

FOR FURTHER INFORMATION CONTACT: Lisa Lierheimer at (301)713-1401.

SUPPLEMENTARY INFORMATION:

Background

Section 4(b)(3)(A) of the Endangered Species Act (ESA) of 1973, as amended (16 U.S.C. *et seq.*), requires that NMFS make a finding on whether a petition to list, delist, or reclassify a species presents substantial scientific or commercial information to demonstrate that the petitioned action may be warranted. NMFS' standard for substantial information is stated at 50 CFR 424.14(b) as "that amount of information that would lead a reasonable person to believe that the measure proposed in the petition may be warranted." This finding is to be based on all information available to NMFS at the time. To the maximum extent practicable, this finding is to be made within 90 days of the receipt of the petition, and the finding is to be published promptly in the **Federal Register**. If the finding is positive, NMFS is also required to promptly commence a review of the status of the involved species.

NMFS has made a 90-day finding on a petition to delist coho salmon (*Oncorhynchus kisutch*) in Siskiyou County, California. The petition, dated January 4, 1999, was submitted by Mr. Richard A. Gierak, Director of New Frontiers Institute, Inc., and was received by NMFS on January 20, 1999. The petitioner requested that NMFS delist coho salmon (*Oncorhynchus kisutch*) in Siskiyou County, California. This population is included in the Southern Oregon/Northern California coho salmon Evolutionarily Significant Unit (ESU); the ESU was listed as a threatened species on May 6, 1997 (62 FR 24588).

The petitioner submitted information from various documents from 1985 through 1998, including NMFS publications, reports, and **Federal Register** documents of salmon listings, and from personal communications on the primary causative factors in the decline of coho salmon in northern California rivers. The petitioner identifies two categories of major factors contributing to the decline of northern California coho: nature (i.e., floods, fire, drought, El Nino), and human activities (i.e., the Marine Mammal Protection Act and the overpopulation of salmonid predators, the removal of salmonid eggs for hatchery production, ocean fishing, and the destruction of estuarine habitats along the coast).

Under section 4(a)(1) of the ESA and the listing regulations at 50 CFR

424.11(c), when a species is considered for listing, NMFS must determine whether the species is endangered or threatened due to any one or a combination of the following factors: (1) The present or threatened destruction, modification, or curtailment of its habitat or range; (2) overutilization for commercial, recreational, scientific, or educational purposes; (3) disease or predation; (4) the inadequacy of existing regulatory mechanism; or (5) other natural or manmade factors affecting its continued existence.

Under 50 CFR 424.11(d), the factors considered in delisting a species are the same as those used to list a species. A species may be delisted only if the best scientific and commercial data indicates that the species is no longer threatened or endangered for the following reasons: (1) Extinction; (2) recovery (the point at which the purposes of the ESA are no longer required); or (3) subsequent investigation reveals that the original data or the interpretation of that data used to list the species was in error.

In its listing determination for coho salmon in the Southern Oregon/Northern California ESU (62 FR 24588, May 6, 1997), NMFS concluded that the current status of the population is the result of a wide range of long-standing, human-induced factors (i.e. habitat degradation, harvest, and artificial propagation) that serve to exacerbate the effects of environmental conditions that adversely impact coho salmon such as drought, poor ocean conditions, and flooding. The specific factors for decline of coho salmon that were identified in the petition (i.e. natural environmental change due to floods, fire, drought and El Nino, and human-induced activities associated with the management of marine mammal populations, fishing, and hatchery practices) were previously considered by NMFS in its listing determination and found to have contributed to the species decline. Information demonstrating that listed salmon have recovered or that the threats to salmon no longer exist were not presented in the petition.

NMFS has reviewed the petition, the literature cited in the petition, and other available literature and information. NMFS finds that the petitioned action does not present substantial scientific or commercial information indicating that delisting coho salmon in Siskiyou County, California, or the Southern Oregon/Northern California coho salmon ESU in which these populations are included, may be warranted.

Authority: 16 U.S.C. 1531 *et seq.*

Dated: March 29, 1999.

Andrew A. Rosenberg,

Deputy Assistant Administrator for Fisheries, National Marine Fisheries Service.

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DEPARTMENT OF COMMERCE

National Oceanic and Atmospheric Administration

50 CFR Parts 223, 224, and 226

[Docket No. 960723205-9057-02; I.D. 121198A]

RIN 1018-AF45

DEPARTMENT OF THE INTERIOR

Fish and Wildlife Service

50 CFR Part 17

Endangered and Threatened Species; Threatened Status for Southwestern Washington/Columbia River Coastal Cutthroat Trout in Washington and Oregon, and Delisting of Umpqua River Cutthroat Trout in Oregon

AGENCIES: National Marine Fisheries Service (NMFS), National Oceanic and Atmospheric Administration (NOAA), Commerce; Fish and Wildlife Service (FWS), Interior.

ACTION: Proposed rule; request for comments.

SUMMARY: NMFS completed a comprehensive status review of coastal cutthroat trout (*Oncorhynchus clarki clarki*) populations in Washington, Oregon, and California and has identified six Evolutionarily Significant Units (ESUs) within this range. Since that time, the question of whether NMFS or FWS (the Services, or we) has ESA jurisdiction over the species has arisen, and we have therefore agreed to resolve this matter before the final listing determination. In addition, the ESA requires FWS concurrence on NMFS ESA delisting determinations. Therefore, we are issuing this proposal jointly. We propose a rule to list one of the six cutthroat trout ESUs as threatened under the Endangered Species Act (ESA). The proposed ESU consists of coastal cutthroat trout populations in southwestern Washington and the Columbia River, excluding the Willamette River above Willamette Falls. We also propose to delist the Umpqua River cutthroat trout ESU currently listed as endangered. Information made available since that listing indicates Umpqua River cutthroat trout are part of a larger ESU

encompassing the coast of Oregon between the Columbia River and Cape Blanco, Oregon, and that this ESU does not warrant listing at this time. NMFS considers this ESU a candidate for listing.

In the proposed ESU, only naturally spawned cutthroat trout are proposed for listing. Prior to the final listing determination, we will examine the relationship between hatchery and naturally spawned populations of cutthroat trout, and populations of cutthroat trout above barriers to assess whether any of these populations warrant listing. This may result in the inclusion of specific hatchery populations or populations above barriers as part of the listed ESU in the final listing determination.

The Services request public comments on the biological issues pertaining to this proposed rule. We also request information on the biological, economic, and any other information relevant to designating critical habitat for the proposed cutthroat trout ESU. We further request suggestions and comments on integrated local/state/tribal/Federal conservation measures that will achieve the purposes of the ESA to recover the health of coastal cutthroat trout populations and the ecosystems upon which they depend. We believe these efforts, if successful, could serve as central components of a broadly based conservation program for recovery and rebuilding of salmonid populations, including coastal cutthroat trout.

DATES: Comments must be received by July 6, 1999. NMFS will announce the dates and locations of public hearings in Washington and Oregon in a separate **Federal Register** document. Requests for additional public hearings must be received by May 20, 1999.

ADDRESSES: Comments on this proposed rule and requests for public hearings or reference materials should be sent to Chief, Protected Resources Division, NMFS, Northwest Region, 525 NE Oregon Street, Suite 500, Portland, OR 97232-2737; fax (503) 230-5435.

FOR FURTHER INFORMATION CONTACT: Garth Griffin, 503-231-2005, Craig Wingert, 562-980-4021, or Christopher Mobley, 301-713-1401 of NMFS, or Catrina Martin, 503-231-6131 of FWS.

SUPPLEMENTARY INFORMATION:

Electronic Access

Reference materials regarding this listing determination can also be obtained from the internet at www.nwr.noaa.gov.

Background

In a document dated September 12, 1994, NMFS announced its intent to conduct comprehensive status reviews for five species of Pacific salmonids, including sea-run cutthroat trout (59 FR 46808). These were in addition to two ongoing status reviews for west coast coho salmon (*O. kisutch*) and steelhead (*O. mykiss*). NMFS completed coastwide status reviews for coho salmon and steelhead on July 25, 1995, and August 9, 1996, respectively (60 FR 38011; 61 FR 41541). On October 4, 1995, NMFS completed its status review for west coast pink salmon (*O. gorbuscha*) (60 FR 51928). In March of 1998, NMFS completed its status reviews for west coast sockeye (*O. nerka*), chum (*O. keta*), and chinook salmon (*O. tshawytscha*) (63 FR 11750; 63 FR 11774; 63 FR 11482). Thus, the current status review for coastal cutthroat trout completes NMFS' comprehensive assessment of seven Pacific salmonid stocks under its ESA jurisdiction (coho, pink, sockeye, chum, and chinook salmon; and steelhead and cutthroat trout).

On December 18, 1997, the Secretary of Commerce received a petition from Oregon Natural Resources Council to list and to designate critical habitat for sea-run cutthroat trout in the States of Washington, Oregon, and California. Copies of this petition are available upon request (see **ADDRESSES**). On March 23, 1998, NMFS accepted this petition as containing substantial scientific information indicating that a status review was warranted (63 FR 13832). Acceptance of this petition invoked the ESA's statutory requirement for NMFS to issue its findings on the coastal cutthroat trout status review by December 18, 1998.

In response to a petition to list Umpqua River cutthroat trout under the ESA, on July 8, 1994 (59 FR 35089), NMFS published a proposed rule to list this ESU, or distinct population (See "Consideration as a 'Species' Under the ESA"), as an endangered species. In this notice, NMFS proposed to include all cutthroat trout life-history types (i.e., non-migratory, freshwater migratory, and anadromous) in the listed ESU. On August 9, 1996 (61 FR 41514), NMFS published a final rule listing Umpqua River coastal cutthroat trout as an endangered species. However, in doing so, NMFS committed to re-evaluate the status of the species within 2 years or as new scientific information became available. The Services re-evaluate the status of Umpqua River cutthroat in this document.

On January 29, 1998, Douglas County, Oregon sued the Secretary of Commerce, alleging that NMFS' listing of Umpqua River cutthroat trout as an endangered species was not based on the "best scientific and commercial data available" in violation of the ESA. On December 14, 1998, the District Court of Oregon upheld NMFS' listing determination, noting that NMFS' ongoing status review of the species provides Douglas County and other parties with an opportunity to submit new information for NMFS' consideration. *Douglas County v. Daley*, No. 98-6024-HO, slip op. at n. 13 (D. OR. Dec. 14, 1998). NMFS considers new information submitted by Douglas County and other parties below.

During the status review process NMFS initiated a series of technical meetings with comanagers (state and tribal governments) and the public. Among these meetings was a series of Pacific Salmon Biological Technical Committee meetings held in Washington, Oregon, and California. Furthermore, on October 13, 1998, NMFS Biological Review Team (BRT) members met with comanagers and discussed their comments on a draft status review report. The BRT considered these comments in drafting their final status review report. Copies of the final status review document entitled "Scientific Conclusions of the Review of the Status of Coastal Cutthroat Trout (*Oncorhynchus clarki clarki*) from Washington, Oregon, and California" (NMFS, 1998a) are available upon request (see **ADDRESSES**).

Agency Jurisdiction for Cutthroat Trout

As described above, NMFS has a history of conducting status reviews on sea-run cutthroat trout. During the status review for Umpqua River sea-run cutthroat trout, NMFS and FWS agreed that NMFS would handle ESA responsibilities for all life forms of the species in the Umpqua River Basin (FWS, 1994). Since that time, the issue of agency jurisdiction has arisen for the various cutthroat life forms in other west coast basins, including the Southwestern Washington/Columbia River cutthroat trout ESU. For this reason, the current proposal to list the Southwestern Washington/Columbia River cutthroat trout ESU is being promulgated jointly. Prior to the final listing determination, one agency will assume lead ESA responsibility for the species.

Data Limitations and Scientific Uncertainty

There is a lack of quantitative information across the range of coastal cutthroat trout. This is not to say that information about coastal cutthroat trout does not exist; in fact, a considerable amount is known about the biology of this species. However, much of this information is qualitative or descriptive, rather than quantitative.

Comprehensive, coastwide data sets on distribution, abundance, age structure, run timing, and other biological characteristics are largely absent for coastal cutthroat trout. The fact that coastal cutthroat trout do not constitute a commercially caught species, with fewer directed fisheries than for co-occurring Pacific salmonids, no doubt has much to do with the paucity of these data. Furthermore, spawning coastal cutthroat trout are more difficult to observe than spawning salmon, and there are almost no large runs that are clear targets for systematic monitoring.

