

CALIFORNIA COASTAL COMMISSION

15 FREMONT, SUITE 2000
 SAN FRANCISCO, CA 94105-2219
 VOICE AND TDD (415) 904-5200



Tu 11b

Staff Report and Recommendation on Consistency Determination

Consistency Determination

No. CD-173-97

Staff: TNP-SF

File Date: 12/22/97

45th Day: 2/5/98

60th Day: 2/20/98

Commission Meeting: 2/3-6/98

Federal Agency: National Marine Fisheries Service

Project Location: Accessible reaches of all rivers between, and including, the San Lorenzo River and the California/Oregon border (Santa Cruz, San Mateo, Sonoma, Mendocino, Humboldt, and Del Norte Counties) (Exhibit 1).

Project Description: Designation of critical habitat for the coho salmon (Exhibit 2).

Executive Summary

On December 22, 1997, the Commission received a consistency determination from the National Marine Fisheries Service (NMFS) for the designation of critical habitat for two evolutionarily significant units of the coho salmon. Under the Endangered Species Act, NMFS is required, to the extent possible, to designate critical habitat for species it has listed as threatened or endangered. The Central California Coast and Northern California Coast coho salmon are both listed as threatened species under the Endangered Species Act. NMFS proposes to designate a number of rivers in Central and Northern California as critical habitat for coho salmon populations (see exhibit 1). (Note: the Service's proposal also includes rivers in southern Oregon and under the jurisdiction of the San Francisco Bay Conservation and Development Commission; however, the Coastal Commission's review and action on this consistency determination is limited to those rivers in the California coastal zone.)

This consistency determination is only for the designation of these areas as critical habitat for the coho salmon; no development or other habitat management measures are proposed as part of this submittal. The proposed project will help protect the coho salmon, and is therefore consistent with Section 30240 of the Coastal Act. The designation of critical habitat itself does

not modify any existing activities and does not mandate any specific management or recovery actions. The designation does not conflict with any other Coastal Act policies.

Staff Summary and Recommendation:

I. Staff Summary

A. *Project Description:* The National Marine Fisheries Service (NMFS) proposes to designate critical habitat for two evolutionarily significant units of coho salmon pursuant to the Endangered Species Act. The critical habitat for the central California coast unit includes reaches of all rivers accessible by fish, including estuarine areas and tributaries, between, and including, the San Lorenzo River to the Punta Gorda River (Santa Cruz County to Humboldt County). For the northern California coast unit, the proposed habitat designation encompasses accessible reaches of all rivers, including estuarine areas and tributaries, from, and including, the Mattole River to the California/Oregon border (Humboldt County and Del Norte County). (Note: The National Marine Fisheries Service proposal also includes the Mill Valley Creek and Corte Madera Creek, under the San Francisco Bay Conservation and Development Commission's jurisdiction, and rivers in northern Oregon (see exhibit 1). The Coastal Commission's review and action on this consistency determination is limited to those areas affecting the California coastal zone.) Critical habitat includes all waterways, substrate, and adjacent riparian zones below longstanding, naturally impassable barriers.

The Endangered Species Act requires, to the maximum extent possible, that NMFS designate critical habitat when it proposes to list a species as threatened or endangered under the Act. NMFS published its determination to list the central California coast coho salmon as threatened in October, 1996, and its determination to list the northern California coast coho salmon as threatened in May, 1997. At the time the coho salmon was listed under the Endangered Species Act, NMFS did not have sufficient information to determine what areas qualified as critical habitat. After obtaining additional information, NMFS has now made the determination of what areas qualify as critical habitat for these two units of coho salmon. This determination is described in detail in Exhibit 2.

B. *Federal Agency's Consistency Determination:* The National Marine Fisheries Service has determined the project to be consistent to the maximum extent practicable with the California Coastal Management Program.

II. Staff Recommendation:

Staff recommends that the Commission adopt the following motion:

MOTION: I move that the Commission *concur* with the National Marine Fisheries Service's consistency determination.

The staff recommends a YES vote on this motion. A majority vote of the prevailing commissioners in the affirmative will result in adoption of the following resolution and findings:

The Commission hereby *concur*s with the consistency determination made by the National Marine Fisheries Service for the proposed project, finding that the project is consistent to the maximum extent practicable with the California Coastal Management Program (CCMP).

III. Findings and Declarations:

The Commission finds and declares as follows:

A. Environmentally Sensitive Habitat:

Section 30240 of the Coastal Act provides for the protection of sensitive habitat areas. This section states, in part:

(a) Environmentally sensitive habitat areas shall be protected against any significant disruption of habitat values, and only uses dependent on those resources shall be allowed within those areas.

(b) Development in areas adjacent to environmentally sensitive habitat areas and parks and recreation areas shall be sited and designed to prevent impacts which would significantly degrade those areas, and shall be compatible with the continuance of those habitat and recreation areas.

This consistency determination proposes the designation of critical habitat areas for the coho salmon; no other habitat management measures or physical development are proposed as part of this submittal. Designations of critical habitat are consistent with Section 30240 of the Coastal Act in that the designation is one step in protecting habitat for species listed under the Endangered Species Act. The designation contributes to species conservation by identifying important areas and features that are essential to a species listed under the Endangered Species Act. A full explanation of NMFS rationale for its designation is contained in Exhibit 2, which is incorporated by reference into these findings. The Commission finds that the designation is consistent with Section 30240 of the Coastal Act.

The designation of critical habitat does not in and of itself restrict human activities within an area or mandate any specific management or recovery actions. Any additional development or habitat management actions that would affect coastal resources will need future consistency review. Therefore, the designation does not conflict with any other Coastal Act policies, and is consistent with the Coastal Act.

Figure 10 to Part 226.—Critical Habitat for Central California Coast Coho Salmon



EXHIBIT NO. 1
APPLICATION NO.
CD-173-97

Figure 11 to Part 226.—Critical Habitat for Southern Oregon/Northern California Coast Coho Salmon

