occurred in the vicinity of the area (Vallejo Yacht Club Breakwater Replacement Project led by ACOE)

<b>Site #2: Coastal Marine Waters Adjacent to Camp Rilea, OR</b>		
<b>Criteria</b>	<b>Rating</b>	<b>Notes</b>
Conservation Value of Specific Area Encompassing the Military Site (i.e., Particular Area) being requested for Exclusion (High, Medium, Low, Ultra-low)	High	Specific area containing the particular area requested for exclusion is Winchester Bay, OR to the Columbia River estuary.

<b>Site #2: Coastal Marine Waters Adjacent to Camp Rilea, OR</b>		
<b>Criteria</b>	<b>Rating</b>	<b>Notes</b>
Use of Particular Area Requested for Exclusion by the Southern DPS (Low, High)	High	Several records of green sturgeon within these marine waters indicate this area is important for migration. From February 2000 to February 2001, 4 green sturgeon of unknown DPS were captured for tissue sampling off of Newport, OR ( <i>Farr et al. 2001</i> ). From August 2001 to January 2007, 9 green sturgeon were incidentally caught on observed West Coast groundfish bottom trawl vessels in the Astoria port group (n = 7 fish), Garibaldi (Tillamook) port group (n = 1 fish), and Newport port group (n = 1 fish) ( <i>pers. comm. with Janell Majewski, NOAA WCGOP, January 29, 2007</i> ). Logbook data provided in Erickson and Hightower (2007) also show concentrated catches of green sturgeon by Oregon bottom trawl fishermen in this area. Southern DPS fish migrating between San Pablo Bay and Winchester Bay, the Columbia River estuary, and other coastal waters as described above migrate through this area.
Relative proportion of specific area requested for exclusion by DOD	Low	The particular area requested for exclusion comprises approximately 0.3% of the nearshore specific area proposed for designation as critical habitat.
Likelihood of DOD consultation	Low	Most consultations in Clatsop county are associated with Corps dredge and fill permits. There is no record of other DOD-related consultations associated with this Camp Rilea and it is unlikely that a critical habitat designation would prompt an increase in consultations on non-Corps DOD projects.
Intensity of area use by DOD	Low	Regular and intensive DOD activities are focused on beach and upland zones outside the nearshore particular area under consideration for critical habitat designation.
Likelihood that DOD activities would destroy or adversely modify critical habitat	Low	Stray bullets are expected to be a rare occurrence and even if they occur, their impact on PCEs (i.e., water quality and food resources) would be virtually undetectable due to the dynamic nature of the nearshore environment (e.g., waves & currents).
Level of protection provided to one or more PCEs by existing DOD safeguards	High	As noted in the 2001 INRMP, "... live fire exercises are tightly controlled and occur only at designated locations (i.e., the weapons firing ranges)."
Likelihood that other Federal nexuses could be removed from consideration if the particular area is excluded from critical habitat designation	High	Evidence includes a recent consultation involving the installation of a submarine telecommunications cable thru the nearshore area adjacent to Camp Rilea.

<b>Site #3: Admiralty Inlet Naval Restricted Area in the Strait of Juan de Fuca, WA</b>		
<b>Criteria</b>	<b>Rating</b>	<b>Notes</b>
Conservation Value of Specific Area Encompassing the Military Site (i.e., Particular Area) being requested for Exclusion (High, Medium, Low, Ultra-low)	High	Specific area containing the particular area requested for exclusion is the Strait of Juan de Fuca.
Use of Particular Area Requested for Exclusion by the Southern DPS (Low, High)	Low	Tag detections of Southern DPS fish suggest that the inner, eastern portion of the Strait of Juan de Fuca is used at a lower frequency than the deeper, outer, western portion of the Strait
Relative proportion of specific area requested for exclusion by DOD	High	A sizable percentage (11%) of the total area of the Strait of Juan de Fuca is being requested for exclusion
Likelihood of DOD consultation	High	Installations at or near the ocean floor have the potential to affect one or more of the PCEs in the area (food resources, water quality, and migratory corridor), and therefore the likelihood that the DOD would have to consult with NMFS on these projects is high because the Southern DPS may be present in the area at certain times of year. However, the consultation history in the area, suggests the number of consultations would be low.