Given the paucity of available data for coastal cutthroat trout, NMFS employed two methods to characterize uncertainty in its risk assessments. Both methods entailed characterizing BRT members' degree of certainty with particular risk conclusions. These methods generally led to consistent results, and the BRT used this information to draw its conclusions regarding the status of ESUs and then to characterize the degree of certainty associated with such scientific conclusions.

Life History of the Species

The life history of coastal cutthroat trout may be one of the most complex of any Pacific salmonid. Unlike other anadromous salmonids, sea-run forms of coastal cutthroat trout do not overwinter in the ocean and only rarely make extended migrations across large bodies of water. Their migrations in the marine environment are usually within 10 kilometers (6 miles) of land (Giger, 1972; Sumner, 1972; Jones, 1976; and Johnston, 1982), but have been detected up to 80 kilometers (50 miles) offshore (Percy, 1997). Although most anadromous cutthroat trout enter seawater as 2- or 3-year-old fish, some may remain in fresh water up to 5 years before entering the sea (Giger, 1972; and Sumner, 1972). Other cutthroat trout may not outmigrate to the ocean, but remain as nonmigrants in small headwater tributaries. Still other cutthroat trout may migrate entirely within freshwater environments (Nicholas, 1978; Tommasson, 1978; and Moring *et al.*, 1986), even when they have access to the ocean (Tomasson,

1978). In the Umpqua River, anadromous, non-migratory, and freshwater migratory (river-migrating) life-history forms have been reported (Loomis and Anglin, 1992; and Loomis *et al.*, 1993). Details of coastal cutthroat trout life history and ecology, including characteristics of particular life-history forms, can be found in published reviews by Hall (1997), Bisson (1997), and Gresswell and Harding (1997). Unfortunately, these reviews indicate that the genetic and environmental factors determining these life-history forms are poorly understood, a situation that has complicated the characterization of ESU boundaries and risk for coastal cutthroat trout.

Consideration as a "Species" Under the ESA

To qualify for listing as a threatened or endangered species, the identified populations of coastal cutthroat trout must constitute "species" under the ESA. The ESA defines a "species" to include "any subspecies of fish or wildlife or plants, and any distinct population segment of any species of vertebrate fish or wildlife which interbreeds when mature." [ESA Section 3(15)] NMFS published a policy describing the agency's application of the ESA definition of "species" to anadromous Pacific salmonid species (56 FR 58612, November 20, 1991). Subsequently, the Services jointly issued a policy addressing the recognition of distinct vertebrate population segments of all vertebrate species under the ESA on February 7, 1996 (61 FR 4722). NMFS' policy provides that a Pacific salmonid population will be considered distinct and, hence, a species under the ESA if it represents an ESU of the biological species. A population must satisfy two criteria to be considered an ESU: (1) It must be reproductively isolated from other conspecific population units (i.e., different populations of the same species), and (2) it must represent an important component in the evolutionary legacy of the biological species. The first criterion, reproductive isolation, need not be absolute, but must be strong enough to permit evolutionarily important differences to accrue in different population units. The second criterion is met if the population contributes substantially to the ecological/genetic diversity of the species as a whole. Guidance on the application of this policy is contained in a NOAA Technical Memorandum entitled "Definition of Species Under the Endangered Species Act:

Application to Pacific Salmon," that is available upon request (see ADDRESSES).

Reproductive Isolation

Genetic data provide useful indirect evidence on reproductive isolation by integrating information about migration and gene flow over evolutionary time frames. However, only a limited number of studies of the genetic population structure of coastal cutthroat trout populations in the Pacific Northwest have been published, and these are very recent. Other studies are contained in unpublished graduate theses. All but one of these studies included samples from a limited geographic range.

In order to address this genetic data gap, NMFS, the Washington Department of Fish and Wildlife (WDFW), and the Oregon Department of Fish and Wildlife (ODFW) recently conducted a coastwide study of biochemical genetic variability in coastal cutthroat trout to help delineate groups of populations for management and conservation. The results of this study are summarized in this document under "Summary of Proposed ESU Determinations" and are discussed in further detail in the status review document (NMFS, 1998a).

Few detailed studies have explored the relationship between non-migratory, freshwater migratory, and anadromous *O. clarki clarki* in the same river basin, cohabitating in the same location. The few existing studies of cutthroat trout show that, although both allele frequencies and morphology may differ between populations above barriers and populations below barriers with access to the sea, these different life-history forms are generally more closely related within a drainage than are populations from different drainages. These results indicate that sea-run and non-migratory populations of cutthroat trout represent a single evolutionary lineage in which the various life-history characteristics have arisen repeatedly in different geographic regions.

With respect to barriers that permit some one-way migration (i.e., downstream migration of smolts but not upstream passage of adults), NMFS concludes that coastal cutthroat trout above these barriers should generally be included in ESUs that contain populations below these barriers. The basis for this conclusion is twofold: (1) Populations above barriers may contribute demographically and genetically to populations below them, even if the number of successful one-way migrants per generation is low, and (2) populations above barriers may represent genetic resources shared by populations below these barriers (and

therefore may constitute a significant component of diversity for an ESU). However, at this time NMFS has not attempted to identify any specific populations above barriers where one-way migration is occurring to a significant extent. Therefore, while such populations are considered part of the biological ESU to which they contribute, NMFS (or the FWS) will determine on a case-by-case basis whether such populations warrant protection under the ESA. Populations of coastal cutthroat trout existing above Willamette Falls in Oregon are an exception to this general rule; this situation and the rationale for this determination are discussed in the following section.

Summary of Proposed ESU Determinations

NMFS' ESU determinations for coastal cutthroat trout in Washington, Oregon, and California are summarized here. A more detailed discussion of ESU determinations is presented in the "Scientific Conclusions of the Review of the Status of Coastal cutthroat (*Oncorhynchus clarki clarki*) trout from Washington, Oregon, and California" (NMFS, 1998a). Copies of this document are available upon request (see ADDRESSES).

(1) Puget Sound ESU

This proposed ESU includes populations of coastal cutthroat trout from drainages of Puget Sound, Hood Canal, the eastern Olympic Peninsula (east of and including the Elwha River), and the Strait of Juan de Fuca. Life-history data indicate that coastal cutthroat trout from Puget Sound generally smolt at a smaller size and possibly at a younger age than those directly entering the open ocean or the outer coastal marine waters. Genetic data also indicate differences among populations in this ESU and those in southwestern Washington and farther south. Genetic data also indicate that, although populations in Puget Sound, Hood Canal, and on the Olympic Peninsula are highly heterogeneous genetically, evidence exists for separation of populations on the Olympic Peninsula from those in the eastern Strait of Juan de Fuca, northern Puget Sound, and Hood Canal. Populations in Hood Canal and along the Strait of Juan de Fuca are distinctive, but show no clear evidence of a transition zone between populations in Puget Sound and southwestern Washington. Populations from the upper Nisqually River (a heavily glacially influenced system in

southern Puget Sound) are markedly distinct genetically from their nearest geographic neighbors. NMFS was unable to ascertain the source of this distinctiveness; possibilities include strong and long-standing reproductive isolation, sharp habitat differences, or a combination of these factors.

Based on distinctive life-history, genetic, and biogeographic patterns, NMFS concludes that the Puget Sound ESU includes all streams in Puget Sound and the Strait of Juan de Fuca west to, and including, the Elwha River. The northern boundary for this ESU is unclear, but genetic data lend support to the hypothesis that this ESU extends into southern British Columbia, including populations along the eastern Georgia Strait north of the city of Vancouver. These data also indicate that Vancouver Island populations are genetically distinct from those on the mainland, providing evidence for reproductive isolation of these groups. In general, this ESU's boundaries reflect an ecoregion in which river drainages have relatively high flows due largely to high precipitation, snow melt, and temperatures moderated by the marine environment. The southern and western boundaries are similar to those previously identified for chinook, coho, chum, and pink salmon, and steelhead; the northern boundary differs from that for chinook and coho salmon (which does not extend into Canada) and for pink, chum, and coho salmon (which does not include eastern Vancouver Island).

(2) Olympic Peninsula ESU

The proposed boundaries of this ESU are similar to those of steelhead and coho salmon, previously reviewed by NMFS (Busby *et al.*, 1996; and Weitkamp *et al.*, 1996) and include coastal cutthroat trout populations from the Strait of Juan de Fuca west of the Elwha River and coastal streams south to, but not including, streams that drain into Grays Harbor. Support for this ESU relies on the ecological distinctiveness of this area, which is characterized by high precipitation, cool water temperatures, and relatively short, high-gradient streams entering directly into the open ocean. Life-history data also suggest that these fish may have different migratory patterns than those in Puget Sound or the Columbia River. Coastal cutthroat trout from this area are relatively large as smolts, and a higher proportion of individuals appear to mature at first return from seawater than is the case in most Puget Sound populations.

Genetic data for this ESU are limited. Populations that have been sampled from the Olympic Peninsula are genetically distinctive but show a stronger genetic affinity to neighboring populations in Puget Sound and in Hood Canal than to those along the Strait of Juan de Fuca (east of the Elwha River). However, at least some of the Olympic Peninsula populations are not strongly differentiated from those in northern or southern Puget Sound, and they are well differentiated from populations to the south along the coast. Available information indicates that this ESU may represent a genetic transition zone between the Puget Sound and Southwestern Washington/Columbia River ESUs.

(3) Southwestern Washington/Columbia River ESU

The proposed boundaries of this ESU are similar to those of the lower Columbia River/southwest Washington Coast coho salmon ESU (Weitkamp *et al.*, 1996). The ESU comprises cutthroat trout in the Columbia River and its tributaries downstream from the Klickitat River in Washington and Fifteenmile Creek in Oregon (inclusive) and the Willamette River and its tributaries downstream from Willamette Falls. The ESU also includes cutthroat trout in Washington coastal drainages from the Columbia River to Grays Harbor (inclusive). Support for these ESU boundaries comes primarily from ecological and genetic information. Ecological characteristics of this region include the presence of extensive intertidal mud and sandflats, similarities in freshwater and estuarine fish faunas, and differences from estuaries to the north of Grays Harbor and to the south of the Columbia River. Genetic samples from coastal cutthroat in southwestern Washington also show a relatively close genetic affinity to the samples from the Columbia River.

Some data support a split of the Columbia River from southwestern Washington coastal cutthroat trout populations. Tagging and recovery data for chinook, coho, and chum salmon indicate different marine distributions for fish from the two areas. The limited dispersal ability of anadromous cutthroat trout may restrict genetic exchange among populations in the two areas, and the areas exhibit differences in their physical estuarine characteristics. An important salmonid parasite, *Ceratomyxa shasta*, occurs in the Columbia River but has not been observed in Willapa Bay or Grays Harbor. WDFW has conducted an unpublished analysis of a small number

of southwestern Washington populations in which it detected a greater differentiation of populations between this ESU and those in the Columbia River than did NMFS in its more comprehensive analysis. WDFW also argues that extensive hatchery influence in some populations may have obscured natural genetic differences between southwestern Washington and lower Columbia River coastal cutthroat trout. However, NMFS concludes that these analyses collectively do not provide compelling evidence for separate coastal cutthroat trout ESUs for the southwestern Washington coast and the Columbia River.

(4) Upper Willamette River ESU

This proposed ESU includes populations of cutthroat trout above Willamette Falls in Oregon. Coastal cutthroat trout, along with spring chinook salmon and winter steelhead, are the only three species of anadromous Pacific salmonids that historically occurred above Willamette Falls. In the Upper Willamette River, these other two species have been identified as separate ESUs in previous status reviews, based on ecological and genetic differences from other Columbia River populations, and on physical and hydrological conditions (Busby *et al.*, 1996; and Myers *et al.*, 1998). Based on information provided by ODFW (1998), Willamette Falls is a nearly complete barrier to anadromous fish, including summer steelhead and coastal cutthroat trout, during summer and early fall. NMFS concludes that the upper Willamette River has probably never supported a substantial anadromous population of cutthroat trout; the primary life-history types that exist above Willamette Falls appear to be the non-migratory and freshwater migratory forms, which appear to be relatively rare below the falls.

Upper Willamette River coastal cutthroat trout exhibit a genetic structure consistent with the hypothesis that Willamette Falls is a strong reproductive barrier between populations above and below the falls. *C. shasta* existing in the Willamette River below the Marys River and high temperatures in the lower Willamette River in summer and fall probably limit the survival of the very few migrants that are known to drop over the falls. The river above Willamette Falls encompasses a large area with considerable habitat complexity, and this area supports several different populations of coastal cutthroat trout. Although these populations are highly heterogeneous (dissimilar) genetically,

they do form a moderately coherent cluster of apparently isolated and semi-isolated populations.

