the average catch from 1995 to 2000 (CDFG 2008, pp.1–4).

Our process for making this 90-day finding under section 4(b)(3)(A) of the Act and 50 CFR 424.14(b) of our regulations is limited to the determination of whether information meets the ''substantial scientific and commercial information'' threshold, which is interpreted in our regulations as ''that amount of information that would lead a reasonable person to believe that the measure proposed in the petition may be warranted'' (50 CFR 424.14). On the basis of information provided in the petition and other information readily available to us, we have determined that the petition presents substantial scientific or commercial information that the San Francisco Bay-Delta longfin smelt population may be a distinct population segment and that listing the San Francisco Bay-Delta longfin smelt population as endangered may be warranted. Therefore, we are initiating a status review to determine if listing the species is warranted. To ensure that the status review is comprehensive, we are soliciting scientific and commercial data and other information regarding this species.

It is important to note that the ''substantial information'' standard for a 90-day finding is in contrast to the Act's ''best scientific and commercial data'' standard that applies to a 12-month finding as to whether a petitioned action is warranted. A 90-day finding is not a status assessment of the species and does not constitute a status review under the Act. Our final determination as to whether a petitioned action is warranted is not made until we have completed a thorough status review of the species, which is conducted following a 90-day finding. Because the Act's standards for 90-day and 12-month findings are different, as described above, a positive 90-day finding does not mean that the 12-month finding will also be positive.

The petitioners also requested that critical habitat be designated for this species. We always consider the need for critical habitat designation when listing species. If we determine in our 12-month finding that listing the longfin smelt is warranted, we will address the designation of critical habitat in a subsequent proposed rule.

Significant Portion of the Species' Range

The Petitioner seeks to list the entire San Francisco Bay-Delta longfin smelt population. During our status review we will evaluate whether the information provided and in our files supports listing and whether there may be a portion of the longfin smelt's range that may be significant. As a result we will leave our analysis and determination of issues of significant portion of range to the 12-month finding.

References Cited

A complete list of all references cited herein is available, upon request, from the Sacramento Fish and Wildlife Office (see **ADDRESSES** section).

Author

The primary authors of this notice are staff of the Sacramento Fish and Wildlife Office, U.S. Fish and Wildlife Service, 2800 Cottage Way, Sacramento, CA 95825.

Authority

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

Dated: April 28, 2008.

Kenneth Stansell,

Acting Director, U.S. Fish and Wildlife Service.

[FR Doc. E8–9835 Filed 5–5–08; 8:45 am]

BILLING CODE 4310–55–P

DEPARTMENT OF THE INTERIOR

Fish and Wildlife Service

50 CFR Part 17

[FWS–R1–ES–2008–0048; 1111 FY07 MO B2]

Endangered and Threatened Wildlife and Plants; 90-Day Finding on a Petition to List Kokanee (Oncorhynchus nerka) in Lake Sammamish, Washington, as Threatened or Endangered

AGENCY: Fish and Wildlife Service, Interior.

ACTION: Notice of 90-day petition finding and initiation of status review.

SUMMARY: We, the U.S. Fish and Wildlife Service (Service), announce a 90-day finding on a petition to list the Lake Sammamish kokanee (*Oncorhynchus nerka*) as a threatened or endangered species under the Endangered Species Act of 1973, as amended (Act). We find that the petition presents substantial scientific or commercial information indicating that listing the Lake Sammamish kokanee may be warranted. Therefore, with the publication of this notice, we are initiating a status review of the species, and we will issue a 12-month finding on our determination as to whether the petitioned action is warranted. To ensure that the status review is comprehensive, we are soliciting information and data regarding this species. We will make a determination on critical habitat for this species if, and when, we initiate a listing action.

DATES: We made the finding announced in this document on May 6, 2008. We will accept comments received or postmarked on or before July 7, 2008.

ADDRESSES: You may submit comments by one of the following methods:

- *Federal eRulemaking Portal: http://www.regulations.gov*. Follow the instructions for submitting comments.
- *U.S. mail or hand-delivery:* Public Comments Processing, Attn: [FWS–R1–ES–2008–0048]; Division of Policy and Directives Management; U.S. Fish and Wildlife Service; 4401 N. Fairfax Drive, Suite 222; Arlington, VA 22203.

We will not accept e-mail or faxes. We will post all information received at *http://www.regulations.gov*. This generally means that we will post any personal information you provide us (see the Information Solicited section below for more details).

FOR FURTHER INFORMATION CONTACT: Ken Berg, Manager, Western Washington Fish and Wildlife Office, U.S. Fish and Wildlife Service, 510 Desmond Drive SE, Suite 102, Lacey, WA 98503; telephone 360–753–6039; facsimile at 360–753–9405. If you use a telecommunications device for the deaf (TDD), call the Federal Information Relay Service (FIRS) at 800–877–8339.

SUPPLEMENTARY INFORMATION:

Information Solicited

When we make a finding that a petition presents substantial information to indicate that listing a species may be warranted, we are required to promptly commence a review of the status of the species. To ensure that the status review is complete and based on the best available scientific and commercial information, we are soliciting information concerning the status of the Lake Sammamish kokanee. We are seeking information regarding the species' historical and current status and distribution, its biology and ecology, ongoing conservation measures for the species and its habitat, and threats to the species and its habitat. We request any additional information, comments, and suggestions from the public, other concerned governmental agencies, Native American Tribes, the scientific community, industry, agricultural and forestry groups, conservation groups, or any other interested parties concerning the status of the Lake Sammamish kokanee.

If we determine that listing the Lake Sammamish kokanee is warranted, it is our intent to propose critical habitat to the maximum extent prudent and determinable at the time we propose to list the species. Therefore, with regard to areas within the geographical area currently occupied by the species, we also request data and information on what may constitute physical or biological features essential to the conservation of the species, where these features are currently found, and whether any of these features may require special management considerations or protection. Please provide specific comments and information as to what, if any, critical habitat you think we should propose for designation if the species is proposed for listing, and why such habitat meets the requirements of the Act.

