no lower than one level above the contracting officer, determines that data other than certified cost or pricing data is needed in order to determine that the price is fair and reasonable (see FAR 15.403–3(a)(2)); and

(ii) Use the clause at 252.215–70YY, Requirement for Data Other Than Certified Cost or Pricing Data—Modifications—Canadian Commercial Corporation—

(A) In solicitations and contracts for sole source acquisitions that are—

(*1*) Cost-reimbursement, if the contract value is expected to exceed the simplified acquisition threshold; or

(*2*) Fixed-price, if the contract value is expected to exceed $500 million; or

(B) In other solicitations and contracts, if the head of the contracting activity, or designee no lower than one level above the contracting officer, determines that it is reasonably certain that data other than certified cost or pricing data will be needed in order to determine that the price of modifications is fair and reasonable (see FAR 15.403–3(a)(2)).

PART 225—FOREIGN ACQUISITION

4. Amend section 225.870–4 by redesignating paragraph (c) as paragraph (d) and adding new paragraph (c) to read as follows:

225.870–4 Contracting procedures.

* * * * *

(c) *Requirement for data other than certified cost or pricing data.* (1) DoD has waived the requirement for submission of certified cost or pricing data for the Canadian Commercial Corporation and its subcontractors (see 215.403–1(c)(4)(C)).

(2) The Canadian Commercial Corporation is not exempt from the requirement to submit data other than certified cost or pricing data, as defined in FAR 2.101. In accordance with FAR 15.403–3(a)(1)(ii), the contracting officer shall require submission of data other than certified cost or pricing data from the offeror, to the extent necessary to determine a fair and reasonable price.

(3) The contracting officer shall use the provision at 252.215–70XX, Requirement for Data Other Than Certified Cost or Pricing Data—Canadian Commercial Corporation, and the clause at 252.215–70YY, Requirement for Data Other Than Certified Cost or Pricing Data—Modifications—Canadian Commercial Corporation, as prescribed at 215.408(3)(i) and (ii), respectively.

(4) Except for contracts described in 225.870–1(c)(1) through (4), Canadian suppliers will provide required data other than certified cost or pricing data exclusively through the Canadian Commercial Corporation.

* * * * *

PART 252—SOLICITATION PROVISIONS AND CONTRACT CLAUSES

5. Add section 252.215–70XX to read as follows:

252.215–70XX Requirement for Submission of Data Other Than Certified Cost or Pricing Data—Canadian Commercial Corporation.

As prescribed at 215.408(3), use the following provision:

REQUIREMENT FOR SUBMISSION OF DATA OTHER THAN CERTIFIED COST OR PRICING DATA—CANADIAN COMMERCIAL CORPORATION (DATE)

(a) Submission of certified cost or pricing data is not required.

(b) Canadian Commercial Corporation shall obtain and provide the following:

(1) Profit rate or fee (as applicable).

(2) Analysis provided by Public Works and Government Services Canada to the Canadian Commercial Corporation to determine a fair and reasonable price (comparable to the analysis required at FAR 15.404–1).

(3) Data other than certified cost or pricing data necessary to permit a determination by the U.S. Contracting Officer that the proposed price is fair and reasonable [*U.S. Contracting Officer to insert description of the data required in accordance with 15.403–3(a)(1)*].

(End of provision)

6. Add section 252.215–70YY to read as follows:

252.215–70YY Requirement for Submission of Data Other Than Certified Cost or Pricing Data—Modifications—Canadian Commercial Corporation.

As prescribed at 215.408(3), use the following clause:

REQUIREMENT FOR SUBMISSION OF DATA OTHER THAN CERTIFIED COST OR PRICING DATA—MODIFICATIONS—CANADIAN COMMERCIAL CORPORATION (DATE)

(a) Submission of certified cost or pricing data is not required.

(b) Canadian Commercial Corporation shall obtain and provide the following:

(1) Profit rate or fee (as applicable).

(2) Analysis provided by Public Works and Government Services Canada to the Canadian Commercial Corporation to determine a fair and reasonable price (comparable to the analysis required at FAR 15.404–1).

(3) Data other than certified cost or pricing data necessary to permit a determination by the U.S. Contracting Officer that the proposed price is fair and reasonable [*U.S. Contracting Officer to insert description of the data required in accordance with 15.403–3(a)(1)*].

(End of clause.)

[FR Doc. 2011–25237 Filed 10–3–11; 8:45 am]

BILLING CODE 5001–06–P

DEPARTMENT OF THE INTERIOR

Fish and Wildlife Service

50 CFR Part 17

[FWS–R1–ES–2008–0048; MO 92210–0–0008 B2]

Endangered and Threatened Wildlife and Plants; 12-Month Finding on a Petition To List the Lake Sammamish Kokanee Population of Oncorhynchus nerka as an Endangered or Threatened Distinct Population Segment

AGENCY: Fish and Wildlife Service, Interior.

ACTION: Notice of a 12-month petition finding.

SUMMARY: We, the U.S. Fish and Wildlife Service (Service), announce a 12-month finding on a petition to list the Lake Sammamish kokanee, *Oncorhynchus nerka,* as an endangered or threatened species under the Endangered Species Act of 1973, as amended (Act). After review of all available scientific and commercial information, we find that the Lake Sammamish kokanee population is not a listable entity under the Act and, therefore, listing is not warranted. We ask the public to continue to submit to us any new information that becomes available concerning the taxonomy, biology, ecology, and status of Lake Sammamish kokanee, and to support cooperative conservation efforts for this population.

DATES: The finding announced in this document was made on October 4, 2011.

ADDRESSES: This finding is available on the Internet at *http://www.regulations.gov* at docket number [FWS–R1–ES–2008–0048]. Supporting documentation we used to prepare this finding is available for public inspection, by appointment, during normal business hours at the U.S. Fish and Wildlife Service, Washington Fish and Wildlife Office, 510 Desmond Drive, SE., Suite 102, Lacey, WA 98503. Please submit any new information, materials, comments, or questions concerning this finding to the above address.

FOR FURTHER INFORMATION CONTACT: Ken Berg, Manager, Project Leader, Washington Fish and Wildlife Office, U.S. Fish and Wildlife Service (see

ADDRESSES) by telephone at 360–753–6039; or by facsimile at 360–753–9405. Persons who use a telecommunications device for the deaf (TDD), may call the Federal Information Relay Service (FIRS) at 800–877–8339.

SUPPLEMENTARY INFORMATION:

Background

Section 4(b)(3)(B) of the Endangered Species Act of 1973, as amended (Act) (16 U.S.C. 1531 *et seq.*) requires that, for any petition to revise the Lists of Endangered and Threatened Wildlife and Plants that contains substantial scientific or commercial information that listing the species may be warranted, we make a finding within 12 months of the date of receipt of the petition on whether the petitioned action is: (a) Not warranted; (b) warranted; or (c) warranted, but immediate proposal of a regulation implementing the petitioned action is precluded by other pending proposals to determine whether species are threatened or endangered, and expeditious progress is being made to add or remove qualified species from the Lists of Endangered and Threatened Wildlife and Plants. Section 4(b)(3)(C) of the Act requires that we treat a petition for which the requested action is found to be warranted but precluded as though resubmitted on the date of such finding; that is, requiring a subsequent finding to be made within 12 months. Such 12-month findings must be published in the **Federal Register.** This notice constitutes our 12-month finding for the petition to list the Lake Sammamish population of kokanee.