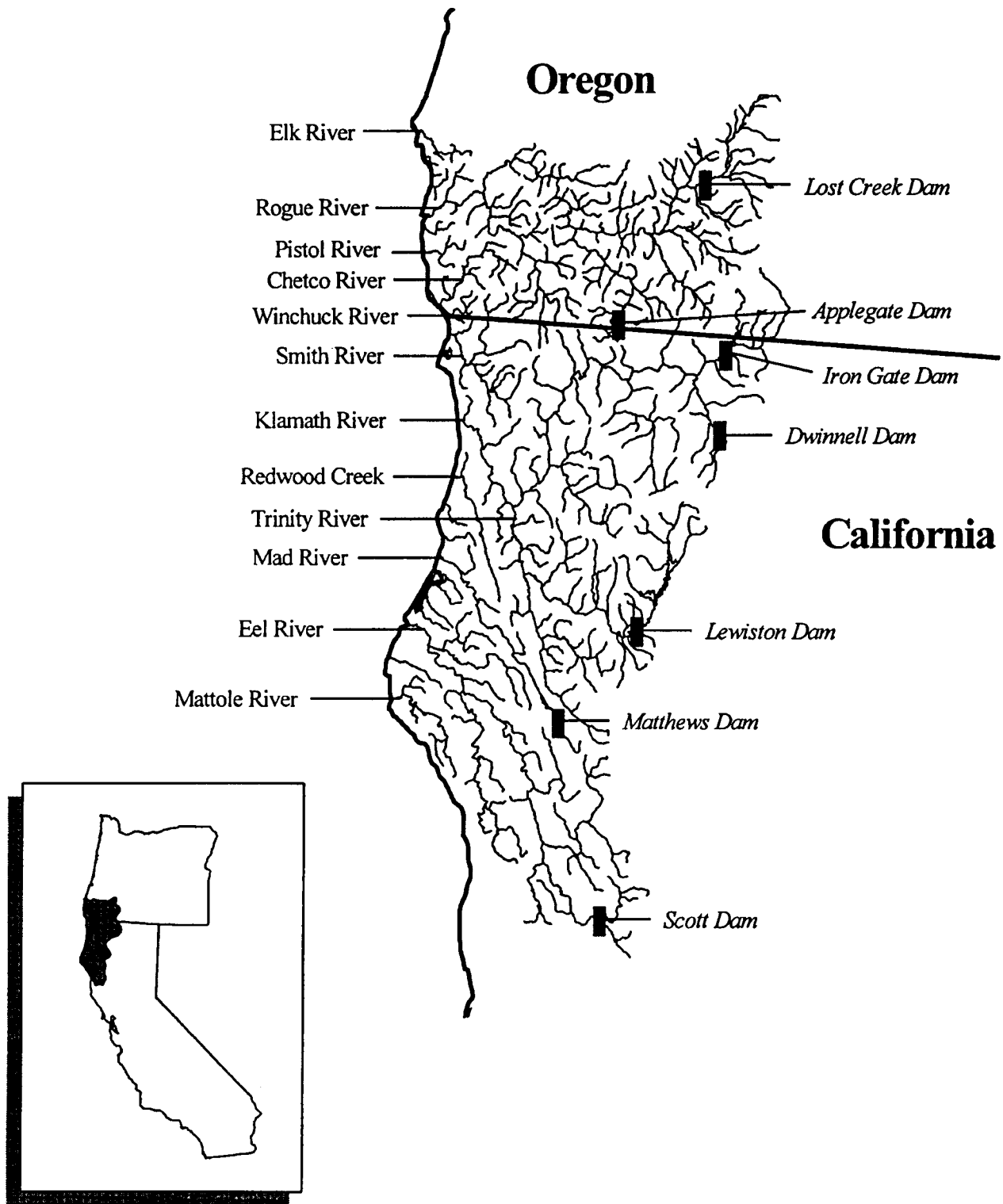


EXHIBIT NO. 1, cont
APPLICATION NO.
CD-173-97

EXHIBIT NO. 2
APPLICATION NO.
CD - 173 - 97

eri

), No

Designated Critical Habitat; Central California Coast and Southern Oregon/Northern California Coast Coho Salmon

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

ACTION: Proposed rule; request for comments and notice of public hearings

SUMMARY: The NMFS proposes to designate critical habitat for two Evolutionarily Significant Units (ESUs) of coho salmon (*Oncorhynchus kisutch*) pursuant to the Endangered Species Act of 1973 (ESA). Critical habitat for the Central California Coast ESU encompasses accessible reaches of all rivers (including estuarine areas and tributaries) between Punta Gorda and the San Lorenzo River (inclusive) in California. Also included are two river entering San Francisco Bay: Mill Valley Creek and Corte Madera Creek. Critical habitat for the Southern Oregon/Northern California Coast ESU encompasses accessible reaches of all rivers (including estuarine areas and tributaries) between the Mattole River in California and the Elk River in Oregon, inclusive.

The areas described in this proposed rule represent the current freshwater and estuarine range of the listed species. For both ESUs, critical habitat includes all waterways, substrate, and adjacent riparian zones below longstanding, naturally impassable barriers (i.e., natural waterfalls in existence for at least several hundred years). NMFS has identified twelve dams in the range of these ESUs that currently block access to habitats historically occupied by coho salmon. However, NMFS has not designated these inaccessible areas as critical habitat because areas downstream are believed to be sufficient for the conservation of the ESUs. The economic and other impacts resulting from this critical habitat designation are expected to be minimal.

DATES: Comments must be received on or before January 26, 1998. Public hearings on this proposed action are scheduled for the month of December 1997. See **SUPPLEMENTARY INFORMATION** for dates and times of public hearings.

ADDRESSES: Comments should be sent to: Garth Griffin, NMFS, Protected Resources Division, 525 NE Oregon St., Suite 500, Portland, OR 97232-2737; or Craig Wingert, NMFS, Southwest Region, Protected Species Management Division, 501 W. Ocean Blvd., Suite 4200, Long Beach, CA 90802-4213. See **SUPPLEMENTARY INFORMATION** for locations of public hearings.

FOR FURTHER INFORMATION CONTACT: Garth Griffin at (503) 231-2005, Craig Wingert at (562) 980-4021, or Joe Blum at (301) 713-1401.

SUPPLEMENTARY INFORMATION:

Background

On October 31, 1996, NMFS published its determination to list Central California Coast coho salmon (*Oncorhynchus kisutch*) as threatened under the ESA (61 FR 56138). In a technical correction to the final listing determination (62 FR 1296, January 9, 1997), NMFS defined the Central California Coast coho salmon ESU to include all coho salmon naturally reproduced in streams between Punta Gorda in Humboldt County, California, and the San Lorenzo River in Santa Cruz County, California. Subsequently, on May 6, 1997, NMFS published its determination to list the Southern Oregon/Northern California Coast coho salmon ESU as threatened under the ESA (62 FR 24588) and defined the ESU to include all coho salmon naturally reproduced in streams between Cape Blanco in Curry County, Oregon, and Punta Gorda in Humboldt County, California.

Section 4(a)(3)(A) of the ESA requires that, to the maximum extent prudent and determinable, NMFS designate critical habitat concurrently with a determination that a species is endangered or threatened. On July 25, 1995, NMFS published a **Federal Register** notice (60 FR 38011) soliciting information and data regarding the biological status of West Coast coho salmon, available salmon conservation measures, and information on areas that may qualify as critical habitat. At the time of final listing for each of these two ESUs, critical habitat was not determinable, since information necessary to perform the required analyses was lacking. NMFS has determined that sufficient information now exists to designate critical habitat for the two listed coho salmon ESUs. NMFS has considered all available information and data in making this proposal.

Use of the term "essential habitat" within this Notice refers to critical habitat as defined by the ESA and

should not be confused with the requirement to describe and identify Essential Fish Habitat (EFH) pursuant to the Magnuson-Stevens Fishery Conservation and Management Act, 16 U.S.C. 1801 et sec.

Definition of Critical Habitat

Critical habitat is defined in section 3(5)(A) of the ESA as "(i) the specific areas within the geographical area occupied by the species * * * 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 * * * upon a determination by the Secretary of Commerce (Secretary) that such areas are essential for the conservation of the species." (see 16 U.S.C. 1532(5)(A)). The term "conservation," as defined in section 3(3) of the ESA, means " * * * 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 Act are no longer necessary." (see U.S.C. 1532(3)).