Please note that submissions merely stating support or opposition to the actions under consideration without providing supporting information, although noted, will not be considered in making a determination, as section 4(b)(1)(A) of the Act directs that determination as to whether any species is a threatened or endangered species shall be made ''solely on the basis of the best scientific and commercial data available.'' Based on the status review, we will issue the 12-month finding on the petition, as provided in section 4(b)(3)(B) of the Act.

You may submit your information concerning this status review by one of the methods listed in the **ADDRESSES** section. We will not consider submissions sent by e-mail or fax or to an address not listed in the **ADDRESSES** section.

If you submit information via *http://www.regulations.gov*, your entire submission—including any personal identifying information—will be posted on the Web site. If your submission is made via a hardcopy that includes personal identifying information, you may request at the top of your document that we withhold this personal identifying information from public review. However, we cannot guarantee that we will be able to do so. We will post all hardcopy submissions on *http://www.regulations.gov*.

Information and materials we receive will be available for public inspection on *http://www.regulations.gov*, or by appointment, during normal business hours, at the U.S. Fish and Wildlife Service, Oregon Fish and Wildlife Office (see **FOR FURTHER INFORMATION CONTACT** section).

Background

Section 4(b)(3)(A) of the Endangered Species Act of 1973, as amended (Act) (16 U.S.C. 1531 *et seq.*) requires that we make a finding on whether a petition to list, delist, or reclassify a species presents substantial scientific or commercial information indicating that the petitioned action may be warranted. We are to base this finding on information provided in the petition, supporting information submitted with the petition, and information otherwise available in our files at the time we make the determination. To the maximum extent practicable, we are to make the finding within 90 days of our receipt of the petition and publish our notice of this finding promptly in the **Federal Register**.

Our standard for ''substantial information,'' as defined in the Code of Federal Regulations at 50 CFR 424.14(b), with regard to a 90-day petition finding is ''that amount of information that would lead a reasonable person to believe that the measure proposed in the petition may be warranted.'' If we find that substantial information was presented, we are required to promptly commence a status review of the species. We base this finding on information provided by the petitioner that we determined to be reliable after reviewing sources referenced in the petition and available in our files. We evaluated that information in accordance with 50 CFR 424.14(b). Our process for making this 90-day finding under section 4(b)(3)(A) of the Act is limited to a determination of whether the information in the petition meets the ''substantial information'' threshold.

It is important to note that the ''substantial information'' standard for a 90-day finding is in contrast to the Act's ''best scientific and commercial data'' standard that applies to a 12-month finding as to whether a petitioned action is warranted. A 90-day finding is not a status assessment of the species and does not constitute a status review under the Act. Our final determination as to whether a petitioned action is warranted is not made until we have completed a thorough status review of the species, which is conducted following a positive 90-day finding. Because the Act's standards for 90-day and 12-month finding are different, as described above, a positive 90-day finding does not mean that the 12-month finding will also be positive.

On July 9, 2007, we received a formal petition from Trout Unlimited; the City of Issaquah, Washington; King County, Washington; People for Puget Sound; Save Lake Sammamish; the Snoqualmie Tribe; and the Wild Fish Conservancy, requesting that we list all wild, indigenous, naturally-spawned kokanee (*Oncorhynchus nerka*) in Lake Sammamish, Washington, as a threatened or endangered species under the Endangered Species Act, because of their declining numbers, reduced productivity, a decline in the quantity and quality of their habitat, and narrowing temporal, spatial, and genetic diversity. The petition clearly identified itself as a petition and included the requisite identification information for the petitioners, as required in 50 CFR 424.14(a). The petition contained information on kokanee biology and distribution. The petition also contained information that may indicate the uniqueness of Lake Sammamish kokanee: The discreteness and significance of this population; population viability, abundance, and productivity; distribution; and genetic diversity. Potential threats discussed in the petition include the present and ongoing destruction, modification, and curtailment of habitat; the lack of effective regulatory measures; and other natural or manmade factors affecting the species' continued existence.

On September 24, 2007, we notified the petitioners that our initial review of the petition for Lake Sammamish kokanee concluded that an emergency listing was not warranted, and that we anticipated making an initial finding within 90 days as to whether the petition contains substantial information indicating that the action may be warranted. This finding addresses the petition.

Species Information

The kokanee and the sockeye salmon are two forms of the same species, *Oncorhynchus nerka* (Order Salmoniformes, Family Salmonidae), that are native to watersheds in the north Pacific from southern Kamchatka to Japan in the western Pacific, and from Alaska to the Columbia River in North America (Page and Burr 1991, p. 52; Taylor *et al.* 1996, pp. 402–403). Adult kokanee resemble sockeye salmon, but are generally smaller in size at maturity because they are confined to freshwater environments, which are less productive than the ocean (Gustafson *et al.* 1997, p. 29). Both kokanee and anadromous sockeye turn from silver to bright red during maturation, while the head is olive green and the fins are blackish red (Craig and Foote 2001, p. 381). Typically, resident sockeye (progeny of anadromous sockeye that do not migrate to sea) turn from silver to green (Foote *et al.* 2004, p. 70).

Sockeye salmon are anadromous, migrating to the Pacific Ocean following hatching and rearing in fresh water. They spend 2 to 3 years in marine waters before returning to freshwater environments to spawn. Kokanee are non-anadromous, spending their entire lives in freshwater habitats (Meehan and Bjorn 1991, pp. 56–57). Kokanee young are spawned in freshwater streams and subsequently migrate to a nursery lake (Burgner 1991, pp. 35–37), where they remain until maturity. When mature, they return to natal freshwater streams to spawn and die, typically around age four.

Taylor *et al.* (1996, pp. 411–414) found multiple episodes of independent divergence between sockeye and kokanee throughout their current range. As ancestral sockeye populations expanded to new river systems, those that could not access the marine environment on a regular basis evolved into the non-anadromous kokanee form. This rapid adaptive evolution occurred multiple times, resulting in native kokanee populations being genetically more similar to their sympatric (occupying the same geographic area without interbreeding) sockeye populations than kokanee in other river systems (Taylor *et al.* 1996, pp. 401, 413–414).