Previous Federal Actions

On July 9, 2007, we received a 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 all wild, indigenous, naturally spawned kokanee (*Oncorhynchus nerka*) in Lake Sammamish, Washington, be listed as a threatened or endangered species under the Endangered Species Act. The petition clearly identified itself as such and included the requisite identification information for the petitioners, as required in 50 CFR 424.14(a). Included in the petition was supporting information regarding the species' declining numbers, reduced productivity, a decline in the quantity and quality of their habitat, and narrowing temporal, spatial, and genetic diversity. We acknowledged the receipt of the petition in a letter to the petitioners dated September 24, 2007, and stated that we anticipated making an initial finding within 90 days as to whether the petition contained substantial information indicating that the action may be warranted. We also advised that our initial review of the petition did not indicate that an emergency listing situation existed, but that if conditions changed and we determined that emergency listing was warranted, an emergency rule may be developed. Funding became available to work on the 90-day finding on October 1, 2007. We published a notice of 90-day finding in the **Federal Register** on May 6, 2008 (73 FR 24915), determining that the petition presented substantial scientific information indicating that listing the Lake Sammamish kokanee may be warranted, and that we were initiating a status review of the species and opening a 60-day public comment period. On December 14, 2009, we received a 60-day notice of intent to sue from the Center for Biological Diversity over the Service's failure to make a 12-month finding as required by the Act (*CBD* v. *Ken Salazar,* U.S. District Court, District of Oregon, CV 10–0176–JO). A complaint was filed with the court on February 17, 2010.

We received comments and information from the following individuals and organizations in response to the 90-day finding: King County Department of Natural Resources and Parks, James Mattila, Trout Unlimited, Snoqualmie Indian Tribe, Save Lake Sammamish, Friends of Pine Lake Creek, Washington Department of Fish and Wildlife, and Sno-King Watershed Council. We have fully considered the comments and information presented by these commentors in this finding. In addition, during our status assessment, we generally found that much more information was available on the status of sockeye populations, compared to kokanee populations at the rangewide scale, which may be related to the commercial importance of sockeye salmon. To evaluate whether the population of kokanee in Lake Sammamish qualifies as a listable entity under the Act, we must first determine if it satisfies the criteria for being a distinct population segment. Under the *Policy Regarding the Recognition of Distinct Vertebrate Population Segments* (DPS Policy), which was published in the **Federal Register** on February 7, 1996 (61 FR 4722), we are required to evaluate the discreteness and significance of the petitioned entity against the rest of the taxon, at the rangewide scale.

Species Information

Taxonomy and Range

Oncorhynchus nerka (Order Salmoniformes, Family Salmonidae), is 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). There are three life forms of this species, which are discussed in greater detail below: (1) Anadromous (ocean-going) sockeye; (2) residual sockeye, and (3) kokanee. The kokanee life form was at one time thought to be a separate subspecies (*Oncorhynchus nerka kennerlyi,* Suckley 1861), and that taxonomy continues to be reflected in some scientific papers and other studies (Robertson 1961; McLellan *et al.* 2001; Carruth *et al.* 2000; Maiolie *et al.* 1996). However, kokanee and sockeye are formally recognized as the same species (*O. nerka*) by the scientific community, and in the integrated taxonomic data system (ITIS) (*http://www.itis.gov/servlet/SingleRpt/SingleRpt?search_topic=TSN&search_value=161979*). Despite their recognized conspecific status, sympatric populations of sockeye and kokanee (those that occur in the same or overlapping geographic areas) are biologically and genetically distinct (Foote *et al.* 1989, in Young *et al.* 2004, p. 63). Based on the best available information, we consider the Lake Sammamish kokanee population to belong to the species *Oncorhynchus nerka.*

Kokanee Evolution

All kokanee populations are evolutionarily derived from sockeye salmon. Sockeye salmon (anadromous *Oncorhynchus nerka*) give rise to kokanee over evolutionary timeframes (hundreds to thousands of years) as a result of isolation or selective pressures related to difficulty of migration and lake productivity (Wood *et al.* 2008, pp. 208–210). All kokanee are at the end of a long chain of events where individuals of the anadromous sockeye entered a lake and selective pressures founded a residual sockeye population, then selective pressures or perhaps a geologic event selected for a kokanee population. The evolution of the *O. nerka* forms is unidirectional, and established resident, migratory, or kokanee forms generally do not create successful progeny of the other forms (Wood *et al.* 2008, pp. 209–210).

Taylor *et al.* (1996, pp. 411–414), found multiple episodes of independent divergence between sockeye and kokanee throughout their current range.

As ancestral anadromous 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 or developed a sympatric population of the non anadromous kokanee form. This has resulted in native kokanee populations typically being genetically more similar to their sympatric (occupying the same geographic area without interbreeding) sockeye populations than to kokanee in other river systems (Taylor *et al.* 1996, pp. 401, 413–414). However, there are exceptions (*e.g.,* Lake Ozette, Washington) where native sympatric kokanee and sockeye populations were determined to be genetically dissimilar, which suggests in these cases that they were established through a different founding event (Winans *et al.* 1996, pp. 655–656).

Differences Between Sockeye and Kokanee

Sockeye salmon are primarily anadromous, migrating to the Pacific Ocean following hatching and rearing in freshwater. Most populations are associated with a natal lake. They spend 2 to 3 years in marine waters before returning to freshwater environments to spawn and die. Some progeny within each sockeye population may remain in freshwater throughout their lifecycle and are called ''residual sockeye'' or ''residuals'' (Gustafson *et al.* 1997, p. 20). Unlike sockeye, kokanee are non anadromous and spend their entire lives in freshwater habitats (Meehan and Bjorn 1991, pp. 56–57). Ricker (1938) first used the terms ''residual sockeye'' and ''residuals'' to refer to these resident, non migratory progeny of anadromous salmon (Quinn 2005, p. 210). These ''residuals'' were much smaller at maturity than the anadromous fish because growing conditions in the lakes are generally poorer than those at sea (Quinn 2005, p. 210). Wood (1995) hypothesizes that the evolution of sockeye populations may proceed from postglacial colonization by ocean-type fish, to lake-type populations if a suitable lake is present, and then to kokanee if there is some combination of good growing conditions and an arduous migration (Quinn 2005, pp. 301–302). Kokanee young are spawned in freshwater streams and subsequently migrate to a nursery lake (Burgner 1991, pp. 35–37), where they remain until maturity. In some cases kokanee are spawned along the shoreline of the nursery lake itself (Scott and Crossman 1973, p.168). When mature, they return to natal freshwater streams to spawn and die, typically around age four. Sympatric kokanee and sockeye populations are typically temporally or spatially separated. In cases where they are not, assortative mating by body size usually leads to assortative mating by type (Gustafson *et al.* 1997, p. 30). Said another way, sockeye are typically larger and spawn with other sockeye, while kokanee are smaller and spawn with other kokanee.