In designating critical habitat, NMFS considers the following requirements of the species: (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, or rearing of offspring; and, generally, (5) habitats that are protected from disturbance or are representative of the historic geographical and ecological distributions of this species (see 50 CFR 424.12(b)). In addition to these factors, NMFS also focuses on the known physical and biological features (primary constituent elements) within the designated area that are essential to the conservation of the species and may require special management considerations or protection. These essential features may include, but are not limited to, spawning sites, food resources, water quality and quantity, and riparian vegetation (see 50 CFR 424.12(b)).

Consideration of Economic and Other Factors

The economic and other impacts of a critical habitat designation have been considered and evaluated in this proposed rulemaking. NMFS identified present and anticipated activities that may adversely modify the area(s) being considered or be affected by a

designation. An area may be excluded from a critical habitat designation if NMFS determines that the overall benefits of exclusion outweigh the benefits of designation, unless the exclusion will result in the extinction of the species (see 16 U.S.C. 1533(b)(2)).

The impacts considered in this analysis are only those incremental impacts specifically resulting from a critical habitat designation, above the economic and other impacts attributable to listing the species or resulting from other authorities. Since listing a species under the ESA provides significant protection to a species' habitat, in many cases, the economic and other impacts resulting from the critical habitat designation, over and above the impacts of the listing itself, are minimal (see Significance of Designating Critical Habitat section of this notice). In general, the designation of critical habitat highlights geographical areas of concern and reinforces the substantive protection resulting from the listing itself.

Impacts attributable to listing include those resulting from the "take" prohibitions contained in section 9 of the ESA and associated regulations. "Take," as defined in the ESA, means to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct (see 16 U.S.C. 1532(19)). Harm can occur through destruction or modification of habitat (whether or not designated as critical) that significantly impairs essential behaviors, including breeding, feeding, rearing, or migration.

Significance of Designating Critical Habitat

The designation of critical habitat does not, in and of itself, restrict human activities within an area or mandate any specific management or recovery actions. A critical habitat designation contributes to species conservation primarily by identifying important areas and by describing the features within those areas that are essential to the species, thus alerting public and private entities to the area's importance. Under the ESA, the only regulatory impact of a critical habitat designation is through the provisions of section 7. Section 7 applies only to actions with Federal involvement (e.g., authorized, funded, or conducted by a Federal agency) and does not affect exclusively state or private activities.

Under the section 7 provisions, a designation of critical habitat would require Federal agencies to ensure that any action they authorize, fund, or carry out is not likely to destroy or adversely modify designated critical habitat.

Activities that destroy or adversely modify critical habitat are defined as those actions that "appreciably diminish the value of critical habitat for both the survival and recovery" of the species (see 50 CFR 402.02). Regardless of a critical habitat designation, Federal agencies must ensure that their actions are not likely to jeopardize the continued existence of the listed species. Activities that jeopardize a species are defined as those actions that "reasonably would be expected, directly or indirectly, to reduce appreciably the likelihood of both the survival and recovery" of the species (see 50 CFR 402.02). Using these definitions, activities that would destroy or adversely modify critical habitat would also be likely to jeopardize the species. Therefore, the protection provided by a critical habitat designation generally duplicates the protection provided under the section 7 jeopardy provision. Critical habitat may provide additional benefits to a species in cases where areas outside the species' current range have been designated. When actions may affect these areas, Federal agencies are required to consult with NMFS under section 7 (see 50 CFR 402.14(a)), a requirement which may not have been recognized but for the critical habitat designation.

A designation of critical habitat provides a clear indication to Federal agencies as to when section 7 consultation is required, particularly in cases where the action would not result in immediate mortality, injury, or harm to individuals of a listed species (e.g., a action occurring within the critical area when a migratory species is not present). The critical habitat designation, describing the essential features of the habitat, also assists in determining which activities conducted outside the designated area are subject to section 7, i.e., activities that may affect essential features of the designated area.

A critical habitat designation will also assist Federal agencies in planning future actions, since the designation establishes, in advance, those habitats that will be given special consideration in section 7 consultations. With a designation of critical habitat, potential conflicts between Federal actions and endangered or threatened species can be identified and possibly avoided early in the agency's planning process.

Another indirect benefit of a critical habitat designation is that it helps focus Federal, state, and private conservation and management efforts in such areas. Management efforts may address special considerations needed in critical habitat areas, including conservation

regulations to restrict private as well as Federal activities. The economic and other impacts of these actions would be considered at the time of those proposed regulations and, therefore, are not considered in the critical habitat designation process. Other Federal, state, and local management programs, such as zoning or wetlands and riparian lands protection, may also provide special protection for critical habitat areas.

Process for Designating Critical Habitat

Developing a proposed critical habitat designation involves three main considerations. First, the biological needs of the species are evaluated and habitat areas and features that are essential to the conservation of the species are identified. If alternative areas exist that would provide for the conservation of the species, such alternatives are also identified. Second, the need for special management considerations or protection of the area(s) or features is evaluated. Finally, the probable economic and other impacts of designating these essential areas as "critical habitat" are evaluated. After considering the requirements of the species, the need for special management, and the impacts of the designation, the proposed critical habitat is published in the **Federal Register** for comment. The final critical habitat designation, considering comments on the proposal and impacts assessment, is typically published within one year of the proposed rule. Final critical habitat designations may be revised, using the same process, as new information becomes available.

A description of the critical habitat, need for special management, impacts of designating critical habitat, and the proposed action are described in the following sections.

Critical Habitat of California and Southern Oregon Coho Salmon

Biological information for listed coho salmon can be found in NMFS species' status reviews (Bryant, 1994; Weitkamp *et al.*, 1995; NMFS, 1997), species life history summaries (Shapavalov and Taft, 1954; Laufle *et al.*, 1986; Hassler, 1987; Anderson, 1995; Sandercock, 1991), and in **Federal Register** notices of proposed and final listing determinations (59 FR 21744, April 26, 1994; 60 FR 38011, July 25, 1995; 61 FR 56138, October 31, 1996; 62 FR 24588, May 6, 1997).

The current geographic range of coho salmon from the Oregon and California coasts includes vast areas of the North Pacific ocean, nearshore marine zone, and extensive estuarine and riverine

areas. The marine distribution south of Punta Gorda, California, appears to encompass a relatively narrow, nearshore strip approximately 100 km wide (Taft, 1937; Shapovalov and Taft, 1954; Laufle *et al.*, 1986; NOAA, 1990; Weitkamp *et al.*, 1995). North of Punta Gorda, the distribution widens to encompass nearly all marine areas north of 41 °N latitude (Wright, 1968; Godfrey *et al.*, 1975; NOAA, 1990). Major rivers, estuaries, and bays known to support coho salmon within the Southern Oregon/Northern California Coast ESU include the Rogue River, Smith River, Klamath River, Mad River, Humboldt Bay, Eel River, and Mattole River. Within the range of the Central California Coast ESU, major rivers, estuaries, and bays include the Ten Mile, Noyo, Big, Navarro, Garcia, Gualala, and Russian Rivers, and Tomales and San Francisco Bays [Emmett *et al.*, 1991; Nickelson *et al.*, 1992; Brown and Moyle, 1991; Bryant, 1994; California Department of Fish and Game (CDFG), 1994; Weitkamp *et al.*, 1995]. Many smaller coastal rivers and streams in each ESU also provide essential estuarine habitat for coho salmon, but access is often constrained by seasonal fluctuations in hydrologic conditions.