Kokanee have been widely introduced in North America in areas outside their larger geographic distribution, and further inland in States and provinces where they occur naturally (*e.g.*, Maine, California, Montana, Colorado, Connecticut, New York, Pennsylvania, Vermont, North Dakota, Nevada, Utah, Wyoming, Alberta, Saskatchewan, Manitoba, Ontario) (Scott and Crossman 1973, p. 167). Native populations of kokanee are likely present over most of the range of sockeye salmon. The Lake Washington-Sammamish watershed is one of five watersheds in Washington that support native populations of resident kokanee (Pfeifer 1995 in Jackson 2006, p. 1). In western Washington, native populations of kokanee occur in Lake Whatcom (Lake Washington watershed), Lake Washington-Lake Sammamish watershed, and Baker Lake (Baker River watershed) (Jackson 2006, p. 1). It is thought that the Baker Lake kokanee population became established after the native sockeye population spawning migration was affected by the construction of Lower Baker Dam and the creation of Lake Shannon, followed by the construction of Upper Baker Dam (FERC and USACOE 2006, p. 100). Therefore, these individuals are most likely ''residual'' sockeye and not true kokanee. Native kokanee populations may exist in Ozette Lake, Lake Pleasant (Quillayute River watershed), and Quinault Lake (Quinault River watershed); however there is uncertainty regarding the origin of these stocks (Gustafson *et al.* 1997, pp. 120–123).

Kokanee historically spawned in tributaries located throughout Lake Washington; however, their current spawning distribution in the Lake Washington Basin appears to be limited to the Sammamish River/Lake Sammamish drainages, and Cedar River (Walsh Lake) drainages (Gustafson *et al.* 1997, p. 123; Berge and Higgins 2003, p. 3). Surface water discharge from Lake Sammamish is through the Sammamish River at the north end of the lake, which ultimately flows into Lake Washington. The major tributary to Lake Sammamish is Issaquah Creek, which enters at the south end of the lake and contributes approximately 70 percent of the inflow to the lake (Kerwin 2001, p. 425). There are also several smaller tributaries used for spawning by native kokanee, including Ebright Creek, Pine Lake Creek, Laughing Jacobs Creek, and Lewis Creek (Berge and Higgins 2003, p. 5). The four major tributaries that discharge into the Sammamish River are Swamp Creek, North Creek, Little Bear Creek, and Big Bear Creek.

Although unconfirmed, it is likely that the kokanee that currently spawn in the Sammamish River and its major tributaries rear in Lake Washington, since if they were to rear in Lake Sammamish, the fry would have to migrate upstream to reach the lake. Individuals of what appear to be resident *O. nerka* (sockeye that originate from at least one sea-going parent but spend their entire life in fresh water) are still occasionally collected in Lake Washington (Berge and Higgins 2003, pp. 3–4). The origin of kokanee in Walsh Lake in the southern part of the Lake Washington Basin is uncertain given that they were first documented in 1997, and were not previously observed in surveys conducted by the University of Washington in 1977 (Connor *et al.* 2000, p. 22). More recent genetic analysis of the Walsh Lake population suggests that this population is introduced, since it genetically more closely resembles sockeye from the Baker Lake system in the Skagit River watershed than native *O. nerka* stocks within the basin (Berge and Higgins 2003).

Kokanee in the Sammamish River/Lake Sammamish watershed (referred to by the petitioners as the Lake Sammamish population) are separated into three groups: (1) Summer/early-run, (2) fall/middle-run, and (3) winter/late-run, based on spawn timing and location (Berge and Higgins 2003, p. 3; Young *et al.* 2004, p. 66). Summer/early-run kokanee spawn during late summer (August through September) in Issaquah Creek, and are the only run of kokanee known to spawn in that creek, although introduced sockeye salmon spawn there in October. Fall/middle-run kokanee spawn in late September through November, primarily in larger Sammamish River tributaries, including Swamp Creek, North Creek, Bear Creek, Little Bear Creek, and Cottage Lake Creek (Trout Unlimited 2007, p. 9). Winter/late-run kokanee spawn from late fall into winter (October through January) in tributaries of Lake Sammamish, including Lewis Creek, Ebright Creek, and Laughing Jacobs Creek, with some spawners recorded in Vasa Creek, Pine Lake, Sammamish River, and East Fork Issaquah Creek (Trout Unlimited *et al.* 2007, p. 9).

Berggren (1974, p. 9) and Pfeifer (1995, pp. 8–9 and 21–22) report escapements (the number of fish arriving at a natal stream or river to spawn) of summer/early-run Issaquah Creek kokanee numbering in the thousands during the 1970s, but since 1980, the escapement of early-run kokanee in Issaquah Creek has ''plummeted dramatically'' (Berge and Higgins 2003, p. 18). Between 1998 and 2001, only three summer/early-run kokanee redds (gravel nests of fish eggs) were observed in Issaquah Creek. In July 2001 and 2002, the Washington Department of Fish and Wildlife installed a fish weir across Issaquah Creek in an attempt to capture all migrating summer/early-run kokanee and spawn them in a hatchery for a supplementation program. However, no kokanee were observed or captured during either of those two years (WDFW 2002, pp. 5–7), nor were kokanee observed during spawner surveys conducted in 2003 (Washington Trout 2004, p. 2), leading biologists to conclude that the summer/early-run is functionally extinct (Berge and Higgins 2003, p. 33; Jackson 2006, p. 1).

The fall/middle-run kokanee was estimated to have at least 6,000 and as many as 30,000 spawners in the 1940s in Big Bear Creek, a tributary to the Sammamish River (Connor *et al.* 2000, pp. 13–14), although these numbers are confounded by the high numbers of out-of-basin and in-basin kokanee introductions during this time period (Gustafson *et al.* 1997, p. 113). However, by the 1970s the fall/middle-run was considered extinct by Washington Department of Game biologists (Connor *et al.* 2000, p. 15).

