



Questions and Answers About Lake Sammamish Kokanee 12-Month Finding

1. Q: What is a kokanee?

A: The kokanee and the sockeye salmon are two forms of the same species (*Oncorhynchus nerka*). The kokanee in Lake Sammamish evolved from anadromous sockeye that entered the lake from the ocean and remained to form a resident population that developed into a permanent kokanee population. Kokanee do not return to the ocean but spawn in streams entering the lake where they live or along the shores of the lake. Native to lands bordering the northern Pacific Ocean, kokanee have been widely introduced to lakes across North America to provide sport fishing opportunities. Although kokanee are salmon, species normally under the jurisdiction of the NOAA Fisheries, the U.S. Fish and Wildlife Service (Service) has jurisdiction over fish species that spend most of their lives in fresh water. Because kokanee spend their entire lives in fresh water they have been determined to be the responsibility of the Service.

2. Q. How does the kokanee differ from the sockeye salmon?

A: Kokanee are not anadromous—they spend their entire lives in freshwater habitats. However, sockeye salmon are typically anadromous—they hatch and rear in freshwater habitat (typically rearing in a lake) and migrate to the Pacific Ocean to spend two to three years in marine waters before returning to fresh water to spawn. Kokanee are also more efficient at extracting carotinoids (pigments that give them their red color) from food resources, have higher gill raker counts, and are usually smaller in size because they are confined to freshwater environments which are less productive than the ocean. Although very similar to sockeye salmon, kokanee are usually much smaller in size when mature. The adult kokanee typically has a bright red body with an olive green head.

3. Q: What has the U.S. Fish and Wildlife Service determined?

A: After evaluating current available scientific information, the Service has determined that the Lake Sammamish kokanee population does not meet the criteria of a distinct population segment and is therefore not a listable entity under the Endangered Species Act.

4. Q: How did the U.S. Fish and Wildlife Service make this determination?

A: Under the Service's Distinct Population Segment (DPS) policy, three elements are considered in the decision regarding establishment of a population as a possible DPS. These elements are: the discreteness of a population segment in relation to the remainder of the species to which it belongs; the significance of the population to the species to which it belongs; and the population segment's conservation status in relation to the ESA's standards for listing, delisting, or reclassification. Although Lake Sammamish kokanee were found to be discrete from other *O. nerka* populations, biologists found no evidence that the population has a special significance to the well-being of the species throughout its range and therefore does not qualify as a DPS under the Service's 1996 DPS policy. Because it does not qualify as a DPS, the population is not a listable entity under the ESA.

5. Q: Who submitted the kokanee petition and what was the action they requested?

A: In July 2007, Trout Unlimited; City of Issaquah, Washington; King County, Washington; People for Puget Sound; Save Lake Sammamish; Snoqualmie Tribe; and the Wild Fish Conservancy filed a petition requesting that we list the Lake Sammamish population of native kokanee in King County, Washington, as threatened or endangered. The petition addressed all three runs of native kokanee in the Sammamish River/Lake Sammamish Basin, King County, Washington.

6. Q: What factors have affected the Lake Sammamish kokanee population?

A: Habitat loss, degradation, and alteration from increased development (urbanization) in the Lake Sammamish watershed have affected the kokanee population. Development has affected the hydrology and water quality in Lake Sammamish and its tributaries. Alterations in water quality have likely limited the amount of habitat within the lake that is suitable to support kokanee. Increased predation from introduced and native fishes as a result of habitat changes are also believed to have contributed to the kokanee's decline. The Issaquah Creek State Salmon Hatchery, local property owners, and culverts block or have blocked the kokanee's access to habitat needed for spawning.

7. Q: What is being done to conserve the Lake Sammamish kokanee population?

A: The Service, Washington Department of Fish and Wildlife, local governments, and other groups concerned about Lake Sammamish kokanee are using a conservation supplementation program to improve egg to fry survival, restoring habitat within key kokanee spawning tributaries, carrying out studies to determine how best to conserve Lake Sammamish kokanee, and conducting public outreach about the plight of the kokanee and how to best conserve them. For more information on Lake Sammamish kokanee conservation efforts please go to:

<http://www.kingcounty.gov/environment/animalsAndPlants/salmon-and-trout/kokanee.aspx>