The physical and genetic evidence for: (1) a barrier at Willamette Falls; (2) habitat and ecological differences above and below the Falls; (3) the lack of anadromous populations and the prevalence of freshwater migratory forms above the Falls; and (4) evidence for very few smolt outmigrants produced above the Falls leads NMFS to conclude that coastal cutthroat trout above Willamette Falls should be considered a separate ESU. Since cutthroat trout in this region do not conduct extensive migrations and remain primarily in the freshwater environment, The Services conclude that cutthroat trout in this ESU fall under the jurisdiction of FWS. As previously noted, overall ESA jurisdiction of all coastal cutthroat trout ESUs remains to be determined.

(5) Oregon Coast ESU

The proposed boundaries of this ESU are similar to those identified for coho and chinook salmon and steelhead (Weitkamp *et al.*, 1996; Myers *et al.*, 1998; and Busby *et al.*, 1996) and include coastal cutthroat trout populations from the mouth of the Columbia River south to Cape Blanco, Oregon. Genetic data indicate marked differences between coastal cutthroat trout populations from coastal Oregon and those in the Columbia River and along the Washington coast. Samples of coastal cutthroat trout south of the Columbia River indicate a large, heterogeneous group of populations along the Oregon coast. Furthermore, several ecological differences exist between rivers along the Oregon coast and those farther north. The Oregon coast is characterized by a strong maritime influence, including relatively high precipitation, moderate temperatures, and short, low gradient streams with few migration barriers. Tagging studies in Alaska and elsewhere indicate that anadromous cutthroat trout follow shorelines when in seawater; thus, the known migratory patterns of this species are consistent with the hypothesis that the Columbia River, which is several miles wide and relatively deep at its mouth, is a migratory barrier between coastal populations in Oregon and those in Washington.

Although genetic data provide some evidence for a split between populations north or south of Cape Blanco, Oregon, biological and ecological data provide even greater support for such a split. The Cape Blanco area is a major

biogeographic boundary for many marine and terrestrial species, and has been identified as an ESU boundary for chinook and coho salmon and steelhead on the basis of strong genetic, life-history, ecological, and habitat differences north and south of this landmark. Meristic data (measurements of physical characteristics) also point to a difference between coastal cutthroat trout populations north and south of Cape Blanco.

Previously, NMFS concluded that cutthroat trout in the Umpqua River Basin constituted an ESU (Johnson *et al.*, 1994; 61 FR 41514, August 9, 1996). However, new genetic information collected during the coastwide status review indicates that cutthroat trout populations in the Umpqua River Basin are part of a larger coastal ESU that includes populations in Oregon coastal drainages from the mouth of the Columbia River to Cape Blanco. As discussed later in this document, NMFS proposes to revise the Umpqua River cutthroat trout listing determination consistent with these findings (see "Proposed Determinations").

(6) Southern Oregon/California Coasts ESU

This proposed ESU includes populations of coastal cutthroat trout from Cape Blanco, Oregon, south to the southern extent of the subspecies' range, currently considered the Mattole River, south of Cape Mendocino, California. Although meristic information lends support for a separate ESU of coastal cutthroat trout populations south of Cape Blanco, genetic and ecological data do not strongly support such a conclusion. In addition, the limited dispersal capability of coastal cutthroat trout and anecdotal evidence for marked differences in population dynamics for populations north and south of Cape Blanco support a split at that landmark. Finally, the majority of river systems in this ESU are relatively small and steep, with limited estuaries, and are heavily influenced by a maritime climate. Many of these systems are characterized by seasonal physical and thermal barriers to movement by anadromous fish; notable exceptions without such barriers are the larger river basins such as the Eel, Klamath, and Rogue Rivers.

Summary of Factors Affecting the Species

Section 2(a)(1) of the ESA states that various species of fish, wildlife, and plants in the United States have been rendered extinct as a consequence of economic growth and development untempered by adequate concern and

conservation. Section 4(a)(1) of the ESA and the Services' regulations (50 CFR part 424) set forth procedures for listing species. The Secretaries of Commerce and the Interior (Secretaries) must determine, through the regulatory process, if a species is endangered or threatened based upon any one or a combination of the following factors: (1) The present or threatened destruction, modification, or curtailment of its habitat or range; (2) overutilization for commercial, recreational, scientific, or educational purposes; (3) disease or predation; (4) inadequacy of existing regulatory mechanisms; or (5) other natural or human-made factors affecting its continued existence.

Several recent documents describe in more detail the impacts of various factors contributing to the decline of cutthroat trout and other salmonids (Bryant and Lynch, 1996; NMFS, 1997; and NMFS, 1998b). These reports, available upon request (see ADDRESSES), conclude that all of the factors identified in section 4(a)(1) of the ESA have played a role in the decline of salmonids on the West Coast. Specifically, these reports identify destruction and modification of habitat, overutilization for recreational purposes, and natural and human-made factors as being the primary reasons for the decline of anadromous salmonids, including coastal cutthroat trout. The following discussion summarizes findings regarding the principle factors for decline across the range of coastal cutthroat trout.

A. The Present or Threatened Destruction, Modification, or Curtailment of its Habitat or Range

Habitat degradation and impacts associated with logging and related land management activities, in particular, have likely contributed to the decline of coastal cutthroat trout. Removal of forest canopy can cause an increase in both the maximum and the diurnal fluctuation of water temperatures, leading to disease outbreaks, altered timing of migration, and accelerated maturation. The removal of streamside vegetation can deplete the bank area of potential new woody debris, which provides cover for cutthroat trout. Lack of cover may increase predation rates on cutthroat trout. In addition, loss of riparian areas can result in decreased invertebrate production and detritus sources, both of which are key components of the species' food chain. Siltation, often caused by certain logging practices, may hinder fry emergence from the gravel and limit production of benthic invertebrates.

Dissolved oxygen content of both surface and intragravel water can decrease as a result of logging operations, reducing egg and fry survival rates. Logging can also cause changes in stream flow regimes, resulting in potentially adverse water velocity and depth characteristics.

In addition to degradation of freshwater habitats, degradation of estuarine habitats has likely contributed to the decline of this species. Estuarine areas are highly productive habitats and play an important role in the life cycle of cutthroat trout (Hall, 1997). Dredging, filling, and diking of estuarine areas for agricultural, commercial, or municipal uses have resulted in the loss of many estuarine habitats.

B. Overutilization for Commercial, Recreational, Scientific, or Educational Purposes

Cutthroat trout are not harvested commercially, and scientific and educational programs have probably had little or no impact on these populations. However, cutthroat trout are a popular gamefish throughout the Pacific Northwest, and available information indicates that recreational fishing may have contributed to the general decline of cutthroat trout populations (Gresswell and Harding, 1997). In addition, coastal cutthroat trout are especially susceptible to hooking mortality and incidental catch in recreational and commercial fisheries targeting Pacific salmon and steelhead. Also, poaching may pose a significant threat to depressed populations of cutthroat trout in some areas.

C. Disease or Predation

Disease may be a factor contributing to the decline of cutthroat trout populations. For example, ODFW believes that *C. shasta* is a factor of decline for cutthroat trout populations in the Columbia and Willamette Rivers (ODFW, 1998). The extent to which this and other diseases affect cutthroat trout populations in other areas is unknown.

Several non-native fish species are known to prey on or compete with salmonids; however, no specific information exists regarding predation impacts by these or by native fishes on cutthroat trout. Pinnipeds, especially harbor seals and California sea lions, are increasing on the West Coast. However, the extent to which pinniped predation is a factor causing the decline of coastal cutthroat trout is unknown.

D. Inadequacy of Existing Regulatory Mechanisms

1. Federal Land Management Practices

The Northwest Forest Plan (NFP) is a Federal management policy with important benefits for salmonids, including cutthroat trout. While the NFP covers a very large area, the overall effectiveness of the NFP in conserving cutthroat trout is limited by the extent of Federal lands and by the fact that Federal land ownership is not uniformly distributed in watersheds within the affected ESUs. The extent and distribution of Federal lands limits the NFP's ability to achieve its aquatic habitat restoration objectives at watershed and river basin scales and highlights the importance of complementary salmon habitat conservation measures on non-Federal lands within the subject ESUs.

2. State Land Management Practices

The Washington Department of Natural Resources implements and enforces the State of Washington's forest practice rules (WFPRs) that are promulgated through the Forest Practices Board. These WFPRs contain provisions that can be protective of salmonids if fully implemented. WFPRs are based on adaptive management of forest lands through watershed analysis, development of site-specific land management prescriptions, and monitoring. Watershed Analysis prescriptions can exceed WFPR minima for stream and riparian protection.

However, NMFS believes the WFPRs, including watershed analysis, do not provide properly functioning riparian and instream habitats. Specifically, the base WFPRs do not adequately address large woody debris (LWD) recruitment, tree retention to maintain stream bank integrity and channel networks within floodplains, and chronic and episodic inputs of coarse and fine sediment-processes which are critical to maintaining properly functioning habitat for all life stages of cutthroat trout.

Similarly, the Oregon Forest Practices Act (OFPA), while modified in 1995 and improved over the previous OFPA, does not adequately protect salmonid habitat. In particular, the current OFPA does not provide adequate protection for the production and introduction of LWD to medium, small, and non-fish bearing streams. Small non-fish bearing streams are vitally important to the quality of downstream habitats. These streams carry water, sediment, nutrients, and LWD from upper portions of the watershed. The quality of downstream

habitats is determined, in part, by the timing and amount of organic and inorganic materials provided by these small streams (Chamberlin *et al.*, in Meehan, 1991). Given the existing depleted condition of most riparian forests on non-Federal lands, the time needed to attain mature forest conditions, the lack of adequate protection for non-riparian LWD sources in landslide-prone areas and small headwater streams (which account for about half the wood found naturally in stream channels) (Burnett and Reeves, 1997, citing Van Sickle and Gregory, 1990; McDade *et al.*, 1990; and McCreary, 1994), and current rotation schedules (approximately 50 years), there is a low probability that adequate LWD recruitment could be achieved under the current requirements of the OFPA. Also, the OFPA neither adequately manages timber harvest and road construction on sensitive, unstable slopes subject to mass wasting; nor does it address cumulative effects.

3. Dredge, Fill, and Inwater Construction Programs

The Army Corps of Engineers (COE) regulates removal/fill activities under section 404 of the Clean Water Act (CWA), which requires that the COE not permit a discharge that would "cause or contribute to significant degradation of the waters of the United States." One of the factors that must be considered in this determination is cumulative effects. However, the COE guidelines do not specify a methodology for assessing cumulative impacts or how much weight to assign them in decision-making. Furthermore, the COE does not have in place any process to address the additive effects of the continued development of waterfront, riverine, coastal, and wetland properties.

4. Water Quality Programs

The Federal CWA is intended to protect beneficial uses, including fishery resources. To date, implementation has not been effective in adequately protecting fishery resources, particularly with respect to non-point sources of pollution.

Sections 303(d)(1)(C) and (D) of the CWA requires states to prepare Total Maximum Daily Loads (TMDLs) for all water bodies that do not meet state water quality standards. TMDLs are a method for quantitatively assessing environmental problems in a watershed and identifying pollution reductions needed to protect drinking water, aquatic life, recreation, and other use of rivers, lakes, and streams. TMDLs may address all pollution sources, including

such point sources as sewage or industrial plant discharges, and such non-point discharges as runoff from roads, farm fields, and forests.

The CWA gives state governments the primary responsibility for establishing TMDLs. However, the Environmental Protection Agency (EPA) is required to establish TMDLs if a state does not do so. State agencies in Oregon are committed to completing TMDLs for coastal drainages within 4 years, and all impaired waters within 10 years. Similarly ambitious schedules are in place, or are being developed for Washington and Idaho. The ability of these TMDLs to protect cutthroat trout and salmonids should be significant in the long term; however, it will be difficult to develop them quickly in the short term, and their efficacy in protecting salmonid habitat will be unknown for years to come.

5. Hatchery and Harvest Management

In an attempt to mitigate the loss of habitat, hatchery programs have been implemented throughout the range of coastal cutthroat trout. While some of these programs have succeeded in providing fishing opportunities, the impacts of these programs on native, naturally spawned stocks are not well understood. Competition, genetic introgression, and disease transmission resulting from hatchery introductions may significantly reduce the production and survival of native, naturally spawned cutthroat trout.

