

proposal. A fact sheet on the proposal was also mailed to the community.

*Determination That the Site Meets the Criteria for Deletion in the NCP*

The NCP [40 CFR 300.425(e)] states that a site may be deleted from the NPL when no further response action is appropriate. EPA, in consultation with the State of New Mexico, has determined that all appropriate response actions under CERCLA for the northern 62-acre parcel of the AT&SF Albuquerque Superfund Site, other than operation, maintenance, and five-year reviews, have been implemented, and no further response action by the PRP is appropriate.

**List of Subjects in 40 CFR Part 300**

Environmental protection, Air pollution control, Chemicals, Hazardous waste, Hazardous substances, Intergovernmental relations, Penalties, Reporting and recordkeeping requirements, Superfund, Water pollution control, Water supply.

**Authority:** 33 U.S.C. 1321(c)(2); 42 U.S.C. 9601–9657; E.O. 12777, 56 FR 54757, 3 CFR, 1991 Comp., p. 351; E.O. 12580, 52 FR 2923; 3 CFR, 1987 Comp., p. 193.

Dated: December 17, 2010.

**Al Armendariz,**

*Regional Administrator, Region 6.*

[FR Doc. 2010–33109 Filed 1–4–11; 8:45 am]

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**DEPARTMENT OF COMMERCE**

**National Oceanic and Atmospheric Administration**

**50 CFR Part 226**

[Docket No. 101027536–0540–02]

RIN 0648–BA38

**Endangered and Threatened Species, Designation of Critical Habitat for Southern Distinct Population Segment of Eulachon**

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

**ACTION:** Proposed rule; request for comment.

**SUMMARY:** We, the National Marine Fisheries Service (NMFS), propose to designate critical habitat for the southern Distinct Population Segment (DPS) of Pacific eulachon (*Thaleichthys pacificus*), which was recently listed as threatened under the Endangered Species Act (ESA). We have proposed 12 specific areas for designation as

critical habitat within the states of California, Oregon, and Washington. The proposed areas are a combination of freshwater creeks and rivers and their associated estuaries which comprise approximately 470 km (292 mi) of habitat. Three particular areas are proposed for exclusion after evaluating the impacts and benefits associated with tribal land ownership and management by Indian tribes, but no areas are proposed for exclusion based on economic impacts.

We are soliciting comments from the public on all aspects of the proposal, including information on the economic, national security, and other relevant impacts of the proposed designation, as well as the benefits to the southern DPS of eulachon from designation. We will consider additional information received prior to making a final designation.

**DATES:** Comments on this proposed rule must be received by close of business on March 7, 2011. A public meeting has been scheduled for January 26, 2011 from 3:30–5:30 p.m. and 6–8 p.m. at the Doubletree Hotel, 1000 NE Multnomah Street, Portland, OR 97232. Requests for additional public hearings should be made in writing by February 22, 2011.

**ADDRESSES:** You may submit comments on the proposed rule, identified by RIN 0648–BA38, by any one of the following methods:

- *Electronic Submissions:* Submit all electronic public comments via the *Federal eRulemaking Portal*: <http://www.regulations.gov>. Follow the instructions for submitting comments.
- *Fax:* 503–230–5441, *Attn:* Marc Romano.
- *Mail:* Chief, Protected Resources Division, Northwest Region, National Marine Fisheries Service, 1201 Lloyd Blvd, Suite 1201, Portland, OR 97232.

*Instructions:* Comments will be posted for public viewing after the comment period has closed. All comments received are a part of the public record and will generally be posted to <http://www.regulations.gov> without change. NMFS may elect not to post comments that contain obscene or threatening content. All Personal Identifying Information (for example, name, address, etc.) voluntarily submitted by the commenter may be publicly accessible. Do not submit Confidential Business Information or otherwise sensitive or protected information.

NMFS will accept anonymous comments (enter N/A in the required fields, if you wish to remain anonymous). You may submit attachments to electronic comments in

Microsoft Word, Excel, WordPerfect, or Adobe PDF file formats only. The proposed rule, list of references and supporting documents (including the Draft Eulachon Biological Report (NMFS 2010b); the Draft Eulachon Economic Analysis (NMFS 2010c); and, the Draft Eulachon Section 4(b)(2) Report (NMFS, 2010d)) are also available electronically at <http://www.nwr.noaa.gov/>.

**FOR FURTHER INFORMATION CONTACT:**

Marc Romano, NMFS, Northwest Region, Protected Resources Division, at the address above or at 503–231–2200, or Jim Simondet, NMFS, Southwest Region, Protected Resources Division, Arcata, CA 707–825–5171, or Dwayne Meadows, NMFS, Office of Protected Resources, Silver Spring, MD 301–713–1401.

**SUPPLEMENTARY INFORMATION:**

**Background**

On March 18, 2010, we listed the southern DPS of Pacific eulachon as threatened under the ESA (75 FR 13012). During the public comment period on the proposed rule to list the southern DPS of eulachon, we requested and received some information on the quality and extent of eulachon freshwater and estuarine habitat (73 FR 13185; March 12, 2008). However, at the time of listing, we concluded that critical habitat was not determinable because sufficient information was not available to: (1) Determine the geographical area occupied by the species; (2) identify the physical and biological features essential to conservation; and (3) assess the impacts of a designation. During promulgation of the final rule to list eulachon, we were working to compile the best available information necessary to consider a critical habitat designation. We have now researched, reviewed and summarized this best available information on eulachon, including recent biological surveys and reports, peer-reviewed literature, the NMFS status report for eulachon (NMFS 2010a), the proposed rule to list eulachon (74 FR 10857; March 13, 2009), and the final listing determination for eulachon (75 FR 13012; March 18, 2010) and had discussions with and considered recommendations by State, Federal, and tribal biologists familiar with eulachon. We used this information to identify the geographical area occupied, specific areas that may qualify as critical habitat for the southern DPS, as well as potential impacts associated with the designation and proposed exclusions.

We considered various alternatives to the critical habitat designation for

southern DPS eulachon. The alternative of not designating critical habitat for southern DPS eulachon 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 southern DPS eulachon. The alternative of designating all of the areas considered for designation (*i.e.*, no areas excluded) was also considered and rejected because, for three areas, the benefits of exclusion outweighed the benefits of designation, 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 of the areas considered would be \$500,000 (discounted at 7 percent) or \$520,000 (discounted at 3 percent).

An alternative to designating critical habitat within all of the areas considered for designation is the designation of critical habitat within a subset of these areas. 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 southern DPS eulachon 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 areas considered for designation would reduce the total impacts of designation. The determination of which units to exclude depends on NMFS' ESA section 4(b)(2) analysis, which is conducted for each area and described in detail in the draft ESA 4(b)(2) report (NMFS, 2010b). Under the preferred alternative we propose to exclude three of the 14 areas considered (we propose to exclude two of the areas completely and part of the third area). The total estimated economic impact associated with this preferred alternative is \$460,500 (discounted at 7 percent) or \$479,000 (discounted at 3 percent). We determined that the exclusion of these areas would not significantly impede the conservation of southern DPS eulachon nor result in extinction of the

species. We selected this as the preferred alternative because it results in a critical habitat designation that provides for the conservation of southern DPS eulachon while reducing other relevant impacts. This alternative also meets the requirements under the ESA and our joint NMFS-U.S. Fish and Wildlife Service (USFWS) regulations concerning critical habitat.

Section 3 of the ESA defines critical habitat as "(i) the specific areas within the geographical area occupied by the species, at the time it is listed \* \* \*, on which are found those physical or biological features (I) essential to the conservation of the species and (II) which may require special management considerations or protection; and (ii) specific areas outside the geographical area occupied by the species at the time it is listed \* \* \*, upon a determination by the Secretary that such areas are essential for the conservation of the species." Section 3 of the ESA (16 U.S.C. 1532(3)) also defines the terms "conserve," "conserving," and "conservation" to 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." Critical habitat cannot be designated in areas outside of U.S. jurisdiction (50 CFR 424.12h). Section 4 of the ESA requires that, before designating critical habitat, we consider economic impacts, impacts on national security, and other relevant impacts of specifying any particular area as critical habitat. The Secretary of Commerce (Secretary) may exclude any area from critical habitat if he determines that the benefits of exclusion outweigh the benefits of designation, unless excluding an area from critical habitat will result in the extinction of the species concerned. Once critical habitat is designated, section 7(a)(2) of the ESA requires that each Federal agency, in consultation with NMFS and with our assistance, ensure that any action it authorizes, funds, or carries out is not likely to result in the destruction or adverse modification of critical habitat. This requirement is additional to the section 7 requirement that Federal agencies ensure their actions do not jeopardize the continued existence of listed species.

#### **Eulachon Natural History**

Eulachon are an anadromous fish, meaning adults migrate from the ocean to spawn in freshwater creeks and rivers where their offspring hatch and migrate back to the ocean to forage until

maturity. Although they spend 95 to 98 percent of their lives at sea (Hay and McCarter 2000), little is known concerning the saltwater existence of eulachon. The species is endemic to the northeastern Pacific Ocean, ranging from northern California to the southeastern Bering Sea in Bristol Bay, Alaska (McAllister, 1963; Scott and Crossman, 1973; Willson *et al.*, 2006). This distribution coincides closely with the distribution of the coastal temperate rain forest ecosystem on the west coast of North America (with the exception of populations spawning west of Cook Inlet, Alaska).

In the portion of the species' range that lies south of the U.S.-Canada border, most eulachon production originates in the Columbia River basin. Within the Columbia River basin, the major and most consistent spawning runs return to the mainstem of the Columbia River and the Cowlitz River. Spawning also occurs in other tributaries to the Columbia River, including the Grays, Elochoman, Kalama, Lewis, and Sandy Rivers (WDFW and ODFW, 2001). Historically, the only other large river basins in the contiguous United States where large, consistent spawning runs of eulachon have been documented are the Klamath River in northern California and the Umpqua River in Oregon. Eulachon have been found in numerous coastal rivers in northern California (including the Mad River and Redwood Creek), Oregon (including Tenmile Creek south of Yachats, OR) and Washington (including the Quinault and Elwha Rivers) (Emmett *et al.*, 1991; Willson *et al.*, 2006).

Major eulachon production areas in Canada are the Fraser and Nass rivers (Willson *et al.*, 2006). Numerous other river systems in central British Columbia and Alaska have consistent yearly runs of eulachon and historically supported significant levels of harvest (Willson *et al.*, 2006; NMFS, 2010a). Many sources note that runs occasionally occur in other rivers and streams, although these tend to be sporadic, appearing in some years but not others, and appearing only rarely in some river systems (Hay and McCarter, 2000; Willson *et al.*, 2006).

#### *Early Life History and Maturation*

Eulachon eggs can vary considerably in size but typically are approximately 1 mm (0.04 in) in diameter and average about 43 mg (0.002 oz) in weight (Hay and McCarter, 2000). Eggs are enclosed in a double membrane; after fertilization in the water, the outer membrane breaks and turns inside out, creating a sticky stalk which acts to anchor the eggs to

the substrate (Hart and McHugh, 1944; Hay and McCarter, 2000). Eulachon eggs hatch in 20 to 40 days with incubation time dependent on water temperature (Howell, 2001). Shortly after hatching, the larvae are carried downstream and dispersed by estuarine, tidal, and ocean currents. Larval eulachon may be retained in low salinity, surface waters of estuaries for several weeks or longer (Hay and McCarter, 2000) before entering the ocean. Similar to salmon, juvenile eulachon are thought to imprint on the chemical signature of their natal river basin. However, because juvenile eulachon spend less time in freshwater environments than do juvenile salmon, researchers believe that this short freshwater residence time may cause returning eulachon to stray between spawning sites at higher rates than salmon (Hay and McCarter, 2000).

Once juvenile eulachon enter the ocean, they move from shallow nearshore areas to deeper areas over the continental shelf. Larvae and young juveniles become widely distributed in coastal waters, where they are typically found near the ocean bottom in waters 20 to 150 m deep (66 to 292 ft) (Hay and McCarter, 2000) and sometimes as deep as 182 m (597 ft) (Barraclough, 1964). There is currently little information available about eulachon movements in nearshore marine areas and the open ocean. However, eulachon occur as bycatch in the ocean shrimp (*Pandalus jordani*) fishery (Hay *et al.*, 1999; Olsen *et al.*, 2000; NWFSC, 2008; Hannah and Jones, 2009), which seems to indicate that the distribution of these organisms may overlap in the ocean.

#### Spawning Behavior

Eulachon typically spend several years in salt water before returning to fresh water to spawn from late winter through early summer. Eulachon are semelparous, meaning that they spawn once and then die. Spawning grounds are typically in the lower reaches of larger rivers fed by snowmelt (Hay and McCarter, 2000). Willson *et al.* (2006) concluded that the age distribution of eulachon in a spawning run varies considerably, but typically consists of fish that are 2 to 5 years old. Eulachon eggs commonly adhere to sand (Langer *et al.*, 1977) or pea-sized gravel (Smith and Saalfeld, 1955), though eggs have been found on silt, gravel to cobble sized rock, and organic detritus (Smith and Saalfeld 1955, Langer *et al.*, 1977, Lewis *et al.*, 2002). Eggs found in areas of silt or organic debris reportedly suffer much higher mortality than those found in sand or gravel (Langer *et al.*, 1977).

In many rivers, spawning is limited to the part of the river that is influenced

by tides (Lewis *et al.*, 2002), but some exceptions exist. In the Berners Bay system of Alaska, the greatest abundance of eulachon are observed in tidally-influenced reaches, but some fish ascend well beyond the tidal influence (Willson *et al.*, 2006). In the Kemano River, Canada, water velocity greater than 0.4 meters/second begins to limit the upstream movements of eulachon (Lewis *et al.*, 2002).

Entry into the spawning rivers appears to be related to water temperature and the occurrence of high tides (Ricker *et al.*, 1954; Smith and Saalfeld, 1955; Spangler, 2002). Spawning generally occurs in January, February, and March in the Columbia River, the Klamath River, and the coastal rivers of Washington and Oregon, and April and May in the Fraser River (NMFS, 2010a). Eulachon runs in central and northern British Columbia typically occur in late February and March or late March and early April. Attempts to characterize eulachon run timing are complicated by marked annual variation in timing. Willson *et al.* (2006) give several examples of spawning run timing varying by a month or more in rivers in British Columbia and Alaska. Climate change, especially in regards to ocean conditions, is considered a significant threat to eulachon and their habitats and may also be a factor in run timing (NMFS, 2010a). Most eulachon rivers are fed by extensive snowmelt or glacial runoff, so elevated temperatures and changes in snow pack and the timing and intensity of stream flows will likely impact eulachon run timing. There are already indications, perhaps in response to warming conditions and/or altered stream flow timing, that adult eulachon are returning earlier in the season to several rivers within the range of the southern DPS (Moody, 2008).