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 or ''residual sockeye'' (progeny of anadromous sockeye that do not migrate to sea but are not kokanee) turn from silver to green (Foote *et al.* 2004, p. 70). Although adult kokanee resemble sockeye salmon, they have significant morphological and physiological differences. Kokanee are more efficient at extracting carotinoids from food resources; have higher gill raker counts, which is known to be an inherited trait; and are normally smaller in size at maturity than sockeye because they are confined to freshwater environments, which are less productive than the ocean (Burgner 1991, p. 59; Gustafson *et al.* 1997, p. 29; Craig and Foote 2001, p. 387; Leary *et al.* 1985 *in* Wood 1995, p. 203). Kokanee maintain a constant egg size, while increasing egg number with increasing body size; sockeye increase both egg number and egg size with increasing body size. It is thought that this characteristic may be related to the less energetically costly kokanee spawning migrations and the smaller particle size of spawning gravel that can be exploited (McGurk 2000, p. 1802). Other studies have demonstrated that under-yearling sockeye salmon exhibit superior swimming ability compared to kokanee (Taylor and Foote 1991). Further, although kokanee appear to have maintained some degree of seasonal adaptation to saltwater, which is part of the smoltification process of anadromous salmonids (complex physiological changes that enable juvenile salmon to make the transition from freshwater to saltwater), genetically there are significant differences in the timing (delayed) and duration (short-lived) compared to sockeye (Foote *et al.* 1992, pp. 106–108).

Sockeye and Kokanee Distribution

Sockeye occur in 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). Sockeye salmon of Canadian origin generally remain east of the International Dateline and south of the Aleutian Islands, while those from Asia originate in freshwater habitats from Cape Navarin Peninsula in the Bering Sea to north of Sakhalin Island in the Sea of Okhotsk. Most sockeye from Canadian rivers spend 2 years in the ocean, while those from other rivers spend 1, 3 or 4 years (Hart 1973, p. 121).

Native populations of kokanee, each associated with a specific nursery lake, likely occurred historically over most of the range of sockeye salmon within the Columbia River to the Yukon River systems. Native kokanee populations are not widespread in Alaska (McGurk 2000, p. 1801) or Asia (McPhail 2007, p. 288). There are said to be well over 500 kokanee populations in British Columbia (B.C.) (McPhail 2007, p. 295). No native kokanee are known from the B.C. portion of the Yukon River (B.C. Ministry of Fisheries 1998, p. 17), and although introduction activities have spread kokanee throughout the province, only two natural populations are known from the Mackenzie River system (McPhail 2007, p. 289). Kokanee have been widely introduced across North America, including areas outside their larger geographic distribution and farther inland in States and provinces where they occur naturally (Scott and Crossman 1973, p. 167).

Sammamish River/Lake Sammamish Watershed Kokanee Population Groupings

Lake Sammamish kokanee distribution (the petitioned entity): Lake Washington is the dominant feature of the greater Lake Washington/Lake Sammamish Basin and is fed by two major drainage systems. The Cedar River watershed at the south end of the lake, and the Sammamish River/Lake Sammamish watershed at the north end of the lake. Surface water discharge from Lake Sammamish is by way of the Sammamish River at the north end of the lake, which ultimately flows into Lake Washington. The four major tributaries that discharge into the Sammamish River are Swamp Creek, North Creek, Little Bear Creek, and Bear Creek. 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). Native kokanee historically spawned in tributaries located throughout Lake Washington and Lake Sammamish. Although the Sammamish River and Cedar River (Walsh Lake) drainages have been included within the current distribution of native kokanee in prior assessments (Gustafson *et al.* 1997, p. 123; Berge and Higgins 2003, p. 3), their current spawning distribution in the Lake Washington/ Lake Sammamish Basin appears to be limited to portions of the Lake Sammamish drainage. For the purposes of this finding, we are analyzing a petitioned entity that includes the native kokanee population found in the Lake Sammamish drainage.

Although the major tributary to Lake Sammamish is Issaquah Creek, there are also several smaller tributaries to Lake Sammamish used for spawning by kokanee, including Ebright Creek, Pine Lake Creek, Laughing Jacobs Creek, and Lewis Creek (Berge and Higgins 2003, p. 5). 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 (Berge and Higgins 2003, pp. 21–25). Winter/late-run kokanee spawn from late fall into winter (October through January) in Lake Sammamish tributaries including Lewis Creek, Ebright Creek, and Laughing Jacobs Creek (Berge and Higgins 2003, pp. 26–29). Some winter/late-run spawning kokanee have also been recorded in Vasa Creek, Pine Lake (Trout Unlimited *et al.* 2007, p. 9), and Tibbetts Creek (Berge and Higgins 2003, pp. 5, 30) in the recent past. Berge and Higgins (2003, p. 5) identified George Davis, Zaccuse, and Alexander's Creeks as part of the historical spawning distribution for winter/late-run kokanee. On at least one occasion, kokanee, presumed to be winter/late-run based on spawn timing, were observed spawning in Lake Sammamish near the mouth of Ebright Creek (Berge and Higgins 2003, p. 33), suggesting that some degree of beach spawning may also occur within the lake. More recently, what appears to be winter/late-run kokanee have been observed entering the lower reach of George Davis Creek at dusk (Nickel 2009) but then retreating back to Lake Sammamish during the day apparently without spawning. This may further indicate possible beach spawning within the lake.

Sammamish River/Lake Sammamish Watershed Kokanee Escapement Surveys

Summer/early-run: Berggren (1974, p. 9) and Pfeifer (1995, pp. 8–9, 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. 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 (Berge and Higgins 2003, p. 18). The last time summer/ early-run kokanee were observed was during the summer of 2000, when only two individuals were recorded (Washington Trout 2004, p. 3). 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. No kokanee were observed or captured (WDFW 2002, pp. 5–7). Further, there were no summer/early-run kokanee observed during spawner surveys conducted in 2003 (Washington Trout 2004, p. 2), leading King County and Washington Department of Fish and Wildlife biologists to conclude that the summer/ early-run is functionally extinct (Berge and Higgins 2003, p. 33; Jackson 2006, p. 1).

Fall/middle-run: In the 1940s, the fall/ middle-run kokanee was estimated to number from 6,000 to as many as 30,000 spawners in Bear Creek, a tributary to the Sammamish River (Connor *et al.* 2000, pp. 13–14), although these estimates are confounded by the high numbers of out-of-basin and in-basin kokanee introductions during this time period. Between 1917 and 1969, more than 44 million kokanee were introduced into Bear Creek and its tributaries, 35 million of which originated from Lake Whatcom in northwestern Washington (Gustafson *et al.* 1997, pp. 3–113). However, the introduced kokanee were unable to persist, and by the 1970s the native kokanee fall/middle-run was also considered extinct by biologists from Washington Department of Game (now part of Washington Department of Fish and Wildlife) (Fletcher 1973, p. 1).

Winter/late-run: From 1996 to 2006, the winter/late-run kokanee have had highly variable spawner returns with returns as low as 64 in 1997, and as high as 4,702 in 2003 (Trout Unlimited *et al.* 2007, p. 18). Annual spawner returns averaged 946 fish, with a median return of 594 fish during this period (Trout Unlimited *et al.* 2007, p. 16). From 2004 to 2007, the average spawner return was 463 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 (Jackson 2009). In 2008, the estimated spawner return was 42 individuals with none observed in Pine Lake Creek and only one kokanee observed in Laughing Jacobs Creek (Jackson 2009, pp. 1–6). This represented the lowest escapement for this population on record, although in 2009 the estimated spawner return was 1,655 individuals, which was the largest escapement recorded since 2003 (Jackson 2010, p. 11). The longest accessible spawning stream currently used by the winter/late-run, Lewis Creek, is 0.75 mile (mi) (1.2 kilometers (km)), and the combined spawning reaches of the core spawning streams (Lewis Creek, Laughing Jacobs Creek, and Ebright Creek) total less than 1.0 mile (1.6 km) (Jackson 2006, p. 5). Winter/late run propagation efforts have recently been implemented, and are described below.