Historically, cutthroat trout were one of the most broadly distributed salmonids in western North America (Behnke, 1979 and 1992). They were often the only salmonid present (sometimes the only fish) in many lakes and streams throughout the interior American west, and they were far more broadly distributed than steelhead, rainbow trout, or other salmonids (Behnke, 1979 and 1992). In recent years, they have been replaced by rainbow trout or other introduced species in many parts of their range (Gresswell, 1988; and Young, 1995). Perhaps most destructive was the widespread release of hatchery rainbow trout (*O. mykiss*) throughout the native range of interior cutthroat trout (Gresswell 1988; Young 1995). The two species readily hybridize, often to the extreme detriment of *O. clarki*, and it has been estimated that "just within the last century perhaps 99 percent of the unique cutthroat strains of interior drainages have been lost forever" (Willers, 1991). Furthermore, in less than 100 years after the first settlements in the West, cutthroat trout vanished

from most of its vast range (Behnke, 1988). Because of this hybridization with rainbow trout, and because of habitat degradation and other reasons, many of these inland subspecies have declined in numbers to an extent that they are now protected by state and Federal endangered species legislation (Johnson, 1987).

Other potentially important impacts of hatchery practices are the negative consequences of interactions between coho salmon fry released from hatcheries and coastal cutthroat trout. Coho salmon fry have often been released into streams in very high numbers, and they can compete with cutthroat trout for feeding and rearing habitat.

E. Other Natural or Manmade Factors Affecting Its Continued Existence

Climatic conditions have exacerbated the problems associated with degraded and altered riverine and estuarine habitats. Persistent drought conditions have reduced the already limited spawning, rearing, and migration habitat. Climatic conditions appear to have resulted in decreased ocean productivity (Francis and Sibley 1991; Francis *et al.* 1992), which may compound the effects of degraded freshwater habitat conditions on salmonid productivity.

Hybridization between coastal cutthroat trout and *O. mykiss* may pose serious risks for this species. A recent NMFS/WDFW survey of genetic variation among populations indicated that hybridization was widespread in the Pacific Northwest. Hybridization appears to occur naturally in some areas where coastal cutthroat trout and *O. mykiss* overlap and may be accelerated by transplants of *O. mykiss* into areas where coastal cutthroat trout occur naturally. Hybridization can reduce the success of coastal cutthroat trout populations by lowering the genetic fitness of hybrid individuals. Hybrids appear to be intermediate in performance to either parental species, but some life-history traits in hybrids may be detrimental to their survival. The extent of the risk of hybridization due to human activities is unknown.

Efforts Being Made To Protect Coastal Cutthroat Trout

Section 4(b)(1)(A) of the ESA requires the Secretaries of Commerce and the Interior to make listing determinations solely on the basis of the best scientific and commercial data available and after taking into account efforts being made to protect the species. Therefore, in making listing determinations, we first

assess the status of the species and identify factors that have led to the decline of the species. We then assess existing conservation measures to determine if such measures sufficiently ameliorate risks to the species.

In judging the efficacy of existing conservation efforts, NMFS considers the following: (1) The substantive, protective, and conservation elements of such efforts; (2) the degree of certainty such that efforts will be reliably implemented; and (3) the presence of monitoring provisions that permit adaptive management (Bryant and Lynch, 1996). In some cases, conservation efforts may be relatively new and may not have had time to demonstrate their biological benefits. In such cases, provisions for adequate monitoring and funding of conservation efforts are essential to ensure that intended conservation benefits are realized.

During its coastal cutthroat trout status review, NMFS reviewed an array of protective efforts underway for cutthroat trout and other salmonids, ranging in scope from broad regional strategies to local watershed initiatives. NMFS has summarized some of the major efforts applicable to salmonids in a document entitled "Steelhead Conservation Efforts: A Supplement to the Notice of Determination for West Coast Steelhead under the Endangered Species Act" (NMFS, 1996). NMFS has identified additional conservation measures in the States of Washington, Oregon, and California that are not specifically addressed in this earlier report. We summarize these additional conservation measures here.

State of Washington Conservation Measures

The State of Washington is currently in the process of developing a statewide strategy to protect and restore naturally spawned steelhead and other salmon and trout species. In May of 1997, the Governor of Washington and other state officials signed a Memorandum of Agreement creating the Joint Natural Resources Cabinet (Joint Cabinet). This body is composed of state agency directors or their equivalents from a wide variety of agencies whose activities and constituents influence Washington's natural resources. The goal of the Joint Cabinet is to restore healthy salmon, steelhead, and trout populations by improving those habitats on which the fish rely. The Joint Cabinet's current activities include development of the Lower Columbia Steelhead Conservation Initiative (LCSCI), which is intended to

comprehensively address protection and recovery of steelhead in the lower Columbia River area.

The scope of the LCSCI includes Washington's steelhead stocks in two ESUs that contain habitat in both Washington and Oregon. The initiative area includes the Lower Columbia River area (Cowlitz to Wind rivers) and portions of southwestern Washington. Although the initial focus of the LCSCI was on steelhead recovery, the state and local governments are exploring ways to expand the LCSCI into a multi-species recovery effort that would be consistent with Oregon's plan. When completed, conservation and restoration efforts in the LCSCI area will form a comprehensive, coordinated, and timely protection and rebuilding framework with benefits to steelhead and other salmonids (including coastal cutthroat trout) in the LCSCI area.

WDFW performed advance work on the initiative, emphasizing harvest and hatchery issues and related conservation measures. Consistent with creation of the Joint Cabinet, conservation planning has recently been expanded to include major involvement by other state agencies and stakeholders and to address habitat and tributary dam/hydropower components.

The LCSCI should provide a framework to describe concepts, strategies, opportunities, and commitments that will be critically needed to maintain the diversity and long term productivity of salmonids in the lower Columbia River for future generations. The initiative does not represent a formal watershed planning process; rather, it is intended to be complementary to such processes as they may occur in the future. The LCSCI details a range of concerns, including natural production and genetic conservation, recreational harvest, hatchery strategies, habitat protection and restoration goals, monitoring of stock status and habitat health, evaluation of the effectiveness of specific conservation actions, and an adaptive management structure to implement and modify the plan's trajectory as time progresses. It also addresses improved enforcement of habitat and fishery regulations and strategies for outreach and education.

The LCSCI is currently a "work-in-progress" and will evolve and change over time as new information becomes available. Input will be obtained through continuing outreach efforts by local governments and other stakeholders. Further refinements to strategies, actions, and commitments will occur using public and stakeholder

review and input and continued interaction with the State of Oregon, tribes, and other government entities, including NMFS. The LCSCI will be subjected to independent technical review. In sum, these input and coordination processes will play a key role in determining the extent to which the eventual conservation package will benefit naturally spawned salmonids.

NMFS intends to continue working with the State of Washington and stakeholders involved in the formulation of the LCSCI. Ultimately, when more fully developed and implemented, this conservation effort may ameliorate risks facing many salmonids in this region.

State of Oregon Conservation Measures

In April 1996, the Governor of Oregon completed and submitted to NMFS a comprehensive conservation plan directed specifically at coho salmon stocks on the coast of Oregon. This plan, termed the Oregon Plan for Salmon and Watersheds (OPSW) (formerly known as the Oregon Coastal Salmon Restoration Initiative) was later expanded to include conservation measures for coastal steelhead stocks (Oregon, 1998). For a detailed description of the OPSW, refer to the May 6, 1997, listing determination for Southern Oregon/Northern California coho salmon (62 FR 24602). The essential tenets of the OPSW include the following:

1. The OPSW is comprehensive, addressing many factors for decline of coastal coho salmon and steelhead, most notably, those factors relating to harvest, habitat, and hatchery activities.
2. Under the OPSW, all state agencies whose activities affect salmon are held accountable for coordinating their programs in a manner that conserves and restores the species and their habitat. This is essential since salmon and steelhead have been affected by the actions of many different state agencies.
3. The OPSW includes a framework for prioritizing conservation and restoration efforts.
4. The OPSW includes a comprehensive monitoring plan that coordinates Federal, state, and local efforts to improve our understanding of freshwater and marine conditions, determine populations trends, evaluate the effects of artificial propagation, and rate the OPSW's success in restoring the salmon.
5. The OPSW recognizes that actions to conserve and restore salmon must be worked out by communities and landowners—those who possess local knowledge of problems and those who

have a genuine stake in the outcome. Watershed councils, soil and water conservation districts, and other grassroots efforts are the vehicles for getting this work done.

6. The OPSW is based upon the principles of adaptive management. Through this process, there is an explicit mechanism for learning from experience, evaluating alternative approaches, and making needed changes in the programs and measures.

7. The OPSW includes an Independent Multi-disciplinary Science Team (IMST). The IMST's purpose is to provide an independent audit of the OPSW's strengths and weaknesses. They will aid the adaptive management process by compiling new information into a yearly review of goals, objectives, and strategies, and by recommending changes to the OPSW.

8. The OPSW requires that a yearly report be made to the Governor, the legislature, and the public. This will help the agencies make the adjustments described for the adaptive management process.

As with the State of Washington's LCSCI process discussed earlier, NMFS intends to continue working with the State of Oregon and stakeholders involved in the formulation of the OPSW. Ultimately, when more fully developed and implemented, this conservation effort may ameliorate risks facing cutthroat trout and the other salmonid species in this region.

State of California Conservation Measures

The July, 1997, Executive Order W-159-97 of the Governor of California created the Governor's Watershed Restoration and Protection Council (WPRC). The WPRC, chaired by the Secretary of Resources, is an umbrella body consisting of all state agencies that have programs addressing anadromous salmonid protection and restoration. Under State law, the WPRC is charged with (1) providing oversight of all state activities aimed at watershed protection and enhancement, including the conservation and restoration of anadromous salmonids in California; and (2) directing the development of a Watershed Protection Program that provides for anadromous salmonid conservation in the State. The WPRC has established a 12-member, multi-disciplinary science review panel to advise it in the development of the watershed protection program.

The WPRC is currently reviewing and evaluating existing statewide regulatory and non-regulatory programs protecting anadromous salmonids and their

habitat, as well as state and local restoration program efforts that are ongoing or proposed. A compilation of management, implementation, and monitoring improvements that are necessary to protect and conserve anadromous salmonids and their habitat will be an important outcome of this comprehensive review. NMFS reviewed and commented on early work products generated by this review process and will continue to participate in the review and the development of the watershed protection program.

NMFS is encouraged by California initiation of a comprehensive, watershed-based approach to salmon management and restoration. However, the WPRC process is still in progress, and a Watershed Protection Program has yet to be developed. The 1998 Memorandum of Agreement (MOA) signed by NMFS, California's Secretary of Resources, and the Director of the California Department of Fish and Game (CDFG) (NMFS/California MOA, 1998) ensures that NMFS will substantively participate in the development of this program, including participation on the scientific review panel that will advise the WPRC in the development of the Program. An important focus of this scientific review panel will be an assessment of the adequacy of California's forest practice regulations, including their implementation and enforcement.

In 1997, the California State legislature enacted SB 271, which provides CDFG with \$43 million over 6 years for habitat restoration and watershed planning in coastal watersheds. This new funding allows CDFG to significantly expand its existing habitat restoration program in coastal watersheds, including areas in Northern California. SB 271 requires that 87.5 percent of the \$43 million in funding be spent on project grants for habitat restoration, watershed planning, and related programs, and permits CDFG to use the remainder for contract administration activities and biological support staff necessary to achieve the restoration objectives of the legislation. SB 271 also specifies that funded projects: (1) emphasize the development of coordinated watershed improvement activities; (2) give highest priority to funding projects that restore habitat for salmon and/or steelhead that are eligible for protection as listed or candidate species under the State or Federal ESA, (3) treat causes of fish habitat degradation; and (4) are designed to restore the structure and function of fish habitat. As part of this program, CDFG is funding \$7.0 million per year in new

projects for 5 years beginning in FY 1998-99 (starting July 1998). In addition, CDFG will use SB 271 funding to support several new permanent positions that will assist in administering the program and will provide technical support in the development of watershed plans and habitat restoration projects.

NMFS has reviewed the SB 271 program and concludes that its implementation will benefit salmonids, including cutthroat trout, by promoting the development of watershed protection plans and the restoration of degraded habitat conditions (NMFS, 1998c). The NMFS/California MOA provides additional assurances that the SB 271 program will provide these benefits. First, the MOA allows NMFS to serve as an ex-officio member of the Advisory Committee that will oversee implementation of SB 271, including the allocation of funds. Second, the MOA commits CDFG to direct a major portion of the new personnel and fiscal resources provided by SB 271 to watershed restoration efforts (NMFS/California MOA, 1998). Finally, the MOA establishes a close working relationship between the State and NMFS that should enable continued improvements in a variety of sectors affecting at-risk salmonids.