Water temperature at the time of spawning varies across the distribution of the species. Although spawning generally occurs at temperatures from 4 to 7 °C (39 to 45 °F) in the Cowlitz River (Smith and Saalfeld, 1955), and at a mean temperature of 3.1 °C (37.6 °F) in the Kemano and Wahoo Rivers, peak eulachon runs occur at noticeably colder temperatures (between 0 and 2 °C [32 and 36 °F]) in the Nass River. The Nass River run is also earlier than the eulachon run that occurs in the Fraser River, which typically has warmer temperatures than the Nass River (Langer *et al.*, 1977).

#### Prey

Eulachon adults feed on zooplankton, chiefly eating crustaceans such as copepods and euphausiids, including

*Thysanoessa* spp. (Hay and McCarter, 2000; WDFW and ODFW, 2001), unidentified malacostracans (Sturdevant 1999), and cumaceans (Smith and Saalfeld, 1955). Eulachon larvae and juveniles eat a variety of prey items, including phytoplankton, copepods, copepod eggs, mysids, barnacle larvae, and worm larvae (WDFW and ODFW 2001). Adults and juveniles commonly forage at moderate depths (20–150 m [66–292 ft]) in nearshore marine waters (Hay and McCarter 2000). Eulachon adults do not feed during spawning (McHugh 1939, Hart and McHugh 1944).

#### Methods and Criteria Used To Identify Critical Habitat

In the following sections, we describe the relevant definitions and requirements in the ESA and our implementing regulations and the key methods and criteria used to prepare this proposed critical habitat designation. In accordance with section 4(b)(2) of the ESA and our implementing regulations (50 CFR 424.12), this proposed rule is based on the best scientific information available concerning the southern DPS's present and historical range, habitat, and biology, as well as threats to its habitat. In preparing this rule, we reviewed and summarized current information on eulachon, including recent biological surveys and reports, peer-reviewed literature, NMFS status reviews for southern DPS eulachon (NMFS 2010), the proposed rule to list eulachon (74 FR 10857; March 13, 2009), and the final listing determination for eulachon (75 FR 13012; March 18, 2010). All of the information gathered to create this proposed rule has been collated and analyzed in three supporting documents: The Draft Eulachon Biological Report (NMFS 2010b); the Draft Eulachon Economic Analysis (NMFS 2010c); and, the Draft Eulachon Section 4(b)(2) Report (NMFS 2010d).

We used this information to identify specific areas that may qualify as critical habitat for the southern DPS. We followed a five-step process in order to identify these specific areas: (1) Determine the geographical area occupied by the species, (2) identify physical or biological habitat features essential to the conservation of the species, (3) delineate specific areas within the geographical area occupied by the species on which are found the physical or biological features, (4) determine whether the features in a specific area may require special management considerations or protections, and (5) determine whether any unoccupied areas are essential for conservation. Our evaluation and

conclusions are described in detail in the following sections.

### Geographical Area Occupied by the Species

We relied on the best available data from commercial and recreational harvest, published literature, field observations (including river sampling with a variety of net types and research trawls), opportunistic sightings, and anecdotal information to determine the geographical area occupied by the southern DPS of eulachon at the time it was listed. The southern DPS ranges from the Skeena River in British Columbia, Canada, to the Mad River in California (NMFS 2010a). We cannot designate areas outside U.S. jurisdiction as critical habitat (see above). Thus, the geographical area under consideration for this designation is limited to areas under the jurisdiction of the United States, south of the international border with Canada, to the Mad River in California. At the time of listing, we had information indicating that the geographical area occupied consists of at least 42 river systems between the international border and the Mad River (NMFS, 2010b). Although eulachon presence has been documented in these systems, most river systems have limited or irregular sampling for eulachon and many other river systems within the range of the DPS have never been sampled. In addition, given the highly migratory nature of eulachon and the lack of published records, we do not know how far offshore southern DPS eulachon are distributed and thus how far offshore the geographical area occupied by the species extends.

### Physical or Biological Features Essential for Conservation

Joint NMFS-U.S. Fish and Wildlife Service (USFWS) regulations at 50 CFR 424.12(b) state that in determining what areas are critical habitat, the agencies “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”. These include, but are not limited to: “(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.”

Based on the best available scientific information, we developed a list of physical and biological features essential to the conservation of eulachon and relevant to determining whether occupied areas are consistent with the above regulations and the ESA section (3)(5)(A) definition of “critical habitat.” The physical or biological features essential to the conservation of the southern DPS fall into three major categories reflecting key life history phases of eulachon:

(1) Freshwater spawning and incubation sites with water flow, quality and temperature conditions and substrate supporting spawning and incubation. These features are essential to conservation because without them the species cannot successfully spawn and produce offspring.

(2) Freshwater and estuarine migration corridors free of obstruction and with water flow, quality and temperature conditions supporting larval and adult mobility, and with abundant prey items supporting larval feeding after the yolk sac is depleted. These features are essential to conservation because they allow adult fish to swim upstream to reach spawning areas and they allow larval fish to proceed downstream and reach the ocean.

(3) Nearshore and offshore marine foraging habitat with water quality and available prey, supporting juveniles and adult survival. Juveniles eat phytoplankton, copepod eggs, copepods and other small zooplanktons (including euphausiids; Barraclough, 1964), and adults eat euphausiids and copepods (Hart, 1973). These features are essential to conservation because they allow juvenile fish to survive, grow, and reach maturity, and they allow adult fish to survive and return to freshwater systems to spawn.

The components of the freshwater spawning and incubation essential features include:

*Flow:* A flow regime (*i.e.*, the magnitude, frequency, duration, seasonality, and rate-of-change of freshwater discharge over time) that supports spawning, and survival of all life stages. Most spawning rivers experience a spring freshet characteristic of rivers draining large snow packs or glaciers (Hay and McCarter, 2000). In general, eulachon spawn at lower water levels before spring freshets (Lewis *et al.*, 2002). In the Kemano River, Canada, water velocity greater than 0.4 m/s (1.3 ft/s) begins to limit upstream movements (Lewis *et al.*, 2002). Sufficient flow may also be needed to flush silt and debris

from spawning substrate surfaces to prevent suffocation of developing eggs.

*Water Quality:* Water quality suitable for spawning and viability of all eulachon life stages. Sublethal concentrations of contaminants affect the survival of aquatic species by increasing stress, predisposing organisms to disease, delaying development, and disrupting physiological processes, including reproduction. Adult eulachon can take up and store pollutants from their spawning rivers, despite the fact that they do not feed in fresh water and remain there only a few weeks (Rogers *et al.*, 1990; WDFW and ODFW, 2001). Eulachon have also been shown to avoid polluted waters when possible (Smith and Saalfeld 1955).

*Water Temperature:* Suitable water temperatures, within natural ranges, in eulachon spawning reaches. Water temperature between 4 °C and 10 °C (39 °F and 50 °F) in the Columbia River is preferred for spawning (WDFW and ODFW, 2001) although temperatures during spawning can be much colder in northern rivers (*e.g.*, 0 °C to 2 °C [32 °F to 36 °F] in the Nass River; Willson *et al.*, 2006). High water temperatures can lead to adult mortality and spawning failure (Blahm and McConnell, 1971).

*Substrate:* Spawning substrates for eulachon egg deposition and development. Spawning substrates typically consist of silt, sand, gravel, cobble, or detritus (NMFS 2010a). However, pea sized gravel (Smith and Saalfeld, 1955) and coarse sand (Langer *et al.*, 1977) are the most commonly used. Water depth for spawning can range from 8 cm (3 in) to at least 7.6 m (25 ft) (Willson *et al.*, 2006).

The components of the freshwater and estuarine migration corridor essential feature include:

*Migratory Corridor:* Safe and unobstructed migratory pathways for eulachon adults to pass from the ocean through estuarine areas to riverine habitats in order to spawn, and for larval eulachon to access rearing habitats within the estuaries and juvenile and adults to access habitats in the ocean. Lower reaches of larger river systems (*e.g.*, the Columbia River) are used as migration routes to upriver or tributary spawning areas. Out-migrating larval eulachon are distributed throughout the water column in some rivers (*e.g.*, the Fraser River) but are more abundant in mid-water and bottom portions of the water column in others (*e.g.*, the Columbia River; Howell *et al.*, 2001).

*Flow:* A flow regime (*i.e.*, the magnitude, frequency, duration, seasonality, and rate-of-change of

freshwater discharge over time) that supports spawning migration of adults and outmigration of larval eulachon from spawning sites. Most eulachon spawning rivers experience a spring freshet (Hay and McCarter, 2000) that may influence the timing of spawning adult migration. In general, eulachon spawn at low water levels before spring freshets (Lewis *et al.*, 2002). In the Kemano River water velocity greater than 0.4 m/s (1.3 ft/s) begins to limit upstream movements (Lewis *et al.*, 2002).

**Water Quality:** Water quality suitable for survival and migration of spawning adults and larval eulachon. Adult eulachon can take up and store pollutants from their spawning rivers, despite the fact that they do not feed in fresh water and remain there only a few weeks (Rogers *et al.*, 1990; WDFW and ODFW, 2001). Eulachon avoid polluted waters when possible (Smith and Saalfeld, 1955).

**Water Temperature:** Water temperature suitable for survival and migration. Eulachon run timing may be influenced by water temperature (Willson *et al.*, 2006), and high water temperatures can increase adult mortality (Blahm and McConnell, 1971). Given the range of temperatures in which eulachon spawn, Langer *et al.* (1977) suggested that the contrast between ocean and river temperatures might be more critical than absolute river or ocean temperatures.

**Food:** Prey resources to support larval eulachon survival. Eulachon larvae need abundant prey items (especially copepod larvae; Hart, 1973) when they begin exogenous feeding after the yolk sac is depleted. Eulachon yolk sac can be depleted between 6 and 21 days after hatching (Howell, 2001), and larvae may be retained in low salinity, surface waters of the natal estuary for several weeks or longer (Hay and McCarter, 2000), making this an important component in migratory corridor habitat.

The components of the nearshore and offshore marine foraging essential feature include:

**Food:** Prey items, in a concentration that supports foraging leading to adequate growth and reproductive development for juveniles and adults in the marine environment. Juveniles eat phytoplankton, copepod eggs, copepods and other small zooplankton (including euphausiids; Barraclough, 1964), and adults eat euphausiids and copepods (Hart, 1973).

**Water Quality:** Water quality suitable for adequate growth and reproductive development. The water quality requirements for eulachon in marine

habitats are largely unknown, but they would likely include adequate dissolved oxygen levels, adequate temperature, and lack of contaminants (such as pesticides, organochlorines, elevated levels of heavy metals) that may disrupt behavior, growth, and viability of eulachon and their prey.

#### Specific Areas Within the Geographical Area Occupied by the Species

After determining the geographical area occupied by the southern DPS of eulachon, and the physical and biological features essential to their conservation, we next identified the specific areas within the geographical area occupied by the species that contain the essential features. All of the essential physical and biological features we identified within the freshwater and estuarine environment are within specific areas associated with spawning, or with migrations related to spawning events. In order to delineate specific areas where the spawning sites and migration corridors occur, we relied on evidence of eulachon spawning and migration. To ensure that our selection of the specific areas was based on the best available information we developed two criteria to identify areas where spawning, and spawning migration, occurs. These criteria are sites that contain: (1) Larval fish or pre-/post-spawn adults that have been positively identified and documented; or (2) commercial or recreational catches that have been documented over multiple years. Within the geographic area occupied by the southern DPS, there are 42 creeks and rivers with documented presence of eulachon (NMFS, 2010a). Of these, we identified 14 that meet at least one of the criteria for spawning.

We next considered the distribution of the essential features within these creeks or rivers. We again used evidence of eulachon spawning and spawning migration to delineate the extent of the specific areas where the spawning sites and spawning migration corridors are found. We relied on data from published literature, field observations (including river sampling with a variety of net types), opportunistic sightings, commercial and recreational harvest, and anecdotal information. Given the extremely limited sampling done for this species, we chose to rely on the most recent information available to us to determine which areas were eligible for designation. For some creeks and rivers, opportunistic sightings are the only information that is available to identify the distribution of the essential features, and in these cases we relied on the best professional judgment of agency and tribal biologists familiar with the

area to identify the extent of the essential features.

The 14 specific freshwater and estuarine areas which contain one or more of the essential physical or biological features are described below and summarized in Table 1, which appears at the end of the Special Management Considerations section. The draft biological report (available via the internet and by contacting NMFS; see ADDRESSES) provides more detailed information on each specific area, including a description of the essential physical and biological features, special management considerations or protection that may be needed, and the presence and distribution of southern DPS eulachon.

(1) *Mad River, CA:* The Mad River is located in northwestern California. It flows for 150 km (95 mi) in a roughly northwest direction through Trinity and Humboldt Counties, draining a 1,290 km<sup>2</sup> (497 mi<sup>2</sup>) basin into the Pacific Ocean near McKinleyville, California. The river's headwaters are in the Coast Range mountains near South Kelsey Ridge.

Eulachon consistently spawned in large numbers in the Mad River as recently as the 1960s and 1970s (Moyle *et al.*, 1995; Moyle, 2002; NMFS, 2010a). However, in recent years eulachon numbers have declined, and they are now considered rare (Sweetnam *et al.*, 2001). Based on observations by the California Department of Fish and Game (CDFG), spawning occurs as far upstream as the confluence with the North Fork of the Mad River (CDFG, 2009). The river below this point contains overlapping spawning and incubation sites and migration corridor features.

(2) *Redwood Creek, CA:* Redwood Creek is located entirely in Humboldt County, in northwestern California. The basin is approximately 105 km (65 mi) long, and drains approximately 738 km<sup>2</sup> (285 mi<sup>2</sup>), most of which is forested and mountainous terrain (Cannata *et al.*, 2006).

Eulachon have been reported from Redwood Creek by a variety of sources (Young, 1984; Ridenhour and Hofstra, 1994; Moyle *et al.*, 1995; Larson and Belchik, 1998), and runs large enough to be noted in available local newspaper accounts occurred in 1963 and 1967. Eulachon returns to Redwood Creek have declined drastically in recent years, and they are now considered rare (Sweetnam *et al.*, 2001). Although the species is not currently targeted in sampling efforts, CDFG reported that during the early 1970s eulachon regularly spawned between the ocean and the mouth of Prairie Creek (the first

major tributary on Redwood Creek; Moyle *et al.*, 1995) indicating that this area contains the spawning and incubation, and migration corridor essential features. Spawning also occurred in the lower 0.5 km (0.3 mi) of Prairie Creek (Moyle *et al.*, 1995), however eulachon have not been seen in Prairie Creek since the 1970s.

The lower reach of Redwood Creek alternates between an open estuary and a closed coastal lagoon depending on the season. During early summer a sand bar typically forms across the river mouth creating a lagoon. Rains during the fall typically clear the sand bar away and open up the river mouth to the ocean (Cannata *et al.*, 2006).

(3) *Klamath River, CA*: The Klamath River basin drains approximately 25,100 km<sup>2</sup> (9,690 mi<sup>2</sup>) in southern Oregon and northern California, making it the second largest river in California (after the Sacramento River). Historically, the Klamath River has been a major producer of anadromous fish, and once was the third most productive salmon and steelhead fishery in the continental United States, prior to recent significant declines (Powers *et al.*, 2005).

