NEPA/CEQA and the Environmental Impact Statement/Report (EIS/EIR)

What is NEPA/CEQA?

- National Environmental Policy Act
- California Environmental Quality Act
- NEPA is our nation's basic charter for protection of the environment. It establishes policy, sets goals, and provides means for carrying out the policy.
- CEQA is California's environmental review process that evaluates the impacts of a proposed project and appropriate alternatives to the proposed action.
- NEPA Requires that all federal projects be reviewed for their potential adverse effects upon the environment.
- CEQA is required for all discretionary actions that are carried out by State agencies.
- NEPA/CEQA provides for public participation in the decision-making process.

What is an EIS/EIR?

- An EIS/EIR is a document that provides full and fair discussion of significant environmental impacts of a Proposed Action.
- Describes way in which to avoid or minimize adverse impacts to the natural and human environment, and alternatives to the proposed project.
- Required by law (NEPA/CEQA)

The NEPA/CEQA Process

NOTICE OF INTENT/PREPARATION PROPOSED ACTION

↓

where we are now

SCOPING

↓

DRAFT EIS/EIR

↓

PUBLIC REVIEW AND COMMENT PERIOD

↓

FINAL EIS/EIR

↓

AGENCY DECISION*

**The Agency Decision will be contained in the Record of Decision/Finding of Fact and Notice of Determination.*

Basic Components of an EIS/EIR:

- Purpose and Need/Project Description
- Proposed Action and Alternatives
- Affected Environment
- Potential Environmental Consequences and Mitigations
- Consideration of Public Input

What is Scoping?

- Scoping is a process for determining the nature and potential significance of issues to be addressed in the EIS/EIR.
- Purpose:
  - Introduce stakeholders* to the Proposed Action and seek input.
  - Help determine the range and significance of issues to be addressed in the EIS/EIR.
  - Help determine potential alternatives.

**Stakeholders include the general public, tribes, special interest groups, and public agencies*

The Proposed Action and Alternatives

The Alternatives

- Alternative 1: No Action
- Alternative 2: Application of Rotenone (Proposed Action)
- Alternative 3: Physical Removal, e.g. electrofishing and/or gill netting
- Alternative 4: Dewatering Followed by Rotenone Treatment
- Alternatives not considered:
  - Treatment of smaller project areas
  - Genetic swamping
  - Explosive detonation cord

Why is the Proposed Action needed?

- Because Paiute cutthroat trout are an extraordinarily rare wild trout that are in danger of extinction.
- To recover this species and provide for its long term viability within its entire historic range.
- Isolation of the Paiute cutthroat trout within the basin will eliminate the threats from non-native species, e.g. hybridization and competition.

What is the Proposed Action?

- The Proposed Action seeks to remove all non-native and hybridized trout from the Paiute cutthroat trout's historic range and restore a viable population of pure Paiute cutthroat trout, recovering the species to the point where it is a secure, self-sustaining part of its ecosystem. The non-native fish species need be removed for Paiute cutthroat trout to be recovered successfully. If recovery efforts are successful, the Paiute cutthroat would be considered for removal from the list of threatened and endangered species under the Endangered Species Act. The Proposed Action consists of the following steps:
- Apply rotenone to Silver King Creek, tributaries, and if necessary Tamarack Lake. Rotenone is the preferred fishery management technique because it is the only technique that has been proven consistently to remove all fish from a stream. Mechanical removal of fish using electrofishing, gill nets, and explosives is rarely 100% effective, especially in larger stream environments, e.g. Silver King.
- Detoxify with potassium permanganate
- Restock with pure Paiute cutthroat trout

Existing Conditions

- The historic distribution of the Paiute cutthroat trout is limited to less than 10 miles of habitat in Silver King Creek from Llewellyn Falls downstream to Silver King Canyon[1] as well as the accessible reaches of three small named tributaries: Tamarack Creek, Tamarack Lake Creek, and the lower reaches of Coyote Valley Creek downstream of barrier falls. This watershed is entirely within the boundaries of the Humboldt-Toiyabe National Forest. Currently, Paiute cutthroat trout are not found within their historic range.
- The present distribution of Paiute cutthroat trout consists of a population in Silver King Creek above Llewellyn Falls and tributary populations in Fly Valley, Four Mile Canyon Creek, Coyote Valley, and Corral Valley creeks. Outside this native drainage, there are four self-sustaining, pure populations in Inyo National Forest and Sierra National Forest (not shown on map).