<b>Site #3: Admiralty Inlet Naval Restricted Area in the Strait of Juan de Fuca, WA</b>		
<b>Criteria</b>	<b>Rating</b>	<b>Notes</b>
Intensity of area use by DOD	High	The intensity of DOD use of this area is likely high based on the fact that, on a daily basis, the Navy does not allow the use of any machinery, gear, objects that will sink and/or come in contact with the benthos in the area and because the Navy has stated that the activities conducted within the area are vital to its mission.
Likelihood that DOD activities would destroy or adversely modify critical habitat	Low	Explosive ordnance training and other training, operation, and testing activities may affect one or more of the PCEs in the area (i.e., food resources, migratory corridors and water quality) because the military installations and operations in this area occur at or near the ocean floor for possibly extended periods of time; however, the consultation history for the area suggests that consultations are unlikely to result in adverse modification of critical habitat.
Level of protection provided to one or more PCEs by existing DOD safeguards	High	Although there is no INRP for this in-water restricted area, there is a high likelihood that Southern DPS PCEs in restricted areas will be protected because public access to these areas is extremely limited.
Likelihood that other Federal nexuses could be removed from consideration if the particular area is excluded from critical habitat designation	Low	The likelihood of non-DOD federal actions in the area requested for exclusion is low given the consultation history in this area (i.e. no records of other non-DOD federal actions).

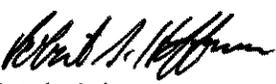
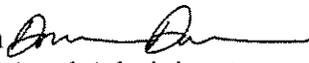
<b>Sites #4 &amp; 5: Restricted Areas Adjacent to the Naval Air Station at Whidbey Island</b>		
<b>Criteria</b>	<b>Rating</b>	<b>Notes</b>
Conservation Value of Specific Area Encompassing the Military Site (i.e., Particular Area) being requested for Exclusion (High, Medium, Low, Ultra-low)	High	Specific area containing the particular area requested for exclusion is the Strait of Juan de Fuca.
Use of Particular Area Requested for Exclusion by the Southern DPS (Low, High)	Low	Tag detections of Southern DPS fish suggest that the inner, eastern portion of the Strait of Juan de Fuca is used at a lower frequency than the deeper, outer, western portion of the Strait
Relative proportion of specific area requested for exclusion by DOD	Low	A very small percentage (0.3%) of the total area of the Strait of Juan de Fuca is being requested for exclusion
Likelihood of DOD consultation	Low	There are no records of consultations occurring in the past within these restricted areas for other listed species. There have been 6 informal consultations conducted on the Naval Air Station at Whidbey Island, but not the restricted areas adjacent to the Island. The outcome of all the consultations was "not likely to adversely affect critical habitat".
Intensity of area use by DOD	Low	Airplane crashes within the restricted areas requested for exclusion are not likely to occur frequently
Likelihood that DOD activities would destroy or adversely modify critical habitat	Low	The likelihood of an airplane crash occurring is very low based on a history of infrequent airplane crashes in this location. In addition, even if an airplane crash were to occur, the effects of the crash on PCEs is likely to be low because they are of limited duration, are not occurring repeatedly, and fuel containment measures are likely to be effective.
Level of protection provided to one or more PCEs by existing DOD safeguards	High	Although there is no INRMP for these in-water restricted areas, the navy has control over public access to the areas because activities that are hazardous to humans may be occurring there. Thus, there is a high likelihood that Southern DPS PCEs in restricted areas will be protected through limited public access.
Likelihood that other Federal nexuses could be removed from consideration if the particular area is excluded from critical habitat designation	Low	There is no consultation history for non-DOD related activities in these areas.