The winter/late-run kokanee have had highly variable spawner returns over the past 11 years (1996–2006), with returns as high as 4,702 in 2003, and as low as 64 in 1997 (Trout Unlimited *et al.* 2007, p. 18). Annual returns averaged 946 fish, with a median return of 594 fish during this period (Trout Unlimited *et al.* 2007, p. 16). During a 3-year period from 2004 to 2006, the average spawner return was 568 fish, although in two of the four spawning streams currently used by the winter/late-run (Laughing Jacobs Creek and Pine Lake Creek), there were fewer than 70 fish counted annually in each stream (Trout Unlimited *et al.* 2007, p. 18). The longest accessible spawning stream for the winter/late-run is 0.75 mile (mi) (1.2 kilometers (km)), and the total spawning area of the core spawning streams (Lewis Creek, Laughing Jacobs Creek, and Ebright Creek) is less than 1.0 mile (1.6 km) (Jackson 2006, p. 4).

Because of the complicated relationships between sockeye and kokanee populations, we will continue to work with National Oceanic and Atmospheric Administration-Fisheries regarding species or life forms under the jurisdiction of each agency.

Distinct Vertebrate Population Segments

We consider a species for listing under the Act if available information indicates such an action might be warranted. ''Species'' is defined in section 3 of the Act to include any subspecies of fish or wildlife or plants, and any distinct population segment of any species of vertebrate fish or wildlife that interbreeds when mature (16 U.S.C. 1532 (16)). We, along with the National Marine Fisheries Service (now the National Oceanic and Atmospheric Administration-Fisheries), developed the Policy Regarding the Recognition of Distinct Vertebrate Population Segments (DPS Policy) (February 7, 1996; 61 FR 4722) to help us in determining what constitutes a distinct vertebrate population segment (DPS). The policy identifies three elements that we are to consider in making a DPS determination. These elements include: (1) The discreteness of the population segment in relation to the remainder of the species to which it belongs; (2) the significance of the population segment to the species to which it belongs; and (3) the population segment's conservation status in relation to the Act's standards for listing. If we determine that a population segment meets the discreteness and significance standards, then the level of threat to that population segment is evaluated based on the five listing factors established by the Act to determine whether listing the DPS as either threatened or endangered is warranted.

The petition asserts that the native summer/early-run and fall/middle-run kokanee are considered functionally extinct, and that the native winter/late-run represents the last remaining population in Lake Sammamish (Trout Unlimited *et al.* 2007, p. 17). However, the native summer/early-run and fall/middle-run of kokanee were included in the petitioned action because there may be remnants of those populations, which are critically important to the recovery of Lake Sammamish kokanee (Trout Unlimited *et al.* 2007, p. 10).

The petition discusses each of the three elements listed above. Following is our evaluation of whether the petition presents substantial information that the petitioned entity, the Lake Sammamish kokanee, may be a DPS.

Discreteness

Discreteness refers to the separation of a population segment from other members of the taxon based on either: (1) Physical, physiological, ecological, or behavioral factors; or (2) international boundaries within which significant differences in control of exploitation, habitat management, conservation status, or regulatory mechanisms exist in light of section 4(a)(1)(D) of the Act.

Data contained in the petition, referenced in the petition, and otherwise available in our files suggest that Lake Sammamish population may be genetically and ecologically discrete from other populations of kokanee. Kokanee in the Lake Sammamish system appear to be reproductively isolated from other kokanee and sockeye populations (Young *et al.* 2004, pp. 72–73), and ecologically unique in that three run-timings have historically been exhibited by this population (Berge and Higgins 2003, pp. 3–7), although only the winter/late run-timing appears to remain expressed. The petitioners assert that not only are Lake Sammamish kokanee significantly different genetically from other kokanee populations, they are uniquely adapted to this system, given that introductions of wild and artificially produced kokanee from other watersheds were unable to persist in the Lake Sammamish system (Trout Unlimited *et al.* 2007, p. 14). The petition also states that each of the three run-timings exhibit different average fish lengths that correspond to their unique ecological settings and life histories. Based on the physical and behavioral factors identified in the petition, we find that there is substantial information indicating that Lake Sammamish kokanee may meet the discreteness element of our DPS policy.

Significance

If we determine that a population meets the DPS discreteness element, we then consider whether it also meets the DPS significance element. The DPS policy (61 FR 4722) states that if a population segment is considered discrete under one or more of the discreteness criteria, its biological and ecological significance will be considered in light of Congressional guidance that the authority to list DPSs be used ''sparingly'' while encouraging the conservation of genetic diversity. In making this determination, we consider available scientific evidence of the discrete population's importance to the taxon to which it belongs. Since precise circumstances are likely to vary considerably from case to case, the DPS policy does not describe all the classes of information that might be used in determining the biological and ecological importance of a discrete population. However, the DPS policy does provide four possible reasons why a discrete population may be significant. As specified in the DPS policy (61 FR 4722), this consideration of the significance may include, but is not limited to, the following:

(1) Persistence of the discrete population segment in a unique or unusual ecological setting;

(2) Evidence that loss of the discrete segment would result in a significant gap in the range of the taxon;

(3) Evidence that the discrete population segment represents the only surviving natural occurrence of the taxon that may be more abundant elsewhere as an introduced population outside of its historic range; or

(4) Evidence that the discrete population segment differs markedly from other populations of the species in its genetic characteristics (USFWS 1996).

The petitioners assert that the Lake Sammamish population is significant because it is native to the Sammamish Basin and genetically unique among native kokanee and sockeye populations in the western United States. They point to several studies demonstrating that this population is genetically distinguishable from a number of other kokanee and sockeye populations across the west. The petition states that: (1) Genetic data highlights the unique genetic structure of the runs relative to other kokanee and sockeye across the west; (2) a genetic difference exists within the kokanee in Lake Sammamish; and (3) artificially-produced kokanee from other

watersheds were unable to persist in Lake Sammamish, as evident by the lack of a genetic signal from those introduced populations (Trout Unlimited *et al.* 2007, p. 14).