Any attempt to describe the current distribution of coho salmon must take into account the fact that extant populations and densities are a small fraction of historical levels. All coho salmon stocks in the Central California Coast ESU are extremely depressed relative to past abundance and there are limited data to assess population numbers or trends. The main coho salmon stocks in this region are from the Ten Mile River, Big River, Noyo River, Navarro River, Garcia River, Gualala River, Russian River, Lagunitas Creek, Waddell Creek, and Scott Creek. Several of these stocks are heavily influenced by hatcheries and apparently have little natural production in mainstem reaches. Historically, coho salmon abundance within this region was estimated from 50,000 to 125,000 native coho salmon. Presently, coho salmon abundance within this region is estimated to be less than 5,000 naturally reproducing fish, and a vast majority of these are considered to be non-native fish (Brown and Moyle, 1991; Bryant, 1994; CDFG, 1994).

All coho salmon stocks between Punta Gorda and Cape Blanco in the Southern Oregon/Northern California Coast ESU are also depressed relative to past abundance, and there are limited data to assess population numbers or trends currently. The main coho salmon stocks in this region are from the Rogue,

Klamath, and Trinity Rivers, and the latter two are heavily influenced by hatcheries and apparently have little natural production in mainstem reaches. Other important stocks within this ESU include the Winchuck, Chetco, Smith, Mad, Elk, Eel, and the Mattole Rivers. Historically, coho salmon abundance within this region was estimated from 150,000 to 400,000 native fish. Presently, abundance is estimated to be less than 30,000 naturally reproducing coho salmon, and a vast majority of these (roughly 20,000) are considered to be non-native fish (Brown and Moyle, 1991; Bryant, 1994; CDFG, 1994; Weitkamp *et al.*, 1995). Within the range of both ESUs, the species' life cycle can be separated into five essential habitat types: (1) juvenile summer and winter rearing areas; (2) juvenile migration corridors; (3) areas for growth and development to adulthood; (4) adult migration corridors; and (5) spawning areas. Areas 1 and 5 are often located in small headwater streams, while areas 2 and 4 include these tributaries as well as mainstem reaches and estuarine zones. Growth and development to adulthood (area 3) occurs primarily in near- and off-shore marine waters, although final maturation takes place in freshwater tributaries when the adults return to spawn. Within these areas, essential features of coho salmon critical habitat include adequate; (1) substrate, (2) water quality, (3) water quantity, (4) water temperature, (5) water velocity, (6) cover/shelter, (7) food, (8) riparian vegetation, (9) space, and (10) safe passage conditions. Given the vast geographic range occupied by each of these coho salmon ESUs and the diverse habitat types used by the various life stages, it is not practical to describe specific values or conditions for each of these essential habitat features. However, good summaries of these environmental parameters and freshwater factors that have contributed to the decline of this and other salmonids can be found in reviews by CDFG, 1965; California Advisory Committee on Salmon and Steelhead Trout (CACSST), 1988; Brown and Moyle, 1991; Bjornn and Reiser, 1991; Nehlsen *et al.*, 1991; Higgins *et al.*, 1992; California State Lands Commission (CSLC), 1993; Botkin *et al.*, 1995; NMFS, 1996; and Spence *et al.*, 1996.

NMFS believes that the current freshwater and estuarine range of the species encompasses all essential habitat features and is adequate to ensure the species' conservation. Therefore, designation of habitat areas outside the species' current range is not

necessary. It is important to note that habitat quality in this current range is intrinsically related to the quality of upland areas and of inaccessible headwater or intermittent streams which provide key habitat elements (e.g., large woody debris, gravel, water quality) crucial for coho in downstream reaches. NMFS recognizes that estuarine habitats are important for rearing and migrating coho salmon and has included them in this designation. Marine habitats (i.e., oceanic or nearshore areas seaward of the mouth of coastal rivers) are also vital to the species, and ocean conditions are believed to have a major influence on coho salmon survival (see review in Pearcy, 1992). However, no need appears to be necessary for special management consideration or protection of this habitat. Therefore, NMFS is not proposing to designate critical habitat in marine areas at this time. If additional information becomes available that supports the inclusion of such areas, NMFS may revise this designation.

Defining specific river reaches that are critical for coho salmon is difficult because of the current low abundance of the species and of our imperfect understanding of the species' freshwater distribution, both current and historical. The latter is due, in large part, to the lack of comprehensive sampling effort dedicated to monitoring the species. For example, in contrast to coho salmon spawner surveys in index and randomly selected stream reaches north of Cape Blanco, Oregon, information on adult coho salmon distribution in California and southwest Oregon streams has been typically gathered secondarily to chinook salmon surveys. Some surveys concerning juveniles have been conducted. However, they are rarely conducted in a consistent, systematic and comprehensive manner and typically do not give an accurate estimate of future adult escapement.

In California and Oregon, several recent efforts have been made to characterize the species' distribution [Brown and Moyle, 1991; Hassler *et al.*, 1991; The Wilderness Society (TWS), 1993; Bryant, 1994; CDFG, 1994; Weitkamp *et al.*, 1995; Adams *et al.*, 1996; Oregon Coastal Salmon Restoration Initiative (OCSRI), 1997] or to identify watersheds important to at-risk populations of salmonids and resident fishes [Forest Ecosystem Management Assessment Team (FEMAT), 1993]. In southwest Oregon, the Oregon Department of Fish and Wildlife (ODFW) has developed a draft series of maps depicting "core areas" for coho salmon and other species. These core areas are defined as "reaches or

watersheds within individual coastal basins that are judged to be of critical importance to the sustenance of salmon populations that inhabit those basins" (OCSRI, 1997) and are derived from 1:100,000 U.S. Geological Survey (USGS) hydrologic unit maps. The areas depicted are primarily river reaches where best available data or professional judgement indicate high concentrations of spawning or rearing coho salmon. Within the Oregon portion of the Southern Oregon/Northern California Coast ESU, 17 areas have been identified as core areas, and the vast majority of these (14 of 17) are located in the mid-to-upper portions of the Rogue River basin. Notably missing are core areas for this species in the Chetco, Pistol, and Winchuck River basins. The ODFW recognizes that coho salmon do inhabit these other southwest Oregon basins, but considers the species "rare" in coastal streams draining the Siskiyou Mountains (ODFW, 1995). While NMFS believes that this mapping effort holds great promise to focus habitat protection and restoration efforts, the core areas are only a subset of the areas that NMFS believes are critical habitat for coho salmon.

In California, the NMFS and U.S. Forest Service (Bryant and Olsen, in prep.) have developed a series of Geographic Information System maps depicting coho salmon historic and current distribution by using data and information NMFS had compiled for the west coast coho salmon status review and information previously developed on fish distributions by ODFW, California Department of Fish and Game, U.S. Forest Service, and U.S. Fish and Wildlife Service. These coho salmon distribution maps, depicted on USGS hydrologic units at a scale of 1:100,000, are the first attempt to develop a comprehensive distribution profile of coho salmon throughout California's watersheds and are an important step in the development of conservation and recovery efforts.