Historically, large aggregations of eulachon consistently spawned in the Klamath River, and a commercial fishery occurred there in 1963. During the spawning run, fish were regularly caught from the mouth of the river upstream to Brooks Riffle, near the confluence with Omogar Creek (Larson and Belchik, 1998), indicating that this area contains the spawning and incubation, and migration corridor essential features.

The only reported commercial catch of eulachon in Northern California occurred in 1963 when a combined total of 25 metric tons (56,000 lbs) was landed from the Klamath River, the Mad River, and Redwood Creek (Odemar, 1964). Since 1963, the run size has declined to the point that only a few individual fish have been caught in recent years. According to accounts of Yurok Tribal elders, the last noticeable runs of eulachon were observed in the Klamath River in 1988 and 1989 by tribal fishers (Larson and Belchik, 1998). However, in January 2007, six eulachon were reportedly caught by tribal fishers on the Klamath River (Yurok Tribe, 2008). Larson and Belchik (1998) report that eulachon have not been of commercial importance in the Klamath in recent years and are unstudied as to their current run strengths.

Approximately 68 km (42 mi) of the lower Klamath River is bordered by the Yurok Indian Reservation. The lower Klamath River is listed as a National Wild and Scenic River from the mouth,

upstream to just below Iron Gate Dam, for a total of 460 km (286 mi). Of these, 19 km (12 mi) are designated Wild, 39 km (24 mi) are designated Scenic, and 402 km (250 mi) are designated Recreational.

(4) *Umpqua River/Winchester Bay, OR*: The Umpqua River Basin consists of a 10,925 km<sup>2</sup> (4,220 mi<sup>2</sup>) drainage area comprised of the main Umpqua River, the North Umpqua River, the South Umpqua River, and associated tributary streams (Snyder *et al.* 2006). The Umpqua River drains a varied landscape, from steep-sloped uplands, to low gradient broad floodplains. Upstream, the Umpqua River collects water from tributaries as far east as the Cascade Mountains.

Historically, a large and consistent run of eulachon returned to the Umpqua River, and both recreational and commercial fisheries occurred. The Umpqua River eulachon sport fishery was active for many years during the 1970s and 1980s, with the majority of fishing activity centered near the town of Scottsburg. A commercial fishery also harvested eulachon during that time. The Oregon Fish Commission (1970) reported that from four to five thousand pounds of eulachon were landed by two commercial fishermen in the Umpqua River during 31 days of drift gill net fishing from late December 1966 to mid-March 1967. Numbers of fish returning to the Umpqua seem to have declined in the 1980s and do not appear to have rebounded to previous levels. Johnson *et al.* (1986) list eulachon as occurring in trace amounts in their trawl and beach-seine samples from April 1977 to January 1986. Williams (2009) reported on the results of seine collections conducted during March to November from 1995 to 2003 in Winchester Bay estuary on the Lower Umpqua River, which confirmed the presence of eulachon in four of the years in which sampling occurred.

Eulachon have been documented in the lower Umpqua River during spawning, from the mouth upstream to the confluence of Mill Creek, just below Scottsburg (Williams, 2009). This indicates that the area downstream from this confluence contains the spawning and incubation, and migration corridor essential features.

(5) *Tenmile Creek, OR*: The Tenmile Creek watershed lies entirely within Lane County, Oregon and encompasses approximately 60 km<sup>2</sup> (23 mi<sup>2</sup>) on the central Oregon Coast (Johnson, 1999). The watershed is in a unique location, between the Cummins Creek and Rock Creek wilderness areas. Together, this area is part of the largest remaining

contiguous coastal temperate forest in the Pacific Northwest.

Eulachon are regularly caught in salmonid smolt traps operated in the lower reaches of Tenmile Creek by the Oregon Department of Fish and Wildlife (ODFW). During previous sampling efforts, 80–90 percent of the eulachon captured in the traps were spawned out and several fish were found dead (Williams, 2009). Given the timing of the sampling (February to May), it is very likely that spawning occurs regularly in Tenmile Creek. It is not known how far adult eulachon ascend the creek to spawn, but the location of the ODFW trap (just upstream of the Highway 101 bridge) is the confirmed upstream extent of adult eulachon in spawning condition, and we conclude that the specific area containing spawning and incubation sites extends upstream at least to this point (ODFW, 2009).

(6) *Sandy River, OR*: The Sandy River and its tributaries drain 1,316 km<sup>2</sup> (508 mi<sup>2</sup>). Most of the headwaters of the Sandy River are within Clackamas County, while the lower mainstem of the river lies within Multnomah County. The Sandy River originates from glaciers on Mount Hood and flows for 90 km (56 mi) to join the Columbia River near the City of Troutdale (Sandy River Basin Watershed Council, 1999). The segment of the Sandy River from Dodge Park to Dabney State Park was designated as a National Wild and Scenic River in October 1988.

Large commercial and recreational fisheries have occurred in the Sandy River in the past. The most recent commercial harvest in the Sandy River was in 2003 and resulted in a catch of 10,400 kg (23,000 lbs) (JCRMS 2009). During spawning, eulachon extent in the Sandy River is typically upstream to the confluence with Gordon Creek at river km 21 (river mi 13) (Anderson 2009), indicating that this area contains the spawning and incubation, and migration corridor essential features.

(7) *Lower Columbia River, OR and WA*: The lower Columbia River and its tributaries support the largest known spawning run of eulachon. The mainstem of the lower Columbia River provides spawning and incubation sites, and a large migratory corridor to spawning areas in the tributaries. Major tributaries of the Columbia River that have supported eulachon runs in the past include the Grays, Elochoman, Cowlitz, Kalama and Lewis Rivers in Washington and the Sandy River in Oregon (the Columbia River tributaries in Washington State are discussed below as separate specific areas).

Although direct estimates of adult spawning stock abundance in the Columbia River are unavailable, records of commercial fishery landings begin in 1888 and continue as a nearly uninterrupted data set to present (NMFS, 2010a). A large recreational dipnet fishery, for which catch records have not been maintained, has taken place concurrent with the commercial fishery (WDFW and ODFW, 2001). However, the dipnet fishery takes place almost entirely within the tributaries. During spawning, adult eulachon are found in the lower Columbia River from the mouth of the river to immediately downstream of Bonneville Dam (WDFW and ODFW, 2008), indicating that the area contains the essential feature of migration corridors. Eulachon eggs have been collected, and spawning presumed, from river km 56 (river mi 35) to river km 117 (river mi 73) (Romano *et al.*, 2002) indicating that this area contains the spawning and incubation essential feature. However, due to the limited range of the study, the entire range of eulachon spawning in the mainstem of the Columbia River remains unknown (Romano *et al.*, 2002). Prior to the construction of Bonneville Dam, eulachon ascended the Columbia River as far as Hood River, Oregon (Smith and Saalfeld, 1955). An extensive fish passage facility is installed at the dam, however eulachon have not been reported upstream of Bonneville Dam since 1953 (FCO, 1953), and it is uncertain whether they can navigate the facility.

The Columbia River, estimated to have historically represented half of the species' abundance, experienced a sudden decline in its commercial eulachon fishery landings in 1993–1994 (WDFW and ODFW, 2001; JCRMS, 2009). Commercial catch levels were consistently high (usually greater than 500 metric tons [550 tons] and often greater than 1,000 metric tons [1,100 tons]) for the three quarters of a century from about 1915 to 1992. In 1993, catches declined greatly to 233 metric tons (257 tons) and to an average of less than 40 metric tons (44 tons) between 1994 and 2000. From 2001 to 2004, the catches increased to an average of 266 metric tons (293 tons), before falling to an average of less than 5 metric tons (5.5 tons) from 2005 to 2008. Some of this pattern is due to fishery restrictions put in place in response to the apparent sharp declines in the species abundance. Persistent low returns and landings of eulachon in the Columbia River from 1993 to 2000 prompted the states of Oregon and Washington to adopt a Joint State Eulachon

Management Plan in 2001 that provides for restricted harvest management when parental run strength, juvenile production, and ocean productivity forecast a poor return (WDFW and ODFW, 2001). Despite a brief period of improved returns in 2001–2003, the returns and associated commercial landings have again declined to the very low levels observed in the mid-1990s (JCRMS, 2009), and since 2005, the fishery has operated at the most conservative level allowed in the Joint State Eulachon Management Plan (JCRMS, 2009).

(8) *Grays River, WA*: The Grays River watershed is located in Pacific and Wahkiakum counties, in Washington State. The Grays River is a tributary of the Columbia River, which it enters near the town of Oneida, Washington. The Grays River watershed encompasses 322 km<sup>2</sup> (124 mi<sup>2</sup>) (May and Geist, 2007).

From 1980 to 1989 the annual commercial harvest of eulachon in the Grays River varied from 0 to 16 metric tons (0 to 35,000 lbs.). No commercial harvest has been recorded for the Grays River from 1990 to the present but larval sampling has confirmed successful spawning in recent years (*e.g.*, 2009; JCRMS, 2009). During spawning, eulachon typically ascend the river as far as 17.3 km (10.8 miles), to the covered bridge near the unincorporated town of Grays River, WA (Anderson, 2009), indicating that this area contains the spawning and incubation, and migration corridor essential features.

(9) *Elochoman River, WA*: The Elochoman River is a tributary of the Columbia River in southwest Washington and it originates in the Willapa Hills. The watershed lies within Lewis, Cowlitz, and Wahkiakum counties and flows generally south to the Columbia River. The combined Elochoman/Skamokawa watershed area is approximately 422 km<sup>2</sup> (163 mi<sup>2</sup>) with the Elochoman accounting for the majority of the area (LCFRB, 2004a).

Eulachon spawn occasionally in the Elochoman River, although there is no history of commercial or recreational harvest of eulachon for the Elochoman River. Sampling of outmigrating larval eulachon by WDFW has confirmed spawning in the river 6 times in the last 15 years, most recently in 2008 (JCRMS, 2009). WDFW has documented spawning eulachon as far as 3.2 km (2 mi) up the lower Elochoman River to the Washington State Highway 4 bridge crossing (Anderson, 2009), indicating that this area contains the spawning and incubation, and migration corridor essential features. If eulachon ascend the river beyond this point, the water intake dam at the old Beaver Creek

Hatchery (located on the Elochoman River at river km 8 [river mi 5]) may be a barrier to any further upstream migration of eulachon (Wade, 2002).

(10) *Cowlitz River, WA*: The Cowlitz River flows from its source on the west slope of the Cascade Mountains through the towns of Kelso and Longview, WA, and empties into the Columbia River about 109 km (68 mi) upstream from the Pacific Ocean. The Cowlitz River drains approximately 6,400 km<sup>2</sup> (2,480 mi<sup>2</sup>) over a distance of 243 km (151 mi) (Dammers *et al.*, 2002). Principal tributaries to the Cowlitz River include the Coweeman, Toutle, Tilton, and Cispus Rivers.

The Cowlitz River is likely the most productive and important spawning river for eulachon within the Columbia River system (Wydoski and Whitney, 2003). Spawning adults typically move upstream about 26 km (16 mi) to the town of Castle Rock, WA or beyond to the confluence with the Toutle River. Adults are regularly sighted from the mouth of the river to 55 km (34 mi) upstream (near the town of Toledo, WA). Eulachon are occasionally sighted as far as 80 km (50 mi) upstream, to the barrier dam at the Cowlitz Salmon Hatchery (WDFW and ODFW, 2008; Anderson, 2009), indicating that this area contains the spawning and incubation, and migration corridor essential features.

The Cowlitz River currently has 3 major hydroelectric dams and several small-scale hydropower and sediment retention structures located on tributaries within the Cowlitz Basin. Mayfield Dam is located at river km 84 (river mi 52) and is a complete barrier to upstream migration of anadromous fishes (LCFRB, 2004b) (although the salmon hatchery barrier dam at river km 80 (river mi 50) may also be a complete barrier to eulachon).

(11) *Kalama River, WA*: The Kalama River basin is a 531 km<sup>2</sup> (205 mi<sup>2</sup>) watershed extending from the southwest slopes of Mount St. Helens to the Columbia River (LCFRB, 2004e). The headwaters of the Kalama River begin in Skamania County, WA, but the majority of the 72 km (45 mi) river flows within Cowlitz County. At river km 16 (river mi 10), a concrete barrier dam and fish ladder prevent upstream movement of all anadromous fishes with the exception of summer steelhead and spring Chinook salmon (LCFRB, 2004c).

The extent of spawning within the Kalama River is from the confluence with the Columbia River to the Modrow Bridge (Anderson, 2009) at river km 4.5 (river mi 2.8), indicating that this area contains the spawning and incubation, and migration corridor essential

features. Although the last commercial harvest of eulachon in the Kalama River occurred in 1993, sampling for larval eulachon has confirmed spawning in the Kalama River as recently as 2002 (JCRMS, 2009).

(12) *Lewis River, WA*: The Lewis River enters the Columbia River 104 km (87 mi) upstream from the mouth of the Columbia River, a few kilometers north of the town of Ridgefield, Washington. The majority of the 1,893 km<sup>2</sup> (731 mi<sup>2</sup>) watershed lies within Lewis and Skamania Counties (LCFRB, 2004d). Although generally not considered as large a eulachon run as the Cowlitz River, the Lewis River has produced very large runs periodically. Nearly half of the total commercial eulachon catch for the Columbia River Basin in 2002 and 2003 came from the Lewis River. Larval eulachon are caught in WDFW sampling on the Lewis River, including during the past three years (2007–09) (JCRMS, 2009). During spawning, eulachon typically move upstream in the Lewis River about 16 km (10 mi; to Eagle Island), but they have been observed upstream to the Merwin Dam (31.4 km [19.5 mi] from the mouth of the river) (WDFW and ODFW, 2008; Anderson, 2009) indicating that this area contains the spawning and incubation, and migration corridor essential features.

Merwin Dam is 240 feet high and was completed in 1931. The dam presents a passage barrier to all anadromous fish, including eulachon (LCFRB, 2004d). We are unable to find information to determine whether eulachon ascended the river beyond river km 31.4 (river mi 19.5) prior to construction of the dam.

(13) *Quinault River, WA*: The headwaters of the Quinault River originate in the Olympic Mountains within Olympic National Park. The river then crosses into the Quinault Indian Reservation where it flows into Lake Quinault. Downstream of the lake, the Quinault River remains within the Quinault Indian Reservation for another 53 km (33 mi) to the Pacific Ocean. The total watershed area is 1,190 km<sup>2</sup> (460 mi<sup>2</sup>) (Smith and Caldwell, 2001).

Although there is currently no monitoring for eulachon in the Quinault River, WDFW and ODFW (2001) reported that eulachon “were noted in large abundance in the Quinault” River in 1993. A noticeable number of eulachon make an appearance in the Quinault River, and to a lesser extent the Queets River, at 5 to 6 year intervals and were last observed in the Quinault River in the winter of 2004–2005 (Quinault Indian Nation, 2008). There is very little information on eulachon spawning distribution in the Quinault

River, but tribal fishermen targeting eulachon typically catch fish in the lower three miles of the river (Quinault Indian Nation, 2008). It is reasonable to conclude that this area contains the spawning and incubation, and migration corridor essential features.

