



Eagle Lake Trout - 90 Day Finding

Questions and Answers

Background

The Eagle Lake rainbow trout (*Oncorhynchus mykiss aquilarum*) is a recognized subspecies of rainbow trout (*Oncorhynchus mykiss*) that is native only to Eagle Lake in Lassen County, California. Eagle Lake, the second largest natural lake located entirely within California, is located approximately 15 miles north of Susanville, and supports a popular recreational fishery.

The Eagle Lake rainbow trout can grow to approximately 24 inches and weigh up to 10 pounds and can tolerate high alkaline conditions (up to pH 9.6), which is more than any other rainbow trout.

The Eagle Lake rainbow trout's alkalinity tolerance helps it to survive the unusual conditions of Eagle Lake. Because the lake has no natural outlet, it is highly alkaline, with pH levels ranging from 8.4 to 9.6. With the exception of the Lahontan cutthroat trout, the Eagle Lake rainbow trout is the only trout that can tolerate pH levels above about 8.4. Similarly, the longer lifespan of this fish likely is an adaptation to the dry climate in which Eagle Lake is located, which makes natural spawning impossible during some years due to lack of water in the main spawning areas of Pine Creek (the primary tributary to Eagle Lake) and Bogard Springs Creek.

Prior to 1917, population levels of Eagle Lake rainbow trout within the lake were high enough to support a commercial fishery, but harvesting of the fish was extremely high, leading to concerns the fish would be driven to extinction. Since 1950, reproduction in the Eagle Lake rainbow trout population has depended largely on a hatchery program run by the California Department of Fish and Game.

Q. Why did the Service make this finding?

A. After reviewing the petition requesting that the Eagle Lake rainbow trout be listed as an endangered or threatened species under the federal Endangered Species Act, the Service found that the petition and other information available in Service files at the time of the petition presented adequate scientific and commercial information to indicate that listing the species may be warranted.

Q. Why did the Service make a 90 day finding after 9 years?

A. The 90 Day finding for the Eagle Lake Trout petition was delayed due to the high priority of responding to court orders and settlement agreements. Court orders and judicially approved settlement agreements for other listing and critical habitat determinations under the Act, required nearly all of the Service's listing and critical habitat funding.

In response to litigation brought on behalf of petitioned and candidate species, the Service reached two settlement agreements on May 10, 2011, and July 12, 2011, that establish a 6-year work schedule for reaching final listing determinations for all petitioned and candidate species (http://www.fws.gov/endangered/improving_ESA/listing_workplan.html). The agreements were approved by the Federal District Court of the District of Columbia on September 9, 2011 (*WildEarth Guardians v. Salazar*, Nos. 10–377). This notice constitutes the Service’s 90-day finding is in keeping with the Multi-District Litigation (MDL) 6-year work schedule as ordered by the Court.

Q. What are the challenges to the Eagle Lake trout?

A. Prior to 1917, commercial fishing of Eagle Lake trout was extremely high and greatly reduced the fish’s population. Fish populations remained low even after the State of California banned commercial trout fishing in Eagle Lake in 1917.

At the time of petition, a weir on Pine Creek was preventing fish passage and access to spawning grounds and most likely prevented any natural spawning from occurring.

Strawberry Disease may affect individual Eagle Lake trout but the extent and degree of the impacts is mostly likely small.

Predation in the main spawning habitat of Pine Creek from introduced brook trout most likely is occurring and may be having a negative effect on the stream population by keeping numbers artificially low.

A potential genotype and phenotypic shift associated with an ongoing hatchery system due to changed selection pressures can be an issue of concern for wild fish populations including the Eagle Lake Trout.

Q. What measures have been and are currently being taken to conserve the Eagle Lake trout?

A. To protect the trout from stranding in low stream flows and assist in collection of fish for hatchery purposes, the California Department of Fish and Game (CDFG) placed a weir across Pine Creek in the 1950’s and upgraded the barrier in the 1990’s. CDFG annually traps spawners at the weir, collects and fertilizes the fish eggs, and raises offspring in hatchery facilities to stock Eagle Lake and other areas throughout the State. The CDFG annually plants approximately 180,000 hatchery raised fish each year to support the fishery.

A Coordinated Resource Management Planning (CRMP) group (U.S. Forest Service, CDFG, University of California Extension, private landowners) has been in place since the late 1980’s and has been instrumental in promoting conservation for the subspecies and restoration of Pine Creek.

Ongoing habitat restoration projects outlined and implemented by the CRMP group have resulted in improving stream flows, passage upstream for adult fish, nonnative brook trout removal, and habitat restoration.

An effort to build a fish passage around the weir which would allow fish to move upstream is anticipated to be complete.

Q. What information is the Service requesting during the 60 day open comment period?

A. Several categories of information:

1. The species' biology, range, and population trends, including:
 - Habitat requirements for feeding, breeding, and sheltering;
 - Genetics and taxonomy;
 - Historical and current range, including distribution patterns; Historical and current population levels, and current and projected trends; and
 - Past and ongoing conservation measures for the species, its habitat, or both.
2. The factors that are the basis for making a listing determination for a species under section 4(a) of the Act (16 U.S.C. 1531 et seq.), which are:
 - The present or threatened destruction, modification, or curtailment of its habitat or range;
 - Overutilization for commercial, recreational, scientific, or educational purposes;
 - Disease or predation;
 - The inadequacy of existing regulatory mechanisms; and
 - Other natural or manmade factors affecting its continued existence.
3. What may constitute "physical or biological features essential to the conservation of the species," within the geographical range currently occupied by the species.
4. Where these features are currently found.
5. Whether any of these features may require special management considerations or protection.
6. Specific areas outside the geographical area occupied by the species that are "essential for the conservation of the species."
7. 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 section 4 of the Act.

Q. What happens next?

A. The Service will conduct a comprehensive review of the status of the species including reviewing all public comments received in this comment period.

The Service will then make a finding, known as a 12 month finding that summarizes the review of the status of the species and will make one of three possible determinations:

- 1) Listing is not warranted, in which case no further action will be taken.
- 2) Listing is warranted. In this case the Service will publish to the Federal Register a proposal to list the species, open a public comment period on the proposal, and consider the public input before making a final decision.
- 3) Listing is warranted but precluded by other, higher priority activities. This means the species is added to the federal list of candidate species, and the proposal to list is deferred while the Service works on listing proposals for other species that are at greater risk. A warranted but precluded finding requires subsequent annual reviews of the finding until such time as either a listing proposal is published, or a not warranted finding is made based on new information.