DEPARTMENT OF COMMERCE

National Oceanic and Atmospheric Administration

50 CFR Parts 223 and 224

[Docket No. 110328226–2189–02]

RIN 0648–XA272

Listing Endangered and Threatened Species; 12-Month Finding on a Petition To List Chinook Salmon in the Upper Klamath and Trinity Rivers Basin as Threatened or Endangered Under the Endangered Species Act

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

ACTION: Status review; notice of finding.

SUMMARY: We, NMFS, announce a 12-month finding on a petition to list the Chinook salmon (*Oncorhynchus tshawytscha*) in the Upper Klamath and Trinity Rivers Basin (UKTR) as threatened or endangered and designate critical habitat under the Endangered Species Act (ESA). We have reviewed the status of the UKTR Chinook salmon Evolutionarily Significant Unit (ESU) and considered the best scientific and commercial data available, and conclude that the petitioned action is not warranted. In reaching this conclusion, we conclude that spring-run and fall-run Chinook salmon in the UKTR Basin constitute a single ESU. Based on a comprehensive review of the best scientific and commercial data currently available, and consistent with the 1998 status review and listing determination for the UKTR Chinook salmon ESU, the overall extinction risk of the ESU is considered to be low over the next 100 years. Based on these considerations and others described in this notice, we conclude this ESU is not in danger of extinction throughout all or a significant portion of its range, nor is it likely to become so in the foreseeable future.

DATES: The finding announced in this notice was made on April 2, 2012.

ADDRESSES: Information used to make this finding is available for public inspection by appointment during normal business hours at the office of NMFS Southwest Region, Protected Resources Division, 501 West Ocean Blvd., Suite 4200, Long Beach, CA 90802. This file includes the status review report, information provided by the public, and scientific and commercial information gathered for the status review. The petition and the status review report can also be found at: *http://swr.nmfs.noaa.gov/.*

FOR FURTHER INFORMATION CONTACT: Rosalie del Rosario at (562) 980–4085 or Ann Garrett at (707) 825–5175, NMFS, Southwest Region Office; or Lisa Manning at (301) 713–1401, NMFS, Office of Protected Resources.

SUPPLEMENTARY INFORMATION:

Background

On January 28, 2011, the Secretary of Commerce received a petition from the Center for Biological Diversity, Oregon Wild, Environmental Protection Information Center, and The Larch Company (hereafter, the petitioners), to list Chinook salmon (*Oncorhynchus tshawytscha*) in the Upper Klamath Basin under the ESA. Because their request is generally made in reference to the UKTR ESU of Chinook salmon, we use the description of that ESU (Myers *et al.,* 1998 and 63 FR 11482; March 9, 1998) as the area in which they are requesting that we list Chinook salmon, and hereafter refer to that area as the Upper Klamath and Trinity Rivers basin. The petitioners identified three alternatives for listing Chinook salmon in the UKTR ESU: (1) Listing spring-run Chinook salmon in the UKTR ESU as a separate ESU; (2) listing spring-run Chinook salmon in the UKTR ESU as a distinct population segment within the currently defined UKTR Chinook salmon ESU; or (3) listing the currently defined UKTR Chinook salmon ESU, which includes both spring-run and fall-run populations. The petitioners also requested that we designate critical habitat for any Chinook salmon populations found to warrant listing.

After reviewing the petition, the literature cited in the petition, and other literature and information available in our files, we found that the petition met the criteria in our implementing regulations at 50 CFR 424.14(b)(2) that are applicable to our 90-day review and determined that the petition presented substantial information indicating that the petitioned action may be warranted (76 FR 20302; April 12, 2011). In that 90-day finding, we explained why we would not further consider Petitioners' second alternative for listing Chinook salmon in the UKTR ESU. We described NMFS' Policy on Applying the Definition of Species Under the Endangered Species Act to Pacific Salmon (ESU Policy; 56 FR 68612; November 20, 1991), which explains that a Pacific salmon stock will be considered a distinct population segment, and hence a ''species'' under the ESA, if it represents an ESU of the biological species. We also explained the two criteria for delineating an ESU. Under its second alternative, Petitioners suggest that, even if we determine that spring-run Chinook salmon in the UKTR ESU do not meet the criteria to be delineated as a separate ESU under the ESU Policy, we should apply the two criteria under the U.S. Fish and Wildlife Service (USFWS) and NMFS Policy Regarding the Recognition of Distinct Vertebrate Population Segments under the Endangered Species Act (DPS Policy; 61 FR 4722; February 7, 1996) to determine that spring-run Chinook salmon in the UKTR ESU are a separate distinct population segment within the UKTR ESU. As we described in the 90-day finding, NMFS will continue to apply the criteria in the ESU Policy to Pacific salmon, which includes Chinook salmon, rather than the criteria in the DPS Policy. Because the ESU Policy explains under what criteria Pacific salmon populations will be considered a distinct population segment, and hence a ''species'' under the ESA, if we evaluate spring-run Chinook salmon in the UKTR according to the criteria of the ESU Policy, we will be determining whether spring-run Chinook salmon are considered a distinct population segment. In the 90-day finding, we also solicited information pertaining to the species and the issues raised in the petition. Following publication of our 90-day finding, we commenced a status review of Chinook salmon in the UKTR ESU. In response to the 90-day finding we received over 50 written comments from the public, which we considered in making this 12-month finding.

In support of the status review, NMFS' Southwest Fisheries Science Center (SWFSC) convened a Biological Review Team (BRT) charged with compiling and reviewing the best available scientific and commercial information on Chinook salmon necessary to: (1) Evaluate whether this information supports the current UKTR Chinook salmon ESU configuration or the separation of spring-run and fall-run Chinook salmon into separate ESUs; and (2) assess the biological status of Chinook salmon populations comprising whichever ESU configuration was best supported by the available information using NMFS' viable salmonid population (VSP) framework for the analysis. The BRT was composed of scientists from the SWFSC and Northwest Fisheries Science Center, USFWS, and U.S. Forest Service with expertise in the biology, genetics, and ecology of UKTR ESU Chinook salmon. The BRT compiled, reviewed, and evaluated the best available scientific and commercial information concerning the ESU configuration and biological status of spring-run and fall-run Chinook salmon populations in the UKTR basin, including information provided by the petitioners, peer-reviewed literature, information provided by other parties interested in this issue, and other information deemed pertinent by the BRT. Following its review, the BRT prepared a report summarizing the information they reviewed, their analysis, and conclusions regarding ESU configuration and biological status (Williams *et al.,* 2011). This report was peer reviewed by two independent scientific experts who have expertise with salmon and steelhead issues in the Klamath Basin. One reviewer has specific expertise on UKTR Chinook salmon genetics, and the other reviewer has expertise in the ecology of UKTR Chinook salmon. The reviewers' comments were incorporated into the final report.