Although eulachon are currently only occasionally recorded in the Quinault River, during the late 19th and early 20th century eulachon were regularly caught by members of the Quinault Indian Tribe (Willoughby, 1889; Olson, 1936). Fish were typically taken in the ocean surf but often ascended the river for several miles (Olson, 1936). Olson (1936) reported that there was usually a large run of eulachon in the Quinault River every three or four years, and the run timing varied, usually occurring between January and April. The Washington Department of Fisheries annual report for 1960 (Starlund, 1960) listed commercial eulachon landings in the Quinault River in 1936, 1940, 1953, 1958 and 1960. The commercial catches ranged from a low of 61 kg (135 lbs.) in 1960, to a high of 42,449 kg (93,387 lbs.) in 1953.

Nearly half of the watershed lies within Olympic National Park, under the jurisdiction of the National Park Service, while the Quinault Indian reservation comprises about one third (32 percent) of the watershed, including most of the area downstream of Lake Quinault (Quinault Indian Nation and U.S. Forest Service, 1999). The U.S. Forest Service manages 13 percent of the watershed, and private landholdings comprise only 4 percent of the lands in the watershed (Smith and Caldwell, 2001).

(14) *Elwha River, WA*: The Elwha River mainstem is approximately 72 km (45 mi) long, and it drains 831 km<sup>2</sup> (321 mi<sup>2</sup>) of the Olympic Peninsula. A majority of the drainage (83 percent) is within Olympic National Park (Elwha-Dungeness Planning Unit, 2005). The historical condition of the river has been altered by two major hydroelectric developments: the Elwha Dam and the Glines Canyon Dam (located just upstream of the Elwha Dam).

In 2005, eulachon were observed in the Elwha River for the first time since the 1970s (Shaffer *et al.*, 2007). Since 2005, adult eulachon have been captured in the Elwha River every year (2006–2010) (Lower Elwha Klallam Indian Tribe, 2010). Several of the fish captured in 2005 were ripe (egg-extruding) females, indicating that eulachon likely spawn in the Elwha River. The Elwha Dam serves as a complete barrier to upstream fish migration, and thus it is reasonable to assume that the spawning and

incubation, and migration corridor essential features only extend to that point in the Elwha River. It is not known if eulachon ascended the Elwha River beyond river km 7.9 (river mi 4.9) prior to the construction of the Elwha Dam, and it is also not known if the portion of the river above Elwha Dam will provide the physical and biological features essential to eulachon once the dam is removed. As part of a comprehensive restoration of the watershed’s ecosystem and its fisheries, the Elwha and Glines Canyon dams were acquired by the Federal government in 2000 and their removal is scheduled to begin in 2011.

*All Areas*: We delineated each specific area as extending from the mouth of the river or creek (or its associated estuary when applicable) upstream to a fixed location. We delineated the upstream extent based on evidence of eulachon spawning or presence, or the presence of an impassable barrier. The boundary at the mouth of each specific area was defined by the demarcation lines which delineate “those waters upon which mariners shall comply with the International Regulations for Preventing Collisions at Sea, 1972 (72 COLREGS) and those waters upon which mariners shall comply with the Inland Navigation Rules” (33 CFR 80.01). For those specific areas that do not have a COLREGS line delineated, the boundary at the mouth of those specific areas was defined as a line drawn from the northernmost seaward extremity of the mouth of the creek or river to the southernmost seaward extremity of the mouth (with the exception of the boundary at the mouth of the Elwha River, which was defined as a line drawn from the easternmost seaward extremity of the mouth of the river to the westernmost seaward extremity of the mouth).

#### **Areas Not Considered for Designation at This Time**

Nearshore and offshore marine foraging habitat is essential for juvenile eulachon to survive and grow to adulthood, and for adults to survive and reproduce. At this time we have little information on eulachon distribution in marine waters and no information on where eulachon foraging habitat might occur. For these reasons, we are unable to identify any specific areas in marine waters that meet the definition of critical habitat under the ESA. Although we cannot presently identify any specific marine areas where foraging takes place, we will continue to gather information and will consider revising the designation in future rulemaking if new information supports doing so.



### Special Management Considerations

Physical or biological features meet the definition of critical habitat if they “may require special management considerations or protection.” Joint NMFS and USFWS regulations at 50 CFR 424.02(j) 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.” We identified a number of activities that may affect the physical and biological features essential to the southern DPS of eulachon such that special management considerations or protection may be required. Major categories of such activities include: (1) Dams and water diversions; (2) dredging and disposal of dredged material; (3) in-water construction or alterations, including channel modifications/diking, shoreline stabilization, sand and gravel mining, and road building and maintenance; (4) pollution and runoff from point and non-point sources including industrial activities, urbanization, grazing, agriculture, and forestry operations; (5) proposed tidal, wind, or wave energy projects; (6) port and shipping terminals; and (7) habitat restoration projects. All of these activities may have an effect on one or more of the essential physical and biological features via their alteration of one or more of the following: stream hydrology; water level and flow; water temperature; dissolved oxygen; erosion and sediment input/transport; physical habitat structure; vegetation; soils; nutrients and chemicals; fish passage; and estuarine/marine prey resources.

In the following paragraphs, we describe the potential effects of certain activities on essential physical or biological features, and we summarize the occurrence of these activities in the specific areas in Table 1 below (examples of activities that may require special management considerations for each of the specific areas are listed in the Draft Eulachon Biological Report (NMFS, 2010b)). This is not an exhaustive list of potential effects, but rather a description of the primary concerns and potential effects that we are aware of at this time and that should be considered in the analysis of these activities under section 7 of the ESA.

(1) *Dams and Water Diversions*: Physical structures associated with dams and water diversions may impede or delay passage of southern DPS eulachon. The operation of dams and water diversions may also affect water flow, water quality parameters, substrate quality, and depth, and further

compromise the ability of adult eulachon to reproduce successfully. Optimum flow and temperature requirements for spawning and incubation are unclear, but effects on water flow and associated effects on water quality (e.g., water temperature) and substrate composition may affect adult spawning activity, egg viability, and larval growth, development, and survival. Many uncertainties remain about how large-scale hydropower development (e.g., the Federal Columbia River Power System) affects eulachon habitat.

(2) *Dredging*: Dredging activities, which include the disposal of dredged material, may affect depth, sediment quality, water quality, and prey resources for eulachon. Dredging and the in-river disposal of dredged material can remove, and/or alter the composition of, substrate materials at the dredge site, as well as bury them at the disposal site (potentially altering the quality of substrate for use as a spawning site). In addition, dredging operations and disposal of dredged materials may result in the re-suspension and spread of contaminated sediments, which can adversely affect eulachon migration and spawning, as well as larval growth and development. The effects of dredging and disposal activities on critical habitat would depend on factors such as the location, seasonality, scale, frequency, and duration of these activities.

(3) *In-Water Construction or Alterations*: This category consists of a broad range of activities associated with in-water structures or activities that alter habitat within rivers, estuaries, and coastal marine waters. The primary concerns are with activities that may affect water quality, water flow, sediment quality, substrate composition, or migratory corridors. Activities that may affect water quality include the installation of in-water structures (such as pilings) with protective coatings containing chemicals that may leach into the water. Activities that affect flow, sediment quality and substrate composition include those that result in increased erosion and sedimentation (such as road maintenance and construction, bridge construction, construction of levees and other flood control devices, construction or repair of breakwaters, docks, piers, pilings, bulkheads, and boat ramps) and those that directly alter substrates (such as sand and gravel mining or gravel augmentation). Activities that may affect migratory corridors include the construction of in-water structures, such as docks, piers, pilings, and ramps.

(4) *Pollution and Runoff*: The discharge of pollutants and runoff from point and non-point sources (including but not limited to: Industrial discharges, urbanization, grazing, agriculture, road surfaces, road construction, and forestry operations) can adversely affect the water quality, sediment quality, and substrate composition of eulachon critical habitat. Exposure to contaminants may disrupt eulachon spawning migration patterns, and high concentrations may be lethal to young fish (Smith and Saalfeld, 1955). Excessive runoff may increase turbidity and alter the quality of spawning substrates.

(5) *Proposed Tidal, Wind, or Wave Energy Projects*: Proposed tidal, wind, or wave energy projects generally require energy generating equipment and supporting structures to be anchored on the bottom. However, there are a wide range of designs currently being tested and potential impacts of individual projects will vary depending on the type of unit being deployed. Proposed projects may be located in coastal marine waters or coastal estuaries. Physical structures associated with tidal, wind, or wave energy projects may impede or delay passage of southern DPS eulachon. In addition, construction and maintenance of these energy projects may require in water construction or alterations, which would include the potential effects described above.

(6) *Port and Shipping Terminals*: The operation of port and shipping terminals poses the risk of leaks, spills, or pipeline breakage and may affect water quality. Vessel ballast water management (including the introduction of competitors or parasites) may also affect water quality. In addition, activities associated with the construction, operation, and maintenance of port and shipping terminals may affect water quality, sediment quality, and prey resources for larval eulachon. For example, dredging operations and in-water and shoreline construction activities associated with the construction and operation of port and shipping terminals may result in increased erosion and sedimentation, increased turbidity, and the re-suspension of contaminated sediments.

(7) *Habitat Restoration Projects*: Habitat restoration activities are efforts undertaken to improve habitat, and can include the installation of fish passage structures and fish screens, in-stream barrier modification, bank stabilization, installation of instream structures, such as engineered log jams, substrate augmentation, planting of riparian vegetation, and many other habitat-

related activities. Although the primary purpose of these activities is to improve natural habitats for the benefit of native species, these activities nonetheless modify the habitat and need to be evaluated to ensure that they do not adversely affect the habitat features essential to eulachon. While habitat restoration activities would be encouraged as long as they promote the conservation of the species, project modifications in the form of spatial and temporal restrictions may be required as a result of this designation.

**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.”

Nearly all of the documented historical presence and production of southern DPS eulachon comes from within the geographical area occupied by the southern DPS at the time of listing. Sightings of southern DPS eulachon from creeks or rivers outside of this area have been extremely infrequent, and have consisted of very few fish (NMFS, 2010). Therefore, we do not consider these areas to be essential to the conservation of the southern DPS of eulachon, and thus we are not considering any unoccupied areas as critical habitat for the DPS.

**TABLE 1—SUMMARY OF OCCUPIED SPECIFIC AREAS THAT CONTAIN THE PHYSICAL OR BIOLOGICAL FEATURES ESSENTIAL TO THE CONSERVATION OF THE SOUTHERN DPS OF EULACHON. THE RIVER MILES CONTAINING THE ESSENTIAL PHYSICAL AND BIOLOGICAL FEATURES PRESENT, AND ACTIVITIES THAT MAY AFFECT THE ESSENTIAL FEATURES AND NECESSITATE THE NEED FOR SPECIAL MANAGEMENT CONSIDERATIONS OR PROTECTION WITHIN EACH AREA ARE LISTED**

[DAM = dams and water diversions; DR = dredging and disposal of dredged material; CON = in-water construction or alterations, including channel modifications/diking; POLL = pollution and runoff from point and non-point sources; ENER = tidal energy or wave energy projects; PORT = operation of port and shipping terminals; REST = habitat restoration projects]

Specific area	River kilometers/miles	Physical or biological features	Activities
Mad River, CA .....	20.3/12.6	Migration, Spawning .....	DAM, CON, POLL.
Redwood Creek, CA .....	6.1/3.8	Migration, Spawning .....	DAM, POLL.
Klamath River, CA .....	17.5/10.9	Migration, Spawning .....	DAM, DR, CON, POLL.
Umpqua River, OR .....	43.5/27.0	Migration, Spawning .....	DAM, DR, POLL.
Tenmile Creek, OR .....	0.8/0.5	Migration, Spawning .....	CON, POLL.
Sandy River, OR .....	20.9/13.0	Migration, Spawning .....	DAM, CON, POLL.
Columbia River, OR and WA .....	235.0/146.0	Migration, Spawning .....	DAM, DR, CON, POLL, ENER, PORT, REST.
Grays River, WA .....	17.4/10.8	Migration, Spawning .....	DAM, DR, CON, POLL.
Elochoman River, WA .....	3.2/2.0	Migration, Spawning .....	CON, POLL.
Cowlitz River, WA .....	80.5/50.0	Migration, Spawning .....	DAM, DR, CON, POLL, PORT, REST.
Kalama River, WA .....	4.5/2.8	Migration, Spawning .....	DAM, CON, POLL.
Lewis River, WA .....	31.4/19.5	Migration, Spawning .....	DAM, CON, POLL.
Quinault River, WA .....	4.8/3.0	Migration, Spawning .....	CON, POLL.
Elwha River, WA .....	7.9/4.9	Migration, Spawning .....	DAM, CON, POLL, REST.

**Military Lands**

The ESA was amended by the National Defense Authorization Act for Fiscal Year 2004 (Pub. L. 108–136) to address the designation of military lands as critical habitat. ESA section 4(a)(3)(B)(i) states: “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.” Department of Defense lands do not overlap with, nor are adjacent to, any areas proposed for designation as critical habitat for the southern DPS so there are no known potential areas that would be removed from designation under ESA Section 4(a)(3)(B)(i).

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

The foregoing discussion describes the specific areas that fall within the ESA section 3(5) definition of critical habitat and are eligible for designation as critical habitat. Specific areas eligible for designation are not automatically designated as critical habitat. Section 4(b)(2) of the ESA requires the Secretary to first consider the economic impact, impact on national security, and any other relevant impact of designation. The Secretary has the discretion to exclude an area from designation if he determines the benefits of exclusion (that is, avoiding the impact that would result from designation) outweigh the benefits of designation based upon best scientific and commercial data. In adopting this provision, Congress explained that, “[t]he consideration and weight given to any particular impact is completely within the Secretary’s discretion.” H.R. Rep. No. 95–1625, at 16–17 (1978). The Secretary may not

exclude an area from designation if exclusion will result in the extinction of the species. Because the authority to exclude is discretionary, exclusion is not required for any area.

The first step in conducting an ESA section 4(b)(2) analysis is to identify the “particular areas” to be analyzed. Section 3(5) of the ESA defines critical habitat as “specific areas,” while section 4(b)(2) requires the agency to consider certain factors before designating any “particular area.” Depending on the biology of the species, the characteristics of its habitat, and the nature of the impacts of designation, “specific” areas might be different from, or the same as, “particular” areas. For this designation, we analyzed two types of “particular” areas. 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).