Proposed Status of Coastal Cutthroat Trout ESUs

Section 3 of the ESA defines the term "endangered species" as "any species which is in danger of extinction throughout all or a significant portion of its range." The term "threatened species" is defined as "any species which is likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range." Thompson (1991) suggested that conventional rules of thumb, analytical approaches, and simulations may all be useful in making this determination. In previous status reviews, NMFS identified a number of factors that should be considered in evaluating the level of risk faced by an ESU, including (1) absolute numbers of fish and their spatial and temporal distribution; (2) current abundance in relation to historical abundance and current carrying capacity of the habitat; (3) trends in abundance; (4) natural and human-influenced factors that cause variability in survival and abundance; (5) possible threats to genetic integrity (e.g., from strays or outplants from hatchery programs); (6) diversity of life-history forms; and (7) recent events (e.g., a drought or changes in harvest

management) that have predictable short-term consequences for abundance of the ESU.

During the coastwide status review for coastal cutthroat trout, NMFS evaluated both quantitative and qualitative information to determine whether any cutthroat trout ESUs are threatened or endangered according to the ESA. The types of information used in these assessments are described in NMFS' status review document (NMFS, 1998a). The following is a summary of NMFS' conclusions regarding the status of identified cutthroat trout ESUs.

(1) Puget Sound ESU

Few data exist concerning historical and present abundance of coastal cutthroat trout in the Puget Sound ESU region, and almost no estimates of adult population sizes existed for this ESU. The exceptions are a WDFW estimate of the 1997 spawning escapement in the Skagit River Basin of 13,000 fish, and counts of cutthroat adults at an upstream migrant trap designed to target coho salmon on the Deschutes River in southern Puget Sound (5-year geometric mean = 74 coastal cutthroat trout). Anecdotal reports suggest low abundance of coastal cutthroat trout in southwestern Puget Sound streams. In general, NMFS remains concerned with the lack of information regarding the distribution and abundance of coastal cutthroat trout throughout the Puget Sound region. However, some data indicate that juvenile coastal cutthroat trout are relatively well distributed in the Skagit and Stillaguamish River Basins and along the Strait of Juan de Fuca.

Few trend data are available for this ESU; these include downstream migrant counts from streams in eastern Hood Canal, the Skagit River Basin, and in southern Puget Sound (up to 1987 only); adult counts on the Deschutes River; and catch-per-unit effort (CPUE) data for adults over the past 2 to 7 years in three northern Puget Sound River Basins.

Trends in smolt numbers were mixed in both Hood Canal and southern Puget Sound. Unfortunately, no information exists regarding smolt-to-adult survival in this ESU, so interpretation of the significance of smolt trends for overall risk to these populations is difficult. Increases in coastal cutthroat trout smolt numbers in some eastern Hood Canal streams coincided with declines in coho salmon abundance. A negative correlation between the abundances of coastal cutthroat trout and coho salmon suggests that interspecific interactions between these two species may be reducing the abundance of coastal

cutthroat trout in some streams. In those streams with reduced coho salmon numbers, it is possible that a relaxation of competition has occurred, allowing for an increase in coastal cutthroat trout abundance.

The CPUE data for the Stillaguamish and Snohomish River populations showed increasing trends; the Skagit River CPUE has been declining. However, the short time frames (2 to 7 years) over which these data have been collected, and the possibility that significant declines in abundance occurred before data collection began, limits the usefulness of these trends in assessing population status. In addition, WDFW biologists feel that the variation in the adults caught may be due, in part, to annual variation in fish sampling conditions.

In addition to information about population sizes and trends in abundance for coastal cutthroat trout in this ESU, NMFS considered another important risk factor—the potential loss of life-history diversity. In particular, the anadromous life-history type appears to be declining in some streams containing coastal cutthroat trout. However, NMFS concludes that risks to the integrity and long-term sustainability of the Puget Sound ESU due to loss of life-history diversity are relatively low compared to other coastal cutthroat trout ESUs, in which there are more streams with documented declines in anadromous life-history types.

The influence of hatchery coastal cutthroat trout in the Puget Sound ESU is probably relatively low compared to the impacts of hatchery fish on the productivity of other Pacific salmonids. For example, the proportion of hatchery fish caught in the recreational fisheries for coastal cutthroat trout in Hood Canal is low indicating hatchery fish do not occur at significant levels in this area. On the other hand, there are some hatchery-related threats to naturally spawned coastal cutthroat trout populations in this ESU. WDFW considers some of the northern Puget Sound coastal cutthroat trout populations to be of mixed origin, indicating that fish of non-native origin may have contributed to the genetic composition of those populations (WDFW, 1998). Production in most streams within the ESU is considered to be "wild" (i.e., naturally spawned) by WDFW, indicating that WDFW does not believe that hatchery fish contribute significantly to natural spawning escapements (WDFW, 1998).

Listing Determination

While in general, little information exists to assess the status of this ESU, NMFS concludes available scientific information indicates the Puget Sound ESU does not warrant listing. Population levels in this ESU appear relatively stable over the past 10 to 15 years, although many of these populations are believed to be smaller relative to historic levels. Implementation of the NFP has likely reduced habitat risks on Federal lands within this ESU, which constitute about 30 percent of the total land area. However, NMFS remains concerned with habitat conditions on non-Federal lands throughout this ESU, including highly urbanized areas in the City of Seattle.

(2) Olympic Peninsula ESU

NMFS possesses little information to estimate population abundances for coastal cutthroat trout in the Olympic Peninsula ESU. However, limited trapping data support the opinions of state and tribal fisheries biologists that juveniles in this ESU are well distributed in streams along the western Strait of Juan de Fuca and northern Washington coast. Further, available data suggest that some highly productive cutthroat trout streams exist in this geographic region. For example, smolt abundances in Dickey Lake are high relative to numbers of smolts in Puget Sound and Hood Canal streams. On the other hand, ongoing habitat destruction, primarily due to logging and its associated activities (e.g., road building and stream blockages by culverts), continue to be a source of risk to coastal cutthroat trout in many Olympic Peninsula streams.

The quantitative data available for the Olympic Peninsula ESU are counts of downstream migrants on Clearwater River tributaries (from 1981 to present), Dickey River (1992–1994), Hoko River (1986–1989), and in Salt Creek along the Strait of Juan de Fuca (1998). The trends among Clearwater tributaries were mixed, suggesting that some tributary streams are good producers, while others are declining in migrant production. The absolute numbers of outmigrants in all streams trapped were encouraging; however, NMFS did not weigh trends from the Hoko River heavily in its risk determinations because these data are not current. In addition, the Dickey River trends were based on only 3 years of trapping designed to estimate coho salmon production. It is difficult to interpret the outmigrant data, partly because smolt-to-adult survival estimates are lacking

and because declines in production may have occurred before data collection began in 1981. Given the continued demonstrations of consistent smolt production from outmigrant trapping, the general consensus among scientists is that coastal cutthroat trout are well represented in streams throughout the Olympic Peninsula.

NMFS judges that the risks to the Olympic Peninsula ESU from losses of life-history diversity are lower than those for any other coastal cutthroat trout ESU. Risks associated with hatchery coastal cutthroat trout are probably low in this ESU. However, hatchery releases of coho salmon fry occur in some areas on the Olympic Peninsula, which may result in increased stress on coastal cutthroat trout due to elevated levels of interspecific competition relative to what occurs naturally.

Listing Determination

NMFS concludes the Olympic Peninsula ESU does not warrant listing at this time. However, BRT scientists were highly uncertain about their risk assessment due to the lack of quantitative data for this ESU. NMFS believes that there is adequate productive cutthroat trout habitat to support this ESU; however, data are not available to confirm such a conclusion. Consistent smolt production in the Dickey River and the general consensus among scientists that coastal cutthroat trout are well distributed in streams throughout the Olympic Peninsula support this conclusion. Implementation of the NFP has likely reduced risks associated with habitat quality and quantity on Federal lands, which constitute about 38 percent of the land area within this ESU.

(3) Southwestern Washington/Columbia River ESU

According to WDFW, the southwestern Washington-lower Columbia River region historically supported healthy, highly productive coastal cutthroat trout populations. Coastal cutthroat trout, especially the freshwater forms, may still be well distributed in most river basins in this geographic region, although probably in lower numbers relative to historical population sizes. However, severe habitat degradation throughout the lower Columbia River area has contributed to dramatic declines in anadromous coastal cutthroat trout populations and two near extinctions of anadromous runs in the Hood and Sandy Rivers. NMFS remains concerned about the extremely low population

sizes of anadromous coastal cutthroat trout in lower Columbia River streams, indicated by low incidental catch of coastal cutthroat trout in salmon and steelhead recreational fisheries, and by low trap counts in a number of tributaries throughout the region.

Although efficiencies for these traps in catching coastal cutthroat trout are not known, numbers of adults returning to traps have been consistently below 10 fish in most streams included in this ESU over each of the past 6 years. In contrast, NMFS believes that, even though information on the distribution of freshwater forms of coastal cutthroat trout in this region was mostly anecdotal, it probably was an accurate reflection of their widespread occurrence in streams throughout the region.

Trends in anadromous adults and outmigrating smolts in the southwestern Washington portion of this ESU are all declining. NMFS is aware that WDFW considers streams in this region to have a relatively good coastal cutthroat trout habitat; however, available data do not support the idea that the anadromous coastal cutthroat trout in this area are at low risk. Returns of both naturally and hatchery produced anadromous coastal cutthroat trout in almost all lower Columbia River streams have declined markedly over the last 10 to 15 years. Indeed, the only anadromous coastal cutthroat trout population in the lower Columbia River to show increases in abundance over the last 10 years is the North Fork Toutle River population, which is thought to be recovering from the effects of the Mt. Saint Helens eruption in 1980. Despite its increasing trend, WDFW states that its population numbers are still critically low (approximately 100 total adults in run).

A significant risk factor for coastal cutthroat trout in this ESU is the reduction in life-history diversity. Serious declines in the anadromous form have occurred throughout the lower Columbia River, and it has been nearly extirpated in at least two rivers on the Oregon side of the basin. Available information suggests that, in many streams, the freshwater forms of coastal cutthroat trout are well distributed and occur in relatively high abundance in comparison to the anadromous coastal cutthroat trout in the same stream. ODFW and WDFW presented evidence that freshwater coastal cutthroat trout can produce smolts that migrate to saltwater. Although this possibility could act to mitigate risks to anadromous forms of coastal cutthroat trout, the observation that sea-run cutthroat trout population

sizes have remained consistently low in many areas is a cause for concern. Reduced abundance of anadromous fish will tend to restrict connectivity of populations in different watersheds, which can increase genetic and demographic risks.

In summary, even if freshwater forms of coastal cutthroat trout have been producing occasional smolts, this production has not resulted in demonstrably successful re-establishment of anadromous forms. Habitat degradation in stream reaches accessible to anadromous coastal cutthroat trout, and poor ocean and estuarine conditions, likely have combined to severely deplete this life-history form throughout the lower Columbia River Basin. Without the appropriate freshwater and estuarine habitat for the expression of anadromous life history, a greater risk of extinction may occur. The significance of this reduction in life-history diversity to the both the integrity and the likelihood of this ESU's long-term persistence is a major concern to NMFS.

Negative effects of hatchery coastal cutthroat trout may be contributing to the risks facing naturally spawned coastal cutthroat trout in this ESU. The lower Columbia River tributaries are the only streams in Washington still receiving hatchery-origin coastal cutthroat trout, although the total numbers of released hatchery fish have recently been substantially curtailed. In the early 1980s, an estimated 50 to 80 percent of the recreational catch for coastal cutthroat trout in the lower Columbia River was composed of hatchery fish. Biologists familiar with coastal cutthroat trout feel that recreational catch data reflect true trends in coastal cutthroat trout abundance (Hooton, 1997). Furthermore, the largest returns of coastal cutthroat trout in this region are to the Cowlitz River Basin, and existing information is consistent with the interpretation that a significant proportion of those fish are of hatchery origin (WDFW, 1998). The ultimate effects of hatchery fish depend on the relative sizes of hatchery and naturally spawned populations, the spatial and temporal overlap of hatchery and naturally spawned fish throughout their life cycles, and the actual extent to which hatchery fish spawn naturally and interbreed with naturally produced fish. In addition, the extent to which naturally spawned coastal cutthroat trout are incidentally harvested in fisheries targeting hatchery coastal cutthroat trout and other salmonids of hatchery origin also affects the

magnitude of the risks to coastal cutthroat trout from hatchery fish.