Information provided by the petitioners, in combination with information available in our files, indicates that this population may occur in a unique or unusual ecological setting, which suggests that the loss of Lake Sammamish kokanee may result in a significant gap in the natural range of the taxon. The petition states that the presence of three distinct kokanee populations separated both by run timing and distribution within the basin is a reflection of the unique ecosystems in the different regions of the basin and the kokanee's natural selection within those ecosystems (Trout Unlimited *et al.* 2007, p. 19). Therefore, information presented in the petition, in combination with information available in our files suggests that the Lake Sammamish kokanee may meet the significance criteria of our DPS policy.

DPS Conclusion

We have reviewed the information presented in the petition, and have evaluated the information in accordance with 50 CFR 424.14(b). In a 90-day finding, the question is whether a petition presents substantial information that the petitioned action may be warranted. We do not make final determinations regarding DPSs at this stage; rather, we determine whether a petition presents substantial information that a population may be a DPS. Based on our review, we find that the July 9, 2007, petition does present substantial scientific or commercial information to indicate that the Lake Sammamish kokanee population may be a DPS based on genetic and ecological discreteness from other populations and representation of a significant gap in the natural range of the taxon. Therefore, the Lake Sammamish kokanee population may be a listable entity under the Act.

To meet the third element of the DPS policy, we evaluate the level of threat to the DPS based on the five listing factors established by the Act. We thus proceeded with an evaluation of information presented in the petition, as well as information in our files, to determine whether there is substantial scientific or commercial information indicating that listing of the Lake Sammamish kokanee population may be warranted. Our threats analysis and conclusion follow.

Threats Analysis

Section 4 of the Act (16 U.S.C. 1533), and its implementing regulations at 50 CFR 424, set forth the procedures for adding species to the Federal Lists of Endangered and Threatened Wildlife and Plants. A species may be determined to be an endangered or threatened species due to one or more of the five factors described in section 4(a)(1) of the Act: (A) Present or threatened destruction, modification, or curtailment of habitat or range; (B) Overutilization for commercial, recreational, scientific, or educational purposes; (C) Disease or predation; (D) Inadequacy of existing regulatory mechanisms; or (E) Other natural or manmade factors affecting its continued existence. In making this finding, we evaluated whether information on threats to Lake Sammamish kokanee presented in the petition and other information available in our files at the time of the petition review reasonably indicate that listing the species may be warranted. Our evaluation of this information is presented below.

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

The petitioners state that present or threatened destruction, modification, or curtailment of the habitat or range of the Lake Sammamish kokanee threatens this population such that listing may be warranted. The petition describes significant alterations that have occurred to the Lake Sammamish watershed, including: (1) The loss or degradation of available kokanee habitat resulting from the channelization of the Sammamish River for flood control; (2) the degradation of stream and lake water quality resulting from past point-source pollution and ongoing urbanization; (3) the alteration of stream hydrology due to increasing urbanization; and (4) the elimination of access to upstream habitats by kokanee because of manmade fish passage barriers (Trout Unlimited *et al.* 2007, pp. 22–25). Each of these potential threats are discussed below.

(1) The petition describes how the channelization of the Sammamish River for flood control resulted in the significant and continuing degradation of the available habitat for kokanee within the Sammamish River (Trout Unlimited *et al.* 2007, p. 22), and states that alteration of the channel and banks has resulted in significant sedimentation and flood scour. The petition states that lake stratification during summer likely affects the distribution and survival of kokanee because of temperature and pollutants (Trout Unlimited *et al.* 2007, p. 19). Information in our files indicates that the Sammamish River system has been highly altered, and converted from a meandering 28-mile (45-km) river into a 14-mile (22.5-km) narrow, steep-sided, and largely straight channel (Kerwin 2001, p. 28). The deepening of the channel and hardening of stream banks has significantly decreased its connectivity to the floodplain, reduced off-channel and side-channel habitats, and disconnected most of the smaller streams from the river, resulting in a loss of salmonid refugia and foraging habitat (Kerwin 2001, p. 392). Kerwin (2001, pp. 425–449) documented losses of stream channel and lake shore complexity and connectivity caused by bank hardening, riparian removal, and residential encroachment within Lake Sammamish and its tributaries. Jackson (2006, p. 4) states that as a result of decreased stream channel complexity, periodic flood events are now directed through the modified stream channels of Lake Sammamish tributaries, rather than dissipating over their floodplains, creating significant scour in the channels during the period when winter/late-run kokanee are staging to spawn or are spawning.

(2) The petition describes the degradation of water quality in Lake Sammamish from effluent discharges into Issaquah Creek (the largest tributary to Lake Sammamish) in the 1960s by a wastewater treatment plant, milk processing plant, fish hatchery, and mining operations (Trout Unlimited *et al.* 2007, pp. 22–23). The petitioners describe ongoing water quality impacts to Lake Sammamish and its tributaries from non-point source pollutants related to increased urbanization and highway runoff. They also state that water withdrawals in conjunction with urbanization have altered stream flows during the dry season, and that land use activities in King County, Washington, have resulted in increased stream temperatures and reduced dissolved oxygen levels (Trout Unlimited *et al.* 2007, p. 25). Information in our files indicates poor water quality related to urbanization has been identified as a habitat limiting factor for salmonids in Lake Sammamish and a number of its tributaries (Kerwin 2001, pp. 423–445).