If a petition is found to present substantial scientific information indicating that the petitioned action may be warranted, ESA section 4(b)(3)(B) (16 U.S.C. 1533(b)(3)(B)) requires the Secretary of Commerce to make a finding within 12 months of receipt of the petition (commonly referred to as a 12-month finding) as to whether a petitioned action is warranted. The Secretary has delegated the authority to make this finding to the NOAA Assistant Administrator for Fisheries. This **Federal Register** notice documents our 12-month finding on this petition.

Species Background

Information on the biology and life history of UKTR Chinook salmon is summarized in Myers *et al.* (1998) and a listing determination for west coast Chinook salmon (63 FR 11482; March 9, 1998). In 1998, NMFS completed a status review of the UKTR Chinook salmon ESU and found that it is comprised of both spring-run and fall-run populations (Myers *et al.,* 1998), as will be further described in the following section. Historically, spring-run Chinook salmon were likely the predominant run type in the Klamath-Trinity River Basin (Myers *et al.,* 1998). Most spring-run spawning and rearing habitat was blocked by the construction of dams in the late 1800s and early 1900s in the Klamath River and in the 1960s in the Trinity River Basin (Myers *et al.,* 1998). As a result of these and other factors, spring-run populations were considered to be at less than 10 percent of their historical levels (Myers *et al.,* 1998). Fall-run populations now comprise the majority of UKTR Chinook salmon. Most of the spring-run populations are currently distributed throughout the New, South Fork Trinity, Upper Trinity, and Salmon rivers. The more widely distributed fall-run Chinook salmon inhabit most accessible streams in the ESU, though their distribution generally does not extend as far into the tributary drainages as spring-run Chinook salmon. As with all Chinook salmon populations south of the Columbia River, the majority of Chinook salmon in the UKTR ESU exhibit an ''ocean-type'' life history with juveniles migrating to the ocean within one year of hatching (Myers *et al.,* 1998). Anadromous salmonids in California, like UKTR Chinook salmon, exist at the southern edge of their range along the west coast of North America.

Two hatcheries are operated in the UKTR basin, Iron Gate Hatchery on the Klamath River and Trinity River Hatchery on the Trinity River, that annually release large numbers of spring-run and fall-run Chinook salmon fingerlings and yearlings into the basin. Marine recoveries of coded-wire tags indicate that hatchery-origin fall- and spring-run Chinook salmon from these hatcheries have a similar coastal distribution offshore of California and Oregon (Myers *et al.,* 1998).

Species Delineation

ESA Section 3(16) (16 U.S.C. 1532(16)) defines a ''species'' to include any subspecies of fish or wildlife or plant, and any distinct population segment of any species of vertebrate fish or wildlife which interbreeds when mature. In 1991, we published the ESU Policy (56 FR 58612; November 20, 1991), which describes how we apply the definition of ''species'' in evaluating Pacific salmon populations for listing under the ESA. Under this policy, a group of Pacific salmon populations is considered an ESU if it is (1) reproductively isolated from other con-specific population units, and (2) represents an important component in the evolutionary legacy of the species. Under this policy, an ESU is considered to be a ''distinct population segment'' and thus a ''species'' under the ESA.

ESU Configuration

Based on biological, genetic, and ecological information compiled and reviewed as part of a previous west coast status review for Chinook salmon (Myers *et al.,* 1998), we included all spring-run and fall-run Chinook salmon populations in the Klamath River Basin upstream from the confluence of the Klamath and Trinity rivers in the UKTR Chinook salmon ESU (Myers *et al.,* 1998 and 63 FR 11482, 11487; March 9, 1998). The petitioners contend new information demonstrates that spring-run and fall-run Chinook salmon in the UKTR ESU qualify as separate ESUs based on significant and persistent genetic and reproductive isolation resulting from their different run timing. They further argue that the genetic differences between spring-run and fall-run Chinook salmon in the UKTR Chinook salmon ESU are comparable to genetic differences between spring-run and fall-run Chinook salmon in California's Central Valley, which are recognized as separate ESUs by NMFS (Myers *et al.,* 1998 and 70 FR 37160; June 28, 2005). The BRT carefully reviewed the petition and all other available and relevant information regarding the ESU configuration of Chinook salmon populations in the UKTR basin and prepared a report detailing their review and conclusions (Williams *et al.,* 2011).

Under our ESU policy, Williams *et al.* (2011) indicate that for spring-run and fall-run Chinook salmon populations in the UKTR ESU to be considered separate ESUs, they would need to be substantially reproductively isolated from each other, and they each must represent an important component in the evolutionary legacy of the species. Under the ESU Policy framework, they indicate that the concept of evolutionary legacy implies there would need to be a monophyletic pattern in the evolutionary history of each of the two run types within the UKTR basin, and that spring-run Chinook salmon individuals and populations would need to be more similar genetically to each other than to fall-run Chinook salmon individuals and populations.

As discussed in Williams *et al.* (2011), NMFS has delineated populations of spring-run and fall-run Chinook salmon in the same basin as separate ESUs in only two areas: California's Central Valley and in the interior Columbia River Basin. Chinook salmon populations in the Central Valley are monophyletic in origin, meaning they descended from a common ancestor and are more closely related to each other than to Chinook salmon populations in any other basin on the west coast. However, there is significant genetic divergence between most naturally spawning populations of fall-run and spring-run Chinook salmon that occur in the same rivers in the Central Valley and both run types are monophyletic rather than polyphyletic. For these and other reasons, NMFS separated spring-run and fall-run Chinook populations in the Central Valley into separate ESUs. In the interior Columbia Basin, spring-run and fall-run Chinook salmon are not closely related genetically and represent two very divergent evolutionary lineages (Myers *et al.,* 1998; Waples *et al.,* 2004), and therefore were placed into separate ESUs.

In contrast, spring-run and fall-run Chinook salmon populations found in the coastal basins in California, Oregon, and Washington or the lower Columbia River basin have not been separated into separate ESUs despite differences in adult run-timing, life-history strategies, and other phenotypic characteristics that sometimes accompany genetic differences (Williams *et al.,* 2011). The primary reason for not separating fall-run and spring-run Chinook salmon into separate ESUs in these coastal basins is that their genetic population structure strongly suggests a polyphyletic pattern of run timing evolution (Myers *et al.,* 1998; Waples *et al.,* 2004), with spring and fall-run life histories having evolved on multiple occasions in different watersheds. Williams *et al.* (2011) indicate this polyphyletic pattern of run timing is observed in watersheds adjacent to the Klamath basin and across a range of watershed sizes in California (Mad River, Redwood Creek and Eel River) and Oregon (Rogue and Umpqua rivers).