Listing Determination

NMFS concludes the Southwestern Washington/Columbia River ESU warrants listing as a threatened species. The degree of scientific certainty in this conclusion is somewhat higher than that for the other cutthroat trout ESUs. NMFS is particularly concerned about the widespread declines in abundance and the small population sizes of anadromous cutthroat trout throughout the lower Columbia River, as exemplified by near extinctions of anadromous cutthroat trout runs in the Hood and Sandy rivers. The severe reductions in abundance of this life-history form could have deleterious effects on the ability of this ESU to recover from widespread declines. Reductions in the quantity and quality of estuarine and riverine habitat have probably contributed to declines, but the relative importance of these risk factors is not well understood. However, NMFS is encouraged by recent steps taken by the States of Washington and Oregon to reduce mortality due to directed and incidental harvest of coastal cutthroat trout. Also, the apparent widespread distribution of non-migratory cutthroat trout in this ESU may help buffer extinction risks to some degree.

Recent conservation planning efforts by the States of Washington and Oregon may reduce risks faced by cutthroat trout in this ESU; however, these efforts are still in their formative stages. Specifically, the State of Washington's LCSCI is still in a developmental stage, and various technical and financial aspects of the plan need to be addressed. Furthermore, this effort is currently limited to lower Columbia River areas. The OPSW, while substantially implemented and funded on the Oregon Coast, has not yet reached a similar level of development in inland areas. Implementation of the NFP has likely reduced habitat risks on Federal lands, which constitute about 20 percent of the land area within this ESU.

(4) Upper Willamette River ESU

The conservation status of this ESU was not formally evaluated by NMFS. As stated earlier, the Services concluded that FWS retained ESA jurisdiction for cutthroat trout populations occurring above Willamette Falls. The conservation status of this ESU will be evaluated by FWS.

(5) Oregon Coast ESU

Coastal cutthroat trout in the Oregon coastal region occur mostly in small populations that are relatively well distributed. Most of the abundance information considered by NMFS for this ESU consists of juvenile and smolt abundance information, with the prominent exception of the adult counts at Winchester Dam on the North Umpqua River. In general, NMFS is encouraged by the number of juveniles in coastal streams with relatively large basins. Since the available data covers only the last 2 years, the accuracy in which these juvenile counts translate into adult abundances or longer-term population trends is uncertain. The estimated pre-1970s abundance of anadromous coastal cutthroat trout in the largest river basin contained within this ESU, the Umpqua River, is 30,000 adults. A recent estimate of total run size, based on expansions of observed numbers of adults from snorkel surveys, is similar. (However, NMFS remains concerned about the assumptions underlying expansion methods using snorkel survey data for the freshwater forms of coastal cutthroat trout in the Umpqua Basin.)

Conflicting information about the abundance and distribution of coastal cutthroat trout in the South Umpqua River Basin suggest that there is insufficient information to reliably determine the status of coastal cutthroat trout in that drainage. The number of adults returning to the North Umpqua River has been critically low in recent years (5-year geometric mean = 18 fish), although for the past 3 years, 79, 81, and 110 (through October, 1998) adult coastal cutthroat trout have been counted at Winchester Dam.

Smolt production in two small drainages (Cummins and Tenmile Creeks) in central Oregon shows an increasing trend over the past 7 years. However, the percentage of repeat spawners has declined in both drainages relative to estimates in the early 1970s. All other streams on the Oregon coast for which data are available are experiencing moderate declines in adults and juveniles. In some areas, declines may have occurred primarily in anadromous coastal cutthroat trout populations. For example, in the Alsea and Siuslaw River Basins, declines in anadromous runs have occurred as indicated by recreational catch data, but ODFW believes there is no evidence for similar declines in the freshwater forms of coastal cutthroat trout in those same basins.

NMFS remains concerned about reductions in anadromous life-history forms throughout this ESU. Available information indicates that sea-run cutthroat trout are suffering more serious declines than are freshwater forms along Oregon coastal streams. ODFW suggests that these freshwater forms may be producing smolts in several coastal streams. However, NMFS does not have the estimates of adult anadromous coastal cutthroat trout in those streams, so it is difficult to evaluate the possibility that freshwater forms could buffer anadromous forms from further declines.

Risks due to interactions with hatchery coastal cutthroat trout are probably moderately low in this ESU. Nevertheless, the widespread releases of Alsea River Hatchery broodstock in Oregon coastal streams have stopped only relatively recently. Genetic samples indicate that hatchery coastal cutthroat trout from the Alsea River broodstock have influenced the genetic composition of several coastal cutthroat trout populations in the Coquille River drainage. Hybrids between coastal cutthroat trout and steelhead/rainbow trout were detected in genetic samples from the Coquille River Basin and a few other streams in this ESU. As discussed earlier, some degree of hybridization between *O. mykiss* and coastal cutthroat trout may occur naturally without the direct influence of hatchery-origin fish.

Listing Determination

NMFS concludes that the Oregon Coast coastal cutthroat trout ESU does not warrant listing at this time but considers it a candidate for future listing. The BRT scientists were evenly split as to whether this ESU faced risk of endangerment. NMFS remains concerned with habitat degradation in this region, and the overall scarcity of abundance information for major drainages limited NMFS' efforts to conduct a risk evaluation.

Hatchery records indicate that the Alsea River coastal cutthroat trout stock was widely released in streams throughout the Oregon coastal region. Recent reductions in releases of hatchery-origin cutthroat trout and coho salmon fry, coupled with a statewide catch-and-release recreational fishery policy for naturally spawned coastal cutthroat trout, may reduce risks associated with these factors. NMFS notes that reduced nearshore ocean habitat quality is likely a significant threat to cutthroat trout in this region, but quantifying those effects on cutthroat trout abundance is difficult. Finally, NMFS remains concerned about

incidental mortality of coastal cutthroat trout in this ESU due to fishing pressure on Pacific salmonids. Recent changes in ODFW's harvest regulations may mitigate this concern to some degree.

Recently implemented state conservation efforts have likely reduced the degree of risk facing this species. Furthermore, implementation of the NFP has likely reduced habitat risks on Federal lands within this ESU, which constitute about 35 percent of the land area. However, NMFS remains concerned about the overall lack of abundance and trend information for this ESU, as evidenced by its scientists' level of uncertainty regarding the status of this ESU. An additional concern for this ESU is increased fragmentation of populations due to the loss of anadromous fish, which can increase genetic and demographic risks. NMFS believes additional monitoring of this ESU is necessary before it is eliminated from ESA consideration. Therefore, NMFS concludes that this ESU warrants classification as a candidate species. NMFS will revisit the status of this ESU within the next 4 years to determine whether ESA protection is warranted.

(6) Southern Oregon/California Coasts ESU

Coastal cutthroat trout in this ESU appear widely distributed in many small populations. Two possible exceptions are populations in the Rogue and Smith River Basins where the abundance of coastal cutthroat trout may be comparatively high. Smolt abundance in Lobster Creek, a Rogue River tributary, was estimated to be over 800 fish in 1998. In addition, fishery biologists familiar with the Rogue River Basin feel that it supports many well-distributed coastal cutthroat trout populations. Historical estimates indicated that the sea-run cutthroat trout population size in the Smith River Basin was 8,500 fish. Expansion estimates of fish greater than 25 cm in the three major forks of the Smith River indicate that each fork supports at least 300 coastal cutthroat trout. In addition, Mill Creek, one of the most productive coastal cutthroat trout tributaries in the Smith River Basin, has had between 1,000 and 4,000 outmigrating smolts over each of the past 4 years. Again, lack of information on smolt-to-adult survival and trap efficiencies makes interpreting smolt abundance estimates in the Rogue and Smith River Basins difficult. Population sizes are thought to be relatively small in other streams throughout this region, partly because it is the southern limit of this subspecies.

NMFS believes that severe habitat degradation has occurred in this region primarily due to activities associated with agriculture, flood control, logging, road construction, and some local development, which have contributed to a reduction in habitat capacity relative to historical levels. In addition, seasonal dewatering of stream mouths occurs naturally in northern California, resulting in sporadic blockages of access to the sea for anadromous fish in some streams. Also, large water withdrawals in several of the larger coastal river basins (e.g., Rogue, Klamath/Trinity, and Eel Rivers) and several of the smaller coastal rivers have reduced the quantity and quality of the remaining riverine and estuarine environments in this ESU.

Biologists familiar with this region believe, and anecdotal evidence suggests, that major declines in coastal cutthroat trout populations have occurred since historical times and that some populations appear to have been relatively stable or increasing in size since that time. The data available to NMFS indicate increasing short-term trends in smolt abundance in Mill Creek and increasing short-term trends in adult abundance in the lower Klamath River tributaries and its estuary and in the Smith River Basin. Exceptions include recent declines in the incidence of coastal cutthroat trout in Redwood Creek.

Risks due to interactions with hatchery coastal cutthroat trout are probably low in this ESU. Other risks NMFS notes for coastal cutthroat trout in this region are possible deleterious interactions with naturally occurring or hatchery-derived coho salmon and steelhead in Oregon and incidental catch of coastal cutthroat trout in sport fisheries targeting steelhead and coho salmon. NMFS is encouraged by recent changes in harvest regulations in both Oregon and California aimed at reducing risks to natural trout from direct and indirect harvest mortality.

Listing Determination

NMFS concludes the Southern Oregon/California Coasts ESU does not warrant listing at this time. Although the majority of the BRT scientists concluded this ESU does not warrant listing, these scientists were uncertain regarding this conclusion. As with many other ESUs for coastal cutthroat trout, NMFS is hindered in its assessment by the scarcity of abundance information for this ESU. However, continuing threats to the quality of freshwater and estuarine habitat for cutthroat trout in this region are sources of concern.

NMFS believes that existing conservation efforts implemented by the States of Oregon and California have likely reduced threats to this species. For example, recent harvest regulations aimed at reducing risks to natural trout from direct and indirect harvest mortality have likely reduced risks to coastal cutthroat trout. NMFS also believes that biological risks associated with habitat modification and degradation on Federal lands have declined in recent years with the implementation of the NFP, coupled with the consultation requirements associated with the listing of coho salmon as a threatened species in this region in 1997. Although NMFS remains concerned about habitat conditions on non-federal lands in this ESU, the majority of habitat in this area (about 53 percent) is under Federal management.

Proposed Determination

Based on NMFS' assessment of available scientific and commercial information obtained during the coast wide status review of coastal cutthroat trout, the Services are issuing a proposed determination that Southwestern Washington/Columbia River cutthroat trout (*O. clarki clarki*) constitute a "species" under the ESA and should be listed as threatened. The listed ESU for Southwestern Washington/Columbia River cutthroat trout is defined as all naturally spawned population(s) of coastal cutthroat trout in the Columbia River and its tributaries downstream from the Klickitat River in Washington and Fifteenmile Creek in Oregon (inclusive) as well as those in the Willamette River and its tributaries downstream from Willamette Falls. The ESU also includes cutthroat trout in Washington coastal drainages between the Columbia River and Grays Harbor (inclusive). The natural population consists of all fish that are progeny of naturally spawning fish residing below long-term, natural barriers (i.e., waterfalls in existence for hundreds or thousands of years). The offspring of all fish taken from the natural population after the date of listing are also part of the listed ESU.

NMFS concludes that the current Umpqua River cutthroat trout ESU, previously listed as an endangered species in 1996 (61 FR 41541, August 9, 1996; 61 FR 48412, September 13, 1996), is part of the larger Oregon Coast coastal cutthroat trout ESU that extends from the mouth of the Columbia River south to Cape Blanco, Oregon. NMFS concludes that the best available scientific information indicates the Oregon Coast ESU does not warrant

listing at this time. Therefore, through this notification, the Services propose to revise the Umpqua River cutthroat trout ESU and include it in the larger Oregon Coast ESU. This proposed revision results in a proposed delisting of the Umpqua River cutthroat trout ESU.

Prohibitions and Protective Measures

Section 9 of the ESA prohibits certain activities that directly or indirectly affect endangered species. These prohibitions apply to all individuals, organizations, and agencies subject to U.S. jurisdiction. Section 9 prohibitions apply automatically to endangered species as described in the following discussion; this is not the case for threatened species.

Section 4(d) of the ESA directs the Secretaries to implement regulations “to provide for the conservation of [threatened] species,” that may include extending any or all of the prohibitions of section 9 to threatened species. Section 9(a)(1)(g) also prohibits violations of protective regulations for threatened species implemented under section 4(d). Therefore, in the case of threatened species, the Services have discretion under section 4(d) to adopt protective regulations based in part on the contents of available conservation measures. NMFS has already adopted 4(d) rules that except a limited range of activities from section 9 take prohibitions. For example, the interim 4(d) rule for Southern Oregon/Northern California coho salmon (62 FR 38479, July 18, 1997) excepts habitat restoration activities conducted in accordance with approved plans and fisheries conducted in accordance with approved state management plans. In appropriate cases, 4(d) rules could contain a broader range of exceptions for activities such as forestry, agriculture, and road construction when such activities are conducted in accordance with approved state or tribal plans.