<b>Sites #6 &amp; 7: Strait of Juan de Fuca Naval Air-to-Surface Weapon Range Restricted Area, WA</b>		
<b>Criteria</b>	<b>Rating</b>	<b>Notes</b>
Conservation Value of Specific Area Encompassing the Military Site (i.e., Particular Area) being requested for Exclusion (High, Medium, Low, Ultra-low)	High	Specific area containing the particular area requested for exclusion is the Strait of Juan de Fuca.
Use of Particular Area Requested for Exclusion by the Southern DPS (Low, High)	Low	Tag detections of Southern DPS fish suggest that the inner, eastern portion of the Strait of Juan de Fuca is used at a lower frequency than the deeper, outer, western portion of the Strait
Relative proportion of specific area requested for exclusion by DOD	High	A sizable percentage (11%) of the total area of the Strait of Juan de Fuca is being requested for exclusion
Likelihood of DOD consultation	Low	There are no records of consultations occurring in the past within these restricted areas for other listed species. There have been a small number of consultations conducted for projects occurring on primarily lands adjacent to this restricted area, but not within the area being requested for exclusion, and all of these resulted in not likely to adversely affect determinations (for informals) or no adverse modification of critical habitat (for formals).
Intensity of area use by DOD	High	This area is used on a daily basis by the Navy to support the acquisition and implementation of advanced military technology and helps sustain the readiness of ships, submarines, aviation squadrons, and other units for potential rapid deployment if needed. Training and testing activities are performed frequently.
Likelihood that DOD activities would destroy or adversely modify critical habitat	Low	Most of the activities described to us by the Navy are not likely to adversely modify critical habitat because benthic disturbances that could affect prey resources of the Southern DPS or water quality due to, for example, inert weapons testing, are likely to be limited in temporal and spatial scope and will not have long lasting effects on habitat. It is unlikely that the activities described to us would affect migration of the Southern DPS, again because of their limited temporal and spatial scope.
Level of protection provided to one or more PCEs by existing DOD safeguards	High	Although there is no INRMP for these in-water restricted areas, the Navy has control over public access to the areas because activities that are hazardous to humans may be occurring there. Thus, there is a high likelihood that Southern DPS PCEs in restricted areas will be protected through limited public access.
Likelihood that other Federal nexuses could be removed from consideration if the particular area is excluded from critical habitat designation	Low	There is no consultation history for non-DOD related activities in these areas.

September 1, 2009

## MEMO

To: PRD File

From:  Russell M. Strach   
Assistant Regional Administrator  
Protected Resources Division, Southwest RegionDonna Darm   
Assistant Regional Administrator  
Protected Resources Division, Northwest Region

Subject: Analysis of the Benefits of Designating versus the Benefits of Excluding Indian Lands from Critical Habitat for the Southern Distinct Population Segment of North American Green Sturgeon

This analysis was prepared to inform the agency's exercise of discretion under Section 4(b)(2) of the Endangered Species Act (ESA), which allows the Secretary to exclude any particular area from critical habitat designation if the benefits of exclusion outweigh the benefits of designation, so long as exclusion will not result in extinction of the listed species. The analysis first examines the benefits of designating Indian lands for the Southern Distinct Population Segment of North American green sturgeon (*Acipenser medirostris*; hereafter "Southern DPS") then examines the benefits of excluding lands of 13 Indian tribes. The analysis concludes that the benefits of exclusion outweigh the benefits of designation because excluding Indian lands benefits the federal government's policy of promoting respect for tribal sovereignty and self-governance and the critical habitat area on Indian lands is a tiny proportion of total critical habitat for this species. The analysis further concludes that excluding this small amount of habitat will not result in extinction of the Southern DPS. Based on this conclusion, I recommend the agency exercise its discretion under ESA section 4(b)(2) to exclude Indian lands from designation for the Southern DPS.

Background

On September 8, 2008, NMFS published a proposed rule to designate critical habitat for the Southern DPS (73 FR 52084), with a technical correction published on October 7, 2008 (73 FR 58527). The rule proposed to designate critical habitat within occupied habitats in freshwater rivers, coastal bays and estuaries, and coastal marine waters of California, Oregon, and Washington. Section 3(5)(A) defines critical habitat, but areas meeting the definition are not automatically designated. Section 4(b)(2) establishes the process the agency is to use in designating critical habitat. It requires us to designate critical habitat for threatened and endangered species "on the basis of the best scientific data available and after taking into consideration the economic impact, and any other relevant impact, of specifying any particular area as critical habitat." This section grants the Secretary of Commerce discretion to exclude any area from critical habitat if he determines "the benefits of such exclusion outweigh the benefits of

specifying such area as part of the critical habitat.” The Secretary’s discretion is limited, as he may not exclude areas if it “will result in the extinction of the species.”