Specifically, these areas were the occupied freshwater and estuarine areas that contain the physical and biological features essential to the conservation of the southern DPS of eulachon. However, because upslope and upstream activities can impact critical habitat, we chose to use the watershed (specifically, individual 5th field hydrologic units as designated by the U.S. Geological Survey) as our assessment area for economic impacts (see the draft Economic Analysis Report [NMFS 2010c] for definition of the 5th field hydrologic units and more information). This approach allowed us to most effectively consider the conservation value of the different areas when balancing conservation benefits of designation against economic benefits of exclusion. Where we considered impacts on Indian lands, however, we instead used a delineation of "particular" areas based on ownership or control of the area. Specifically, these particular areas consisted of occupied freshwater and estuarine areas that overlap with Indian lands. (We defined Indian lands in accordance with our past practice, as described in the Draft Eulachon Section 4(b)(2) Report [NMFS 2010d].) This approach allowed us to consider impacts and benefits associated with tribal land ownership and management by Indian tribes. In the future, if we consider impacts and benefits of designation associated with lands covered by a habitat conservation plan (HCP), we will also use a delineation of "particular" areas based on ownership or control of the area.

#### *Benefits of Designation*

The primary benefit of designation is the protection afforded under the ESA section 7 requirement that all Federal agencies ensure their actions are not likely to destroy or adversely modify designated critical habitat. This type of benefit is sometimes referred to as an incremental benefit because the protections afforded to the species from critical habitat designation are 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 enhance the conservation of habitat by informing the public about areas and features important to species conservation. This may help focus and contribute to conservation efforts for eulachon and their habitats.

With sufficient information, it may be possible to monetize these benefits of 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 physical and biological features within specific areas that meet the definition of critical habitat, or of the monetary value of general benefits such as education and outreach). In an alternative approach that we have commonly used in the past, we qualitatively assessed the benefit of designation for each of the specific areas identified as meeting the definition of critical habitat for the southern DPS. Our qualitative consideration began with an evaluation of the conservation value of each area. We considered a number of factors to determine the conservation value of an area, including the quantity and quality of physical or biological features, the relationship of the area to other areas within the DPS, and the significance to the DPS of the population occupying that area.

To evaluate the quantity and quality of features of the specific areas, we considered existing information on the consistency of spawning in each area, the typical size of runs in the area, and the amount of habitat available to and used by eulachon in the area. We found that eulachon habitat and habitat use varies widely among the areas, and may vary within the same area across different years. It is difficult to identify differences between the areas that could be driving variation in run size and frequency, and variation in habitat use. Eulachon spawn in systems as large as the Columbia River (largest river in the Pacific Northwest), and as small as Tenmile Creek (a watershed of 60 km<sup>2</sup> [23 mi<sup>2</sup>]). While some rivers consistently produce large spawning runs of eulachon (e.g., the Columbia and Cowlitz Rivers), spawning can be sporadic in others (e.g. Grays, Kalama, Lewis, Sandy, and Quinalt Rivers). Still other areas, either currently or in the past, produce small yet consistent runs of eulachon (e.g., Tenmile Creek and Elwha River).

Another factor we considered in evaluating the conservation value of the specific areas is the geographic distribution of the areas. Nearly the entire production of southern DPS eulachon in the conterminous United States originates in the 14 specific areas we have identified. These specific areas are widely distributed across the geographic extent of the DPS. Compared to salmon, steelhead, and other anadromous fishes, these relatively small areas historically produced a very large biomass of eulachon. The loss of any one of these areas could potentially leave a large gap in the spawning

distribution of the DPS, and the loss to eulachon production could represent a significant impact on the ability of the southern DPS to survive and recover. Utilizing a diversity of stream/estuary sizes across a wide geographic area can be a useful strategy to buffer the species against localized environmental catastrophes (such as the Mount St. Helens eruption of May 18, 1980). For the above reasons, we conclude that all of the specific areas have a high conservation value.

There are many Federal activities that occur within the specific areas that could impact the conservation value of these areas. Regardless of designation, Federal agencies are required under Section 7 of the ESA to ensure these activities are not likely to jeopardize the continued existence of the southern DPS of eulachon. If the specific areas are designated as critical habitat, Federal agencies will additionally be required to ensure their actions are not likely to adversely modify the critical habitat. We grouped the potential Federal activities that would be subject to this additional protection into several broad categories: Dams and water supply, agriculture, transportation, forest management, mining, in-water construction and restoration, water quality management/monitoring, and other activities. (The Draft Economic Analysis [NMFS, 2010c] includes a detailed description of the industry sectors associated with these activities).

The benefit of designating a particular area depends upon the likelihood of a section 7 consultation occurring in that area and the degree to which a consultation would yield conservation benefits for the species. Based on past consultations for other migratory fish species, we estimated that a total of 37.5 actions would require section 7 consultation annually within the particular areas being considered for eulachon critical habitat designation (NMFS, 2010c). The most common activity type subject to consultation would be in-stream work (estimated 13.2 consultations annually), followed by forest management (estimated 6.7 consultations annually) and transportation projects (estimated 6.2 consultations annually). (A complete list of the estimated annual actions, divided by particular area, is included in the Draft Economic Analysis [NMFS, 2010c]). These activities have the potential to adversely affect water quality, sediment quality, substrate composition, or migratory corridors for eulachon. Consultation would yield conservation benefits for the species by preventing or ameliorating such habitat effects.

### Impacts of Designation

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 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 ensure their actions are not likely to destroy or adversely modify the critical habitat of the species, beyond any modifications they would make because of listing and the jeopardy requirement. Additional impacts of designation include state and local protections that may be triggered as a result of the designation.

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 critical habitat designations for salmon and steelhead (70 FR 52630; September 2, 2005) and for Southern Resident killer whales (71 FR 69054; November 29, 2006), we considered the “coextensive” impact of designation, in accordance with a Tenth Circuit Court decision (*New Mexico Cattle Growers Association v. U.S. Fish and Wildlife Service*, 248 F.3d 1277 (10th Cir. 2001)). More recently, however, several courts (including the 9th Circuit Court of Appeals in *Arizona Cattlegrowers v. Salazar*, 606 F.3d 1160 (9th Cir. 2010); *Homebuilders Association of Northern California v. U.S. Fish and Wildlife*, 616 F.3d 983 (9th Cir. 2010)) have approved an approach that examines only the incremental impact of designation (see also: *Cape Hatteras Access Preservation Alliance v. Norton*, 344 F. Supp. 2d 1080 (D.DC 2004)). In more recent critical habitat designations, both NMFS and the USFWS have considered the incremental impact of critical habitat designation (for example, NMFS’ designation of critical habitat for the Southern DPS of green sturgeon (74 FR 52300; October 9, 2009); U.S. Fish and Wildlife’s designation of critical habitat

for the Oregon chub (75 FR 11031; March 10, 2010)). Consistent with this more recent practice, we estimated the incremental impacts of designation, beyond the impacts that would result from the listing and jeopardy provision.

To determine the impact of designation, we examined what the state of the world would be with and without the designation of critical habitat for eulachon. The “without critical habitat” scenario represents the baseline for the analysis. It includes process requirements and habitat protections already afforded eulachon under its Federal listing or under other Federal, state, and local regulations. Such regulations include protections afforded eulachon habitat from other co-occurring ESA listings and critical habitat designations, such as for Pacific salmon and steelhead (70 FR 52630; September 2, 2005), North American green sturgeon (74 FR 52300; October 9, 2009), and bull trout (75 FR 63898; October 18, 2010) (see the Draft Economic Analysis for Eulachon (NMFS, 2010c) for examples of protections for other species that would benefit eulachon). The “with critical habitat” scenario describes the incremental impacts associated specifically with the designation of critical habitat for eulachon. The primary impacts of critical habitat designation we found were: (1) The additional administrative effort of including a eulachon critical habitat analysis in section 7 consultations, (2) the project modifications required solely to avoid destruction or adverse modification of eulachon critical habitat, and (3) the perception of Indian tribes that designation of Indian lands is an unwarranted intrusion into tribal sovereignty and self-governance.

### Economic Impacts

To quantify the economic impact of designation, we employed the following three steps:

- (1) Define the geographic study area for the analysis, and identify the units of analysis (the “particular areas”). In this case, we defined 5th field hydrologic units that encompass occupied stream reaches as the study area.
- (2) Identify potentially affected economic activities and determine how management costs may increase due to the designation of eulachon critical habitat, both in terms of project administration and project modification.
- (3) Estimate the economic impacts associated with these changes in management.

We estimated a total annualized incremental administrative cost of

approximately \$500,000 for designating the 14 specific areas as eulachon critical habitat. The greatest costs are associated with dams and water supply, mining, and forest management activities (see NMFS, 2010c for more details). The Lower Mad River and Columbia River—Hayden Island 5th field hydrologic units have the largest estimated annual impacts (\$63,500 and \$33,300), due to mining activities and water supply activities, respectively (NMFS, 2010c). For 5th field hydrologic units other than the lower Mad River and Columbia River—Hayden Island, we estimate the incremental impacts of critical habitat designation would be less than \$30,000/year.

For the second category of impacts, we identified three areas where critical habitat designation for eulachon might result in modifications to activities beyond those already resulting from the ESA listing of eulachon. Although we could not quantify the economic impacts, we anticipate these costs would be small, for the reasons described below.

(1) *Disposal of dredge material in the Lower Columbia River.* Eulachon spawning habitat has the potential to be modified by the disposal of dredge material in the Lower Columbia River, particularly if material is disposed in shallow water. If we conclude that disposing of dredge material in shallow water could destroy or adversely modify critical habitat, the U.S. Army Corps of Engineers (USACE) or the party seeking disposal may need to find alternative disposal sites, thereby incurring additional project costs. Because disposal of dredge material in shallow water is already quite limited in the Lower Columbia River and its cost is already relatively high, requiring another disposal method may have minimal added costs.

(2) *Elwha River Dam removal.* The Elwha and Glines Canyon dams, on the Elwha River, are scheduled for removal beginning in early 2011. Because protections are already in place to reduce the impact of the project on salmonid habitat, consideration of eulachon critical habitat is unlikely to result in recommendations to change the project, except possibly recommendations to make slight changes to the timing of the dam removals. If that were the case, such timing changes would likely have small associated costs.

(3) *Mayfield Dam flow regime.* As outlined in the eulachon final listing determination (75 FR 13012; March 18, 2010), dams and water diversions are moderate threats to eulachon in the Columbia River Basin. To benefit

salmon and steelhead species, Tacoma Power Company currently follows a flow regime for Mayfield Dam on the Cowlitz River. If we conclude the existing flow regime could destroy or adversely modify eulachon critical habitat, Tacoma Power Company may need to change the timing or amount of water releases. This could change the timing of energy production, with an associated decrease in revenue from energy sales. We would expect any such decreases to be small because the effect would be to change the timing of energy production and not the total amount of energy produced.

Without conducting a complete analysis on a specific project, it is difficult to evaluate the extent to which NMFS might recommend changes in any of these activities to avoid destroying or adversely modifying critical habitat. Any changes required solely to avoid destroying or adversely modifying critical habitat would be an impact of designation.

#### *Impacts to National Security*

Department of Defense lands do not overlap with, nor are adjacent to, any areas proposed for designation as critical habitat for the southern DPS. Thus, there would be no direct impacts to national security if any of the specific areas were designated as critical habitat.

#### *Other Relevant Impacts—Impacts to Tribal Sovereignty and Self-Governance*

We identified three rivers with areas under consideration for critical habitat designation that overlap with Indian lands—the Elwha River and Quinalt River in Washington, and the Klamath River in California. The Federally-recognized tribes (74 FR 40218; August 11, 2009) potentially affected are the Lower Elwha Tribe, the Quinalt Tribe, the Yurok Tribe, and the Resighini Rancheria. In addition to the economic impacts described above, designating these tribes' Indian lands would have an impact on Federal policies promoting tribal sovereignty and self-governance. 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 U.S. 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. Executive Order 13175, Consultation and Coordination with Indian Tribal Governments, outlines the responsibilities of the Federal Government in matters affecting tribal interests (recently confirmed by Presidential Memorandum; 74 FR 57879; November 9, 2009). In addition to Executive Order 13175, we have Department of Commerce direction, via Secretarial Order 3206, stating that Indian lands shall not be designated as critical habitat, 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.”

Designation would also have impacts to NMFS' relationship with the affected tribes. In the decision *Center for Biological Diversity v. Norton*, 240 F. Supp. 2d 1090 (D. Ariz. 2003), the court held that a positive working relationship with Indian tribes is a relevant impact that can be considered when weighing the relative benefits of a critical habitat designation. We contacted the governments of each of the potentially affected tribes to determine what impact a critical habitat designation on Indian lands would have on the working relationship between NMFS and the tribes. All four advised us that they would view critical habitat designation on their lands as an unwanted intrusion, which would have a negative impact on tribal sovereignty and self-governance and on the relationship between the tribe and the agency. This response was consistent with responses NMFS has received from Indian tribes in past designations (for example, the designation of critical habitat for 12 ESUs of West Coast salmon and steelhead (70 FR 52630; September 2, 2005)).

#### *Other Relevant Impacts—Impacts to Landowners With Contractual Commitments to Conservation*

Conservation agreements with non-Federal landowners (e.g., HCPs) enhance species conservation by extending species' protections beyond those available through section 7 consultations. We have encouraged non-Federal landowners to enter into

conservation agreements, based on a view that we can achieve greater species' conservation on non-Federal land through such partnerships than we can through coercive methods (61 FR 63854; December 2, 1996).

Section 10(a)(1)(B) of the ESA authorizes us to issue to non-Federal entities a permit for the incidental take of endangered and threatened species. This permit allows a non-Federal landowner to proceed with an activity that is legal in all other respects, but that results in the incidental taking of a listed species (i.e., take that is incidental to, and not the purpose of, the carrying out of an otherwise lawful activity). The ESA specifies that an application for an incidental take permit must be accompanied by a conservation plan, and specifies the content of such a plan. The purpose of such an HCP is to describe and ensure that the effects of the permitted action on covered species are adequately minimized and mitigated, and that the action does not appreciably reduce the likelihood of the survival and recovery of the species.

In previous critical habitat designations, we have exercised discretion to exclude some (but not all) lands covered by an HCP from designation (e.g., for Pacific salmon (70 FR 52630; September 2, 2005)), after concluding that benefits of exclusion outweighed the benefits of designation. For lands covered by an HCP, the benefits of designation typically arise from section 7 protections as well as enhanced public awareness. The benefits of exclusion generally include relieving regulatory burdens on existing conservation partners, maintaining good working relationships with them (thus enhancing implementation of existing HCPs), and encouraging the development of new partnerships.

There are two existing HCPs that overlap areas proposed as critical habitat for the southern DPS of eulachon; the Green Diamond Timber HCP (covering the company's operations in northern California, including portions of the Klamath River), and the Humboldt Bay Municipal Water District HCP (covering their operations in the Mad River, California). Neither of these HCPs currently address conservation of eulachon, and it is unclear what, if any, conservation benefits they might provide to eulachon. We will seek comments and information specific to these HCPs and determine by the time of the final rule if, as in some past designations, the benefits of excluding these HCP areas outweigh the conservation benefits of designation.

### *Balancing Benefits of Designation Against Benefits of Exclusion*

The following section balances the benefits of avoiding economic impacts and impacts to tribal sovereignty and self-governance against the incremental and general benefits of designation. We determine whether the benefits of exclusion outweigh the benefits of designation and make recommendations for exclusion.