Winter/Late Run Propagation Efforts

In the fall of 2009, approximately 35,000 eggs were harvested from mature kokanee collected from Lewis, Ebright, and Laughing Jacobs Creeks by teams from the Issaquah Creek salmon hatchery. The eggs were shipped to the Cedar River and Chambers Creek hatcheries in Washington State for development into fry, for use in supplementing the native kokanee population in Lake Sammamish. In March 2010, approximately 14,000 kokanee fry were released into Lewis, Ebright, and Laughing Jacobs Creeks; another release of 20,000 fry into the same creeks was done on April 14, 2010. The eventual success of these efforts remains to be determined (*http://www.issaquahpress.com/2010/04/20/the-fish-journal-bar-codes-help-kokanee-salmon-in-their-survival/#more-21481*).

Sockeye and Kokanee Abundance Trends

Quinn 2005 (p. 319) indicated the estimated average annual abundance of sockeye salmon per region (catch and escapement of wild and hatchery fish) from 1981 to 2000 to be 83 million fish (Japan 0.0 million, Russia 10.0 million, Western Alaska 50.4 million, Central

Alaska 20.3 million, and Southeast Alaska to California 19.3 million). The estimated catch and escapement of North American sockeye salmon from 1951 through 2001 was 51.4 million fish from 1,400 populations, averaging approximately 37,000 fish per population (Quinn 2005, p. 321).

Sockeye populations inhabiting the southern portions of their range are in decline, whereas those in the northerly regions are generally stable. In southwestern British Columbia, one-third of the sockeye spawning runs known since the early 1950s have been lost or have decreased to such low numbers that spawners are not consistently monitored (Ridell 1993, *in* Wood 1995, p. 195). These trends in number and magnitude of spawning runs imply a loss of genetic diversity, through the loss of both locally adapted subpopulations and genetic variation due to low effective population sizes (Wood 1995, p. 195). Subpopulations in the Hecata Strait–Queen Charlotte Sound, Georgia Basin/Vancouver Island Area, Skeena River and Fraser River, decreased in abundance considerably over the last three generations. Towards the northern end of their distribution, sockeye were generally characterized by stable-to-increasing trends in adult abundance. There were several notable exceptions, however, to the north-to-south risk gradient, including subpopulations in the Columbia and in eastern Washington State. Many of these are supported through some level of artificial enhancement, however, which may mask declines in wild populations (Rand 2008 (IUCN Red List Supporting Documentation, *O. nerka,* (*http://www.iucnredlist.org/apps/redlist/details/135301/0*)).

Although Fraser River stocks as well as other West Coast sockeye salmon stocks had record returns in 2010 (Northwest Indian Fisheries Commission (NWIFC 2010, p. 1) (*http://nwifc.org/2010/09/large-fraser-sockeye-run-doesnt-make-up-for-decades-of-poor-fishing/*), prior to this year most Fraser River stocks have exhibited declining trends in productivity beginning as early as 1960 (Fisheries and Oceans Canada (DFO) 2010, p. 1). Following returns are expected to again be poor for the next 3 years (NWIFC 2010, p. 1). The three factors that likely contributed to this record return are:

(1) Large number of offspring resulting from the 6th largest spawning escapement since 1952 as a result of reduced fisheries in 2006;

(2) Favorable changes in coastal ocean conditions toward cool temperatures in early 2008 when sockeye that returned in 2010 were entering the ocean as juveniles; and

(3) the occurrence of a major volcanic eruption in Alaska's Aleutian Islands in 2008, which resulted in ash fertilizing the ocean and triggering an algal bloom that possibly enhanced forage value and availability (Simon Fraser University *et al.* 2010, p. 2).

The Snake River sockeye Evolutionarily Significant Unit (ESU) has remained at very low levels of only a few hundred fish, though there have been recent increases in the number of hatchery-reared fish returning to spawn. Data quality for the Ozette Lake sockeye ESU make differentiating between the number of hatchery and natural spawners difficult, but in either case the size of the population is small, though possibly growing. Both the Snake River and Ozette Lake ESUs were listed as endangered and threatened, respectively, under the Act by the National Marine Fisheries Service (now NOAA Fisheries (NOAAF) under their ESU policy (56 FR 58612; November 20, 1991), (*http://www.nmfs.noaa.gov/pr/species/fish/sockeyesalmon.htm*).

We are unaware of average annual abundance records for kokanee; however, there are said to be well over 500 kokanee populations in British Columbia (McPhail 2007, p. 295). No native kokanee are known from the B.C. portion of the Yukon River (B.C. Ministry of Fisheries 1998, p. 17), and although introduction activities have spread kokanee throughout the province, only two natural populations are known from the Mackenzie River system (McPhail 2007, p. 289). There are numerous introduced kokanee populations maintained through hatchery introductions to support recreational fisheries; kokanee have been widely introduced across North America, including areas outside their larger geographic distribution and farther inland in States and provinces where they occur naturally (Scott and Crossman 1973, p. 167).

Regulatory Context and Agency Responsibilities

National Oceanic and Atmospheric Administration and U.S. Fish and Wildlife Service Regulatory Jurisdiction under the Endangered Species Act

Under a 1974 Memorandum of Understanding between the U.S. Fish and Wildlife Service (FWS) and the National Marine Fisheries Service (now NOAAF), NOAAF has Act authority over species that either reside the major portion of their lifetimes in marine waters or spend part of their lifetime in estuarine waters if the major portion of the remaining time is spent in marine waters. The FWS has Act authority over species that spend the major portion of their lifetimes on land or in fresh water, or that spent part of their lifetimes in estuarine waters if a major portion of the remaining time is spent on land or in fresh water (USFWS and NOAA, 1974).

Evolutionarily Significant Unit (ESU) and Distinct Population Segment (DPS) Policies

In addition to the DPS policy, NOAAF applies the ESU policy (56 FR 58612; November 20, 1991), which was adopted prior to adoption of the U. S. Fish and Wildlife Service and National Marine Fisheries Service DPS Policy. The ESU policy considers a stock of Pacific salmon to be a distinct population and hence a ''species'' under the Act, if it represents an ESU of the biological species. A stock must satisfy two criteria to be considered an ESU: (1) It must be substantially reproductively isolated from other conspecific population units; and (2) It must represent an important component in the evolutionary legacy of the species. Under the ESU policy, the evolutionary legacy of a species is the genetic variability that is a product of past evolutionary events and which represents the reservoir upon which future evolutionary potential depends. This criteria would be met for purposes of the ESU policy if the population contributed substantially to the ecological/genetic diversity of the species as a whole (*i.e.,* extinction of the population would represent a significant loss to the ecological/genetic diversity of the species). In making this determination, NOAAF considers whether: (1) The population is genetically distinct from other conspecific populations; (2) the population occupies unusual or distinctive habitat; and (3) the population shows evidence of unusual or distinctive adaptation to its environment.

NOAAF states that while conclusive evidence does not yet exist regarding the relationship of resident and anadromous forms of *Oncorhynchus nerka,* the available evidence suggests that resident sockeye and kokanee should not be included in listed anadromous sockeye ESUs in cases where the strength and duration of reproductive isolation would provide the opportunity for adaptive divergence in sympatry (64 FR 14530; March 25, 1999). However, NOAAF does include those resident/residual sockeye within ESUs that spawn with, or adjacent to, sockeye salmon in the same ESU. NOAAF interprets an ESU as a population that is substantially reproductively isolated from conspecific populations (populations of the same species), which represents an important component of the evolutionary legacy of the species. Although Lake Sammamish kokanee are also Pacific salmon, we have no authority under NOAAF's ESU policy, and have evaluated the status of the Lake Sammamish kokanee population under the DPS policy.