Williams *et al.* (2011) reviewed new genetic information for Chinook salmon populations in the UKTR ESU (Banks *et al.,* 2000a; Kinziger *et al.,* 2008a; Kinziger *et al.,* 2008b; Kinziger *et al.,* In Preparation,), as well as other studies (Lindley *et al.,* 2004; Waples *et al.,* 2004; Garza *et al.,* 2007), to assess patterns of genetic population structure and population differentiation within the UKTR ESU and to compare those patterns with what has been observed in other basins (e.g., Central Valley and other coastal watersheds). Kinziger *et al.* (2008a) found that there are four genetically differentiated and geographically separated groups of Chinook salmon populations in the UKTR basin and that spring-run and fall-run Chinook life histories have evolved independently and in parallel within both the Salmon and Trinity rivers. Kinziger *et al.* (In Preparation) documented the same geographic population structure reported by Kinziger *et al.* (2008a) and indicated the genetic difference between populations was related to geographic distance and was independent of run timing (i.e., spring-run versus fall-run). In addition, they found that spring-run and fall-run populations in the Salmon River were nearly indistinguishable genetically and that spring and fall-run populations in the South Fork Trinity were extremely similar to each other and to the Trinity River hatchery stocks. Banks *et al.* (2000a) reported they found greater genetic distances between some fall-run populations than among fall-run and spring-run populations in the Klamath Basin and concluded that populations diverged according to geographic location first and life history second. Banks *et al.* (2000a) emphasized that this pattern of geographic differentiation is in strong contrast to that found for Chinook salmon populations in the Central Valley.

The petition contends that genetic differentiation of Chinook salmon populations in the UKTR ESU and the Central Valley is of a similar scale, and that our separation of spring and fall-run Chinook into separate ESUs in the Central Valley means that spring-run and fall-run Chinook salmon in the UKTR ESU should also be separated. The structure of Central Valley spring-run and fall-run Chinook salmon populations was recently reviewed by Lindley *et al.* (2004), Good *et al.* (2005), and Garza *et al.* (2007), all of whom supported the general conclusions that: (1) Central Valley Chinook salmon of all run-types represent a separate lineage from Chinook salmon populations found in coastal watersheds; and (2) Central Valley spring-run populations are monophyletic, with spring-run Chinook salmon from different basins more closely related to each other than to fall-run Chinook salmon from the same basin. Lindley *et al.* (2004), Good *et al.* (2005), and Garza *et al.* (2007) also support the conclusion of Banks *et al.* (2000a, 2000b) that the genetic population structure and genetic variation observed in Chinook salmon populations in the Central Valley is organized by life history (run-type) rather than geographic location, unlike that which is observed with the UKTR Chinook salmon populations where Chinook salmon populations are organized by geographic location rather than life history type (see Banks *et al.,* 2000a).

Based on a review and evaluation of this information, Williams *et al.* (2011) concluded that spring-run and fall-run Chinook salmon populations in the UKTR ESU constitute a single ESU as originally defined by Myers *et al.* (1998), and that the expression of the spring-run life-history variant is polyphyletic in origin in all of the populations in the ESU for which data are available.

UKTR spring-run Chinook salmon do not warrant being separated into a separate ESU because they fail to meet the reproductive isolation and evolutionary legacy criteria in our ESU Policy for Pacific Salmon. The available genetic evidence considered by Williams *et al.* (2011) clearly demonstrates that spring-run and fall-run Chinook salmon populations in the UKTR basin are genetically very similar and are not substantially reproductively isolated from each other. The degree of genetic differentiation between spring and fall-run Chinook salmon in the UKTR basin is comparable to that observed in other coastal basins that support the two run types (Waples *et al.,* 2004) and is much less than that which has been observed in the Interior Columbia Basin and the Central Valley where the two run types have been separated into different ESUs. The available evidence indicating that spring-run and fall-run Chinook salmon in the UKTR basin are polyphyletic in origin and have evolved on multiple occasions, together with the ocean type life-history characteristics exhibited by both run types, suggests that spring-run Chinook salmon do not represent an important component in the evolutionary legacy of the species.

Hatchery Stocks

In 2005, NMFS published a policy on how it would consider hatchery-origin fish when making ESA listing determinations for Pacific salmon and steelhead (Hatchery Listing Policy; 70 FR 37204; June 28, 2005). Under this policy, hatchery stocks are considered part of an ESU in making ESA listing determinations if their level of genetic divergence relative to local natural populations is no more than what occurs between natural populations in the ESU. NMFS used this policy and a previous assessment of all west coast hatchery programs (NMFS 2003) to determine which hatchery stocks would be considered part of west coast salmon and steelhead ESUs in a series of listing determinations published in 2005 and 2006, respectively (70 FR 37160; June 28, 2005 and 71 FR 834; January 5, 2006). The assessment of hatchery stocks (NMFS 2003) used to support these listing determinations evaluated each hatchery stock associated with individual salmon and steelhead ESUs to determine its level of genetic divergence relative to natural populations. Based on this assessment and application of our Hatchery Listing Policy (70 FR 37204; June 28, 2005), we determined that hatchery stocks that were no more than moderately divergent from natural populations would be considered part of an ESU in making listing determinations under the ESA.

Iron Gate Hatchery (IGH) produces fall-run Chinook salmon and releases approximately 6 million fish (fingerlings and yearlings combined) annually in the upper Klamath River. Trinity River

Hatchery (TRH) produces both fall-run and spring-run Chinook salmon and releases approximately 3 million fall-run fish (fingerlings and yearlings combined) and 1.3 million spring-run fish (fingerlings and yearlings combined), respectively, annually in the Trinity River. The SWFSC reviewed and evaluated the available information on broodstock origin, history, and genetics for these three Chinook salmon hatchery stocks and concluded that each stock was founded from a local, native population in the watershed where fish are released and that each stock is no more than moderately divergent from other local, natural populations. Moderate divergence in this case means that the hatchery stocks and local natural populations are no more genetically divergent than what is observed between closely related natural populations. Based on this assessment and the criteria in our Hatchery Listing Policy, we conclude that these three hatchery stocks are part of the UKTR Chinook salmon ESU.

UKTR Chinook Salmon Biological Status

Williams *et al.* (2011) assessed the biological status of the UKTR Chinook salmon ESU using methods similar to those described in Good *et al.* (2005). In conducting their review, Williams *et al.* (2011) considered the best available information on the species' current distribution, historical abundance, recent abundance, trends in abundance, population growth rates, the distribution of hatchery-origin spawners in natural areas, and fishery exploitation rates. To the extent possible, Williams *et al.* (2011) evaluated the available data on the basis of putative population units that are currently recognized by management agencies in the Klamath Basin such as sub-basin units (e.g., Scott River) or specific geographic areas (e.g., upper Klamath River mainstem). Wherever possible, spring-run and fall-run Chinook salmon populations were assessed separately within specific population units. The following discussion summarizes the biological status assessment of UKTR Chinook salmon from Williams *et al.* (2011).