#### *Economic Exclusions*

As described above, the economic benefits of excluding particular areas are small, for a total of about \$500,000. Also as described above, we consider all 14 particular areas meeting the definition of critical habitat to have a high conservation value and a high benefit of designation. When we listed eulachon as a threatened species we cited, among other reasons, the present or threatened destruction, modification, or curtailment of its habitat. Identified threats to eulachon habitat include climate-induced change to freshwater habitats; dams and water diversions (particularly in the Columbia and Klamath Rivers); and degraded water quality. Designating these areas as critical habitat will enhance our ability to address some of these threats through section 7 consultations and through public outreach and education. We conclude that the economic benefits of excluding each particular area do not outweigh the conservation benefits of designating each particular area as critical habitat, given the following considerations: (1) The economic impact of designating all areas is small; (2) eulachon are likely to become endangered in the foreseeable future; (3) threats to freshwater habitat were a primary concern leading to our decision to list the species as threatened; (4) there are a limited number of spawning areas available throughout the coast-wide range of eulachon; and (5) designation will enhance the ability of a section 7 consultation to protect the habitat through the identification of areas of particular concern and through the added protection of the adverse modification provision.

#### *Indian Lands Exclusions*

The eulachon critical habitat Section 4(b)(2) report (NMFS, 2010d) details our consideration of excluding Indian lands in this critical habitat designation. The discussion here summarizes that consideration. As described above, designating critical habitat on Indian lands would have economic impacts. It is difficult to quantify those impacts (and therefore the benefit of exclusion),

for the Lower Elwha tribe because their lands do not encompass the entire area that is being considered for designation. The effects of many types of actions on their lands would also affect areas downstream that are not excluded from designation. Therefore, a section 7 consultation would still need to consider the downstream effects on critical habitat. Administrative costs of designation would still be incurred, along with any costs associated with project modifications. The Quinault Tribe's lands encompass nearly the entire watershed of the specific area identified, thus exclusion would relieve Federal agencies of the administrative costs of considering effects of actions on designated critical habitat. The boundaries of the Yurok Indian Reservation encompass the entire specific area that represents critical habitat on the Klamath River. However there is some uncertainty as to which particular areas within it meet the above definition of Indian lands. For this analysis we have assumed, based on initial discussions with the Tribe that the entire specific area under consideration qualifies as Indian land. We estimated a total annualized incremental administrative cost of approximately \$500,000 for designating all 14 specific areas as eulachon critical habitat. The exclusion of Indian Lands from critical habitat designation would decrease the total annualized incremental administrative cost by approximately \$39,500. With Indian Lands excluded, the total annualized incremental administrative cost of designating eulachon critical habitat would be approximately \$460,500.

In addition to the economic impact, designation would have an impact on Federal policies promoting tribal sovereignty and self-governance (e.g., Executive Order 13175), and on the relationship between NMFS and each of the tribes (e.g., Secretarial Order 3206) because of their perception that designation is an intrusion on tribal sovereignty and self-governance. The benefit of excluding Indian lands would be to avoid these impacts.

Balanced against these benefits of exclusion, a benefit of designating the Indian lands would be to achieve the added protection from ESA section 7's critical habitat provisions. This protection would apply to all Federal activities, which we expect would include dam operations and water supply, forest management, instream construction, mining, transportation projects, and habitat restoration. As described above, section 7 consultations for Federal actions on lands of the Lower Elwha Tribe may still need to

consider designated critical habitat elsewhere in the watershed, thus many of the benefits of a section 7 consultation could still apply even if the Indian lands were excluded. In contrast, if Indian lands on the Quinault River and Klamath River were excluded, section 7 consultations would not include consideration of eulachon critical habitat.

Another benefit of designation would be to educate the public about the importance of these Indian lands to eulachon conservation. Because these are not public or private lands, and because the tribes themselves are keenly aware of the importance of their lands to eulachon conservation, we consider the education benefit of designating these Indian lands to be low.

*Quinault Indian Nation Lands.* In the Quinault River, exclusion of Indian lands would result in 100 percent of the area being excluded. An ESA section 7 consultation in this area would not consider adverse modification of critical habitat. In a public comment letter submitted in response to the designation of critical habitat for the bull trout, the Quinault Indian Nation (QIN) state that a Forest Management Plan (FMP), on which the USFWS prepared a programmatic biological opinion for bull trout, should provide adequate protection for the bull trout. The QIN intend to submit a similar comment in response to the designation of critical habitat for the eulachon (Quinault Indian Nation 2010). The FMP takes into account significant restrictions on in-water construction activities imposed by the State of Washington (USFWS 2003; Washington State Law, Chapter 77.55). Project modifications specific to the bull trout included in the biological opinion for the FMP include requirements that in-water or near-stream activities may only be conducted during the specific timeframes outlined in the FMP, construction of new roads is to be minimized "to the maximum extent practicable," and construction of fill roads is allowable only when absolutely necessary. These project modifications would likely benefit eulachon habitat as well by limiting runoff which can adversely affect water quality, sediment quality, and substrate composition.

Exclusion of the 4.8 km (3.0 mi) of the Quinault River that runs through tribal lands would have the benefit of promoting Federal policies regarding tribal sovereignty and self-governance (e.g., Executive Order 13175). It would also have the benefit of promoting a positive relationship between NMFS and the tribe (in accordance with Secretarial Order 3206), with a very

small reduction in the benefits of designation (primarily the loss of section 7 consultation to consider adverse modification of critical habitat). The current FMP provides some protection for eulachon habitat and will provide a structure for future coordination and communication between the QIN, USFWS, and NMFS. For these reasons, we conclude that the benefits of exclusion outweigh the benefits of designation.

**Lower Elwha Tribal Lands.** In the Lower Elwha River, exclusion of tribal lands would result in 1.3 km (0.8 mi) of the lower Elwha River being excluded, which represents about 16 percent of the total 7.9 km (4.9 mi) of habitat. As explained above, Federal agencies would still need to consult on the effects of their actions on the designated critical habitat elsewhere in the river. Exclusion of the 1.3 km (0.8 mi) of the lower Elwha River that runs through tribal lands would have the benefit of promoting Federal policies regarding tribal sovereignty and self-governance (e.g., Executive Order 13175). It would also have the benefit of promoting a positive relationship between NMFS and the tribe (in accordance with Secretarial Order 3206), with a very small reduction in the benefits of designation (primarily, the loss of section 7 consultation to consider adverse modification of critical habitat). For these reasons, we conclude that the benefits of exclusion outweigh the benefits of designation.

**Resighini Rancheria Land.** The tribal lands of the Resighini Rancheria include approximately 0.5 km (0.3 mi) along the Klamath River, within the specific area of critical habitat for eulachon. Exclusion of this land would account for approximately 3 percent of the specific habitat of southern DPS eulachon in the Klamath River. Exclusion of the 0.5 km (0.3 mi) of the Klamath River that runs through tribal lands would have the benefit of promoting Federal policies regarding tribal sovereignty and self-governance. It would also have the benefit of promoting a positive relationship between NMFS and the tribe, with a very small reduction in the benefits of designation. For these reasons, we conclude that the benefits of exclusion outweigh the benefits of designation.

**Yurok Tribal Lands.** Yurok Tribal Lands: The boundaries of the Yurok Indian Reservation encompass the 17.5 km (10.9 mi) on the Klamath River that represent the specific area occupied by eulachon on that river. However, land ownership within the reservation boundary includes a mixture of Federal, State, tribal and private ownerships.

As managers of the Klamath River fisheries and their resources, the Tribe oversees and protects fish and fish habitat through various land and water management practices, plans, and cooperative efforts. Tribal forest practices and land management are guided by a Forest Management Plan (FMP), a primary objective of which is to protect and enhance tribal trust fisheries. The Tribe has an established water quality control plan on the Reservation (Yurok Tribe, 2004) with standards that have been approved by the Environmental Protection Agency (EPA). In conjunction with Federal, state and private partners, the Yurok Tribe has initiated a large-scale, coordinated watershed restoration effort in the Lower Klamath sub-basin to protect and improve instream, intertidal, and floodplain habitats that support viable, self-sustaining populations of native fishes. More recently, the Yurok Tribe fisheries program has implemented a eulachon monitoring study to determine the current abundance, and distribution of eulachon in the Klamath River.

We are proposing to exclude from designation all areas of the Klamath River based on an initial consideration of impacts on our working relationship with the Yurok Tribe. Although this decision is consistent with our previous critical habitat designation for Southern Oregon/Northern California Coasts coho salmon (64 FR 24049; May 5, 1999), it is less clear how well it reflects our more recent 4(b)(2) analyses used in 2005 to designate critical habitat for 19 salmon and steelhead DPSs (70 FR 52630; September 2, 2005). In that more recent approach we focused such exclusions on those Indian lands defined in the 1997 Secretarial Order 3206 "American Indian Tribal Rights, Federal-Tribal Trust Responsibilities, and the Endangered Species Act." Specifically, we excluded: (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.

During the time between this proposed rule and a final designation we will consult with the Tribe and other land managers in the lower Klamath Basin to determine how best to determine the benefits of designating or excluding particular areas within the Yurok Reservation boundary. As noted

in a biological report supporting this designation, the eulachon habitat under consideration includes the lowermost 17.5 km (10.9 miles) of the Klamath River. Depending on the outcome of our consultations and a final 4(b)(2) analysis (informed by tribal input and public comments), our final rule may designate some or none of these occupied areas as critical habitat for this species.

#### **Extinction Risk Due to Exclusions**

Section 4(b)(2) limits our discretion to exclude areas from designation if exclusion will result in extinction of the species. The overwhelming majority of production for the southern DPS of eulachon occurs in the Columbia River (and tributaries) and the Fraser River in Canada (NMFS, 2010a). While abundance estimates are not available for the three rivers (Quinalt, Elwha, and Klamath) that overlap Indian lands, the runs on these rivers are believed to be very small (NMFS, 2010a) and likely contribute only a small fraction to the total DPS abundance. Because the overall percentage of critical habitat on Indian lands is so small (5 percent of the total area identified) and the likelihood that eulachon production on these lands represents a very small percent of the total annual production for the DPS, we conclude that exclusion will not result in extinction of the southern DPS of eulachon.

#### **Critical Habitat Designation**

We propose to designate approximately 470.2 km (292.1 mi) of riverine and estuarine habitat in California, Oregon, and Washington within the geographical area occupied by the southern DPS of eulachon. The proposed critical habitat areas contain one or more physical or biological features essential to the conservation of the species that may require special management considerations or protection. We propose to completely exclude two areas (the Quinalt River and the Klamath River) and portions of one other area (Elwha River) from designation for which the benefit of exclusion outweighs the benefit of inclusion (NMFS, 2010c). These areas include less than 23.6 km (14.7 mi) of riverine and estuarine habitat in California and Washington. We conclude that the exclusion of these areas will not result in the extinction of the southern DPS. We have not identified any unoccupied areas that are essential to conservation, and thus we are not proposing any unoccupied areas for designation as critical habitat at this time.

### Lateral Extent of Critical Habitat

We describe the lateral extent of critical habitat units as the width of the stream channel defined by the ordinary high water line, as defined by the USACE in 33 CFR 329.11. The ordinary high water line on non-tidal rivers is defined as “the line on the shore established by the fluctuations of water and indicated by physical characteristics such as a clear, natural line impressed on the bank; shelving; changes in the character of soil; destruction of terrestrial vegetation; the presence of litter and debris, or other appropriate means that consider the characteristics of the surrounding areas” (33 CFR 329.11(a)(1)). In areas for which the ordinary high-water line has not been defined pursuant to 33 CFR 329.11, we define the width of the stream channel by its bankfull elevation. Bankfull elevation is the level at which water begins to leave the channel and move into the floodplain (Rosgen, 1996) and is reached at a discharge which generally has a recurrence interval of 1 to 2 years on the annual flood series (Leopold *et al.* 1992).

As discussed in previous critical habitat designations (*e.g.*, Pacific salmon and steelhead (70 FR 52630; September 2, 2005), North American green sturgeon (74 FR 52300; October 9, 2009)), the quality of aquatic and estuarine habitats within stream channels and bays and estuaries is intrinsically related to the adjacent riparian zones and floodplain, to surrounding wetlands and uplands, and to non-fish-bearing streams above occupied stream reaches. Human activities that occur outside of designated critical habitat can destroy or adversely modify the essential physical and biological features within these areas. In addition, human activities occurring within and adjacent to reaches upstream or downstream of designated stream reaches or estuaries can also destroy or adversely modify the essential physical and biological features of these areas. This designation will help to ensure that Federal agencies are aware of these important habitat linkages.

### Effects of Critical Habitat Designation

Section 7(a)(2) of the ESA requires Federal agencies to insure that any action authorized, funded, or carried out by the agency (agency action) does not jeopardize the continued existence of any threatened or endangered species or destroy or adversely modify designated critical habitat. Federal agencies are also required to confer with us regarding any actions likely to jeopardize a species proposed for listing under the ESA, or

likely to destroy or adversely modify proposed critical habitat, pursuant to section 7(a)(4). A conference involves informal discussions in which we may recommend conservation measures to minimize or avoid adverse effects. The discussions and conservation recommendations are to be documented in a conference report provided to the Federal agency. If requested by the Federal agency, a formal conference report may be issued; including a biological opinion prepared according to 50 CFR 402.14. A formal conference report may be adopted as the biological opinion when the species is listed or critical habitat designated, if no significant new information or changes to the action alter the content of the opinion.

When a species is listed or critical habitat is designated, Federal agencies must consult with NMFS on any agency actions to be conducted in an area where the species is present and that may affect the species or its critical habitat. During the consultation, we would evaluate the agency action to determine whether the action may adversely affect listed species or critical habitat and issue our findings in a biological opinion or concurrence letter. If we conclude in the biological opinion that the agency action would likely result in the destruction or adverse modification of critical habitat, we would also recommend any reasonable and prudent alternatives to the action. Reasonable and prudent alternatives (defined in 50 CFR 402.02) are alternative actions identified during formal consultation that can be implemented in a manner consistent with the intended purpose of the action, that are consistent with the scope of the Federal agency’s legal authority and jurisdiction, that are economically and technologically feasible, and that would avoid the destruction or adverse modification of critical habitat.

Regulations at 50 CFR 402.16 require Federal agencies that have retained discretionary involvement or control over an action, or where such discretionary involvement or control is authorized by law, to reinitiate consultation on previously reviewed actions in instances where: (1) Critical habitat is subsequently designated; or (2) new information or changes to the action may result in effects to critical habitat not previously considered in the biological opinion. Consequently, some Federal agencies may request reinitiation of a consultation or conference with us on actions for which formal consultation has been completed, if those actions may affect designated

critical habitat or adversely modify or destroy proposed critical habitat.

Activities subject to the ESA section 7 consultation process include activities on Federal lands and activities on private or state lands requiring a permit from a Federal agency (*e.g.*, a Clean Water Act, Section 404 dredge or fill permit from USACE) or some other Federal action, including funding (*e.g.*, Federal Highway Administration funding for transportation projects). ESA section 7 consultation would not be required for Federal actions that do not affect listed species or critical habitat and for actions on non-Federal and private lands that are not Federally funded, authorized, or carried out.