(3) The petition describes the alteration of hydrology in kokanee spawning streams due to an increase in the percentage of impervious surfaces (*e.g.*, sidewalks, roads, parking lots, roof tops), as a result of urbanization (Trout Unlimited *et al.* 2007, p. 23). The petitioners describe how increased stormwater runoff during the rainy

season has increased pollutants and led to more intensive flash flood events, which scour stream channels, erode stream banks, cause turbidity in spawning tributaries, and contribute significant sediment pulses into Lake Sammamish. Water withdrawals in conjunction with land cover changes associated with urbanization have reduced summer base flows in the system and may prevent upstream migration of summer/early-run kokanee. However, low base flows are unlikely to impede the return of fall and winter-run kokanee adults due to their later migration timing. Information in our files indicates that urbanization and the conversion of the landscape from a forested watershed to one dominated by impervious surfaces has long been known to harm aquatic systems, principally through hydrologic changes (Booth *et al.* 2002, pp. 835–836). Modifications of the land surface through urbanization results in dramatic changes in stream flow patterns, significantly degrading instream habitats for fish and other aquatic biota. Kerwin (2001, pp. 438, 446) noted that impervious surface areas within the watersheds of two of the four major spawning tributaries for winter/late-run kokanee currently exceed 20 percent (Lewis Creek subbasin), or are projected to exceed 20 percent (Laughing Jacobs subbasin) under expected development levels, which is double the percentage determined to have demonstrable degradation to stream channels in this region (Booth *et al.* 2002, p. 842). Booth *et al.* (2002, p. 838) state that ''imperviousness,'' although an imperfect measure of human influence, is clearly associated with stream-system decline.

(4) The petition describes how past and present manmade fish passage barriers have prevented kokanee from accessing upstream tributary habitats. It states that the Interstate-90 culvert restricts winter/late-run kokanee to 0.75 mile (1.2 km) of spawning habitat on Lewis Creek (Trout Unlimited *et al.* 2007, p. 25), and that remnants of a weir constructed by property owners on Ebright Creek may have continued to block upstream passage for winter/late-run kokanee a number of years after its removal. The petitioners also claim that the State of Washington Issaquah Creek Hatchery blocks 32 miles (51.5 km) of potential summer/early-run kokanee spawning habitat on Issaquah Creek (Trout Unlimited *et al.* 2007, p. 25). Information in our files shows that winter/late-run kokanee that spawn in Lewis, Laughing Jacobs, and Ebright creeks only have access to less than one mile of stream. Most notable of the three tributaries is Lewis Creek, where kokanee have access to 0.75 mile (1.2 km) of stream (the longest of the three spawning tributaries) until they reach the Interstate-90 culvert that blocks passage to approximately 0.49 acres (0.2 hectares) of spawning habitat (Jackson 2006, p. 4). Winter/late-run kokanee were able to access Ebright Creek at least into the 1930s (Connor *et al.* 2000, p. 11), although passage was blocked by the construction of a barrier by property owners for an undetermined period of time prior to 1973. Conner *et al.* (2000, p. 28) noted that after this barrier was removed in 1973, Ebright Creek may have once again been blocked in the late 1980s by the remnants of an old fish weir and the roots of a cottonwood tree. There is no information in either the petition or our files that indicates kokanee passage into Ebright Creek remained blocked after the 1980s. The Washington Department of Game identified the Issaquah Creek Hatchery weir as a major factor in the decline of kokanee in this stream (Pfeifer 1982, as cited in Connor *et al.* 2000, p. 29).

Summary of Factor A

The petition identifies numerous potential factors that may be affecting the Lake Sammamish kokanee, including: (1) The loss of stream channel and lake shore complexity and connectivity; (2) the degradation of stream and lake water quality; (3) the alteration of stream hydrology; and (4) the elimination of access to upstream habitats. Information in our files also indicates these factors may be affecting the population. We therefore conclude that the petition presents substantial information to indicate that the present or threatened destruction or modification of habitat or range may present a threat to Lake Sammamish kokanee.

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

The petitioners claim that past kokanee egg collections in the Lake Sammamish system for transport outside the system had significant impact on abundance and productivity of the kokanee population (Trout Unlimited *et al.* 2007, p. 20). Information in our files indicates that although kokanee egg collections took place within both the Lake Washington and Lake Sammamish watersheds, the eggs collected were largely used for hatchery supplementation of the natural production of various stream systems within these basins (Pfeifer 1992, pp. 9, 68–69). The removal of as many as 14 million eggs from the Bear Creek (fall/middle-run) kokanee population in the 1940s (Berge and Higgins 2003, p. 6) may have contributed significantly to the eventual loss of this segment of the population. However, since 1979, Lake Washington and Lake Sammamish have been managed for wild kokanee production, and there have been no introductions of hatchery broodstocks or nonnative stocks to these systems (Pfeifer 1992, p. 9).

The petitioners provided little information on the impact of recreational fisheries to Lake Sammamish kokanee. However, they do state that kokanee were an important sport fish in the past. Information in our files indicates sport fishing may have contributed to initial declines in the population, although there currently is no intentional fishery for kokanee in Lake Sammamish, and a harvest ban has been in place since 1986 (Pfeifer 1995, p. 12). Nevertheless, some kokanee (albeit in low numbers and of unknown stock) are harvested illegally (Pfeifer 1995, p. 33), and incidental catch of kokanee through other fisheries may occur (Coyle *et al.* 2001, p. 22).

Summary of Factor B

The petition identifies egg collections and sport fishing as potential factors affecting Lake Sammamish kokanee. Although information in the petition indicates that overutilization for commercial, recreational, scientific or educational purposes likely contributed to the population's initial decline, information in our files suggests this is no longer a threat to the Lake Sammamish kokanee. Therefore, we find that the petition does not present substantial information indicating that the overutilization for commercial, recreational, scientific or educational purposes may present a threat to Lake Sammamish kokanee.

C. Disease or Predation

Neither the petition nor information in our files presents information that would indicate that disease is a current threat to Lake Sammamish kokanee, and the effect of disease on the Lake Sammamish kokanee population is largely unknown (Connor *et al.* 2000, p. 30).