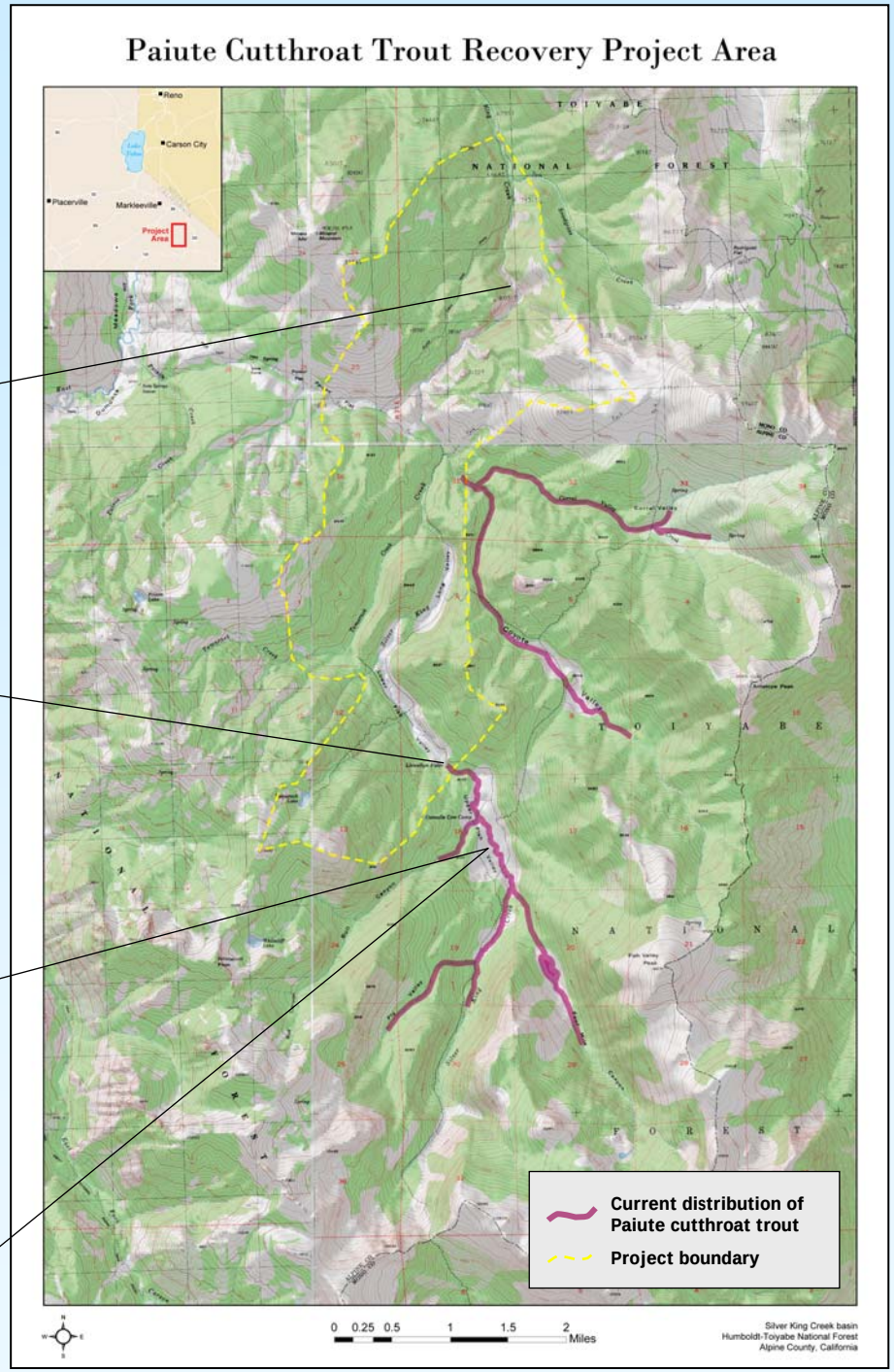
1. Ryan and Nicola, 1976 – Status of Paiute cutthroat trout, *Salmo clarki seleniris.*

Silver King Canyon

Llewellyn Falls

Upper Fish Valley

Upper Fish Valley



The Paiute Cutthroat Trout

- The Paiute cutthroat trout, a federally threatened species, is one of the world's rarest trout. Remarkable for their purplish-pink body color and for their almost total lack of spots, they are native to Silver King Creek in the East Fork Carson River drainage.
- 5,000-8,000 years ago, Lahontan cutthroat trout in Silver King Creek became isolated in a section of the creek between Silver King Canyon and Llewellyn Falls.[1,2] In time, those fish evolved into Paiute cutthroat trout. The entire native range of the subspecies consists of approximately 10 stream miles.
- In 1912, a Basque shepherd moved some Paiute cutthroat trout above Llewellyn Falls and into the upper reaches of Silver King Creek, and in doing so established a new, isolated population. This action saved the Paiute cutthroat from extinction, as horse pack trains were stocking Sierra Nevada streams with non-native trout species. Shortly after the shepherd's transplant activities, the original population below Llewellyn Falls was hybridized out of existence.[2]
- The Paiute cutthroat trout was listed as endangered in 1967 and reclassified as threatened in 1975.