NOAAF acknowledges the DPS policy takes a somewhat different approach from the ESU policy to identifying conservation units, which may result, in some cases, in the identification of different conservation units. Although the DPS and ESU policies are consistent, they will not necessarily result in the same delineation of DPSs under the Act. The statutory term ''distinct population segment'' is not used in the scientific literature and does not have a commonly understood meaning therein. NOAAF's ESU policy and the joint DPS policy apply somewhat different criteria, with the result that their application may lead to different outcomes in some cases. The ESU policy relies on ''substantial reproductive isolation'' to delineate a group of organisms, and emphasizes the consideration of genetic and other relevant information in evaluating the level of reproductive exchange among potential ESU components. The DPS policy does not rely on reproductive isolation to determine ''discreteness,'' but rather on the marked separation of the population segment from other populations of the same taxon as a consequence of biological factors (61 FR 4725; February 7, 1996). In addition, the DPS policy also considers the significance of the discrete population segment to the taxon to which it belongs, which may produce a different result than the important evolutionary legacy component considered by NOAAF under the ESU policy.

Distinct Population Segment Policy

Defining a Species Under the Act

Section 3(16) of the Act defines ''species'' to include ''any subspecies of fish or wildlife or plants, and any distinct population segment of any species of vertebrate fish or wildlife which interbreeds when mature.'' Under the DPS policy, three elements are considered in the decision regarding the establishment and classification of a population of a vertebrate species as a possible DPS. These are applied similarly for additions to and removal from the Lists of Endangered and Threatened Wildlife and Plants. These elements are: (1) The discreteness of a 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, delisting, or reclassification. Our regulations provide further guidance for determining whether a particular taxon or population is a species for the purposes of the Act: ''The Secretary shall rely on standard taxonomic distinctions and the biological expertise of the Department and the scientific community concerning the relevant taxonomic group'' (50 CFR 424.11).

Kokanee are classified as *Oncorhynchus nerka,* which is the same taxonomic species as sockeye salmon. Because the kokanee life history form itself is not recognized taxonomically as a distinct species or subspecies, to determine whether the kokanee population in Lake Sammamish constitutes a DPS, and thus a listable entity under the Act, we evaluate this population's discreteness and significance with respect to the taxon to which it belongs (in other words, all *Oncorhynchus nerka* (sockeye and kokanee) populations rangewide). Accordingly, each of the factors evaluated in this finding have been considered within that context.

Under the DPS policy, a population segment of a vertebrate taxon may be considered discrete if it satisfies either of the following factors:

Discreteness Factor 1: The population is markedly separated from other populations of the same taxon as a consequence of physical, physiological, ecological, or behavioral factors (quantitative measures of genetic or morphological discontinuity may provide evidence of this separation).

Discreteness Factor 2: The population is delimited by international governmental boundaries within which differences in control of exploitation, management of habitat, conservation status, or regulatory mechanisms exist that are significant in light of Section 4(a)(1)(D) of the Act.

Lake Sammamish Kokanee Discreteness Analysis

Discreteness Factor 1 Examination

Patterns of genetic variation demonstrate that the sockeye and kokanee within lakes are usually more closely related to each other than they are to members of their form in other lakes (Foote *et al.* 1989; Taylor *et al.* 1996 *in* Quinn 2005 p. 212). Sympatric kokanee and sockeye populations are typically temporally or spatially separated; where that is not the case, assortative mating by body size usually leads to assortative mating by type (Gustafson *et al.* 1997, p. 30) (*e.g.,* sockeye are typically larger and spawn with other sockeye, while kokanee are smaller and spawn with other kokanee). Historically, a heritable tendency to remain in a lake system rather than migrate to sea may have promoted genetic divergence between kokanee and sockeye forms as they specialized for their freshwater and marine habitat. These genetic differences would be reinforced by size-specific preferences for breeding sites, accompanied by the evolution of isolating mechanisms to reduce interbreeding between the forms (Quinn p. 210). Kokanee in Lake Sammamish are geographically isolated from other kokanee, and within Lake Sammamish, kokanee and sockeye are further isolated by genetic and reproductive behavior (Young *et al.* 2004, pp. 72–73).

Conclusion: Available data indicate that the Lake Sammamish population is geographically and reproductively isolated from other native kokanee and sockeye populations, and genetically and ecologically discrete from other *Oncorhynchus nerka* populations, although a transplanted sockeye population was introduced during the 1930s to the 1950s (NOAA 1997, p. ix).

Discreteness Factor 2 Examination

This factor is not applicable to the discreteness analysis for the Lake Sammamish kokanee population, as the petitioned *Oncorhynchus nerka* population is not delimited by international governmental boundaries within which differences in control of exploitation, management of habitat, conservation status, or regulatory mechanisms exist that are significant in light of Section 4(a)(1)(D) of the Act.

Discreteness Analysis Summary

The kokanee population in Lake Sammamish has been determined to be discrete as a result of its marked separation from other populations of the same taxon as a consequence of physical, physiological, ecological, or behavioral factors. There are no international governmental boundaries within which differences in control of exploitation, management of habitat, conservation status, or regulatory mechanisms exist that are significant in light of Section 4(a)(1)(D) of the Act. Accordingly, this discreteness criterion is not applicable to our evaluation.

Lake Sammamish Kokanee Significance Analysis

Under the DPS policy, a determination as to whether the Lake Sammamish kokanee population is a listable entity under the Act must first consider its discreteness and significance with regard to the remainder of the taxon, which includes all other sockeye salmon and kokanee populations throughout the range of the biological species. If a population segment is considered discrete under one or more of the conditions listed in the Service's DPS policy, its biological and ecological significance is considered in light of Congressional guidance that the authority to list a DPS be used sparingly, while encouraging the conservation of genetic diversity. In carrying out this examination, we consider available scientific evidence of the population segment's importance to the taxon to which it belongs. This consideration may include, but is not limited to: (1) Its persistence in an ecological setting unusual or unique for the taxon; (2) evidence that its loss would result in a significant gap in the range of the taxon; (3) evidence that it is the only surviving natural occurrence of the taxon that may be more abundant elsewhere as an introduced population outside of its historical range; or (4) evidence that the discrete segment differs markedly from other populations of the species in its genetic characteristics (FR 61 4721; February 7, 1996). A population segment needs to satisfy only one of these criteria to be considered significant. Furthermore, since the list of criteria is not exhaustive, other criteria may be used if appropriate.

Significance Factor 1: Persistence of the discrete population segment in an ecological setting unusual or unique for the taxon.