The petition asserts that lake stratification during summer likely affects the distribution and survival of kokanee either directly because of temperature and pollutants (as described in Factor A), or indirectly through the movement and distribution of its zooplankton food sources and its predators (Trout Unlimited *et al.* 2007, p. 19). It also states that nonnative fish

species (*e.g.*, black bass (*Micropterus* spp.), yellow perch (*Perca flavescens*)) and native fish species (*e.g.*, northern pikeminnow (*Ptychocheilus oregonensis*), coastal cutthroat trout (*O. clarkii clarkii*)) prey on young kokanee in Lake Sammamish (Trout Unlimited *et al.* 2007, p. 22) (see also Factor E discussion). The petition also states that permanent habitat alteration in the Sammamish River has removed areas previously used by kokanee as refugia from predators (Trout Unlimited *et al.* 2007, p. 22). Information in our files indicates that predation has been identified as a potential threat to kokanee (Pfeifer 1995, p. 16–17; Connor *et al.* 2000, p. 30; Coyle *et al.* 2001, p. 23). However, the petition did not provide information on the rates of predation, and no information is available in our files with which to assess this potential threat. Pfeifer (1995, p. 16) states that predation in Lake Sammamish is certainly likely, but whether it has increased over historic levels is uncertain, since appropriate sampling has not occurred. There is, however, anecdotal evidence indicating coastal cutthroat populations in the Lake Washington basin have increased in abundance since the 1970s (Nowak *et al.* 2004, p. 625).

Summary of Factor C

No information on disease was presented in the petition, and no information on this potential factor was available in our files. Some qualitative information was presented related to predation, which is generally consistent with information available in our files. However, the petition did not present, and our files do not include, quantitative or specific information on the possible impacts of predation on Lake Sammamish kokanee. Therefore, we find that the petition does not present substantial information indicating that disease or predation factors may present a threat to Lake Sammamish kokanee.

D. Inadequacy of Existing Regulatory Mechanisms

The petitioners assert that the continued destruction, modification and curtailment of habitat and other manmade factors are having significant impacts on Lake Sammamish kokanee, and are not regulated in a manner that protects the population (Trout Unlimited *et al.* 2007, p. 25). The petitioners claim that although some conservation benefits to Lake Sammamish kokanee may be gained through the recently adopted Federal recovery plan for listed Puget Sound Chinook salmon (Shared Strategy Development Committee 2007), this plan does not specifically address conservation or recovery of kokanee (Trout Unlimited *et al.* 2007, p. 27). Consequently, the petitioners state that the effectiveness of this plan to incidentally address currently limiting factors of the Lake Sammamish kokanee population is uncertain. The petition acknowledges that the Washington Department of Fish and Wildlife (WDFW) has committed to monitor the winter/late-run spawner abundance and hydrological conditions in the three known spawning streams as funding and resources allow (Jackson 2006, cited in Trout Unlimited *et al.* 2007, p. 27). However, the petitioners assert that although this monitoring will help refine future management options and create a foundation for a recovery plan, it does not ensure persistence or recovery of the winter/late-run kokanee population. They state that the WDFW is considering a supplementation plan for winter/late-run kokanee, but the petitioners remain concerned that implementation of the plan is uncertain and cannot conserve or recover the species without a comprehensive program that addresses the primary limiting factors and factors leading to the decline of the population. The petitioners also assert that although scientific reviewers have proposed further investigations and studies of the Lake Sammamish kokanee population, policy-makers have not taken the next step of proposing changes to management actions (Trout Unlimited *et al.* 2007, p. 27), and that conservation efforts by WDFW and King County are not enough by themselves to recover the winter/late-run kokanee, given the multiple municipalities that are affecting the Lake Sammamish watershed.

Information in our files indicates that the Cedar River/Sammamish River/Lake Washington watershed (Water Resource Inventory Area 8) has the highest human population in the State, which is projected to increase by 24 percent between 2002 and 2022 (Shared Strategy Development Committee 2007, p. 238). Accordingly, we expect that this already highly urbanized watershed will be further developed. The Puget Sound Salmon Recovery Plan states that regulations, incentives, and educational outreach will be used to implement actions to protect or restore habitat within the Sammamish River, Issaquah Creek, and Lake Sammamish (Shared Strategy Development Committee 2007, p. 242). Where these habitat improvement actions overlap with the Lake Sammamish kokanee distribution (primarily in the mainstem and lake habitats), they are also likely to provide conservation benefits to this species. Jackson (2006, p. 5) states that, at a minimum, the Washington Department of Fish and Wildlife Fish Management Division Region 4 Fish Program would annually collect data needed to estimate escapement of late-run kokanee in the core spawning tributaries (i.e., Lewis Creek, Laughing Jacobs Creek, and Ebright Creek). Jackson (2006, p. 4) also states that, if Lake Sammamish tributary habitat improvements are not addressed, winter/late-run kokanee productivity will not improve and may likely decrease, posing the threat of local or population extinction.

According to information available in our files, existing regulations have been somewhat effective in reducing or slowing development impacts to Lake Sammamish kokanee habitat, but not in eliminating them. Although there is a renewed focus on salmon recovery for the Lake Washington/Lake Sammamish Basin, the conservation benefits to kokanee from recovery actions directed at Chinook salmon remains uncertain.

Summary of Factor D

The petition presents information indicating that existing regulations may be inadequate to protect Lake Sammamish kokanee from the continued destruction, modification, and curtailment of habitat, and that conservation or recovery plans that specifically target the petitioned species have not been developed. Information in the petition and in our files supports these claims. Therefore, we find that the petition presents substantial information indicating that the inadequacy of existing regulatory mechanisms may present a threat to Lake Sammamish kokanee.