The limited data across the range of both ESUs, as well as dissimilarities in data types within the Southern Oregon/Northern California Coast ESU, make it difficult to define this species distribution at a fine scale. However, through consultations with other Federal and State biologists, NMFS has been able to construct a clearer picture of coho salmon distribution at the scale of fifth, sixth, and seventh field watersheds (Bryant and Olsen, in prep.). These watersheds and drainages provide a finer scale of geographic resolution than the larger USGS hydrologic units they are nested within. NMFS explored using these data to more accurately

characterize the coho salmon's distribution in these listed ESUs. Except in a very few cases, the assessment revealed that coho salmon, though considerably reduced in population size, are still distributed or have the potential for distribution throughout nearly all watersheds within the geographic range of both ESUs. Notable exceptions are areas above several impassable dams (see Barriers Within the Species' Range section of this notice) and some streams that have had only sporadic presence/absence sampling.

Based on consideration of the best available information regarding the species' current distribution, NMFS believes that the preferred approach to identifying critical habitat is to designate all areas (and their adjacent riparian zones) accessible to the species within the range of each ESU. The NMFS has taken this approach in previous critical habitat designations for other species (e.g., Snake River salmon and proposed for Umpqua River cutthroat trout) which inhabit a wide range of freshwater habitats, in particular small tributary streams (58 FR 68543, December 28, 1993; 62 FR 40786, July 30, 1997). NMFS believes that adopting a more inclusive, watershed-based description of critical habitat is appropriate because it (1) recognizes the species' use of diverse habitats and underscores the need to account for all of the habitat types supporting the species' freshwater and estuarine life stages, from small headwater streams to migration corridors and estuarine rearing areas; (2) takes into account the natural variability in habitat use (e.g., some streams may have fish present only in years with plentiful rainfall) that makes precise mapping difficult; and (3) reinforces the important linkage between aquatic areas and adjacent riparian/upslope areas.

An array of management issues encompass these habitats, and special management considerations will be necessary, especially on lands and streams under Federal ownership (see Activities that May Affect Critical Habitat and Need for Special Management Considerations or Protection sections of this notice). While marine areas are also a critical link in this cycle, NMFS does not believe that special management considerations are needed to conserve the habitat features in these areas. Hence, only the freshwater and estuarine areas are being proposed for critical habitat at this time.

Barriers Within the Species' Range

Within the range of both ESUs, coho salmon face a multitude of barriers that

limit the access of juvenile and adult fish to essential freshwater habitats. While some of these are natural barriers (e.g., waterfalls or high-gradient velocity barriers) that have been in existence for hundreds or thousands of years, more significant are the manmade barriers that have been created in the past several decades (CACSSST, 1988; FEMAT, 1993; Botkin *et al.*, 1995; National Research Council, 1996). The extent of such barriers as culverts and road crossing structures that impede or block fish passage appears to be substantial. For example, of 532 fish presence surveys conducted in Oregon coastal basins during the 1995 survey season, nearly 15 percent of the confirmed end of fish use were due to human barriers, principally road culverts (OCSRI, 1997). Pushup dams/diversions and irrigation withdrawals also present significant barriers or lethal conditions (e.g., high water temperatures) to coho salmon in southern Oregon and California. However, because these manmade barriers can, under certain flow conditions, be surmounted by fish or present only a temporary/seasonal barrier, NMFS does not consider them to delineate the upstream extent of critical habitat.

Numerous hydropower and water storage projects have been built which either block access to areas used historically by coho salmon or alter the hydrograph of downstream river reaches. NMFS has identified a total of 12 dams within the range of both ESUs which currently have no fish passage facilities to allow coho access to former spawning and rearing habitats. Blocked habitat constitutes approximately 9 to 11 percent of the historic range of each ESU. While these blocked areas are proportionally significant in certain basins, NMFS believes this blocked habitat is not currently essential for the recovery of either ESU. NMFS will re-evaluate this conclusion during the recovery planning process and in section 7 consultation.

Because these projects are widely distributed throughout the range of each ESU, they can have a major downstream influence on coho salmon. Such impacts can include the following: Depletion and storage of natural flows which can drastically alter natural hydrological cycles; increase juvenile and adult mortality due to migration delays resulting from insufficient flows or habitat blockages; loss of sufficient habitat due to deterring and blockage; stranding of fish resulting from rapid flow fluctuations; entrainment of juveniles into poorly screened or unscreened diversions; and increased

mortality resulting from increased water temperatures (CACSSST, 1988; Bergren and Filardo, 1991; CDFG, 1991; Reynolds *et al.*, 1993; Chapman *et al.*, 1994; Cramer *et al.*, 1995; NMFS, 1996). In addition to these factors, reduced flows negatively affect fish habitats due to increased deposition of fine sediments in spawning gravels, decreased recruitment of large woody debris and spawning gravels, and encroachment of riparian and non-endemic vegetation into spawning and rearing areas resulting in reduced available habitat (CACSSST, 1988; FEMAT, 1993; Botkin *et al.*, 1995; NMFS, 1996). These dam-related factors will be effectively addressed through section 7 consultations. Following are brief summaries of the 12 dams (by ESU, ordered from south to north) identified within the range of both ESUs and the habitats these dams effectively remove from coho salmon production.

Dams in the Range of the Central California Coast ESU

There are five dams within the range of this ESU that currently block access to historical spawning and rearing areas of coho salmon. Combined, these blocked areas amount to approximately 9 percent of the freshwater and estuarine range of the ESU.

1. Newell Dam is located on Newell Creek (tributary to the San Lorenzo River), approximately 18 miles (29 km) upstream from the Pacific Ocean, and forms Loch Lomond reservoir in Santa Cruz County, California. The dam does not have a fish passage facility, and upon its completion in 1960, blocked access to approximately 5 miles (8 km) of mainstem upstream habitat. These blocked areas constitute approximately 26 percent of the entire San Lorenzo River basin.

2. Peters Dam is located on Lagunitas Creek, approximately 14 miles (23 km) upstream from the Pacific Ocean, and forms Kent Lake in Marin County, California. The dam does not have a fish passage facility, and upon its completion in 1940, blocked access to approximately 8 miles (13 km) of mainstem upstream habitat. These blocked areas constitute approximately 6 percent of the entire Lagunitas Creek basin.

3. Nicasio Dam is located on Nicasio Creek (tributary to Lagunitas Creek), approximately 8 miles (13 km) upstream from the Pacific Ocean, and forms Nicasio Reservoir in Marin County, California. The dam does not have a fish passage facility, and upon its completion in 1961, blocked access to approximately 5 miles (8 km) of mainstem upstream habitat. These

blocked areas constitute approximately 10 percent of the entire Lagunitas Creek basin.

4. Warm Springs Dam is located on Dry Creek (tributary to the Russian River), approximately 45 miles (72 km) upstream from the Pacific Ocean, and forms Sonoma Lake in Sonoma County, California. The dam does not have a fish passage facility, and upon its completion in 1982, blocked access to approximately 50 miles (80 km) of upstream habitat. These blocked areas constitute approximately 9 percent of the entire Russian River basin.

5. Coyote Dam is located on the mainstem Russian River, approximately 95 miles (153 km) upstream from the Pacific Ocean, and forms Lake Mendocino in Mendocino County, California. The dam does not have a fish passage facility, and upon its completion in 1959, blocked access to approximately 36 miles (58 km) of mainstem upstream habitat. These blocked areas constitute approximately 7 percent of the entire Russian River basin.

Dams in the Range of the Southern Oregon/Northern California Coast ESU

There are seven dams within the range of this ESU that currently block access to historical spawning and rearing areas of coho salmon. Combined, these blocked areas amount to approximately 11 percent of the freshwater and estuarine range of the ESU.