Significance Factor 1 Examination

(A) The Lake Washington/Lake Sammamish Basin is a large, interconnected lake system containing two low-elevation mesotrophic lakes (Edmondson 1979, pp. 234–235; Welch *et al.* 1977, p. 301). Mesotrophic lakes are characterized by an intermediate concentration of nutrients, moderate plant production, some organic sediment accumulation, some loss of dissolved oxygen in the lower waters, and moderate water clarity. Other lake systems that support or have supported native sockeye populations (and by association their native kokanee populations) are typically oligotrophic in nature (Mullan 1986, pp. 71–73; Quinn 2005, p. 171). Oligotrophic lakes are characterized by low concentrations of nutrients, limited plant production, little accumulation of organic sediment on the bottom, an abundance of dissolved oxygen, and good water clarity. Oligotrophic lakes are also typically located at high elevations in interior areas where energetic costs of anadromous migration are high (Wood 1995, pp. 202–203). In addition to Lake Sammamish, the two other known exceptions are Lake Ozette in Washington, which has been characterized as oligotrophic to mesotrophic (or meso-oligotrophic) (Ritchie and Bourgeois 2010, p. 5), and Lake Osoyoos, which straddles the Washington and B.C border in the interior Columbia Basin, which has been characterized as a mesotrophic system (Gustafson *et al.* 1997, p. 57).

Although we were unable to find comprehensive information on limnology as it relates to lake systems occupied by *O. nerka,* within the known and studied kokanee lakes, Lake Sammamish is the only mesotrophic, easily accessible coastal lake, where energetic costs of migration are minimal, that is known to support a native kokanee population in the coterminous United States. Mesotrophic lakes containing *Oncorhynchus nerka* populations appear to be rare in coastal British Columbia (Shortreed 2007, p. vi; Woodruff 2010, pp. 47, 56). We would also expect mesotrophic lakes that support kokanee to be rare or absent within the northern portion of the species' range and at higher elevations, since lakes with the lowest productivity are either at high altitudes or high latitudes (Brylinsky and Mann 1973, p. 2). One research biologist with the NOAAF Northwest Fishery Science Center, commented that most sockeye salmon nursery lakes are typically strongly nutrient limited (*i.e.,* oligotrophic), and kokanee are not common in easily accessible coastal lakes where the energetic costs of migration are minimal (Gustafson 2009. pers comm.).

Although the presence of the petitioned entity in a mesotrophic lake appears to be atypical, we do not have information on the percentage or extent of mesotrophic lakes occupied by *O. nerka* throughout the range of the taxon, and therefore cannot determine whether this is actually an unusual or unique setting for *O. nerka.* However, it is well-documented that the species occupies lakes with a wide range of thermal regimes and other physical attributes (McPhail 2007, pp. 288, 295; Scott and Crossman 1973, p. 167; Mullen 1986 pp. 71–73; Quinn 2005, p. 171). These include coastal lakes in Washington that stratify in summer with surface temperatures near 20 degrees Celsius (C) (60 degrees Fahrenheit (F)), and remain mixed without freezing in winter, to lakes in the interior and northern latitudes that are ice-covered for at least half the year and have summer temperatures barely above 10 degrees C (50 degrees F). *Oncorhynchus nerka* occupies lakes that range in elevation from essentially sea level to 2,000 m (6,550 ft), and in area from 1 to 2,600 square kilometers (0.6 to 1,615 square miles), which includes coastal lakes from Washington to Alaska and lakes in the interior of the Columbia, Fraser, and Skeena river systems (Quinn 2005, p. 173). Anadromous *O. nerka* do not occur naturally in Japan, although other populations are distributed among several lakes. Native populations occur in Akan and Chimikeppu Lakes (Kogura *et al.* 2011, pp. 2–3), and *O. nerka* also occurs in Lake Toya, a large oligotrophic lake located in a caldera in the central area of Hokkaido, in Northern Japan (Sakano *et al.,* 1998, p. 173). Based on our analysis, we are not aware of any scientific evidence suggesting or demonstrating that the presence of an *O. nerka* population in a mesotrophic lake is beyond the normal range of variability that would be expected from a species that occupies the diversity of habitat types where it has been documented, or that this may represent an important trait from an adaptation/evolutionary perspective.

In addition, NOAAF (1997, p. 20) states that *Oncorhynchus nerka* exhibits the greatest diversity in selection of spawning habitat among the Pacific salmon, and great variation in river entry timing and the duration of holding in lakes prior to spawning. The species' adaptation to a greater diversity of lake environments for adult spawning and juvenile rearing has resulted in the evolution of complex timing for incubation, fry emergence, spawning, and adult lake entry that often involves intricate patterns of adult and juvenile migration and orientation not seen in other *Oncorhynchus species.*

Conclusion: Oncorhynchus nerka exhibiting differing life-history forms occupy a variety of ecosystems and 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). We acknowledge Lake Sammamish represents a complex ecological setting. However, the available information indicates *O. nerka* occurs in a wide geographical range, and habitat varies with respect to continental setting, latitude, elevation, and type(s) of waters used to support the species' physical and biological needs. Given the available information on the diversity and extent of ecological settings *O. nerka* occupies within the rest of its range, the best scientific information available does not suggest that Lake Sammamish represents a unique or unusual setting that may have special significance relative to the taxon as a whole.

(B) The kokanee life form has historically been more abundant than the sockeye life form in Lake Sammamish, although a larger number of the sockeye life form would be expected because of the relatively easy access to marine waters. Reports in the literature are equivocal as to whether sockeye salmon were historically present in the Lake Sammamish basin prior to the construction of the Lake Washington Ship Canal, although kokanee were described as numerous (NOAA 1997, pp. 73–75). Hendry (1995) *in* NOAA 1997 (p. 75), stated that limited runs of sockeye salmon were probably present at the turn of the century in the Lake Washington/Lake Sammamish drainage, and that it is ''certainly unlikely that large populations were present.'' Young (2004, p. 1) stated the Lake Sammamish/Lake Washington watershed supported only small populations of sockeye, but large populations of kokanee in the period from 1890 to 1920. In addition, the oral history of the Snoqualmie Indian Tribe once characterized kokanee as being so abundant that Tribal members could stand in the tributaries of Lake Sammamish and scoop up the ''little red fish'' in their hands (Snoqualmie Indian Tribe and Trout Unlimited 2008, p. 10).

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 (Taylor *et al.* 1996, pp. 411–414). Kokanee populations are typically located at high elevations in interior areas where energetic costs of anadromous migration are high or where productive lakes can support both types (Wood 1995, pp. 202–203). In areas closer to and with easy access to marine waters, sockeye populations typically dominate and kokanee are not common, since the energetic costs of migration are minimal (Gustafson 2009, pers comm.), and marine waters are much more productive. At higher latitudes, productivity (and growing opportunities) is greater at sea than in freshwater, as is evidenced by the more rapid growth of salmon at sea than in streams and lakes (Quinn 2005, p. 6). Since Lake Sammamish is located close to marine waters and is historically and presently capable of accommodating anadromous migration, the expectation would be that this should be a sockeye-dominated system. The fact that kokanee appears to have been the more common *Oncorhynchus nerka* life form in the Lake Washington/Lake Sammamish system historically suggests there may have been at least some partial or periodic barrier to anadromous sockeye in the past (Young *et al.* 2004, p. 1).

Comparing Lake Sammamish to other nearby water bodies, Lake Whatcom and Lake Ozette are geographically near marine waters and support native kokanee populations; however, there are differences. Lake Whatcom is oligotrophic (Matthews *et al.* 2002, p. 107), and has an outlet that presents a long-standing natural barrier to anadromous migration. Lake Ozette, although also near marine waters, is meso-oligotrophic and dominated by sockeye.