These examples show that NMFS may apply section 9 prohibitions narrowly if there are strong protections provided in a state or tribal plan. There may be other circumstances as well in which NMFS would use the flexibility of section 4(d). For example, in some cases there may be a healthy population of salmon or coastal cutthroat trout within an overall ESU that is listed. In such a case, it may not be necessary to apply the full range of prohibitions available in section 9. The Services intend to use the flexibility of the ESA to respond appropriately to the biological condition of the proposed ESU and the populations within it and to the strength of state and tribal plans

in place to protect them. Therefore, after further analysis, NMFS and/or the FWS will issue protective regulations pursuant to section 4(d) for the Southwestern Washington/Columbia River coastal cutthroat trout ESU.

Section 7(a)(4) of the ESA requires that Federal agencies confer with us on any actions likely to jeopardize the continued existence of a species proposed for listing and on actions likely to result in the destruction or adverse modification of proposed critical habitat. Federal agencies should confer with NMFS on the proposed Southwestern Washington/Columbia River coastal cutthroat trout ESU. For listed species, section 7(a)(2) requires Federal agencies to ensure that the activities they authorize, fund, or conduct are not likely to jeopardize the continued existence of a listed species or to destroy or adversely modify its critical habitat. If a Federal action may affect a listed species or its critical habitat, the responsible Federal agency must enter into consultation with the appropriate Service.

Examples of Federal actions likely to affect coastal cutthroat trout in the proposed ESU include authorized land management activities of the U.S. Forest Service and U.S. Bureau of Land Management, as well as operation of hydroelectric and storage projects of the Bureau of Reclamation and the COE. Such activities include timber sales and harvest, hydroelectric power generation, and flood control. Federal actions, including the COE section 404 permitting activities under the CWA, COE permitting activities under the River and Harbors Act, National Pollutant Discharge Elimination System permits issued by the EPA, highway projects authorized by the Federal Highway Administration, Federal Energy Regulatory Commission licenses for non-federal development and operation of hydropower, and Federal salmon hatcheries, may also require consultation. These actions will likely be subject to ESA section 7 consultation requirements that may result in conditions designed to achieve the intended purpose of the project and avoid or reduce impacts to coastal cutthroat trout and its habitat within the range of the proposed ESU.

Sections 10(a)(1)(A) and 10(a)(1)(B) of the ESA provide us with the authority to grant exceptions to the ESA’s “taking” prohibitions (see regulations to be codified at 50 CFR 222.301 through 222.308 for NMFS, 64 FR 14051 through 14066, and 50 CFR 17.22 and 17.32 for FWS). Section 10(a)(1)(A) scientific research and enhancement permits may

be issued to entities (Federal and non-Federal) conducting research that involves a directed take of listed species.

NMFS has issued section 10(a)(1)(A) research or enhancement permits for other listed species (e.g., Snake River chinook salmon and Sacramento River winter-run chinook salmon) for a number of activities, including trapping and tagging, electroshocking to determine population presence and abundance, removing fish from irrigation ditches, and collecting adult fish for artificial propagation programs. These and other research efforts could provide critical information regarding cutthroat trout distribution and population abundance.

We can issue section 10(a)(1)(B) incidental take permits to non-federal entities performing activities that may incidentally take listed species. The types of activities potentially requiring a section 10(a)(1)(B) incidental take permit include the operation and release of artificially propagated fish by state or privately operated and funded hatcheries, state or university research on listed species not receiving Federal authorization or funding, the implementation of state fishing regulations, and timber harvest activities on non-Federal lands.

Conservation Measures

Conservation measures provided to species listed as endangered or threatened under the ESA include recognition, recovery actions, Federal agency consultation requirements, and prohibitions on taking. Recognition through listing promotes public awareness and conservation actions by Federal, state, and local agencies, private organizations, and individuals.

Several conservation efforts are underway that may help reverse the decline of coastal cutthroat trout and other salmonids. These include the NFP (on Federal lands within the range of the northern spotted owl), Oregon’s OPSW, Washington’s LCSCI, and California’s WPRC and SB 271 programs. We are encouraged by these efforts and believe they constitute significant strides in the region’s endeavor to develop a scientifically well grounded conservation plan for these stocks. Other efforts, such as the Willamette River Conservation Planning process, are at various stages of development, but show promise to ameliorate risks facing coastal cutthroat trout. We intend to support and work closely with these efforts—staff and resources permitting—in the belief that

they can play an important role in the recovery planning process.

Based on information presented in this proposed rule, general conservation measures that could be implemented to help conserve coastal cutthroat trout are listed here. This list is not exhaustive and does not constitute NMFS' interpretation of a recovery plan under section 4(f) of the ESA.

1. Measures could be taken to promote land management practices that protect and restore cutthroat trout habitat. Land management practices affecting cutthroat trout habitat include timber harvest, road building, agriculture, livestock grazing, gravel mining, and urban development.

2. Evaluation of existing harvest regulations could identify any changes necessary to protect cutthroat trout populations.

3. Artificial propagation programs could be required to incorporate practices that minimize impacts upon natural populations of cutthroat trout.

4. Efforts could be made to ensure that existing and proposed dam facilities are designed and operated in a manner that lessens adverse effects on cutthroat trout populations.

5. Water diversions could have adequate headgate and staff gauge structures installed to control and monitor water usage accurately. Water rights could be enforced to prevent irrigators from exceeding the amount of water to which they are legally entitled. As necessary, instream flow studies could be conducted, and existing water rights re-adjudicated as necessary to ensure adequate instream flows to support cutthroat trout.

6. Irrigation diversions affecting downstream migrating cutthroat trout could be screened according to appropriate anadromous fish screen criteria. A thorough review of the impact of irrigation diversions on cutthroat trout could be conducted.

We recognize that, to be successful, protective regulations and recovery programs for cutthroat trout will need to be developed in the context of conserving aquatic ecosystem health. We intend that Federal lands and Federal activities play a primary role in preserving listed populations and the ecosystems upon which they depend. However, throughout the range of the ESU proposed for listing, cutthroat trout habitat occurs and can be affected by activities on state, tribal, or private land. Agricultural, timber, and urban land management activities on non-federal land could and should be conducted in

a manner that minimizes adverse effects to cutthroat trout habitat.

We encourage non-Federal landowners to assess the impacts of their actions on potentially threatened or endangered salmonids. In particular, we encourage the establishment of watershed partnerships to promote conservation in accordance with ecosystem principles. These partnerships will be successful only if state, tribal, local governments, landowner representatives, and Federal and non-Federal biologists all participate and share the goal of restoring cutthroat trout to the watersheds.

Critical Habitat Determination

Critical habitat is defined in section 3 of the ESA as: (i) The specific areas within the geographical area occupied by a species, at the time it is listed in accordance with the ESA, on which are found those physical or biological features (I) essential to the conservation of the species and (II) that may require special management considerations or protection; and (ii) specific areas outside the geographical area occupied by a species at the time it is listed, upon a determination that such areas are essential for the conservation of the species. "Conservation" means the use of all methods and procedures needed to bring the species to the point at which listing under the Act is no longer necessary.

Section 4(a)(3)(A) of the ESA requires that, to the maximum extent prudent and determinable, the Services designate critical habitat concurrently with a determination that a species is endangered or threatened. Our regulations (50 CFR 424.12(a)) state that critical habitat is not determinable if information sufficient to perform required analysis of the impacts of designation is lacking or if the biological needs of the species are not sufficiently well known to permit identification of an area as critical habitat. Section 4(b)(2) of the ESA requires us to consider economic and other relevant impacts of designating a particular area as critical habitat on the basis of the best scientific data available. The Secretaries may exclude any area from critical habitat if they determine that the economic benefits of such exclusion outweigh the conservation benefits, unless to do such would result in the extinction of the species. When a "not determinable" finding is made, we must, within 2 years of the publication date of the original proposed rule, designate critical habitat, unless designation is found to be not prudent.

Prior to proposing critical habitat for this species, the Services must identify geographic areas occupied by the species, as well as areas outside the current species range, which contain important physical or biological features essential for the conservation and recovery of the species, and must consider the economic and other impacts of designating critical habitat. Given this species' complex life history and the high degree of scientific uncertainty associated with it, NMFS has not yet had time to complete analyses necessary for designating critical habitat. Further, due to statutory time limitations, NMFS has not yet consulted with affected Indian tribes regarding the designation of critical habitat in areas that may impact tribal trust resources, tribally-owned fee lands, or the exercise of tribal rights. Such consultation is required by the recently implemented Secretarial Order entitled "American Indian Tribal Rights, Federal-Tribal Trust Responsibilities, and the Endangered Species Act."

Given these remaining unresolved scientific and tribal issues, the Services find that critical habitat is not now determinable for the proposed ESU. During the comment period for this listing proposal, the Services also seek additional agency and public input on critical habitat, along with information on the proposed listing. We will use this and other information in formulating a determination on critical habitat for the Southwestern Washington/Columbia River ESU. The Services will also engage in government-to-government consultations with affected Indian tribes as required by the Secretarial Order.

NMFS Policies on Endangered and Threatened Fish and Wildlife

On July 1, 1994, the Services published a series of policies regarding listings under the ESA, including a policy for peer review of scientific data (59 FR 34270) and a policy to identify, to the maximum extent possible, those activities that would or would not constitute a violation of section 9 of the ESA (59 FR 34272).

Role of Peer Review

The intent of the peer review policy is to ensure that listings are based on the best scientific and commercial data available. Prior to a final listing, NMFS will solicit the expert opinions of three qualified specialists, concurrent with the public comment period. Independent peer reviewers will be selected from the academic and scientific community, tribal and other

Native American groups, Federal and state agencies, and the private sector.

Identification of Those Activities That Would Constitute a Violation of Section 9 of the ESA

The intent of this policy is to increase public awareness of the effect of this listing on proposed and ongoing activities within the range of coastal cutthroat trout. NMFS or the FWS will publish a proposed 4(d) rule in the future applying section 9 prohibitions and exceptions. However, to provide guidance prior to publication of this proposed rule, the following is a list of actions NMFS believes will not result in a violation of section 9:

(1) Possession of cutthroat trout acquired lawfully by permit issued by the appropriate Service pursuant to section 10 of the ESA, or by the terms of an incidental take statement pursuant to section 7 of the ESA.

(2) Federally approved projects that involve activities such as silviculture, grazing, mining, road construction, dam construction and operation, discharge of fill material, stream channelization or diversion for which consultation has been completed, and when such activity is conducted in accordance with any terms and conditions given by NMFS or the FWS in an incidental take statement accompanied by a biological opinion.

Activities that NMFS believes could potentially harm the cutthroat trout and result in "take", include, but are not limited to:

(1) Unauthorized collecting or handling of the species. Permits to conduct these activities are available for purposes of scientific research or to enhance the propagation or survival of the species.

(2) Unauthorized destruction/alteration of the species' habitat such as removal of large woody debris or riparian shade canopy, dredging, discharge of fill material, draining, ditching, diverting, blocking, or altering stream channels or surface or ground water flow.

(3) Discharges or dumping of toxic chemicals or other pollutants (i.e., sewage, oil, and gasoline) into waters or riparian areas supporting the species.

(4) Violation of discharge permits.

(5) Interstate and foreign commerce (commerce across state lines and international boundaries) and import/export without prior obtainment of an endangered species permit.

This list is not exhaustive; rather, it is provided to give you some examples of activities that may be considered by NMFS as constituting a "take" of coastal

cutthroat trout under the ESA and associated regulations. Questions regarding whether specific activities constitute a violation of section 9 and general inquiries regarding prohibitions and permits, should be directed to NMFS (see **ADDRESSES**).

Public Comments Solicited

To ensure that the final action resulting from this proposal will be as accurate and effective as possible, we are soliciting comments and suggestions from the public, other governmental agencies, the scientific community, industry, and any other interested parties. We will hold public hearings in the areas affected by this proposal; details regarding locations, dates, and times will be published in a forthcoming **Federal Register** notification. We recognize that there are serious limits to the quality of information available, and, therefore, NMFS has executed its best professional judgement in developing this proposal. We request additional information regarding coastal cutthroat trout, in particular: (1) Biological or other relevant data concerning any threat to cutthroat trout; (2) the range, distribution, and population size of coastal cutthroat trout in the proposed and candidate ESUs; (3) current or planned activities in the subject areas and their possible impact on the proposed and candidate species; (4) cutthroat trout escapement, particularly escapement data partitioned into natural and hatchery components; (5) the proportion of naturally reproducing fish that were reared as juveniles in a hatchery; (6) homing and straying of natural and hatchery fish; (7) the reproductive success of naturally reproducing hatchery fish (i.e., hatchery-produced fish that spawn in natural habitat) and their relationship to the proposed and candidate ESUs; and (8) efforts being made to protect native, naturally reproducing populations of coastal cutthroat trout in Washington, Oregon, and California.