In the proposed rule, we identified the following tribes that may have lands that overlap with the proposed critical habitat areas: the Hoh, Jamestown S’Klallam, Lower Elwha, Makah, Quileute, Quinault, and Shoalwater Bay tribes in Washington; the Confederated Tribes of Coos, Lower Umpqua, and Siuslaw Indians and the Coquille Tribe in Oregon; and the Cachil DeHe Band of Wintun Indians of the Colusa Indian Community, Wiyot Tribe, and Yurok Tribe in California. The rule did not propose to exclude these Indian lands, but solicited comments from the public regarding whether these Indian lands overlap with the proposed critical habitat areas and whether the Indian lands may warrant exclusion from the designation.

During the public comment period, we received comments from several tribes in Washington and Oregon requesting the exclusion of Indian lands from the critical habitat designation for the Southern DPS. We corresponded with several tribes in Washington and Oregon to discuss and better understand their concerns regarding the critical habitat designation. The tribes were primarily concerned with the potential impact of the critical habitat designation on tribal fisheries, particularly within usual and accustomed fishing areas located in coastal estuaries and coastal marine waters. Based on the information provided by the tribes, we would expect the critical habitat designation to have minimal effects on tribal fisheries. Tribal fisheries may cause take of Southern DPS green sturgeon and thus are more likely to be affected by take prohibitions as established in the proposed ESA 4(d) Rule for green sturgeon (74 FR 23822; May 21, 2009) than by the proposed critical habitat designation. In addition, and as described below, usual and accustomed fishing areas are not necessarily coextensive with areas defined as “Indian lands” in various Federal policies, orders, and memoranda. Thus, we conclude that exclusion of usual and accustomed fishing areas outside those identified as Indian lands is not warranted.

The Southwest Region, in coordination with the Northwest Region, is recommending a final critical habitat designation for the Southern DPS. As noted above, there are 13 Indian tribes whose lands intersect with defined critical habitat for this species. Table 1 lists the tribes and the attached map shows the location of the Indian lands relative to Southern DPS habitat areas.

#### Unique Federal Relationship with Indian Tribes

Executive Order 13175 reiterates the unique relationship between the federal and tribal governments: The United States has a unique relationship with Indian tribal governments as set forth in the Constitution of the United States, treaties, statutes, Executive Orders, and court decisions. The nature of the relationship has been discussed from the earliest court cases (see *Worcester v. Georgia*). In his seminal work, Felix Cohen<sup>1</sup> points out that, while treaties with Indian tribes are accorded the same dignity as that given to treaties with foreign nations, they differ in at least two important respects. Through the application of special canons of construction, Indian treaties are construed in favor of the Indians. Further, the courts will not find that Indian treaties have been abrogated by later treaties or legislation unless there is a clear and specific showing in the later enactment that abrogation was intended.

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<sup>1</sup> Cohen, F. 2005. *Cohen's Handbook of Federal Indian Law*, 2005 edition. LexisNexis Matthew Bender Publications, San Francisco, CA.

**Table 1.** Indian tribes with lands overlapping critical habitat areas for the Southern DPS.

Indian Tribe (State)
Cachil DeHe Band of Wintun Indians of the Colusa Indian Community (California)
Confederated Tribes of the Coos, Lower Umpqua, and Siuslaw (Oregon)
Coquille Indian Tribe (Oregon)
Cher-Ae Heights Indian - Trinidad Rancheria (California)
Hoh Tribe (Washington)
Jamestown S’Klallam Tribe (Washington)
Lower Elwha Tribe (Washington)
Makah Tribe (Washington)
Quileute Tribe (Washington)
Quinault Tribe (Washington)
Shoalwater Bay Tribe (Washington)
Wiyot Tribe (California)
Yurok Tribe (California)

This description supports points that will be made later in this memo regarding the purpose of Indian lands as reserves for tribal governments. The reservations are both secure homelands for the tribes, as well as bases for their economic stability. The title to the land is held by the United States for the sole beneficial use of the tribes and their members. These are not federal lands reserved for public use, but rather “Indian lands” reserved for use by tribal governments (and individual tribal members). Discussion regarding the future status of Indian lands should be consistent with these purposes.