Although the dominant presence of kokanee in a system where a greater abundance of the sockeye life form would be expected is notable, this does not necessarily lead to a conclusion that Lake Sammamish represents a unique or unusual ecological setting. Quinn (2005, pp. 10–11), states that all salmon are habitat generalists, and populations tend to be very productive (*i.e.,* when the population is below its carrying capacity, each salmon produces many surviving offspring). They spawn and rear in bodies of water ranging from tiny creeks above waterfalls in the mountains, or streams discharging directly into saltwater, to large rivers, and from small beaver ponds and ephemeral wetlands to the largest lakes of the region. They are found in a number of large rivers as well as in thousands of smaller streams. *Oncorhynchus nerka* is the second most abundant Pacific salmon species, having a primary spawning range from the Columbia River to the Kuskokwim River in Alaska. In Asia they range from the Kuril Islands to the area of the Anadyr River, but the heart of their distribution is the Kamchatka Peninsula and tributaries of the Bering Sea. They spawn in coastal systems and also ascent as far as 1,600 km (994 mi) to Redfish Lake, Idaho (Quinn 2005, p. 14). We have no information on whether there are any other lake systems that are predominately occupied by the kokanee life form that would be expected to be dominated by sockeye.

Conclusion: We have insufficient information to determine the extent of waterbodies with relatively easy access to marine waters where the kokanee form may be dominant over the anadromous form of *O. nerka* across the range of the taxon. However, given the available information on the diversity and extent of ecological settings of *O. nerka* throughout the rest of its range, there is no information that would suggest the apparent dominance of the kokanee life form over the anadromous form in Lake Sammamish (at least since at least the late 19th century) supports a conclusion that Lake Sammamish constitutes a unique or unusual setting that is significant to the taxon.

Significance Factor 2: Evidence that the loss of the population would result in a significant gap in the range of the taxon.

Significance Factor 2 Examination

Lake Sammamish kokanee represent 1 of 11 known native kokanee populations within the southern extent of their North American range, and currently, we believe the best available information identifies 9 extant native kokanee populations that occur in the coterminous United States (Lake Ozette, WA; Lake Sammamish, WA; Lake Whatcom, WA; Chilliwack Lake, WA; Chain Lake, WA; Osoyoos Lake, WA; Stanley Lake, ID; Redfish Lake, ID; and Alturas Lake, ID). The number of kokanee populations in other areas within the range of the taxon is less well known, but there are said to be well over 500 kokanee populations in British Columbia (McPhail 2007, p. 295) alone. At one time there were kokanee in Lake Washington as well as three different runs of kokanee in Lake Sammamish. All other native kokanee that inhabited the Lake Washington Basin are thought to be extinct, and the prevailing evidence indicates that only the winter/late-run kokanee in the Lake Sammamish Basin remain (Berge and Higgins 2003, p. 33; Jackson 2006, p. 1; Warheit and Bowman 2008, p. 3).

Conclusion: The Lake Sammamish kokanee population is one of three native kokanee populations (Lake Sammamish, Lake Whatcom, and Chilliwack Lake) that evolved from sockeye populations within the Puget Sound and the Strait of Georgia Basin regions. If Lake Sammamish kokanee were to become extirpated, two other native kokanee populations would persist from this evolutionary arm of the taxon, and there are other native kokanee populations in the southern extent of their North American range, although each of these populations expresses differences in their geographic and biological characteristics. The loss of Lake Sammamish kokanee, when considered in relation to *Oncorhynchus* *nerka* throughout the remainder of the species' range would mean the loss of a very small geographic portion of the entire range of the taxon, since this species occurs in 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). Due to the broad geographic range of *O. nerka,* the wide diversity of habitats available to the species, and the fact that this population is one of several *O. nerka* populations within this portion of the range, we find the gap in the range resulting from the loss of the Lake Sammamish population would not be significant.

Significance Factor 3: Evidence that the population represents the only surviving natural occurrence of a taxon that may be more abundant elsewhere as an introduced population outside of its historical range.

Significance Factor 3 Examination

Since the taxon is widespread, there are 11 known populations of native kokanee in the coterminous United States within the historic range, and at least 500 kokanee populations in B.C., Lake Sammamish kokanee do not represent the only surviving natural occurrence of the taxon.

Significance Factor 4: Evidence that the population differs markedly from other populations of the species in its genetic characteristics.

Significance Factor 4 Examination

Relatively large genetic differences occur among the largest sockeye salmon stocks in northwestern, coastal Canadian, and southeastern parts of the species' range (Wood 1995, p. 197). Surveys of genetic variation throughout the range of *Oncorhynchus nerka* provide new insights about colonization patterns following the last glaciation and the extent of reproductive isolation among spawning locations (Wood 1995, p. 196). Evidence from geological studies and the distribution of freshwater fish assemblages strongly suggests that modern sockeye salmon populations are derived primarily from a northern race that survived glaciation in the Bering Sea area and a southern race that survived south of the Cordilleran Ice Sheet in the Columbia River (Wood *et al.* 2008, p. 208). This 4,000-feet thick (1,219-meters) ice sheet expanded southward into Northern Washington, Idaho and Montana and had three main lobes. The Puget lobe that scoured out the Puget Sound, the Okanogan lobe that blocked the Columbia River at the site of the present day Grand Coulee dam, and the Purcell lobe that blocked the North Fork, Clark River near Cabinet Gorge on the Idaho-Montana border. Postglacial (the time following a glacial period) adaptive evolution occurred multiple times, resulting in native kokanee populations being genetically more similar to their sympatric (*i.e.,* occupying the same geographic area without interbreeding) sockeye populations than kokanee in other river systems (Taylor *et al.* 1996, pp. 401, 413–414).

Conclusion: Lake Sammamish kokanee may be 1 of only 11 remaining native kokanee populations that evolved from the southern race of sockeye and 1 of 3 that evolved in the Puget Sound/Georgia Basin region. Given the presumed large number of kokanee populations across the range of *Oncorhynchus nerka* (*e.g.,* 500 kokanee populations in British Columbia alone (McPhail 2007, p. 295)), based on the genetic information currently available, the Lake Sammamish kokanee population does not differ markedly from other *O. nerka* populations with respect to the variability beyond the species' norm of distribution, such that they should be considered biologically or ecologically significant based on genetic characteristics. Although each *O. nerka* population likely expresses some degree of genetic distinctiveness because of differing responses to evolutionary pressures, Lake Sammamish kokanee do not demonstrate any unique or unusual genetic distinctiveness beyond that which would be expected between other populations throughout the range of the taxon. When measuring this evidence against the DPS standard, we are required to look for evidence of marked differentiation of this Lake Sammamish kokanee population segment compared to other populations of *Oncorhynchus nerka* throughout the range of the taxon. More importantly, scientific information to indicate that the genetic divergence observed in the Lake Sammamish kokanee population segment confers a fitness advantage or otherwise contributes to the biological or ecological importance of this population, in relation to the taxon as a whole, is lacking. With the additional consideration that the authority to list DPSs be used ''sparingly,'' we conclude this population segment of *O. nerka* does not meet the significance element of this factor.