### Activities That May Be Affected

ESA section 4(b)(8) requires in any proposed or final regulation to designate critical habitat an evaluation and brief description of those activities (whether public or private) that may adversely modify such habitat or that may be affected by such designation. A wide variety of activities may affect the proposed critical habitat and may be subject to the ESA section 7 consultation process when carried out, funded, or authorized by a Federal agency. These include water and land management actions of Federal agencies (*e.g.*, U.S. Forest Service (USFS)), Bureau of Land Management (BLM), U.S. Army Corps of Engineers (USACE), U.S. Bureau of Reclamation (BOR), Natural Resource Conservation Service (NRCS), National Park Service (NPS), Bureau of Indian Affairs (BIA), the Federal Energy Regulatory Commission (FERC), and the Nuclear Regulatory Commission (NRC) and related or similar Federally-regulated projects and activities on Federal lands, including hydropower sites licensed by the FERC; nuclear power sites licensed by the NRC; dams built or operated by the USACE or BOR; timber sales and other vegetation management activities conducted by the USFS, BLM and BIA; irrigation diversions authorized by the USFS and BLM; and road building and maintenance activities authorized by the USFS, BLM, NPS, and BIA. Other actions of concern include dredging and filling, mining, diking, and bank stabilization activities authorized or conducted by the USACE, habitat modifications authorized by the Federal Emergency Management Agency, and approval of water quality standards and pesticide labeling and use restrictions administered by the Environmental Protection Agency.

Private entities may also be affected by this proposed critical habitat designation if a Federal permit is



required, if Federal funding is received, or the entity is involved in or receives benefits from a Federal project. For example, private entities may have special use permits to convey water or build access roads across Federal land; they may require Federal permits to construct irrigation withdrawal facilities, or build or repair docks; they may obtain water from Federally funded and operated irrigation projects; or they may apply pesticides that are only available with Federal agency approval. These activities will need to be evaluated with respect to their potential to destroy or adversely modify critical habitat for eulachon. Changes to some activities, such as the operations of dams and dredging activities, may be necessary to minimize or avoid destruction or adverse modification of proposed critical habitat. Transportation and utilities sectors may need to modify the placement of culverts, bridges, and utility conveyances (e.g., water, sewer, and power lines) to avoid barriers to fish migration. Developments (e.g., marinas, residential, or industrial facilities) occurring in or near streams, estuaries, or marine waters designated as critical habitat that require Federal authorization or funding may need to be altered or built in a manner to ensure that critical habitat is not destroyed or adversely modified as a result of the construction or subsequent operation of the facility. Questions regarding whether specific activities will constitute destruction or adverse modification of critical habitat should be directed to NMFS (see ADDRESSES and FOR FURTHER INFORMATION CONTACT).

#### Public Comments Solicited

We solicit comments or suggestions from the public, other concerned governments and agencies, the scientific community, industry, non-governmental organizations, or any other interested party concerning the proposed designation and exclusions as well as the documents supporting this rulemaking. We are particularly interested in comments and information in the following areas: (1) Information describing the abundance, distribution, and habitat use of southern DPS eulachon, including marine areas; (2) Information on the identification, location, and the quality of physical or biological features which may be essential to the conservation of the species, including marine foraging sites; (3) Information regarding potential benefits of designating any particular area as critical habitat, including information on the types of Federal actions that may affect the area's physical and biological features;

(4) Information regarding potential impacts of designating any particular area, including the types of Federal actions that may trigger an ESA section 7 consultation and the possible modifications that may be required of those activities; (5) Information regarding the benefits of excluding a particular area from critical habitat, including areas covered by an existing HCP, especially the Green Diamond Timber and Humboldt Bay Municipal Water District HCPs in northern California; (6) Current or planned activities in the areas proposed as critical habitat and costs of potential modifications to those activities due to critical habitat designation; and (7) Any foreseeable economic, national security, or other relevant impact resulting from the proposed designation. You may submit your comments and materials concerning this proposal by any one of several methods (see ADDRESSES). Copies of the proposed rule and supporting documentation can be found on the NMFS Web site <http://www.nwr.noaa.gov>. We will consider all comments pertaining to this designation received during the comment period in preparing the final rule. Accordingly, the final decision may differ from this proposal.

#### Public Hearings

50 CFR 424.16(c)(3) requires the Secretary to promptly hold at least one public hearing if any person requests one within 45 days of publication of a proposed rule to designate critical habitat. Such hearings provide the opportunity for interested individuals and parties to give comments, exchange information and opinions, and engage in a constructive dialogue concerning this proposed rule. We encourage the public's involvement in such ESA matters. A public meeting has been scheduled for January 26, 2011 at the Doubletree Hotel, 1000 NE Multnomah Street, Portland, OR. Requests for additional public hearings must be made in writing (see ADDRESSES) by February 22, 2011.

#### Information Quality Act and Peer Review

The data and analyses supporting this proposed action have undergone a pre-dissemination review and have been determined to be in compliance with applicable information quality guidelines implementing the Information Quality Act (IQA) (Section 515 of Pub. L. 106-554). In December 2004, the Office of Management and Budget (OMB) issued a Final Information Quality Bulletin for Peer Review pursuant to the IQA. The

Bulletin was published in the **Federal Register** on January 14, 2005 (70 FR 2664). The Bulletin established minimum peer review standards, a transparent process for public disclosure of peer review planning, and opportunities for public participation with regard to certain types of information disseminated by the Federal Government. The peer review requirements of the OMB Bulletin apply to influential or highly influential scientific information disseminated on or after June 16, 2005. Two documents supporting this proposal to designate critical habitat for the southern DPS of eulachon are considered influential scientific information and subject to peer review. These documents are the draft Biological Report and draft Economic Analysis. We have distributed the draft Biological Report and draft Economic Analysis for independent peer review and will address any comments received in developing the final drafts of the two reports. Both documents are available on our Web site at <http://www.nwr.noaa.gov/>, on the Federal eRulemaking Web site at <http://www.regulations.gov>, or upon request (see ADDRESSES).

#### Classification

*Regulatory Flexibility Act (5 U.S.C. 601 et seq.)*

Under the Regulatory Flexibility Act (RFA) (5 U.S.C. 601 *et seq.*, as amended by the Small Business Regulatory Enforcement Fairness Act (SBREFA) of 1996), whenever an agency publishes a notice of rulemaking for any proposed or final rule, it must prepare and make available for public comment a regulatory flexibility analysis describing the effects of the rule on small entities (*i.e.*, small businesses, small organizations, and small government jurisdictions). We have prepared an initial regulatory flexibility analysis (IRFA), which is part of the draft Economic Analysis. This document is available upon request (see ADDRESSES), via our Web site at <http://nwr.noaa.gov>, or via the Federal eRulemaking Web site at <http://www.regulations.gov>. The results of the IRFA are summarized below.

At the present time, little information exists regarding the cost structure and operational procedures and strategies in the sectors that may be directly affected by the potential critical habitat designation. In addition, given the short consultation history for eulachon, there is significant uncertainty regarding the activities that may trigger an ESA section 7 consultation or how those activities may be modified as a result of

consultation. With these limitations in mind, we considered which of the potential economic impacts we analyzed might affect small entities. These estimates should not be considered exact estimates of the impacts of potential critical habitat to individual businesses.

The impacts to small businesses were assessed for the following eight broad categories of activities: Dams and water supply, agriculture and grazing, transportation, forest management, mining, in-water construction and restoration, water quality management/monitoring (and other activities resulting in non-point pollution), and other activities. Small entities were defined by the Small Business Administration size standards for each activity type. The majority (approximately 97 percent) of entities affected within each specific area would be considered a small entity. A total of 540 small businesses involved in the activities listed above would most likely be affected by the proposed critical habitat designation. Total annualized impacts to small entities are conservatively assumed to be \$459,000, or approximately 99.5 percent of total incremental impacts anticipated as a result of this rule.

We estimated the annualized costs associated with section 7 consultations incurred per small business under two different scenarios. These scenarios are intended to provide a measure of the range of potential impacts to small entities given the level of uncertainty referred to above. Under the first scenario the analysis estimated the number of small entities located within areas affected by the proposed designation (approximately 540), and assumes that incremental impacts are distributed evenly across all entities in each affected industry. Under this scenario, a small entity may bear costs up to \$3,550, representing between < 0.01 and 0.10 percent of average revenues (depending on the industry). Under the second scenario, the analysis assumes the costs of each anticipated future consultation are borne by a distinct small business most likely to be involved in a section 7 consultation (approximately 38 entities). Under this scenario, each small entity may bear costs of between \$1,330 and \$162,000, representing between 0.01 and 4.69 percent of average annual revenues, depending on the industry.

In accordance with the requirements of the RFA (as amended by SBREFA of 1996) this analysis considered various alternatives to the critical habitat designation for the southern DPS. The alternative of not designating critical

habitat for the southern DPS of eulachon was considered and rejected because such an approach does not meet the legal requirements of the ESA. We considered the alternative of designating all specific areas (*i.e.*, no areas excluded); however, for three areas (all of the Quinault and Klamath Rivers and part of the Elwha River), the benefits of exclusion outweighed the benefits of including them in the designation. Thus, NMFS also considered the alternative of designating all specific areas, but excluding these areas. This alternative helps to reduce the number of small businesses potentially affected from 571 to 540, and the total potential annualized economic impact to small businesses would be reduced from \$498,000 to \$459,000.

#### *Executive Order 13211*

On May 18, 2001, the President issued an executive order on regulations that significantly affect energy supply, distribution, and use. E.O. 13211 requires agencies to prepare Statements of Energy Effects when undertaking any action that promulgates or is expected to lead to the promulgation of a final rule or regulation that (1) is a significant regulatory action under E.O. 12866 and (2) is likely to have a significant adverse effect on the supply, distribution, or use of energy.

We have considered the potential impacts of this action on the supply, distribution, or use of energy and find the designation of critical habitat will not have impacts that exceed the thresholds identified above (NMFS, 2010c).

#### *Unfunded Mandates Reform Act (2 U.S.C. 1501 et seq.)*

In accordance with the Unfunded Mandates Reform Act, NMFS makes the following findings:

(a) This proposed rule will not produce a Federal mandate. In general, a Federal mandate is a provision in legislation, statute or regulation that would impose an enforceable duty upon state, local, tribal governments, or the private sector and includes both "Federal intergovernmental mandates" and "Federal private sector mandates." These terms are defined in 2 U.S.C. 658(5)–(7). "Federal intergovernmental mandate" includes a regulation that "would impose an enforceable duty upon State, local, or tribal governments" with two exceptions. It excludes "a condition of Federal assistance." It also excludes "a duty arising from participation in a voluntary Federal program," unless the regulation "relates to a then-existing Federal program under which \$500,000,000 or more is

provided annually to state, local, and tribal governments under entitlement authority," if the provision would "increase the stringency of conditions of assistance" or "place caps upon, or otherwise decrease, the Federal Government's responsibility to provide funding" and the state, local, or tribal governments "lack authority" to adjust accordingly. (At the time of enactment, these entitlement programs were: Medicaid; Aid to Families with Dependent Children work programs; Child Nutrition; Food Stamps; Social Services Block Grants; Vocational Rehabilitation State Grants; Foster Care, Adoption Assistance, and Independent Living; Family Support Welfare Services; and Child Support Enforcement.)

"Federal private sector mandate" includes a regulation that "would impose an enforceable duty upon the private sector, except (i) a condition of Federal assistance; or (ii) a duty arising from participation in a voluntary Federal program." The designation of critical habitat does not impose a legally binding duty on non-Federal government entities or private parties. Under the ESA, the only regulatory effect is that Federal agencies must ensure that their actions do not destroy or adversely modify critical habitat under section 7. While non-Federal entities which receive Federal funding, assistance, permits or otherwise require approval or authorization from a Federal agency for an action may be indirectly impacted by the designation of critical habitat, the legally binding duty to avoid destruction or adverse modification of critical habitat rests squarely on the Federal agency. Furthermore, to the extent that non-Federal entities are indirectly impacted because they receive Federal assistance or participate in a voluntary Federal aid program, the Unfunded Mandates Reform Act would not apply; nor would critical habitat shift the costs of the large entitlement programs listed above to state governments.

(b) Due to the existing protection afforded to the proposed critical habitat from existing critical habitat for salmon and steelhead (70 FR 52630; September 2, 2005), Southern DPS of green sturgeon (74 FR 52300; October 9, 2009), and/or bull trout (70 FR 56212; September 26, 2005), we do not anticipate that this proposed rule will significantly or uniquely affect small governments. As such, a Small Government Agency Plan is not required.

### Takings

Under Executive Order 12630, Federal agencies must consider the effects of their actions on constitutionally protected private property rights and avoid unnecessary takings of property. A taking of property includes actions that result in physical invasion or occupancy of private property, and regulations imposed on private property that substantially affect its value or use. In accordance with E.O. 12630, this proposed rule does not have significant takings implications. A takings implication assessment is not required. The designation of critical habitat affects only Federal agency actions. We do not expect the proposed critical habitat designation to impose additional burdens on land use or affect property values. Additionally, the proposed critical habitat designation does not preclude the development of Habitat Conservation Plans and issuance of incidental take permits for non-Federal actions. Owners of areas included within the proposed critical habitat designation would continue to have the opportunity to use their property in ways consistent with the survival of listed southern DPS eulachon.

### Coastal Zone Management Act

Section 307(c)(1) of the Federal Coastal Zone Management Act of 1972 (16 U.S.C. 1456) requires that all Federal activities that affect the land or water use or natural resource of the coastal zone be consistent with approved state coastal zone management programs to the maximum extent practicable. We have determined that this proposed designation of critical habitat is consistent to the maximum extent practicable with the enforceable policies of approved Coastal Zone Management Programs of California, Oregon, and Washington. The determination has been submitted for review by the responsible agencies in the aforementioned states.

### Federalism

In accordance with Executive Order 13132, we determined that this proposed rule does not have significant Federalism effects and that a Federalism assessment is not required. In keeping with Department of Commerce policies, we request information from, and will coordinate development of this proposed critical habitat designation with, appropriate state resource agencies in California, Oregon, and Washington. The proposed designation may have some benefit to state and local resource agencies in that the areas essential to the conservation of the

species are more clearly defined, and the essential features of the habitat necessary for the survival of the southern DPS of eulachon are specifically identified. It may also assist local governments in long-range planning (rather than waiting for case-by-case ESA section 7 consultations to occur).

### Civil Justice Reform

The Department of Commerce has determined that this proposed rule does not unduly burden the judicial system and meets the requirements of sections 3(a) and 3(b)(2) of Executive Order 12988. We are proposing to designate critical habitat in accordance with the provisions of the ESA. This proposed rule uses standard property descriptions and identifies the essential features within the designated areas to assist the public in understanding the habitat needs of southern DPS eulachon.