Current Distribution and Historical Abundance

Williams *et al.* (2011) concluded there have been no changes to the distribution of UKTR Chinook salmon since the review of Myers *et al.* (1998). Williams *et al.* (2011) summarized information from Myers *et al.* (1998) and the California Department of Fish and Game (CDFG 1965) that indicates the historical abundance of Chinook salmon in the UKTR ESU was estimated to be approximately 130,000 adults in 1912 (based on peak cannery pack of 18,000 cases) and 168,000 adults in 1963, with the 1963 abundance estimate from CDFG split evenly between Klamath and Trinity rivers.

Recent Abundance, Trends in Abundance, and Population Growth Rate

As reported in Williams *et al.* (2011), the numbers of adults returning to spawning grounds (e.g., Upper Klamath, Trinity, Scott, Salmon, and Shasta rivers and smaller tributaries) and returns to Iron Gate and Trinity River hatcheries are monitored using a variety of methods by a combination of State, Federal, and Tribal agencies. Williams *et al.* (2011) characterized the recent spawner abundance in a manner that was consistent with the previous coast-wide salmon and steelhead status reviews (Good *et al.,* 2005). Based on this analysis, recent spawner abundance estimates of both fall-run and spring-run Chinook salmon returning to spawn in natural areas are generally low compared to historical estimates of abundance; however, the majority of populations have not declined in spawner abundance over the past 30 years (i.e., from the late 1970s and early 1980s to 2010) except for the Scott and Shasta rivers where there have been modest declines. While the BRT considered and presented both short- and long-term population growth rate, to be consistent with Good *et al.* (2005), the BRT stated that they viewed population growth rates based on just 13 years of data with caution given the highly variable population dynamics typical of salmon populations and influences of shifting environmental conditions. Of most interest to the BRT were the long-term population growth rates of the populations individually and the ESU as a whole.

Williams *et al.,* (2011) reported that short-term trends in spawner abundance declined slightly for about half of the population components over the past 13 years, and that fall-run Chinook salmon returns to Trinity River hatchery have been more variable than returns of fall-run Chinook salmon to Iron Gate hatchery. Williams *et al.* (2011) found that hatchery returns did not mirror (or did not track) escapement to natural spawning areas. Overall, Williams *et al.* (2011) concluded that there has been little change in the abundance levels, trends in abundance, or population growth rates since the review by Myers *et al.* (1998). They noted, however, as did Myers *et al.* (1998), that the recent abundance levels of some populations are low, especially in the context of historical abundance estimates. This was most evident with respect to two of the three spring-run population units that were evaluated (Salmon River and South Fork Trinity River).

Hatchery-origin Spawners in Natural Areas

Williams *et al.* (2011) evaluated the occurrence of hatchery-origin Chinook salmon spawners in several natural spawning areas (i.e., Bogus Creek and the Upper Klamath, Shasta, Scott, Salmon, Trinity, and South Fork Trinity rivers) over the past decade and concluded that the majority of hatchery-origin Chinook salmon that stray to natural areas do so in areas adjacent to the hatcheries. This is not unexpected since both hatcheries release fingerlings and yearlings ''on-site,'' as opposed to other locations further downstream in the basin. This finding was supported by recent genetic analyses from Kinziger *et al.* (In Preparation) that found strong evidence for genetic isolation-by-distance that is inconsistent with hatchery-origin fish straying in large numbers throughout the basin.

Extinction Risk Assessment

Williams *et al.* (2011) used a risk matrix approach to assess the viable salmonid population (VSP) criteria (i.e., abundance, productivity, spatial structure, and diversity) for the UKTR Chinook salmon ESU. This approach was used in the most recent west coast salmon and steelhead status reviews (Good *et al.,* 2005) and the details of the methodology are described in both Williams *et al.* (2011) and Good *et al.* (2005). Based on this risk matrix approach, Williams *et al.* (2011) concluded that the UKTR Chinook salmon ESU was at a relatively low risk of extinction based on abundance, growth rate and productivity, and spatial structure and connectivity; and the UKTR Chinook salmon ESU was at a moderate risk of extinction based on diversity. The following sections briefly summarize the conclusions of Williams *et al.* (2011) regarding each of the four VSP criteria.

Abundance

Abundance of spawning populations in the ESU appear to have been fairly stable for the past 30 years and since the review by Myers *et al.* (1998). Although current levels of abundance are generally low compared with historical estimates of abundance, the current abundance levels do not constitute a major risk in terms of ESU extinction. Long-term population growth rates are positive for most population components that were analyzed, indicating they are not currently in decline and, in general, most populations are large enough to avoid genetic problems.

Growth Rate and Productivity

There is no indication that growth rates or productivity of populations have changed since the review of Myers *et al.* (1998); however, the impact of hatchery-origin fish in some locations and in some years is uncertain and is a concern. Based on the available information, hatchery influence appeared to be most concentrated in areas adjacent to the two hatcheries, and spawning survey information (i.e., estimates of adipose fin-clipped fish) and genetic analyses suggest there is a low hatchery fish influence elsewhere in the ESU.

Spatial Structure and Connectivity

There is a broad geographic distribution of fall-run Chinook salmon throughout the UKTR ESU, with genetic data (*i.e.,* isolation-by-distance information) indicating that there is connectivity among populations. There are no cases where fall-run Chinook were found to be locally extirpated and the spatial distribution of fall-run Chinook salmon in the UKTR ESU indicates that it currently occupies all accessible available habitat. Conversely, spring-run Chinook population numbers are low, with few if any spring-run fish recently observed in the Scott and Shasta rivers. The geographic distribution of spring-run Chinook salmon is of some concern, with possible extirpations perhaps reflecting the effects of low water years and habitat accessibility.

Diversity

Although there are extant spring-run and fall-run Chinook salmon populations in the basin, the low spawner abundance in spring-run populations continues to be a concern, as it was in the previous review (Myers *et al.,* 1998). In addition to the continued presence of both the spring-run and fall-run life-history types in the basin, the presence of large sub-yearlings in the Shasta River was considered evidence of continuing life history diversity in the ESU. Hatchery influence in natural spawning areas near the two hatcheries is a concern because of its possible impacts on the productivity and diversity of natural spawning Chinook salmon populations in those areas, but hatchery-origin fish appear to be most concentrated in relatively small areas located near the two hatcheries rather than elsewhere throughout the geographic area occupied by the ESU.

To assess the overall extinction risk of the UKTR Chinook salmon ESU, Williams *et al.* (2011) employed a methodology (the Forest Ecosystem Management Assessment Team, (FEMAT) approach) that has been used in previous west coast salmon status reviews (see Good *et al.,* 2005). Under this approach, the members of the BRT made informed professional judgments about whether the UKTR Chinook salmon ESU was presently in one of three extinction risk categories: ''high risk,'' ''moderate risk,'' and ''neither at high risk or moderate risk'' (low risk) based on the results of the VSP criteria assessment and other relevant information on the status of the ESU as discussed previously. In its assessment, the BRT members interpreted the high risk category as ''a greater than 5% risk of extinction within 100 years'', and the moderate risk category as ''more likely than not risk of moving into the high risk category within 30–80 years.'' Beyond these time horizons, the BRT members concluded it was difficult with any degree of confidence to project ESU extinction risk. Based on this assessment process, Williams *et al.* (2011) concluded that the UKTR Chinook salmon ESU was at a low risk of extinction in the next 100 years, although the BRT did express some uncertainty as to whether the ESU was at low risk or moderate risk of extinction (Table 5, Williams *et al.,* 2011).