Other Potential Significance Factors Examined

(A) *Disease resistance:* Infectious hematopoietic necrosis (IHN) is a serious viral disease of salmonid fish, which was first reported at fish hatcheries in Oregon and Washington in the 1950s. The causative virus now exists in many wild and farmed salmonid stocks in the Pacific Northwest region of North America, and has spread to Europe and some Asian countries. IHN virus (IHN) affects rainbow/steelhead trout (*O. mykiss*), cutthroat trout (*Salmo clarki*), brown trout (*Salmo trutta*), Atlantic salmon (*Salmo salar*), and Pacific salmon including chinook (*O. tshawytscha*), sockeye/kokanee (*O. nerka*), chum (*O. keta*), masou/yamame (*O. masou*), amago (*O. rhodurus*), and coho (*O. kisutch*) (Iowa State University, 2007, p. 1). Over 40 million kokanee were introduced into the Sammamish basin from the Lake Whatcom Hatchery between 1940 and 1978 (Young *et al.* 2004, p. 65); however, these introduced stocks have not been successful. The Lake Sammamish kokanee population remains extant, whereas transplanted stocks were unable to persist (Young *et al.* 2004, p. 1). The reasons are unknown, and there has been some speculation that this could be related to a disease resistance function to IHN; however, this theory has not been confirmed. This speculation is based on Young *et al.* 2004 (p. 3), who stated, ''We note that the Lake Washington/Lake Sammamish Basin is an IHN positive environment and that Lake Whatcom is IHN free. We speculate that IHN vulnerability might explain the apparent lack of success of the Lake Whatcom kokanee introductions, however, confirmation or refutation would require further study.'' However, while these authors speculated as to the vulnerability of Lake Whatcom kokanee to IHN, it does not follow that Lake Sammamish kokanee are, therefore, resistant to, or tolerant of, the disease. We were also unable to find any additional studies regarding disease resistance or disease tolerance of the Lake Sammamish kokanee, so this idea remains merely speculative at this time.

Even assuming that Lake Sammamish kokanee may be resistant to IHN, this does not mean disease resistance is unique to kokanee in the Lake Washington/Lake Sammamish system. We were unable to find any information on IHN presence in other lakes within the range of *Oncorhynchus nerka,* so were unable to determine whether a presumed resistance or tolerance to IHN (as evidenced by presence of a population of *O. nerka* in IHN-positive lakes) is unusual such that a population evidencing this disease resistance or tolerance would be significant to the taxon as a whole.

Conclusion: Although disease resistance or tolerance may be important to the long-term viability of *Oncorhynchus nerka* at some scale, the relevant question for this finding is whether the Lake Sammamish kokanee population is significant to the taxon as a whole (*i.e.,* all *O. nerka* populations and life history forms throughout the range of the species). Given that there is no evidence indicating that the Lake Sammamish kokanee are disease resistant or disease tolerant, and that we were unable to find any information on IHN presence in other lakes containing *O. nerka* populations in order to determine whether Lake Sammamish is atypical, we conclude that the hypothesized disease resistance or tolerance of the Lake Sammamish kokanee population does not meet the significance element of the DPS policy.

(B) Multiple run spawning timings: Multiple run timings allow kokanee and other salmonid populations the ability to exploit a range of available habitats and reduce risks to extirpation (*e.g.,* stochastic events, predation, variable climate) by diversifying spawning distribution over space and time. The Lake Sammamish/Lake Washington kokanee population historically had at least three distinct run timings expressed in different locations within the basin. The expression of multiple-run timings within populations appears to be rare across the range of kokanee, especially among tributaries (Wood 2009, pers comm.), although there are at least a few other kokanee populations that are known to exhibit this trait (Shepard 1999). In addition, the literature indicates that other kokanee populations have run timings that occur during similar times of the year as do the run timings of the Lake Sammamish kokanee (Scott and Crossman 1973, p. 167). With regard to the taxon-wide examination, NOAAF (1997, p. 20) states that *Oncorhynchus nerka* exhibits the greatest diversity in selection of spawning habitat among the Pacific salmon, and great variation in river entry timing and the duration of holding in lakes prior to spawning. Bimodal run timing (two spawning runs in a single season) for *O. nerka* populations have been demonstrated in the Russian River in Alaska (Nelson 1979, p. 3), the Klukshu River, Yukon Territory (Fillatre *et al.* 2003, p. 1), and Karluk Lake on Kodiak Island, Alaska (Schmidt *et al.* 1998, p. 744).

Conclusion: Under the DPS policy, we are required to evaluate the Lake Sammamish kokanee population segment's significance relative to the taxon as a whole. Therefore, given the available information on the number of *O. nerka* populations across the range of the species (see sockeye and kokanee abundance trends above), and the presence of bimodal run timing in other populations, we conclude the presence of multiple run timings in Lake Sammamish is not significant to the taxon.

DPS Conclusion

On the basis of the best available information, we conclude that the Lake Sammamish kokanee population segment is discrete due to marked separation as a consequence of physical, ecological, physiological, or behavioral factors according to the 1996 DPS policy. However, on the basis of the four significance elements in the 1996 DPS policy, we conclude this discrete population segment is not significant to the remainder of the taxon and therefore, does not qualify as a DPS under our 1996 DPS policy. As such, we find the Lake Sammamish kokanee population is not a listable entity under the Act.

Finding

In making this finding, we considered information provided by the petitioners, as well as other information available to us concerning the Lake Sammamish kokanee population. We have carefully assessed the best scientific and commercial information available regarding the status and threats to the Lake Sammamish kokanee population. We reviewed the petition and unpublished scientific and commercial information. We also consulted with Federal and State land managers, and scientists having expertise with *Oncorhynchus nerka.* This 12-month finding reflects and incorporates information received from the public following our 90-day finding or obtained through consultation or literature research.

On the basis of that review, we have determined that the Lake Sammamish kokanee does not meet the elements of our 1996 DPS policy as being a valid DPS. Consequently, we find the Lake Sammamish kokanee population is not a listable entity under the Act, and that listing is not warranted.

References

A complete list of all references cited is available at *http://www.regulations.gov,* or upon request from the Washington Fish and Wildlife Office (see **ADDRESSES**).

Author

The primary authors of this document are staff of Region 1, Pacific Region, U.S. Fish and Wildlife Service.

Authority

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

Dated: September 23, 2011.

Rowan W. Gould,

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

[FR Doc. 2011–25595 Filed 10–3–11; 8:45 am]

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DEPARTMENT OF THE INTERIOR

Fish and Wildlife Service

50 CFR Part 17

[Docket No. FWS–R3–ES–2010–0034; MO 92210–0–0008]

Endangered and Threatened Wildlife and Plants; 12-Month Finding on a Petition To List Calopogon oklahomensis as Threatened or Endangered

AGENCY: Fish and Wildlife Service, Interior.

ACTION: Notice of 12-month petition finding.

SUMMARY: We, the U.S. Fish and Wildlife Service, announce a 12-month finding on a petition to list *Calopogon oklahomensis* (Oklahoma grass pink orchid) under the Endangered Species Act of 1973, as amended. After review of the best available scientific and commercial information, we find that listing *Calopogon oklahomensis* is not warranted at this time. However, we ask the public to submit to us any new information that becomes available concerning the threats to *Calopogon oklahomensis* or its habitat at any time.

DATES: The finding announced in this document was made on October 4, 2011.

ADDRESSES: This finding is available on the Internet at *http://www.regulations.gov* at Docket Number FWS–R3–ES–2010–0034. Supporting documentation used in preparing this finding is available for public inspection, by appointment, during normal business hours at the U.S. Fish and Wildlife Service, Chicago, Illinois Ecological Services Field Office, 1250 South Grove, Suite 103, Barrington, IL 60010. Please submit any new information, materials, comments, or questions concerning this finding to the above address.

FOR FURTHER INFORMATION CONTACT: Ms. Louise Clemency, Field Supervisor, Chicago, Illinois Ecological Services Field Office (see **ADDRESSES**); by telephone at 847–381–2253; or by facsimile at 847–381–2285. Persons who