Unique Status of “Indian Country” and Indian Lands

Before addressing specific characteristics of Indian Land, it is helpful to look at the legal status of the areas within which they are found, i.e., “Indian Country.” Indian Country is defined in 18 U.S.C. § 1151:

*(a) all lands within the limits of any reservation under the jurisdiction of the United States Government, notwithstanding the issuance of any patent, and including rights-of-way running through the reservation,*

*(b) all dependent Indian communities within the borders of the United States whether within the original or subsequently acquired territory thereof, and whether within or without the limits of a State, and*

*(c) all Indian allotments, the Indian titles to which have not been extinguished, including rights-of-way running through the same.*

As Cohen (2005) points out, the Indian country statute is thus of general importance in defining the special territory where Indians are governed primarily by tribal and federal law rather than state law. “Indian lands” are defined in the Secretarial Order as “any lands title to which is either 1) held in trust by the United States for the benefit of any Indian tribe or individual, or 2) held by any Indian tribe or individual subject to restrictions by the United States against alienation.” Additionally, it is a stated principle of the Secretarial Order that Indian lands “are not subject to the controls or restrictions set forth in federal public land laws. Indian lands are not federal public land or part of the public domain, but are rather retained by tribes or set aside for tribal use pursuant to treaties, statutes, court orders, executive orders, judicial decision, or agreements. Accordingly, Indian tribes manage Indian lands in accordance with tribal goals and objectives, within the framework of applicable laws.” The above supports the conclusions of Sandi Zellmar’s discussion in “Indian Lands as Critical Habitat for Indian Nations and Endangered Species: Tribal Survival and Sovereignty Come First”:<sup>2</sup>

*Thus, the trust responsibility arises not only from the nature of the relationship between tribes and the United States, but also from the massive transfer of lands from Indian Nations to the federal government and the retention and protection of a critical—though diminished—land base, as reflected in treaties. Just as sovereignty is at the very core of the trust responsibility, the tribal land base, retained by the tribes through treaties, is a critical component of sovereignty for most tribes.*

#### Executive Policy Guides Treatment of Indian Lands in Designating Critical Habitat

In addition to Executive Order 13175, we have Department of Commerce direction, via the Secretarial Order, stating that Indian lands shall not be designated, nor areas where the “tribal trust resources ... or the exercise of tribal rights” will be impacted, unless such lands or areas are determined “essential to conserve a listed species.” In such cases we “shall evaluate and document the extent to which the conservation needs of the listed species can be achieved by designating only other lands.” The Secretarial Order is consistent with the long-standing policies of the federal government regarding relationships with, and responsibilities to, Indian tribes. The Secretarial Order direction was developed in consultation with tribal governments, in recognition of their sovereign status and management authority. The Order’s purpose, in part, is to help ensure the tribes do not bear a disproportionate conservation burden.

This direction recognized the unique status of Indian lands. In the words of the Secretarial Order, “Indian lands are not federal public lands or part of the public domain, and are not subject to federal public land laws.” They were retained by tribes or were set aside for tribal use pursuant to treaties, statutes, judicial decisions, executive orders or agreements. These lands are managed by Indian tribes in accordance with tribal goals and objectives, within the framework of applicable laws. (For a description of the federal government’s relationship and responsibility regarding Indian lands and trust resources, see *United States v. Mitchell* (463 U.S. 206 (1983)).

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<sup>2</sup> Zellmar, Sandi B., South Dakota Law Review [43 S.D.L. Rev. 381] (1998)

## The Relationship between the Federal and Tribal Governments is Unique and Longstanding

The federal government has long recognized the unique status of Indian tribes. The U.S. Constitution recognized tribal status via the “Indian commerce clause.” Additionally, treaties are identified as being part of the “supreme law of the land.” In addition to Constitutional recognition, there have been a number of executive branch expressions of the relationships<sup>3</sup> between the federal and tribal governments. Examples of executive direction include:

- **Presidential Memorandum of April 28, 1994**—directs executive departments and agencies to “assess the impact of federal government plans, projects, programs, and activities on tribal resources to assure that tribal government rights and concerns are considered during ... [their] development.”
  