### Paperwork Reduction Act of 1995 (44 U.S.C. 3501 et seq.)

This proposed rule does not contain new or revised information collection requirements for which Office of Management and Budget (OMB) approval is required under the Paperwork Reduction Act. This proposed rule will not impose recordkeeping or reporting requirements on state or local governments, individuals, businesses, or organizations. Notwithstanding any other provision of the law, no person is required to respond to, nor shall any person be subject to a penalty for failure to comply with, a collection of information subject to the requirements of the PRA, unless that collection of information displays a currently valid OMB Control Number.

### National Environmental Policy Act of 1969 (NEPA)

We have determined that an environmental analysis as provided for under NEPA is not required for critical habitat designations made pursuant to the ESA. See *Douglas County v. Babbitt*, 48 F.3d 1495 (9th Cir. 1995), cert. denied, 116 S.Ct. 698 (1996).

### Government-to-Government Relationship With Tribes

Executive Order 13175, Consultation and Coordination with Indian Tribal Governments, outlines the responsibilities of the Federal Government in matters affecting tribal interests. If NMFS issues a regulation with tribal implications (defined as having a substantial direct effect on one or more Indian tribes, on the relationship between the Federal

Government and Indian tribes, or on the distribution of power and responsibilities between the Federal Government and Indian tribes) we must consult with those governments or the Federal Government must provide funds necessary to pay direct compliance costs incurred by tribal governments.

Pursuant to Executive Order 13175 and Secretarial Order 3206, we consulted with the affected Indian Tribes 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. All of the tribes we consulted expressed concern about the intrusion into tribal sovereignty that critical habitat designation represents. The Secretarial Order defines Indian lands as "any lands title to which is either: (1) Held in trust by the United States for the benefit of any Indian tribe or (2) held by an Indian Tribe or individual subject to restrictions by the United States against alienation." Our conversations with the tribes indicate that they view the designation of Indian lands as an unwanted intrusion into tribal self-governance, compromising the government-to-government relationship that is essential to achieving our mutual goal of conserving threatened and endangered salmonids.

For the general reasons described in the Other Relevant Impacts—Impacts to Tribal Sovereignty and Self-Governance section above, the draft ESA 4(b)(2) analysis has led us to propose the exclusion of all Indian lands in our proposed designation for the southern DPS of eulachon. Consistent with other proposed exclusions, any exclusion in the final rule will be made only after consideration of all comments received.

### References Cited

A complete list of all references cited in this rulemaking can be found on our Web site at <http://www.nwr.noaa.gov/> and is available upon request from the NMFS office in Portland, Oregon (see ADDRESSES.)

### List of Subjects in 50 CFR Part 226

Endangered and threatened species.

Dated: December 29, 2010.

### Eric C. Schwaab,

Assistant Administrator for Fisheries,  
National Marine Fisheries Service.

For the reasons set out in the preamble, we propose to amend part 226, title 50 of the Code of Federal Regulations as set forth below:

**PART 226—DESIGNATED CRITICAL HABITAT**

1. The authority citation of part 226 continues to read as follows:

**Authority:** 16 U.S.C. 1533.

2. Add § 226.222, to read as follows:

**§ 226.222 Critical habitat for the southern Distinct Population Segment of eulachon. (Thaleichthys pacificus).**

Critical habitat is designated for the southern Distinct Population Segment of eulachon (southern DPS) as described in this section. The textual descriptions of critical habitat in this section are the definitive source for determining the critical habitat boundaries. The overview maps are provided for general guidance only and not as a definitive source for determining critical habitat boundaries. In freshwater areas, critical habitat includes the stream channel and a lateral extent as defined by the ordinary high-water line (33 CFR 329.11). In areas where the ordinary high-water line has not been defined, the lateral extent will be defined by the bankfull elevation. Bankfull elevation is the level at which water begins to leave the channel and move into the floodplain and is reached at a discharge which generally has a recurrence interval of 1 to 2 years on the annual flood series. In estuarine areas, critical habitat includes tidally influenced areas as defined by the elevation of mean higher high water.

**(a) Critical habitat boundaries.**

Critical habitat is designated to include the following areas in California, Oregon, and Washington:

(1) Mad River, California. From the mouth of the Mad River (40°57'37" N./

124°7'36" W.) upstream to the confluence with the North Fork Mad River (40°52'30" N./123°59'26" W.).

(2) Redwood Creek, California. From the mouth of Redwood Creek (41°17'33" N./124°5'30" W.) upstream to the confluence with Prairie Creek (41°17'59" N./124°3'00" W.).

(3) Umpqua River, Oregon. From the mouth of the Umpqua River (43°40'8" N./124°12'36" W.) upstream to the confluence with Mill Creek (43°39'20" N./123°52'34" W.).

(4) Tenmile Creek, Oregon. From the mouth of Tenmile Creek (44°13'34" N./124°6'45" W.) upstream to the Highway 101 bridge crossing (44°13'27" N./124°6'35" W.).

(5) Sandy River, Oregon. From the confluence with the Columbia River upstream to the confluence with Gordon Creek (45°29'45" N./122°16'41" W.).

(6) Columbia River, Oregon and Washington. From the mouth of the Columbia River (46°15'9" N./124°4'32" W.) upstream to Bonneville Dam (45°38'40" N./121°56'27" W.).

(7) Grays River, Washington. From the confluence with the Columbia River upstream to Covered Bridge Road (46°21'17" N./123°34'52" W.).

(8) Elochoman River, Washington. From the confluence with the Columbia River to Washington State Highway 4 bridge crossing (46°13'44" N./123°23'39" W.).

(9) Cowlitz River, Washington. From the confluence with the Columbia River upstream to the Cowlitz Salmon Hatchery barrier dam (46°30'45" N./122°37'60" W.).

(10) Kalama River, Washington. From the confluence with the Columbia River upstream to the bridge at Modrow Road (46°2'50" N./122°50'15" W.).

(11) Lewis River, Washington. From the confluence with the Columbia River upstream to Merwin Dam (45°57'24" N./122°33'21" W.).

(12) Elwha River, Washington. From the mouth of the Elwha River (48°8'52" N./123°34'5" W.) upstream to Elwha Dam (48°5'42" N./123°33'22" W.).

(b) Physical or biological features essential for conservation. The physical or biological features essential for conservation of southern DPS eulachon are:

(1) Freshwater spawning and incubation sites with water flow, quality and temperature conditions and substrate supporting spawning and incubation.

(2) Freshwater and estuarine migration corridors free of obstruction and with water flow, quality and temperature conditions supporting larval and adult mobility, and with abundant prey items supporting larval feeding after the yolk sac is depleted.

(3) Nearshore and offshore marine foraging habitat with water quality and available prey, supporting juveniles and adult survival.

(c) Indian lands. Critical habitat does not include any Indian lands of the following Federally-recognized Tribes in the States of California, Oregon, and Washington:

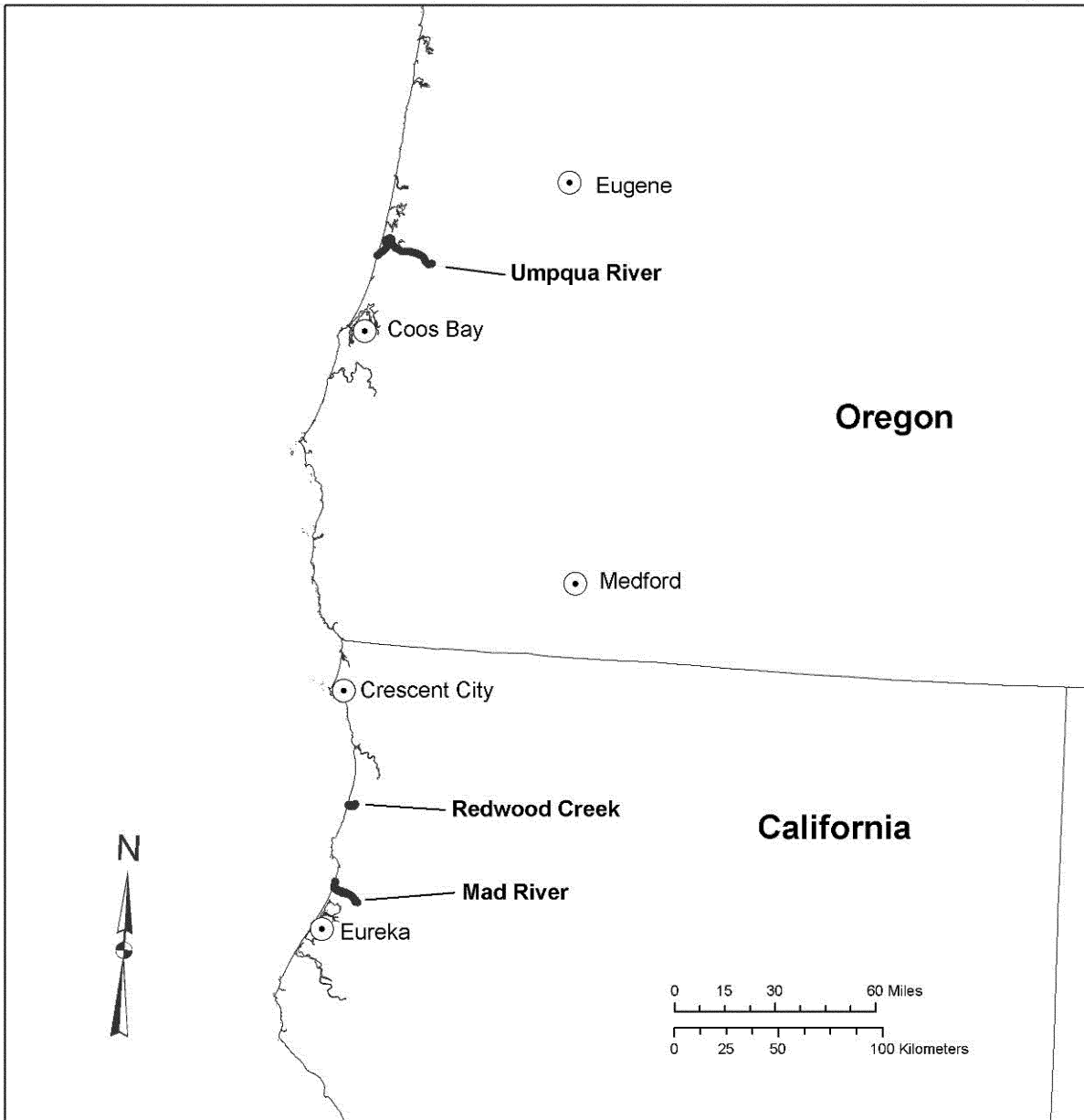
- (1) Lower Elwha Tribe, Washington;
- (2) Quinault Tribe, Washington;
- (3) Yurok Tribe, California; and
- (4) Resighini Rancheria, California.

(d) Maps of proposed critical habitat for the southern DPS of eulachon follow:




**BILLING CODE 3510-22-P**

# Proposed Critical Habitat for the Southern DPS of Eulachon

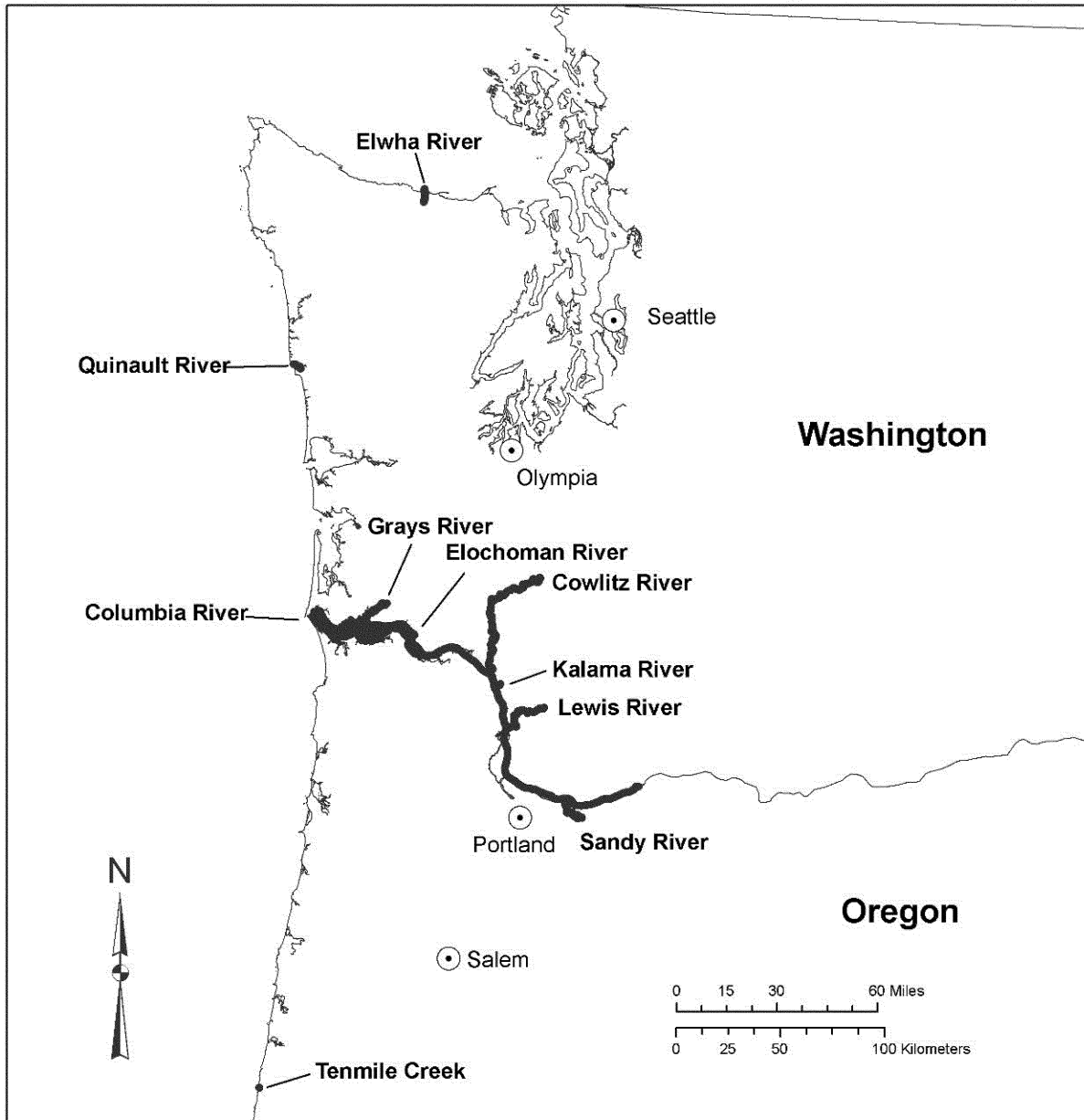
# California & Southern Oregon



## Legend

-  Riverine and Estuarine Areas Proposed as Critical Habitat
-  State Boundary
-  Cities and Towns

# Proposed Critical Habitat for the Southern DPS of Eulachon Northern Oregon & Washington



**Legend**

- Riverine and Estuarine Areas Proposed as Critical Habitat
- State Boundary
- Cities and Towns