1. Scott Dam is located on the mainstem Eel River, approximately 169 miles (272 km) upstream from the Pacific Ocean, and forms Lake Pillsbury in Lake County, California. The dam does not have a fish passage facility, and upon its completion in 1922, blocked access to approximately 36 miles (58 km) of upstream habitat. These blocked areas constitute approximately 8 percent of the entire Eel River basin.

2. Matthews Dam is located on the mainstem Mad River, approximately 79 miles (127 km) upstream from the Pacific Ocean, and forms Ruth Lake in Trinity County, California. The dam does not have a fish passage facility, and upon its completion in 1961, blocked access to approximately 2 miles (3 km) of mainstem upstream habitat. These blocked areas constitute approximately 13 percent of the entire Mad River basin.

3. Lewiston Dam is located on the Trinity River (tributary to the lower Klamath River), approximately 110 miles (177 km) upstream from the Pacific Ocean, and forms Lewiston Reservoir in Trinity County, California. The dam does not have a fish passage

facility, and upon its completion in 1963, blocked access to approximately 109 miles (175 km) of upstream habitat. These blocked areas constitute approximately 24 percent of the Trinity River subbasin and 9 percent of the entire Klamath River basin.

4. Dwinnell Dam is located on the Shasta River (tributary to the upper Klamath River), approximately 214 miles (345 km) upstream from the Pacific Ocean, and forms Dwinnell Reservoir in Siskiyou County, California. The dam does not have a fish passage facility, and upon its completion in 1928, blocked access to approximately 17 miles (27 km) of upstream habitat. These blocked areas constitute approximately 17 percent of the Shasta River subbasin and 2 percent of the entire Klamath River basin.

5. Iron Gate Dam is located on the mainstem Klamath River, approximately 190 miles (306 km) upstream from the Pacific Ocean, and forms Iron Gate Reservoir in Siskiyou County, California. The dam does not have a fish passage facility, and upon its completion in 1961, blocked access to approximately 30 miles (48 km) of mainstem upstream habitat. These blocked areas constitute approximately 8 percent of the entire Klamath River basin.

6. Applegate Dam is located on the Applegate River (tributary to the Rogue River), approximately 140 miles (225 km) upstream from the Pacific Ocean, and forms Applegate Reservoir in Jackson County, Oregon. The dam does not have a fish passage facility, and upon its completion in 1980, blocked access to approximately 30 miles (48 km) of upstream habitat. These blocked areas constitute approximately 29 percent of the Applegate River subbasin and approximately 5 percent of the entire Rogue River basin that was historically accessible to coho salmon.

7. Lost Creek Dam is located on the Rogue River, approximately 156 miles (252 km) upstream from the Pacific Ocean, and forms Lost Creek Reservoir in Jackson County, Oregon. The dam does not have a fish passage facility, and upon its completion in 1977, blocked access to approximately 6 miles (10 km) of mainstem upstream habitat. These blocked areas constitute approximately 1 percent of the entire Rogue River basin that was historically accessible to coho salmon.

Land Ownership Within the Species' Range

Tables 5 and 6 summarize the major river basins inhabited by each coho salmon ESU as well as counties containing basins designated as critical

habitat. NMFS has also derived estimates of land ownership by Federal, State, and Private/Other (primarily private and tribal) landholders for each of the major river basins. Due to data limitations which prevent mapping the precise river reaches inhabited by coho salmon, the ownership estimates were based on land area within entire river basins. Aggregating all basins in the Central California Coast ESU yields ownership estimates of approximately 5 percent Federal; 6 percent State, and 89 percent Private/Other lands. In contrast, ownership for the Southern Oregon/Northern California Coast ESU is approximately 53 percent Federal, 1 percent State, and 46 percent Private/Other lands. These data clearly indicate that the role of Federal land/water management agencies will be greater in the Southern Oregon/Northern California Coast ESU while private landholders will play a major role in protecting and restoring coho salmon habitat in the Central California Coast ESU.

Need for Special Management Considerations or Protection

In order to assure that the essential areas and features are maintained or restored, special management may be needed. Activities that may require special management considerations for freshwater and estuarine life stages of listed coho salmon include, but are not limited to (1) land management; (2) timber harvest; (3) point and non-point water pollution; (4) livestock grazing; (5) habitat restoration; (6) irrigation water withdrawals and returns; (7) mining; (8) road construction; (9) dam operation and maintenance; and (10) dredge and fill activities. Not all of these activities are necessarily of current concern within every watershed; however, they indicate the potential types of activities that will require consultation in the future. No special management considerations have been identified for listed coho salmon while they are residing in the ocean environment.

Activities That May Affect Critical Habitat

A wide range of activities may affect the essential habitat requirements of listed coho salmon. More in-depth discussions are contained in the **Federal Register** notices announcing the listing determinations for each ESU (61 FR 56138, October 31, 1996; 62 FR 24588, May 6, 1997). These activities include water and land management actions of Federal agencies (i.e., U.S. Forest Service, U.S. Bureau of Land Management, U.S. Army Corps of Engineers, U.S. Bureau of Reclamation,

the Federal Highway Administration, and the Federal Energy Regulatory Commission) and related or similar actions of other federally regulated projects and lands, including livestock grazing allocations by the U.S. Forest Service and U.S. Bureau of Land Management; hydropower sites licensed by the Federal Energy Regulatory Commission; dams built or operated by the U.S. Army Corps of Engineers or U.S. Bureau of Reclamation; timber sales conducted by the U.S. Forest Service and U.S. Bureau of Land Management; road building activities authorized by the Federal Highway Administration, U.S. Forest Service, and U.S. Bureau of Land Management; and mining and road building activities authorized by the states of California and Oregon. Other actions of concern include dredge and fill, mining, and bank stabilization activities authorized or conducted by the U.S. Army Corps of Engineers.

The Federal agencies that will most likely be affected by this critical habitat designation include the U.S. Forest Service, U.S. Bureau of Land Management, U.S. Bureau of Reclamation, U.S. Army Corps of Engineers, the Federal Highway Administration, and the Federal Energy Regulatory Commission. This designation will provide these agencies, private entities, and the public with clear notification of critical habitat designated for listed coho salmon and the boundaries of the habitat and protection provided for that habitat by the section 7 consultation process. This designation will also assist these agencies and others in evaluating the potential effects of their activities on listed coho salmon and their critical habitat and in determining when consultation with NMFS is appropriate.

Expected Economic Impacts

The economic impacts to be considered in a critical habitat designation are the incremental effects of critical habitat designation above the economic impacts attributable to either listing or to authorities other than the ESA (see Consideration of Economic and Other Factors section of this notice). Incremental impacts result from special management activities in areas outside the present distribution of the listed species that have been determined to be essential to the conservation of the species. However, NMFS has determined that the species' present freshwater and estuarine range contains sufficient habitat for conservation of the species. Therefore, the economic impacts associated with this critical

habitat designation are expected to be minimal.