- **Executive Order 13175 – Consultation and Coordination With Indian Tribal Governments (November 6, 2000)**—directs departments and agencies to “encourage Indian tribes to develop their own policies to achieve program objectives;” “where possible, defer to Indian tribes to establish standards;” “in determining whether to establish federal standards, consult with tribal officials as to the need for federal standards and any alternatives that would limit the scope of federal standards or otherwise preserve the prerogatives and authority of Indian tribes.”
  
- **Department of Commerce—American Indian and Alaska Native Policy (March 30, 1995)**— includes the following “Policy Principles”:
  - Recognition of, and commitment to, “a government-to-government relationship with ... Tribal governments.” (First Principle)
  - Recognition that “the tribal right to self-government flows from the inherent sovereignty of tribes and nations and that Federally recognized tribes have a unique and direct relationship with the Federal government.” (First Principle)
  - Recognition trust responsibility and commitment to “consult and work with tribal governments prior to implementing any actions when developing legislation regulations, and/or policies that will affect tribal governments, their development efforts, and their land and resources” (Third Principle)
  - “Pledges to honor the Constitutional protections to Indian Commerce” by recognizing that tribes, as sovereign governments, “are responsible for the welfare and rights of their members and the right to regulate commerce within their reservation boundaries.” (Fourth Principle)
  - Confirmation that the Department “will consult and work with tribal governments before making decisions or implementing policy, rules or programs that may affect tribes to ensure tribal rights and concerns are addressed.” (Fifth Principle)
  - Recognition “that as a sovereign government” tribes are “responsible for the welfare and rights” of their membership and have “the right to regulate commerce within [their] boundaries.” (Fifth Principle)

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<sup>3</sup> Rather than conduct an exhaustive historical review of executive (or judicial, for that matter) direction this memo discusses the most recent examples. For more detail on the history of federal-Indian relations see: (1) Cohen, F. 2005. Cohen's Handbook of Federal Indian Law, 2005 edition. LexisNexis Matthew Bender Publications, San Francisco, CA and (2) Getches, D.H., Wilkinson, C.F., and R.A. Williams, Jr. 2005. Cases and Materials on Federal Indian Law (5th edition).

– Commitment to identify and take “appropriate steps to remove any impediments to working directly and effectively with tribal governments.” This includes applying the requirements of applicable executive orders (e.g., 13175 on intergovernmental partnerships (see above) and 12866 Regulatory Planning and Reviews) and legislative (e.g., Regulatory Flexibility Act) requirements “to design solutions and tailor Federal programs, when appropriate, to address specific or unique needs of tribal communities.” (Sixth Principle)

• **SECRETARIAL ORDER--American Indian Tribal Rights, Federal-Tribal Trust Responsibilities, and the Endangered Species Act.** The secretaries of commerce and of the interior jointly issued the Secretarial Order in June 1997. The stated purpose of the Order is the clarification of “the responsibilities of the component agencies, bureaus and offices” of the Department “when actions taken under authority of the [Endangered Species] Act and associated implementing regulations affect, or may affect, Indian lands, tribal trust resources or the exercise of ... tribal rights.” The opening section continues by saying the Departments will strive “to ensure that Indian tribes do not bear a disproportionate burden for the conservation of listed species, so as to avoid or minimize the potential for conflict and confrontation.” Several sections of the Secretarial Order refer to, or specifically address critical habitat. The following is from Appendix Section 3(B):