We also request quantitative evaluations describing the quality and extent of freshwater and marine habitats for juvenile and adult cutthroat trout as well as information on areas that may qualify as critical habitat in Washington and Oregon. Areas that include the physical and biological features essential to the recovery of the species should be identified. We recognize there are areas within the proposed boundaries of these ESUs that historically constituted cutthroat trout habitat, but that may not be currently occupied by cutthroat trout. We request

information about cutthroat trout in these currently unoccupied areas and whether these habitats should be considered essential to the recovery of the species or excluded from designation. Essential features include, but are not limited to (1) habitat 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 reproduction and rearing of offspring; and (5) habitats that are protected from disturbance or are representative of the historical geographical and ecological distributions of the species.

For areas potentially qualifying as critical habitat, we request information describing (1) the activities that affect the area or could be affected by the designation, and (2) the economic costs and benefits of additional requirements of management measures likely to result from the designation.

We will consider all public comments and additional information regarding the status and critical habitat of the cutthroat trout ESUs prior to issuing a final determination. The availability of new information may cause us to reassess the status of cutthroat trout ESUs in the final determination.

Public Hearings

Joint Commerce-Interior ESA implementing regulations require us to promptly hold at least one public hearing if any person so requests within 45 days of publication of a proposed regulation to list a species or to designate critical habitat (see 50 CFR 424.16(c)(3)). In a forthcoming **Federal Register** notification, we will announce the dates and locations of public hearings on this proposed rule to provide the opportunity for the public to give comments and to permit an exchange of information and opinion among interested parties. We encourage the public's involvement in such ESA matters.

References

A complete list of all references cited herein is available upon request (see **ADDRESSES**).

Classification

The 1982 amendments to the ESA, in section 4(b)(1)(A), restrict the information that may be considered when assessing species for listing. Based on this limitation of criteria for a listing decision and the opinion in *Pacific Legal Foundation v. Andrus*, 675 F.2d 825 (6th Cir. 1981), NMFS categorically excludes all ESA listing actions from

environmental assessment requirements of the National Environmental Policy Act (NEPA) under NOAA Administrative Order 216-6. FWS also determined that an environmental assessment need not be prepared in connection with regulations adopted pursuant to section 4 of the ESA and published a notice in the **Federal Register** on October 25, 1983 (48 FR 49244), outlining its reasons.

As noted in the Conference Report on the 1982 amendments to the ESA, economic impacts cannot be considered in determinations regarding the status of species. Therefore, the economic analysis requirements of the Regulatory Flexibility Act (RFA) are not applicable to the listing process. In addition, this proposed rule is exempt from review under E.O. 12866.

At this time we are not proposing protective regulations pursuant to ESA section 4(d). In the future, prior to finalizing its 4(d) regulations for the

threatened ESU, we will comply with all relevant NEPA and RFA requirements.

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

List of Subjects

50 CFR Part 17

Endangered and threatened species, Exports, Imports, Reporting and record keeping requirements, Transportation.

50 CFR Part 223

Endangered and threatened species, Exports, Imports, Marine mammals, Transportation.

50 CFR Part 224

Administrative practice and procedure, Endangered and threatened species, Exports, Imports, Reporting and record keeping requirements, Transportation.

50 CFR Part 226

Endangered and threatened species.

For the reasons set out in the preamble, 50 CFR parts 17, 223, 224, and 226 are proposed to be amended as follows:

PART 17—ENDANGERED AND THREATENED WILDLIFE AND PLANTS

1. The authority citation for part 17 continues to read as follows:

Authority: 16 U.S.C. 1361-1407; 16 U.S.C. 1531-1544; 16 U.S.C. 4201-4245; Pub. L. 99-625, 100 Stat. 3500, unless otherwise noted.

2. Amend § 17.11(h) by adding the following in alphabetical order under "Fishes", to the List of Endangered and Threatened Wildlife:

§ 17.11 Endangered and threatened wildlife.

* * * * *
(h) * * *

Species		Historic range	Vertebrate population where endangered or threatened	Status	When listed	Critical habitat	Special rules
Common name	Scientific name						
*	*	*	*	*	*	*	*
FISHES							
*	*	*	*	*	*	*	*
Trout, coastal cutthroat.	<i>Oncorhynchus clarki clarki</i> .	U.S.A. (AK, CA, OR, WA) Canada.	Southwestern WA/Columbia R.—(USA—OR, WA)—naturally spawning populations (and their progeny) below natural barriers in Columbia R. and its tributaries downstream from Klickitat R. (WA) and Fifteenmile Cr. (OR), inclusive, including Willamette R. downstream from Willamette Falls, and in coastal drainages between Columbia R. and Grays Harbor (WA), inclusive.	T	NA	NA
*	*	*	*	*	*	*	*

3. Amend § 17.11(h) by removing the entry for "Trout, Umpqua River cutthroat" under "Fishes" from the List of Endangered and Threatened Wildlife.

PART 223—THREATENED MARINE AND ANADROMOUS SPECIES

4. The authority citation for part 223 continues to read as follows:

Authority: 16 U.S.C. 1531 *et seq.*; 16 U.S.C. 742a *et seq.*; 31 U.S.C. 9701.

5. In § 223.102, paragraph (a)(20) is added to read as follows:

§ 223.102 Enumeration of threatened marine and anadromous species.

* * * * *
(a) * * *

(20) Southwestern Washington/ Columbia River coastal cutthroat trout (*Oncorhynchus clarki clarki*). Includes all naturally spawned populations of coastal cutthroat trout (and their progeny) residing below long-standing, naturally impassable barriers in the Columbia River and its tributaries downstream from the Klickitat River in Washington and Fifteenmile Creek in Oregon (inclusive), including the Willamette River and its tributaries downstream from Willamette Falls, as well as those populations in Washington coastal drainages from the Columbia River to Grays Harbor (inclusive).

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PART 224—ENDANGERED MARINE AND ANADROMOUS SPECIES

6. The authority citation for part 224 continues to read as follows:

Authority: 16 U.S.C. 1531-1543 and 16 U.S.C. 1361 *et seq.*

§ 224.101 [Amended]

7. In § 224.101, in paragraph (a), remove the words "Umpqua River cutthroat trout (*Oncorhynchus clarki clarki*)".

PART 226—DESIGNATED CRITICAL HABITAT

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

Authority: 16 U.S.C. 1533.

§ 226.206 [Removed]

9. Section 226.206 is removed.

§§ 226.207 through 226.209 [Redesignated as §§ 226.206 through 226.208]

10. Sections 226.207 through 226.209 are redesignated as §§ 226.206 through 226.208, respectively.

Table 4 to part 226 [Removed]

11. Table 4 to part 226 is removed.

Dated: March 29, 1999.

Rolland A. Schmitt,

*Assistant Administrator for Fisheries,
National Marine Fisheries Service.*

Dated: March 22, 1999.

Jamie Rappaport Clark,

Director, U.S. Fish and Wildlife Service.

[FR Doc. 99-8195 Filed 4-2-99; 8:45 am]

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DEPARTMENT OF COMMERCE

National Oceanic and Atmospheric Administration

50 CFR Part 600

[Docket No. 981228324-8324-01; I.D. 121697A]

RIN 0648-AJ70

Magnuson-Stevens Fishery Conservation and Management Act; Amendment of Foreign Fishing Regulations

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

ACTION: Proposed rule; request for comments.

SUMMARY: NMFS proposes to amend the foreign fishing regulations to provide for the issuance of certain transshipment permits under the Magnuson-Stevens Fishery Conservation and Management Act (Magnuson-Stevens Act), as amended by the Sustainable Fisheries Act (SFA). NMFS also proposes to make additional minor changes in the foreign fishing regulations to update permit application and issuance procedures applicable to all types of foreign fishing permits issued under the Magnuson-Stevens Act. These proposed actions are necessary to maintain the foreign fishing regulations in a current and complete manner.

DATES: Comments must be received on or before May 5, 1999.

ADDRESSES: Send comments to Gary C. Matlock, Office of Sustainable Fisheries,

NMFS, 1315 East-West Highway, Silver Spring, MD 20910.

FOR FURTHER INFORMATION CONTACT: Robert A. Dickinson, 301-713-2276.

SUPPLEMENTARY INFORMATION:

Regulations at 50 CFR part 600, subpart F, govern foreign fishing under the Magnuson-Stevens Act (16 U.S.C. 1801 *et seq.*). Among other things, the regulations establish procedures for permit application and issuance under section 204(b) of the Magnuson-Stevens Act. Under these regulations, foreign fishing vessels may be permitted to fish in the U.S. Exclusive Economic Zone (EEZ). Until the SFA (Pub. L. 104-297) established section 204(d) of the Magnuson-Stevens Act, all foreign fishing applications were submitted under section 204(b) of the Magnuson-Stevens Act.

Section 204(d) of the Magnuson-Stevens Act authorizes the Assistant Administrator for Fisheries (AA) to issue transshipment permits authorizing foreign vessels to engage in fishing consisting solely of transporting fish or fish products at sea from a point within the EEZ or, with the concurrence of a state, within the boundaries of that state, to a point outside the United States. Issuance of a permit to a foreign vessel to receive fish or fish products at sea within the boundaries of a state is subject to certain conditions and restrictions and contingent upon the concurrence of the involved state. Until section 204(d) was added to the Magnuson-Stevens Act, transshipments of this nature at points at sea within the boundaries of a state were prohibited.

For consistency of process with permits issued under section 204(b) of the Magnuson-Stevens Act, NMFS proposes to make minor changes in the regulations at 50 CFR part 600, subpart F, to accommodate applications submitted under section 204(d) of the Magnuson-Stevens Act and to provide for the issuance of permits under section 204(d).

NMFS proposes to amend § 600.501(d) to provide that application forms for permits issued under section 204(d) be available from NMFS, and submitted to the AA. NMFS proposes that the application fee submitted for a permit under section 204(d) of the Magnuson-Stevens Act be the same as for applications submitted under section 204(b) of the Magnuson-Stevens Act. Currently this fee amount is \$354.00 per vessel. This fee was determined in accordance with the procedures for determining administrative costs of each special product or service contained in the NOAA Finance Handbook. However, in accordance with section

204(d)(7) of the Magnuson-Stevens Act, this fee will be waived for applications under section 204(d) of the Magnuson-Stevens Act if the applicant provides satisfactory documentation to the AA indicating that the foreign nation under which the applicant vessel is registered does not collect a fee from vessels of the United States engaged in similar activities in the waters of such foreign nation. NMFS proposes that the documentation presented (e.g., copy of foreign fishing regulations applicable to vessels of the United States) must clearly exempt vessels of the United States from such a fee. NMFS proposes to publish, as appropriate, a notice of receipt in the **Federal Register** to notify interested parties of the opportunity to review and/or comment on applications. NMFS suggests that applicants allow 90 days for processing applications submitted under section 204(b) and (d) of the Magnuson-Stevens Act.

Following consideration of all recommendations, comments and any other factors pertinent to an application, the AA may issue an appropriate permit to a foreign vessel authorizing transshipments under provisions of section 204(d) if the AA determines that to do so would be in accordance with section 204(d)(3) of the Magnuson-Stevens Act. It is proposed that activity code 10 be established at § 600.501(c) to denote transshipment activities under section 204(d) of the Magnuson-Stevens Act. It is proposed that § 600.501(e)(2) be amended to provide for issuance of permits for activity code 10 directly to applicants and to provide that permits for activity codes 1 through 9 will be provided to the official representative of the applicant foreign nation by the Department of State (DOS). It is proposed that in § 600.508, a new paragraph (g) regarding transshipment operations be added.

NMFS also proposes that additional minor changes be made in the foreign fishing regulations at 50 CFR part 600, subpart F, to make vessels operating under permits issued in accordance with section 204(d) of the Magnuson-Stevens Act subject to the same requirements as vessels operating under permits issued in accordance with section 204(b) of the Magnuson-Stevens Act.

NMFS also proposes to amend § 600.501(e)(2) to reflect the fact that permit holders no longer have to enter any data in "blank permit forms." All necessary information will appear on the permit provided by the DOS (in the case of activity codes 1 through 9) or the NMFS (in the case of activity code 10). In order to delete references to outdated