The Forest Service, Bureau of Land Management, Bureau of Reclamation, and Army Corps of Engineers manage areas of proposed critical habitat for the listed coho salmon ESUs. The Corps of Engineers and other Federal agencies that may be involved with funding or permits for projects in critical habitat areas may also be affected by this designation. Because NMFS believes that virtually all "adverse modification" determinations pertaining to critical habitat would also result in "jeopardy" conclusions, designation of critical habitat is not expected to result in significant incremental restrictions on Federal agency activities. Critical habitat designation will, therefore, result in few, if any, additional economic effects beyond those that may have been caused by listing and by other statutes. Additionally, previously completed biological opinions would not require re-initiation to reconsider any critical habitat designated in this rulemaking.

Public Comments Solicited; Public Hearings

NMFS is soliciting information, comments and/or recommendations on any aspect of this proposal from all concerned parties (see **ADDRESSES**). In particular, NMFS is requesting any data, maps, or reports describing areas that should be excluded from the critical habitat designation due to either the species' historic absence or the lack of special management considerations required in a particular area. NMFS will consider all information, comments, and recommendations received before reaching a final decision.

Joint Commerce-Interior ESA implementing regulations state that the Secretary "shall promptly hold at least one public hearing if any person so requests within 45 days of publication of a proposed regulation to * * * designate or revise critical habitat." (see 50 CFR 424.16(c)(3)). Public hearings on the proposed rule provide the opportunity for the public to give comments and to permit an exchange of information and opinion among interested parties. NMFS encourages the public's involvement in such ESA matters.

The public will have the opportunity to provide oral and written testimony at the public hearings. Written comments on the proposed rule may also be submitted to Garth Griffin (see **ADDRESSES** and **DATES**). The hearings are scheduled from 6 p.m. to 9 p.m. as follows:

1. Monday, December 8, 1997—Gold Beach City Hall, City Council Chambers, 29592 Ellensburg Avenue, Gold Beach, Oregon.

2. Tuesday, December 9, 1997—Eureka Inn, 518 7th Street, Eureka, California.

3. Thursday, December 11, 1997—Days Inn, 185 Railroad Street, Santa Rosa, California.

These hearings are physically accessible to people with disabilities. Requests for sign language interpretation or other aids should be directed to Garth Griffin or Craig Wingert (see ADDRESSES).

Compliance With Existing Statutes

NMFS has determined that Environmental Assessments and Environmental Impact Statements, as defined under the authority of the National Environmental Policy Act of 1969, need not be prepared 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).

Classification

The Assistant Administrator for Fisheries, NOAA (AA) has determined that this rule is not significant for purposes of Executive Order (E.O.) 12866.

NMFS proposes to designate only the current range of these coho salmon ESUs as critical habitat. Given the affinity of this species to spawn in small streams, this current range encompasses a wide range of habitat, including small tributary reaches, as well as mainstem, off-channel and estuarine areas. Areas excluded from this proposed designation include nearshore habitats in the Pacific Ocean, historically-occupied areas above 12 extant and impassable dams, and headwater areas above impassable natural barriers (e.g., long-standing, natural waterfalls). NMFS has concluded that currently inhabited areas within the range of each ESU are the minimum habitat necessary to ensure conservation and recovery of the listed species.

Since NMFS is designating the current range of the listed species as critical habitat, this designation will not impose any additional requirements or economic effects upon small entities, beyond those which may accrue from section 7 of the ESA. Section 7 requires Federal agencies to insure that any action they carry out, authorize, or fund is not likely to jeopardize the continued existence of any listed species or result in the destruction or adverse modification of critical habitat (ESA section 7(a)(2)). The consultation

requirements of section 7 are nondiscretionary and are effective at the time of species' listing. Therefore, Federal agencies must consult with NMFS and ensure their actions do not jeopardize a listed species, regardless of whether critical habitat is designated.

In the future, should NMFS determine that designation of habitat areas outside the species' current range is necessary for conservation and recovery, NMFS will analyze the incremental costs of that action and assess its potential impacts on small entities, as required by the Regulatory Flexibility Act. Until that time, a more detailed analysis would be premature and would not reflect the true economic impacts of the proposed action on local businesses, organizations, and governments.

Accordingly, the Assistant General Counsel for Legislation and Regulation of the Department of Commerce has certified to the Chief Counsel for Advocacy of the Small Business Administration that the proposed rule, if adopted, would not have a significant economic impact of a substantial number of small entities, as described in the Regulatory Flexibility Act.

This rule does not contain a collection-of-information requirement for purposes of the Paperwork Reduction Act.

The AA has determined that the proposed designation is consistent to the maximum extent practicable with the approved Coastal Zone Management Program of the states of Oregon and California. This determination will be submitted for review by the responsible state agencies under section 307 of the Coastal Zone Management Act.

References

The complete citations for the references used in this document can be obtained by contacting Garth Griffin, NMFS (see ADDRESSES).

List of Subjects in 50 CFR Part 226

Endangered and threatened species, Incorporation by reference.

Dated: November 19, 1997.

David L. Evans,
Deputy Assistant Administrator for Fisheries
National Marine Fisheries Service.

For the reasons set out in the preamble, 50 CFR part 226 is proposed to be amended as follows:

PART 226—DESIGNATED CRITICAL HABITAT

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

Authority: 16 U.S.C. 1533.

2. Sections 226.24 and 226.25 are added to subpart C to read as follows:

§ 226.24 Central California Coast Coho Salmon (*Oncorhynchus kisutch*).

Critical habitat is designated to include all river reaches accessible to listed coho salmon from Punta Gorda in northern California south to the San Lorenzo River in central California, including Mill Valley and Corte Madera Creeks, tributaries to San Francisco Bay. Critical habitat consists of the water, substrate, and adjacent riparian zone of estuarine and riverine reaches in hydrologic units and counties identified in Table 5 of this part. Accessible reaches are those within the historical range of the ESU that can still be occupied by any life stage of coho salmon. Inaccessible reaches are those above specific dams identified in Table 5 of this part or above longstanding, naturally impassable barriers (i.e., natural waterfalls in existence for at least several hundred years). Adjacent riparian zones are defined as those areas within a horizontal distance of 300 ft (91.4 m) from the normal line of high water of a stream channel or adjacent off-channel habitats (600 ft or 182.8 m, when both sides of the channel are included). Figure 10 of this part identifies the general geographic extent of larger rivers and streams within hydrologic units designated as critical habitat for Central California Coast coho salmon. Note that Figure 10 of this part does not constitute the definition of critical habitat but, instead, is provided as a general reference to guide Federal agencies and interested parties in locating the boundaries of critical habitat for listed Central California Coast coho salmon. Hydrologic units are those defined by the Department of the Interior (DOI), U.S. Geological Survey (USGS) publication, "Hydrologic Unit Maps," Water Supply Paper 2294, 1986, and the following DOI, USGS, 1:500,000 scale hydrologic unit maps: State of Oregon, 1974 and State of California, 1978 which are incorporated by reference. This incorporation by reference was approved by the Director of the Federal Register in accordance with 5 U.S.C. 552(a) and 1 CFR part 51. Copies of the USGS publication and maps may be obtained from the USGS, Map Sales, Box 25286, Denver, CO 80225. Copies may be inspected at NMFS, Protected Resources Division, 525 NE Oregon Street—Suite 500, Portland, OR 97232-2737, or NMFS, Office of Protected Resources, 1335 East-West Highway, Silver Spring, MD 20910, or at the Office of the Federal Register, 800 North Capitol Street, NW., Suite 700, Washington, DC.

Note: The incorporation by reference and availability of inspection copies are pending approval by the Office of the Federal Register.