Under NMFS' Hatchery Listing Policy, any hatchery stocks that are part of an ESU must be considered in status assessments for the ESU if it is being considered for possible listing (70 FR 37204; June 28, 2005). As discussed in the policy, any status assessment of an ESU which includes hatchery stocks should evaluate the manner in which the hatchery stocks contribute to conserving natural populations by considering their impact on the VSP criteria for natural populations comprising the ESU. As noted previously, the SWFSC determined that the fall-run Chinook salmon stock from IGH and the spring-run and fall-run Chinook salmon stocks from TRH are no more than moderately diverged from the local, natural populations, and as a result NMFS has concluded that these three hatchery stocks are part of the UKTR Chinook salmon ESU. Based on the hatchery operations and releases, as well as the assessment of hatchery-origin fish spawning in natural areas presented by Williams *et al.* (2011), we conclude that these three hatchery stocks: (1) Slightly reduce ESU extinction risk by increasing abundance of Chinook salmon in the UKTR ESU; (2) have a neutral or uncertain effect on ESU extinction risk associated with productivity and spatial structure because hatchery origin fish spawn in natural areas primarily near the hatcheries and naturally produced Chinook salmon populations are widely distributed throughout the basin; and (3) have a slightly increased effect on ESU extinction risk associated with diversity because of the potential impacts of hatchery fish on naturally spawning populations near the hatcheries. Overall, we conclude that including these three hatchery stocks in the UKTR Chinook salmon ESU does not appreciably alter the Williams *et al.* (2011) assessment of the VSP status of the UKTR Chinook salmon ESU or its extinction risk.

As part of their status review, Williams *et al.* (2011) assessed whether there are portions of the UKTR Chinook Salmon ESU that would constitute a significant portion of its range. In making this assessment they considered a portion of the range to be significant if its contribution to the overall viability of the ESU was so important that, without it, the ESU would be in danger of extinction. The geographical range of the ESU they considered in their assessment was the current geographical distribution of Chinook salmon in the UKTR ESU, and thus they did not consider inaccessible portions of the historical range of Chinook salmon upstream of dams. These considerations are consistent with interpretations and principles in the NMFS and USFWS Draft Policy on Interpretation of the Phrase ''Significant Portion of Its Range'' in the Endangered Species Act's Definitions of ''Endangered Species'' and ''Threatened Species,'' which we consider as nonbinding guidance in making listing determinations until a final policy is published (76 FR 76987; December 9, 2011). Lastly, they assumed that a significant portion of the ESU's range could be a geographic sub-unit of the current ESU (e.g., the Salmon River) or a life-history variant (spring-run or fall-run life-history type), but based on the petition, focused their assessment on whether the spring-run Chinook salmon component of the UKTR ESU constituted a significant portion of the ESU's range.

Williams *et al.* (2011) concluded that Chinook salmon are distributed broadly throughout the UKTR ESU and that there is connectivity among the component populations in the basin based on the available genetic information. Within the current geographic range of the ESU, they did not find any situations where there was substantial unused habitat (i.e., extirpations) and concluded the spatial distribution of Chinook salmon in the ESU appeared to be appropriate given the current condition of the habitat. Williams *et al.* (2011) expressed concern about the overall status of spring-run Chinook salmon populations in the UKTR Chinook salmon ESU, but they did not conclude that these populations were at immediate risk of extinction (i.e., within the timeframe of generations as opposed to tens of generations) or that their demographic status posed an immediate risk of extinction to the ESU. The complete loss of spring-run Chinook salmon is unlikely in the foreseeable future, but if that occurred Williams *et al.* (2011) indicated it would reduce the viability of the ESU by reducing its overall diversity. Despite such a reduction in the viability of the ESU, the BRT concluded that the complete loss of spring-run would not result in an immediate risk of extinction to the UKTR Chinook Salmon ESU. Based on these considerations, we conclude that spring-run Chinook salmon do not constitute a significant portion of the range of the UKTR Chinook salmon ESU.

Summary of Factors Affecting the UKTR Chinook Salmon ESU

Section 4(a)(1) of the ESA (16 U.S.C. 1533(a)(1)) and NMFS' implementing regulations (50 CFR Part 424) set forth factors and procedures for listing species. NMFS must determine 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) its overutilization for commercial, recreational, scientific, or educational purposes; (3) disease or predation; (4) inadequacy of existing regulatory mechanisms; or (5) other natural or manmade factors affecting its continued existence. NMFS has previously reviewed and evaluated these listing factors for west coast Chinook salmon, including those populations that comprise the UKTR Chinook salmon ESU (63 FR 11482, March 9, 1998; and NMFS 1998). These reviews have identified a wide range of factors that have adversely impacted Chinook salmon and their habitat on the west coast as well as in the UKTR ESU. The following discussion is based on those reviews and other more recent sources of information.

Present or Threatened Destruction, Modification, or Curtailment of the Species' Habitat or Range

Previous reviews as cited above have identified a range of historical and ongoing land management activities and practices that adversely impact freshwater habitat used by Chinook salmon in the UKTR ESU, including construction of dams and other barriers that block access to historical habitat, water diversions, agriculture, timber harvest, road construction, grazing, and mining. The impacts associated with these activities have altered or in some cases eliminated habitat for Chinook salmon. A more detailed discussion of the impacts associated with these activities can be found in Nehlsen *et al.* (1991), Moyle (2002), and NRC (2004).

Within the freshwater range of the UKTR ESU there are two important migration barriers that block access to historical spawning and rearing habitat: Iron Gate Dam on the Klamath River (DOI and CDFG 2011) and Lewiston Dam on the Trinity River (DOI 2000). Many of the streams blocked by these dams were high quality snowmelt-driven tributaries or groundwater dominated streams that supported adult spring-run and fall-run Chinook salmon (Moyle 2002). The presence of these dams has impacted the production of both spring-run and fall-run Chinook salmon in the UKTR ESU, but they have had a greater impact on the distribution and abundance of spring-run Chinook salmon (63 FR 11482; March 9, 1998).

Water diversion and agricultural activities in the Klamath River and Trinity River basins have altered the timing and volume of flows in streams, reduced habitat availability, reduced water quality, and contributed to the reduced productivity of natural-origin Chinook salmon (NMFS 2010; DOI 2000). Stream water is diverted for consumptive use in the Upper Klamath Basin, in the Shasta and Scott River valleys, and from the Trinity River into other river basins (e.g., Rogue River, Sacramento River). Substantial water diversions, particularly during dry water years, can nearly dewater sections of rivers, creating barriers to Chinook salmon migration (e.g., Scott River), reducing the amount of available juvenile rearing habitat, and contributing to poor water quality. The Klamath River is impaired by a variety of water quality problems, including temperature, dissolved oxygen, nutrients, organic matter, and microcystin (NCRWQCB 2010), all of which can adversely impact Chinook salmon.