E. Other Natural or Manmade Factors Affecting Its Continued Existence

The petitioners claim past and current fisheries management is a threat to Lake Sammamish kokanee, and describe how the transplanting of millions of nonnative kokanee and sockeye into the system created competition for spawning grounds, food resources in the lakes, and rearing areas (Trout Unlimited *et al.* 2007, p. 21). They also state that when the Issaquah Creek hatchery was built in 1937, the weir forced the kokanee into holding ponds, preventing them from reaching the 32 miles (51 km) of spawning habitat above the barrier. Once it was determined that there was no use for the fish, the hatchery drained the ponds, leaving the kokanee to die (Kvam *et al.* 1999; Buehler, 2000, in Trout Unlimited *et al.*

2007, p. 22). The petitioners also claim that the continued operation of the weir and hatchery production of Chinook and coho salmon (*O. kisutch*) could limit the recovery of summer/early-run kokanee through competition and predation impacts (Trout Unlimited *et al.* 2007, p. 22). Our files also contain information regarding competition associated with the introductions of nonnative sockeye salmon, which are believed to have increased competition with native juvenile kokanee for food resources (Conner *et al.* 2000, p. 30). Summer/early-run and fall/middle-run kokanee may be especially vulnerable to redd superimposition (the excavation of a new nest on top of an existing nest) by sockeye salmon (Berge and Higgins 2003, p. 38). Information in our files indicates that summer/early-run kokanee were destroyed during past hatchery weir operations, which likely contributed to this run's decline. Thousands of summer/early-run kokanee were reportedly killed at the weir during the 1960s and 1970s because of concerns over potential disease transmission (Connor *et al.* 2000, pp. 27–28). The Issaquah Creek weir is still in operation, although the removal of kokanee is no longer practiced. There is insufficient information in our files to determine if future weir operations will threaten summer/early-run kokanee, or whether continued Chinook and coho salmon production threaten kokanee through predation, although predation has been identified by others as a potential concern (Pfeifer 1995, p. 17). Information in our files suggests that competition for spawning sites with Chinook and coho salmon may be a threat to summer/early-run and fall/middle-run kokanee (Berge and Higgins 2003, p. 38), but not to winter/late-run kokanee because of differences in habitat use (Berge and Higgins 2003, pp. 38–39).

The petitioners assert that climate change is one of the potentially largest future impacts to kokanee, and that although the impact of different climate scenarios on salmonids is an active area of scientific research, the impact on kokanee has not been thoroughly examined. They claim that increases in regional temperatures could result in thermal barriers for kokanee in stream and lake habitats; act as a fatal stressor to individuals; and alter chemical processes, food web dynamics, lake stratification, nutrient cycling, and hydrologic patterns. The petition states that while the effects of climate change are harder to pinpoint, they are real, imminent and must be proactively addressed to ensure that kokanee survive into the future (Trout Unlimited *et al.* 2007, p. 26). Information in our files indicates that since 1950, the average annual air temperatures at the majority of meteorological stations in the northwestern region have increased by approximately 0.25 degrees Celsius (C) per decade, and climate models predict an additional increase of 1.5 to 3.2 degrees C by the middle of the 21st century (Battin *et al.* 2007, p. 6720). The increases in air temperature for the Puget Sound region during the 20th century are evident, and further significant increases are predicted by the middle of the 21st century (Snover *et al.* 2005, p. 13; Battin *et al.* 2007, p. 6720). Snover *et al.* (2005, pp. 6–7) described a range of projected habitat changes for waters in the Puget Sound region similar to those identified by the petitioners. Nelitz *et al.* (2007, p. 18) state that in the Pacific Region of Canada (British Columbia and Yukon Territory), watersheds where thermal regimes are currently near the upper tolerance limits for salmon migration and spawning will likely be the most vulnerable to future changes and resultant adverse effects on salmon.

Summary of Factor E

The petition presents information indicating that competition with other salmonids may pose a threat to some of the Lake Sammamish kokanee runs, and potential climate change impacts could threaten the population. Based on that information and on information available in our files, we conclude that substantial information exists to indicate that other natural or manmade factors may present a threat to Lake Sammamish kokanee.

Finding

We have reviewed the petition and the literature cited in the petition, and evaluated the information to determine whether the sources cited support the claims made in the petition. We also reviewed reliable information that was readily available in our files to evaluate the petition.

Berge and Higgens (2003, p. 3) state that the distribution of native kokanee in the greater Lake Washington watershed appears to be limited to the Lake Sammamish population. Populations that spawned in Lake Washington tributaries (other than the Sammamish River system) appear to be functionally extinct (Berge and Higgins 2003, pp. 3, 26). The Lake Sammamish population diversity and abundance has also declined significantly, with apparently only one of the three run-timings remaining extant (Connor *et al.* 2000, p. 15; Berge and Higgins 2003, p. 21, 33; Jackson 2006, p. 1).

If, as the petitioners suggest, Lake Sammamish kokanee constitute a distinct vertebrate population segment, we find that the petition presents substantial information to indicate that listing Lake Sammamish kokanee under the Act may be warranted due to: (1) The present destruction, modification, or curtailment of the population's habitat or range (Factor A); (2) the inadequacy of existing regulatory mechanisms (Factor D); and (3) other natural or manmade factors affecting its continued existence (Factor E).

In summary, we conclude that the petition has presented substantial information that listing may be warranted for Lake Sammamish kokanee. As such, we are initiating a status review to determine whether listing Lake Sammamish kokanee under the Act is warranted.

References Cited

A complete list of all references cited is available on the Internet at *http://www.regulations.gov* and upon request from the Western Washington Fish and Wildlife Office (see **FOR FURTHER INFORMATION CONTACT**).

Author

The primary authors of this document are staff of the Western Washington Fish and Wildlife Office (see **FOR FURTHER INFORMATION CONTACT**).

Authority

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

Dated: April 28, 2008.

Kenneth Stansell,

Acting Director, U.S. Fish and Wildlife Service.

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DEPARTMENT OF COMMERCE

National Oceanic and Atmospheric Administration

50 CFR Parts 600 and 635

[Docket No. 070801432–7435–01]

RIN 0648–AV92

Atlantic Highly Migratory Species; Atlantic Tuna Fisheries; Gear Authorization and Turtle Control Devices

AGENCY: National Marine Fisheries Service (NMFS), National Oceanic and