Sources: 1) Behnke and Zarn, 1976;
2) Ryan and Nicola, 1976

Llewellyn Falls

- Paiute cutthroat trout require cool, well-oxygenated waters. Adult fish prefer stream pool habitat in low gradient meadows with undercut or overhanging banks and abundant riparian vegetation. Pools are important rearing habitat for juveniles and act as refuge areas during winter. During the winter months, trout move into pools to avoid physical damage from ice scouring and to conserve energy. As with other salmonids, suitable winter habitat may be more restrictive than summer habitat.
- Maximum observed length: 13 Inches
- Maximum weight: Approximately 1 pound
- Lifespan: Less than 5 years
- Feed: Terrestrial and aquatic insects

Source: http://www.fws.gov/nevada/protected_species/fish/species/pct.html

Potential Issues, Mitigation, Monitoring, and Affected Environment

Potential Issues/Concerns of Proposed Action

- Effects on Paiute cutthroat trout
- Effects on non-target organisms
- Effects on water quality
- Effects on wilderness values and management
- Handling of hazardous materials
- Effects on recreational fisheries

Possible Mitigation Measures

- Signs would be prominently displayed at trail heads and along Silver King Creek.
- The oxidizing agent potassium permanganate would be applied to Silver King Creek near Snodgrass Creek to neutralize rotenone.
- Develop appropriate mitigation measures to protect non-target species.
- Alternative water sources are available for hikers and anglers.

Proposed Monitoring

- Native and Non-native species
  - Aquatic Insect populations
  - Amphibian populations
  - Fish populations
- Water quality
  - Independent Monitoring by LRWQCB
  - Operational Monitoring

Resource Areas being considered by this EIS/EIR

- Natural
  - Fish and Wildlife
  - Aquatic Insects
  - Non-target Special-Status Species:
    - Yellow warbler
    - Mountain yellow-legged frog
    - Yosemite toad
    - Willow flycatcher
  - Protected and Sensitive Habitats
  - Water Quality
  - Air Quality
  - Geology and Soils
- Cultural
- Growth Inducing Impacts
- Human
  - Human Health and Safety
  - Treaty Rights
  - Recreation
  - Public Services
  - Socioeconomics and Tourism
  - Noise
  - Environmental Justice
  - Aesthetics
- Cumulative Impacts

What is Rotenone?

- Rotenone is a naturally occurring compound that is derived from the roots of a tropical plant of the bean family. Rotenone compounds have been used by people worldwide to stun and kill fish.
- Rotenone is not harmful to people when used as a fishery management tool; no health effects have occurred from its use in fisheries management. The U.S. Environmental Protection Agency has concluded that "use of rotenone for fish control does not present a risk of unreasonable adverse effects to humans or the environment."
- Rotenone is the preferred fishery management technique because it is the only technique that has been proven consistently to remove all fish from a stream. Mechanical removal of fish using electrofishing, gill nets, and explosives is rarely 100% effective, especially in larger stream environments, e.g. Silver King.
- Rotenone does not affect all aquatic animals the same; generally fish are more susceptible. All animals have natural enzymes in the digestive tract that neutralize rotenone. However, fish and some forms of amphibians and aquatic invertebrates are more susceptible because they are gill-breathing animals and, thus, the digestive enzymes cannot neutralize rotenone. Although some organisms like aquatic insects are susceptible to rotenone, studies have shown that these organisms are able to quickly repopulate an area after treatment.
- Wildlife that eat dead fish and drink treated water will not be affected, for the reasons listed above. A bird weighing one-quarter pound would have to consume 100 quarts of treated water or more than 40 pounds of fish and invertebrates within 24 hours to receive a lethal dose (this same bird would normally consume 0.2 ounces of water and 0.32 ounces of food daily).
- Some of the impacts of rotenone treatment include slight odor for several days in lakes (in streams the odor is present for several hours), temporary change in water quality, and of course temporary loss of fish.
- Rotenone can be neutralized with potassium permanganate, an oxidizing agent.

Manual rotenone application

Automated rotenone application

Rotenone detoxification using potassium permanganate

Additional Information

To make written comments

- If you would like to make written comments on the information provided tonight, please fill out a comment card and turn it in at the registration table before you leave today.
- Written comments can also be emailed, faxed or snail-mailed *(see "How to contact us" at right).*

The deadline for comments is October 31, 2008

To get more information or to be added to the mailing list

- If you are interested in obtaining more information, please call Stafford Lehr of the CA Dept. of Fish and Game at (916) 358-2900 or send your request via one of the channels provided below.

How to contact us:

Email
silverkingpubliccomment@dfg.ca.gov

Subject: Paiute Cutthroat Recovery

Fax
(916) 358-2912
Attn: Paiute Cutthroat Recovery

Snail-mail
California Department of Fish and Game
Attn: Stafford Lehr
1701 Nimbus Road
Rancho Cordova, CA 95670