Historical and ongoing timber harvest activities in the UKTR ESU have reduced habitat quality for Chinook salmon (Moyle 2002). Timber harvest can result in the loss of riparian vegetation, increased stream sedimentation, warmer water temperatures, reduced availability of large woody debris, increased peak runoff events, and simplified stream habitat, including filling of pools (Chamberlain *et al.,* 1991). Road systems used to access timber areas cause high rates of erosion, landslides and in some cases block access to habitat when poorly designed culverts are used in road-stream crossings (Chamberlain *et al.,* 1991). While mining in the UKTR ESU has been significantly curtailed in the past several decades, some lingering effects from tailings piles and other disturbances remain. Currently, there is a moratorium on suction dredge gold mining in California, which limits the impact of this activity on UKTR Chinook salmon habitat. The impacts to UKTR Chinook salmon from land management activities that were identified in Myers *et al.* (1998) and NMFS' 1998 listing determination for this ESU (63 FR 11482; March 9, 1998) continue today, with a few exceptions as noted above. Chinook salmon in the UKTR ESU have persisted for several decades at relatively stable levels of abundance, despite the existence of these threats to freshwater habitat, and, therefore, it is unlikely that destruction or modification of habitat or curtailment of the species' range will threaten its continued existence now or in the foreseeable future.

Overutilization for Commercial, Recreational, Scientific, or Educational Purposes

UKTR Chinook salmon are harvested in commercial and recreational fisheries in the ocean as well as Tribal and recreational fisheries in the Klamath Basin. Ocean harvest of Klamath Basin fall-run Chinook salmon is coordinated by the Pacific Fishery Management Council (PFMC), Tribal harvest is managed by the individual tribes in the Klamath Basin, and in-river recreational fisheries are managed by the California Fish and Game Commission. From the mid-1980s through 2011, the PFMC managed the Klamath Basin fall-run Chinook salmon fishery with twin conservation objectives aimed at not surpassing a maximum total exploitation rate of 67 percent of projected returning natural adult spawners and achieving a minimum of at least 35,000 natural area adult spawners, with occasional allowances for smaller harvests when projected returns were less than 35,000 adults (i.e., *de minimis* fisheries; PFMC 2011). The PFMC Salmon Fishery Management Plan was amended in 2011 and, beginning in 2012, the maximum allowable exploitation rate will be 68 percent of projected natural area adult spawners, subject to a minimum escapement of 40,700 natural area adult spawners, with allowances for *de minimis* fisheries when the stock is at low abundance (PFMC and NMFS 2011). The minimum natural area spawner escapement of 40,700 adults is the best estimate of an escapement level that will produce maximum sustainable yield (Salmon Technical Team 2005). Fisheries have very rarely resulted in exploitation rates meeting or exceeding the maximum allowable level of 67 percent and the observed total exploitation rate on Klamath Basin fall-run Chinook salmon has varied between approximately 20 and 65 percent since the late 1990s (Williams *et al.,* 2011).

Ocean exploitation rates for Klamath Basin spring-run Chinook salmon are not available (Williams *et al.,* 2011). However, restrictions on ocean fisheries that have been implemented as a result of the status of Klamath Basin fall-run Chinook salmon, Sacramento River fall-run Chinook salmon, and ESA listed salmon stocks also protect UKTR spring-run Chinook salmon, given the general overlap in the ocean distribution of these other stocks and UKTR spring-run Chinook salmon (Williams *et al.,* 2011). In their final year of life, fall-run Chinook salmon leave the ocean and return to the river for spawning later in the year than do spring-run Chinook salmon. As a consequence, fall-run fish are exposed to the summer ocean fishery in their final year of life, whereas spring-run are not. Thus, the ocean exploitation rate on Klamath Basin spring-run Chinook salmon is considered to be lower than on Klamath Basin fall-run Chinook salmon, because of their lack of exposure to the summer ocean fishery in their final year of life.

In-river recreational fishery exploitation rates in the Klamath Basin for spring-run Chinook salmon are unknown. Williams *et al.* (2011) indicated that in-river Tribal exploitation rates in recent years have generally been comparable to or slightly greater than those reported by Myers *et al.* (1998), particularly for spring-run Chinook salmon. To reduce impacts on spring-run adult escapement, the Yurok Tribe has enacted voluntary conservation measures since the early 1990s. The most recent example is the closure of the gillnet fishery three days per week and the prohibition of commercial fishing during the 2011 spring-run Chinook salmon migration period. Overall, impacts from commercial, recreational, and Tribal harvest do not appear to have changed significantly since they were last reviewed in 1998 (Myers *et al.,* 1998).

Because of the relatively robust regulatory controls on the harvest and other uses of Chinook salmon in the UKTR ESU and the reductions in overall harvest from historic levels, overutilization of Chinook salmon in this ESU for commercial, recreational or scientific purposes is unlikely to threaten the ESU's continued existence now or in the foreseeable future.

Disease or Predation

Diseases that cause mortality to UKTR Chinook salmon adults and juveniles are prevalent in the Klamath Basin, particularly in the mainstem Klamath River. In the fall of 2002, over 30,000 fall-run Chinook salmon died in the Klamath River as a result of low water discharge, large run size, high water temperatures, and an epizootic outbreak of the bacterium *Flavobacterium columnare* (columnaris) and the parasite *Ichthyopthirius multifilis* (ich) (CDFG 2004). Since that event, there have been substantial efforts to reduce the likelihood that such events will occur in the future or to minimize the impacts of any future event (CDFG 2011). An interagency task force has been organized to provide early warning and response to a potential fish kill that would entail requesting water releases from either Iron Gate or Lewiston dams if Klamath River flows fall below a specified minimum threshold during the adult fall-run Chinook salmon migration period.

An area of high parasite infections exists in the upper Klamath River from its confluence with the Shasta River downstream to the Seiad Valley (Foote *et al.,* 2011). Infection by *Ceratomyxa shasta* can be a significant mortality factor for juvenile Chinook salmon; the average infection rate for fish in the Klamath River upstream from its confluence with the Trinity River was 30 percent from 2004–2008, and 54 percent in 2009 (True *et al.,* 2011). Because high water temperature is one of the primary drivers for disease infection rates (Foote *et al.,* 2011), increased water temperatures associated with drought, climate change, and human activities (e.g., water diversions) are predicted to increase disease rates in the future (Woodson *et al.,* 2011).