§ 226.25 Southern Oregon/Northern California Coast Coho Salmon (*Oncorhynchus kisutch*).

Critical habitat is designated to include all river reaches accessible to listed coho salmon between Cape Blanco, Oregon, and Punta Gorda, California. Critical habitat consists of the water, substrate, and adjacent riparian zone of estuarine and riverine reaches in hydrologic units and counties identified in Table 6 of this part. Accessible reaches are those within the historical range of the ESU that can still be occupied by any life stage of coho salmon. Inaccessible reaches are those above specific dams identified in Table 6 of this part or above longstanding, naturally impassable barriers (i.e., natural waterfalls in existence for at least several hundred years). Adjacent riparian zones are defined as those areas

within a horizontal distance of 300 ft (91.4 m) from the normal line of high water of a stream channel or adjacent off-channel habitats (600 ft or 182.8 m, when both sides of the channel are included). Figure 11 of this part identifies the general geographic extent of larger rivers and streams within hydrologic units designated as critical habitat for Southern Oregon/Northern California Coast coho salmon. Note that Figure 11 of this part does not constitute the definition of critical habitat but, instead, is provided as a general reference to guide Federal agencies and interested parties in locating the boundaries of critical habitat for listed Southern Oregon/Northern California Coast coho salmon. Hydrologic units are those defined by the Department of the Interior (DOI), U.S. Geological Survey (USGS) publication, "Hydrologic Unit Maps," Water Supply Paper 2294, 1986, and the following DOI, USGS, 1:500,000 scale hydrologic unit maps: State of Oregon (1974) and State of California

(1978) which are incorporated by reference.

This incorporation by reference was approved by the Director of the Federal Register in accordance with 5 U.S.C. 552(a) and 1 CFR part 51. Copies of the USGS publication and maps may be obtained from the USGS, Map Sales, Box 25286, Denver, CO 80225. Copies may be inspected at NMFS, Protected Resources Division, 525 NE Oregon Street—Suite 500, Portland, OR 97232-2737, or NMFS, Office of Protected Resources, 1335 East-West Highway, Silver Spring, MD 20910, or at the Office of the Federal Register, 800 North Capitol Street, NW., Suite 700, Washington, DC.

Note: The incorporation by reference and availability of inspection copies are pending approval by the Office of the Federal Register.

3. Tables 5 and 6 are added in numerical order to part 226 to read as follows:

TABLE 5 TO PART 226.—HYDROLOGIC UNITS AND COUNTIES CONTAINING CRITICAL HABITAT FOR THREATENED CENTRAL CALIFORNIA COHO SALMON, AND DAMS/RESERVOIRS REPRESENTING THE UPSTREAM EXTENT OF CRITICAL HABITAT

Hydrologic unit name	Hydrologic unit No.	Counties contained in hydrologic unit and within range of ESU ¹	Dams (reservoirs)
San Lorenzo-Soquel	18060001	Santa Cruz (CA), San Mateo (CA)	1. Newell Dam (Loch Lomond).
San Francisco Coastal South	18050006	San Mateo (CA).	
San Pablo Bay	18050002	Marin (CA), Napa (CA).	
Tomales-Drake Bays	18050005	Marin (CA), Sonoma (CA)	
Bodega Bay	18010111	Marin (CA), Sonoma (CA).	
Russian	18010110	Sonoma (CA), Mendocino (CA)	2. Peters Dam (Kent Lake).
Gualala-Salmon	18010109	Sonoma (CA), Mendocino (CA).	3. Nicasio Dam (Nicasio Reservoir).
Big-Navarro-Garcia	18010108	Mendocino (CA).	4. Warm Springs Dam (Sonoma Lake)
			5. Coyote Dam (Lake Mendocino).

¹ Some counties have very limited overlap with estuarine, riverine, or riparian habitats identified as critical habitat for this ESU. Consult USG hydrologic unit maps (available from USGS) to determine specific county and basin boundaries.

TABLE 6 TO PART 226.—HYDROLOGIC UNITS AND COUNTIES CONTAINING CRITICAL HABITAT FOR THREATENED SOUTHERN OREGON/NORTHERN CALIFORNIA COHO SALMON, AND DAMS/RESERVOIRS REPRESENTING THE UPSTREAM EXTENT OF CRITICAL HABITAT

Hydrologic unit name	Hydrologic unit No.	Counties contained in hydrologic unit and within range of ESU ¹	Dams (reservoirs)
Mattole	18010107	Humboldt (CA), Mendocino (CA).	1. Scott Dam (Lake Pillsbury).
South Fork Eel	18010106	Mendocino (CA), Humboldt (CA).	
Lower Eel	18010105	Mendocino (CA), Humboldt (CA), Trinity (CA).	
Middle Fork Eel	18010104	Mendocino (CA), Trinity (CA), Glenn (CA), Lake (CA).	
Upper Eel	18010103	Mendocino (CA), Glenn (CA), Lake (CA)	
Mad-Redwood	18010102	Humboldt (CA), Trinity (CA)	
Smith	18010101	Del Norte (CA), Curry (OR).	
South Fork Trinity	18010212	Humboldt (CA), Trinity (CA).	
Trinity	18010211	Humboldt (CA), Trinity (CA)	
Salmon	18010210	Siskiyou (CA).	
Lower Klamath	18010209	Del Norte (CA), Humboldt (CA), Siskiyou (CA).	2. Matthews Dam (Ruth Lake).
Scott	18010208	Siskiyou (CA).	
Shasta	18010207	Siskiyou (CA)	
Upper Klamath	18010206	Siskiyou (CA), Jackson (OR)	
Chetco	17100312	Curry (OR), Del Norte (CA).	
			3. Lewiston Dam (Lewiston Reservoir).
			4. Dwinnell Dam (Dwinnell Reservoir).
			5. Irongate Dam (Irongate Reservoir).

TABLE 6 TO PART 226.—HYDROLOGIC UNITS AND COUNTIES CONTAINING CRITICAL HABITAT FOR THREATENED SOUTHERN OREGON/NORTHERN CALIFORNIA COAST COHO SALMON, AND DAMS/RESERVOIRS REPRESENTING THE UPSTREAM EXTENT OF CRITICAL HABITAT—Continued

Hydrologic unit name	Hydrologic unit No.	Counties contained in hydrologic unit and within range of ESU ¹	Dams (reservoirs)
Illinois	17100311	Curry (OR), Josephine (OR), Del Norte (CA).	
Lower Rogue	17100310	Curry (OR), Josephine (OR), Jackson (OR).	
Applegate	17100309	Josephine (OR), Jackson (OR), Siskiyou (CA).	6. Applegate Dam (Applegate Reservoir).
Middle Rogue	17100308	Josephine (OR), Jackson (OR).	
Upper Rogue	17100307	Jackson (OR), Klamath (OR), Douglas (OR).	7. Lost Creek Dam (Lost Creek Reservoir).
Sixes	17100306	Curry (OR).	

¹ Some counties have very limited overlap with estuarine, riverine, or riparian habitats identified as critical habitat for this ESU. Consult USG hydrologic unit maps (available from USGS) to determine specific county and basin boundaries.

4. Figures 10 and 11 are added in numerical order to part 226 to read as follows:

Figures to Part 226

* * * * *

BILLING CODE 3510-22-P