- (2) *Recognize the right of Indian tribes to participate fully in the listing process by providing timely notification to, soliciting information and comments from, and utilizing the expertise of, Indian tribes whose exercise of tribal rights or tribal trust resources could be affected by a particular listing. This process shall apply to proposed and final rules to... (ii) designate critical habitat.*
- (3) *Recognize the contribution to be made by affected Indian tribes, throughout the process and prior to finalization and close of the public comment period, in the review of proposals to designate critical habitat and evaluate economic impacts of such proposals with implications for tribal trust resources or the exercise of tribal rights. The Services shall notify affected Indian tribes and the BIA, and solicit information on, but not limited to, tribal cultural values, reserved hunting, fishing, gathering, and other Indian rights or tribal economic development, for use in: (i) the preparation of economic analyses involving impacts on tribal communities; and (ii) the preparation of "balancing tests" to determine appropriate exclusions from critical habitat and in the review of comments or petitions concerning critical habitat that may adversely affect the rights or resources of Indian tribes.*
- (4) *In keeping with the trust responsibility, [the Services] shall consult with the affected Indian tribe(s) when considering the designation of critical habitat in an area that may impact tribal trust resources, tribally-owned fee lands, or the exercise of tribal rights. Critical habitat shall not be designated in such areas unless it is determined essential to conserve a listed species. In designating critical habitat, the Services shall evaluate and document the extent to which the conservation needs of the listed species can be achieved by limiting the designation to other lands.*
- (6) *Having first provided the affected Indian tribe(s) the opportunity to actively review and comment... provide affected Indian tribe(s) with a written explanation whenever a final decision on any of the following activities conflicts with comments provided by an affected Indian tribe: ... (ii) designate critical habitat.*

In summary, as articulated in the February 16, 2000 FRN (65 FR 7764-7787, February 16, 2000) designating critical habitat:

- *...there is a unique and distinctive relationship between the United States and Indian tribes (as defined by the U.S. Constitution, treaties, statutes, executive orders, judicial decisions, and agreements), which differentiate tribes from the other entities that have a relationship with, or are affected by, actions of the federal government.*
- *This relationship has given rise to a special federal trust responsibility involving the legal responsibilities and obligations of the United States toward Indian tribes and the application of fiduciary standards of due care with respect to Indian lands, tribal trust resources, and the exercise of tribal rights.*
- *Pursuant to the treaties, statutes, judicial decisions, executive orders and other agreements that define the relationship between the United States and tribes, lands have been retained by Indian tribes or have been set aside for tribal use. These lands are managed by Indian tribes in accordance with tribal goals and objectives, within the framework of applicable laws.*

### Benefits of Designation

The principal benefit of designating critical habitat is that ESA section 7 requires every federal agency to ensure that any action it authorizes, funds or carries out is not likely to result in the destruction or adverse modification of the designated critical habitat. This complements the Section 7 provision that federal agencies ensure their actions are not likely to jeopardize the continued existence of a listed species. Another possible benefit is that the designation of critical habitat can serve to educate the public regarding the potential conservation value of an area. This may focus and contribute to conservation efforts by clearly delineating areas that are important to species conservation.

In developing the critical habitat designation for the Southern DPS, we first established those areas that meet the definition of critical habitat. We identified critical habitat areas throughout the species range, including stream reaches in the Sacramento and San Joaquin river basins, estuaries in California, Oregon and Washington, and nearshore U.S. marine waters from California to Alaska. We asked a team of federal biologists to determine the relative conservation value of each area the species (high, medium, low or ultra-low). Their evaluation provided information allowing us to determine the benefit of designating any particular area in a way that would aid the 4(b)(2) balancing test. The higher the conservation value of an area, the greater the benefit of the section 7 protection.

Tables 2 and 3 identify the habitat<sup>4</sup> that would be affected by a designation on Indian lands. The benefits of designation depend upon the extent of the habitat under consideration, its conservation value, and the types of federal activities in that area likely to undergo section 7 consultation.

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<sup>4</sup> The actual overlap between Indian lands and Southern DPS habitat consists of a narrow strip of riparian or intertidal land. Therefore, we chose to calculate our overlap estimates using linear shoreline miles.

**Table 2.** Summary of Tribes, organized by state, that have lands overlapping with specific areas for the Southern DPS. The conservation value (High, Medium, Low, Ultra-low) of the affected specific area and the miles of shoreline overlap are shown.