Naturally-produced Chinook salmon fry are preyed upon by hatchery steelhead in the upper Trinity River (Naman and Sharpe 2011). There is limited information on pinniped predation of Chinook salmon in the UKTR ESU, but one study from the Klamath River estuary in 1997 estimated that over 8 percent of the fall-run Chinook salmon escapement was consumed by pinnipeds (Hillemeier 1999).

Diseases are unlikely to threaten the ESU's continued existence now or in the foreseeable future, unless climate change in the basin causes a substantial increase in disease related mortality. However, the magnitude of any such effects is difficult to predict with any degree of certainty. Predation is unlikely to threaten the ESU's continued existence now or in the foreseeable future.

Inadequacy of Existing Regulatory Mechanisms

Forest practices, managed by the State and the Federal Government, have generally improved since 1998, although some practices do not adequately protect Chinook salmon or other salmonids. About 68 percent of the land within the UKTR ESU is managed by the U.S. Forest Service (USFS) and the Bureau of Land Management (BLM) under the Northwest Forest Plan (NWFP). The NWFP and its associated Aquatic Conservation Strategy (ACS), which was designed to protect salmon and steelhead habitat by maintaining and restoring ecosystem health at watershed and landscape scales, has improved the landscape through changes in timber harvesting and road maintenance and construction. A recent report assessing the overall effectiveness of the NWFP indicates that there have been positive changes in watershed condition scores throughout the range of the NWFP, with trends indicating small increases in vegetation scores (Lanigan *et al.,* 2011). While overall road density changed only slightly across the area of the NWFP, road densities remain high in some portions of the UKTR Chinook salmon ESU (e.g., South Fork Trinity River).

Since 1998, NMFS has actively engaged with the State Board of Forestry to facilitate improvements in California's state forest practice rules to improve aquatic habitat protection. The Board of Forestry has made some improvements to the rules. However, the current forest practice rules will continue to be considered inadequate for anadromous salmonids until the full suite of needed protections outlined by NMFS in public hearings and the Northern California steelhead listing (65 FR 36074; June 7, 2000) are adopted.

Enforcement of State fishery regulations and Tribal trust fishing rights is a challenge within the UKTR

ESU. The Yurok Tribe and Hoopa Valley Tribe have Federally reserved fishing rights, but the Federally reserved salmon and steelhead fishing rights of other Tribes have not been established. Under their Federally reserved rights, the Yurok Tribe and Hoopa Valley Tribe are entitled to a moderate living standard or 50 percent of the harvest of Klamath-Trinity Basin salmon. However, members of the Karuk Tribe are authorized to fish with traditional hand-held dip nets at their indigenous fishing site at Ishi Pishi Falls under State fishing regulations. Thus, the management of in-river harvest of salmonids is shared between Federal, Tribal, and State agencies and depends upon whether the Tribe has a Federally reserved fishing right or is harvesting salmon under State fishing regulations. Monitoring and enforcement of in-river harvest is hampered by the complexity of the regulations governing the in-river fishery. Although the extent to which illegal harvest is a problem is unclear, illegal harvest of UKTR Chinook salmon has been documented. For example, State law enforcement officers have confiscated gill nets and fishing rods in the New River watershed, even during periods when the river is closed to fishing (Leach 2012).

While some water diversions in the UKTR Chinook salmon ESU are well monitored, consumptive water use is often poorly or, in some cases, entirely undocumented. Groundwater withdrawals are not monitored or quantified and water master service is lacking in much of the UKTR Chinook salmon ESU. The effects of water utilization on UKTR Chinook salmon are not well understood, and few studies have been developed to quantify the effects.

Current regulatory mechanisms are not quantifying or addressing consumptive water use, land clearing, chemical spills, and fertilizer and pesticide use associated with outdoor cannabis cultivation in the UKTR ESU.

There is no comprehensive drought plan for the Klamath Basin (including the Trinity River) or coordinated strategy that directs actions of resource management agencies to reduce the effects of drought or climate change on Chinook salmon. However, parties to the Klamath Basin Restoration Agreement have drafted a Drought Plan which, if finalized and implemented, is expected to reduce the effects of drought on UKTR Chinook salmon in the mainstem Klamath River. Without appropriate mechanisms in place to reduce the effects of drought or climate change throughout the UKTR ESU, both remain threats to the ESU.

Though there are examples of existing regulatory mechanisms not adequately protecting Chinook salmon in the UKTR ESU, Chinook salmon populations in the ESU have persisted at current levels for several decades despite these limitations. Overall, we conclude that it is unlikely that inadequacies in these regulatory mechanisms threaten the continued existence of the ESU.

Other Natural or Man-made Factors Affecting Its Continued Existence

Natural events like prolonged drought or catastrophic flooding could pose significant threats to UKTR Chinook salmon. Prolonged drought (more than two years) would magnify already challenging water quality, disease, and freshwater habitat conditions for UKTR Chinook salmon. A decadal scale drought, such as the one that lasted from the late 1920s until the late 1930s (McCabe *et al.,* 2004), would adversely affect several generations of Chinook salmon and increase the population's extinction risk. Although many shorter term droughts (two to three years) have occurred in the recent past, a decadal scale drought has occurred once in approximately the past 100 years.

Catastrophic flooding events like those in 1955, 1964 and 1997 in the Klamath Basin destroyed a large area of salmonid habitat, the effects of which are still presently evident (Cover *et al.,* 2010). In addition to adverse impacts to the spawning and rearing of Chinook salmon during flood events, such events also degrade habitat conditions by filling in holding pools, changing channel hydraulics, reducing the amount of large woody debris, and increasing summer stream temperatures through loss of riparian vegetation (Lisle 1982). While improvements to watershed conditions have been made which could help reduce the intensity of debris flows and sedimentation, catastrophic flooding poses a risk to UKTR Chinook salmon, though the timing and frequency of such events are difficult to predict.

Climate change projections for the Klamath Basin predict greater relative warming in the summer than in other seasons, drier summers, less snowpack, lower stream flow, and changes in predominant vegetation types such that wildfires are projected to increase in frequency and area (Woodson *et al.,* 2011). These predicted changes would impact UKTR Chinook salmon by altering fish migration and timing, decreasing the availability of side channel and floodplain habitats, the loss of cool-water refuge areas, higher rates of disease incidence, lower dissolved oxygen levels, and potentially earlier, longer, and more intense algae blooms (Woodson *et al.,* 2011). Climate change will likely exacerbate existing stressors as well as create new stressors for salmonids in the Klamath River (Quiñones 2011). A transition to a warmer climate state and sea surface warming may be accompanied by reductions in ocean productivity, which affects Chinook salmon survival (Behrenfeld *et al.,* 2006).

Iron Gate Hatchery and Trinity River Hatchery release roughly 14.2 million hatchery salmonids into the UKTR basin annually, of which 10.3 million are Chinook salmon that we have determined are part of this ESU. Releases of hatchery fish can create a host of ecological (Kostow 2009) and genetic (Reisenbichler and Rubin, 1999; Araki *et al.,* 2009) problems that can result in lower productivity of natural-origin salmonids (Buhle *et al.,* 2009; Chilcote *et al.,* 2011). Genetic information and escapement estimates indicate straying of hatchery Chinook salmon adults into tributaries is more acute for those streams or areas located closest to the two hatcheries in the Klamath Basin (Williams *et al.,* 2011). The extent to which hatchery-origin fish affect the productivity of UKTR Chinook salmon is unknown, but given research on the effect of hatchery fish on the productivity of natural-origin fish in other systems (Buhle *et al.,* 2009; Chilcote *et al.,* 2011), it is likely that productivity of UKTR Chinook salmon is impacted at least in those areas near hatcheries where hatchery-origin fish are most abundant.

Floods and droughts are natural phenomena that have affected UKTR Chinook salmon for millennia. Although these natural phenomena temporarily reduce the ability of freshwater habitat to support UKTR Chinook salmon, they are unlikely to threaten the continued existence of the species. Climate change has the potential to threaten the ESU's continued existence, particularly if precipitation and snowpack markedly decrease and temperatures substantially increase. However, the magnitude of climate driven changes in precipitation and snowpack in the foreseeable future and the response of Chinook salmon populations in the ESU to any such changes is unknown. Efforts to reform hatchery practices at Trinity River and Iron Gate hatcheries are increasing, in part driven by the recent scientific review of hatchery operations by the California Hatchery Scientific Review Group. If changes in hatchery operations resulting from this process are implemented in the future, they are expected to reduce the potential adverse effects of hatchery releases on the productivity of naturally spawning Chinook salmon in this ESU.

Conservation Efforts

When considering the listing of a species, section 4(b)(1)(A) of the ESA (16 U.S.C. 1533(b)(1)(A)) requires consideration of efforts by any State, foreign nation, or political subdivision of a State or foreign nation to protect the species. On March 28, 2003, NMFS and the USFWS published the final Policy for Evaluating Conservation Efforts When Making Listing Decisions (68 FR 15100), that provides guidance on evaluating current protective efforts identified in conservation agreements, conservation plans, management plans, or similar documents (developed by Federal agencies, State and local governments, Tribal governments, businesses, organizations, and individuals) that have not yet been implemented, or that have been implemented but have not yet demonstrated effectiveness.

There is a wide range of conservation efforts focused on salmonids, including Chinook salmon, in the UKTR ESU. One important effort is the Trinity River Restoration Program. This ongoing program established restoration goals for spring-run and fall-run Chinook salmon, identified actions that must be taken to restore Trinity River Chinook salmon populations, established quantifiable performance measures, and incorporated the principles of adaptive management (TRRP 2012). Removing Iron Gate Dam and three other dams upstream of Iron Gate Dam on the Klamath River (if the Secretary of the Interior makes an affirmative determination under the Klamath Hydroelectric Settlement Agreement) or adding fish passage facilities around these and other upper basin dams on the Klamath River (if the Secretary of the Interior does not make an affirmative determination under the Klamath Hydroelectric Settlement Agreement) and associated restoration efforts will likely improve the viability of UKTR Chinook salmon (CDFG and DOI 2011), but there are uncertainties regarding which of these efforts will be implemented. Several other efforts are ongoing in the Klamath Basin; in particular, improved forest practices, land management, and purchase of private land for conservation. Ongoing research on diseases that afflict UKTR Chinook salmon is expected to provide greater understanding of the factors that contribute to disease infection and management efforts that can ameliorate disease impacts in the UKTR ESU.

12-Month Finding

We have reviewed the status of the UKTR Chinook salmon ESU and considered the best scientific and commercial data available, and we conclude that the petitioned action is not warranted. In reaching this conclusion, we conclude that spring-run and fall-run Chinook salmon in the UKTR Basin constitute a single ESU. We have considered the conservation efforts for the ESU. In addition, we have considered the ESA section 4(a)(1) (16 U.S.C. 1533(a)(1)) factors in the context of the biological status of the species, the assessment of the risks posed by those threats, the possible cumulative impacts, and the associated uncertainties. Despite the issues discussed under those factors, consistent with the 1998 status review and listing determination for the UKTR Chinook salmon ESU, and based on a comprehensive review of the best scientific and commercial data currently available, NMFS concludes the overall extinction risk of the ESU is considered to be low over the next 100 years.

Based on these considerations and others described in this notice, we conclude that the UKTR Chinook salmon ESU is not in danger of extinction throughout all or a significant portion of its range, nor is it likely to become so in the foreseeable future. Therefore, the UKTR Chinook salmon ESU does not meet the ESA definition of an endangered or threatened species, and listing the UKTR Chinook salmon ESU under the ESA is not warranted at this time.

References

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

Authority

The authority for this action is the Endangered Species Act of 1973, as amended (16 U.S.C. 1531 *et seq.*).

Dated: March 27, 2012.

Alan D. Risenhoover,

Acting Deputy Assistant Administrator for Regulatory Programs, National Marine Fisheries Service.

[FR Doc. 2012–7879 Filed 3–30–12; 8:45 am]

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DEPARTMENT OF COMMERCE

National Oceanic and Atmospheric Administration

50 CFR Part 679

RIN 0648–BB77

Fisheries of the Exclusive Economic Zone Off Alaska; Pacific Salmon

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

ACTION: Notice of availability of fishery management plan amendments; request for comments.

SUMMARY: The North Pacific Fishery Management Council (Council) submitted Amendments 10, 11, and 12 to the Fishery Management Plan for the Salmon Fisheries in the EEZ off the Coast of Alaska (FMP) to NMFS for review. If approved, Amendment 10 would provide authority for NMFS to recover the administrative costs of processing applications for any future permits that may be required under this FMP, except for exempted fishing permits and prohibited species donation permits. If approved, Amendment 11 would revise the timeline associated with the Council's process to identify Habitat Areas of Particular Concern so that the process coincides with the Essential Fish Habitat (EFH) 5-year review, revise habitat research priority objectives, and update EFH conservation recommendations for, and the analysis of the impacts of, non-fishing activities. If approved, Amendment 12 would comprehensively revise and update the FMP to reflect the Council's salmon management policy and Federal law. Amendments 10, 11, and 12 are intended to promote the goals and objectives of the Magnuson-Stevens Fishery Conservation and Management Act, the FMP, and other applicable laws.

DATES: Written comments on the amendment must be received on or before 5 p.m., Alaska local time, on June 1, 2012.

ADDRESSES: You may submit comments, identified by FDMS Docket Number NOAA–NMFS–2011–0295, by any one of the following methods:

- *Electronic Submissions:* Submit all electronic public comments via the Federal eRulemaking Portal *http://www.regulations.gov.* To submit comments via the e-Rulemaking Portal, first click the ''submit a comment'' icon, then enter NOAA–NMFS–2011–0295 in the keyword search. Locate the