Tribe	Specific Area(s) Overlapping with Indian Lands	Conservation Value of Affected Specific Area	Shoreline Miles Overlapping with Indian Lands
<b>WASHINGTON</b>			
Hoh Tribe	Coastal area from Grays Harbor to Cape Flattery	High	1.6 mi
Jamestown S'Klallam Tribe	Coastal Area in Strait of Juan de Fuca	High	<0.1 mi
Lower Elwha Tribe	Coastal Area in Strait of Juan de Fuca	High	1.1 mi
Makah Tribe	(A) Coastal Area in Strait of Juan de Fuca; (B) Coastal area from Grays Harbor to Cape Flattery	(A) High; (B) High	25.1 mi total (A) = 11.9 mi; (B) = 13.2 mi
Quileute Tribe	Coastal area from Grays Harbor to Cape Flattery	High	2.4 mi
Quinault Tribe	Coastal area from Grays Harbor to Cape Flattery	High	25.2 mi
Shoalwater Bay Tribe	Willapa Bay	High	1.9 mi
<b>OREGON</b>			
Confederated Tribes of Coos Lower Umpqua and Siuslaw Indians	(A) Coos Bay; (B) Coastal area from Humboldt Bay to Coos Bay	(A) High; (B) High	0.7 mi total (A) = 0.2 mi; (B) = 0.5 mi
Coquille Tribe	Coos Bay	High	1.6 mi
<b>CALIFORNIA</b>			
Cachil DeHe Band of Wintun Indians of the Colusa Indian Community	Sacramento River	High	0.1 mi
Cher-Ae Heights Trinidad Rancheria	Coastal area from Humboldt Bay to Coos Bay	High	0.4 mi
Wiyot Tribe	Humboldt Bay	Medium	1.1 mi
Yurok Tribe	Coastal area from Humboldt Bay to Coos Bay	High	0.9 mi

**Table 3.** Southern DPS green sturgeon habitat overlap with Indian lands.

Conservation Value	Number of Specific Areas with Indian Land Overlap	Approximate Total Shoreline Miles of Habitat in Specific Areas with Indian Land Overlaps	Indian Lands (miles)	Indian Lands as a Percent of Shoreline Habitat Miles
High	6	1,813	60.9	3.4%
Medium	1	168	0.7	0.4%
Low	0	na	na	na
Ultra-Low	0	na	na	na

The activities occurring in these areas that would be likely to undergo a section 7 consultation include transportation projects, tidal energy projects, permits for instream work, NPDES permits, and dredging. Given the tiny percentage of critical habitat on Indian lands, we anticipate there would be very few federal actions undergoing a section 7 consultation.

Benefits of Exclusion

Exclusion of Indian lands would further federal government policies to promote tribal sovereignty and self-governance:

- The Secretarial Order states that Indian lands will not be designated as critical habitat unless they are essential for conservation, i.e., after the Secretary determines that the designation of all other non-Indian land is insufficient to conserve the species.
- The exclusion is consistent with the April 28, 1994 executive memorandum and executive order 13175.
- The exclusion is consistent with past Federal Register-published secretarial determinations (65 FR 7764-7787, February 16, 2000).
- The exclusion is consistent with the recognition of the sovereignty of tribal governments and their jurisdiction over Indian and (where documented) non-Indian lands.
- The exclusion is consistent with departmental/agency trust responsibility in that it supports an essential purpose of the Indian lands, including economic security; it recognizes tribal primacy regarding the management of tribal lands; and it complies with direction/statements found in the Secretarial Order and EO 13175.
- The exclusion supports and affirms the federal-tribal co-manager partnership crucial to the conservation and recovery of the species.

### Conclusion

Based on the foregoing analysis, I conclude that the benefits of excluding the identified Indian lands outweigh the benefits of designating those lands because excluding Indian lands benefits the federal government's policy of promoting respect for tribal sovereignty and self-governance and critical habitat on Indian lands represents such a small proportion of total critical habitat. Also, because the percentage of critical habitat on Indian lands is so small, I conclude that exclusion will not result in extinction of the Southern DPS green sturgeon.

Attachment – Map

# Map of Southern DPS Specific Areas and Indian Lands

