



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION IX
75 Hawthorne Street
San Francisco, CA 94105

April 29, 2009

Robert D. Williams
Nevada Fish and Wildlife Office
U.S. Fish and Wildlife Service
1340 Financial Boulevard, Suite 234
Reno, NV 89502

Subject: EPA Comments on the Paiute Cutthroat Trout Restoration Project Draft
Environmental Impact Statement/Environmental Impact Report (DEIS/EIR),
Alpine County, California (CEQ # 20090076)

Dear Mr. Williams:

The U.S. Environmental Protection Agency (EPA) has reviewed the above-referenced document pursuant to the National Environmental Policy Act (NEPA), Council on Environmental Quality (CEQ) regulations (40 CFR Parts 1500-1508), and our NEPA review authority under Section 309 of the Clean Air Act. Our detailed comments are enclosed.

Based on our review, we have rated the DEIS as Environmental Concerns – Insufficient Information (EC-2) (see enclosed “Summary of Rating Definitions”). The project proposes to eradicate non-native trout species from 11 stream miles of Silver King Creek, its tributaries, and Tamarack Lake, for the purposes of preventing hybridization with other trout species and preventing Paiute cutthroat trout from becoming extinct. The proposed action would utilize the piscicide rotenone to eradicate non-native trout, and neutralize the rotenone using potassium permanganate downstream of Silver King Canyon at its confluence with Snodgrass Creek. We have concerns regarding the piscicide selection process, and request additional information regarding the environmental impacts of piperonyl butoxide. We also recommend either further consideration of physical treatment combined with chemical treatment options, or additional discussion as to why such approaches were dismissed.

EPA appreciates the opportunity to review this DEIS/EIR. When the Final EIS/EIR is released for public review, please send one copy to the address above (mail code: CED-2). If you have any questions, please contact me at (415) 972-3521, or contact Karen Vitulano, the lead reviewer for this project, at 415-947-4178 or vitulano.karen@epa.gov.

Sincerely,

/s/
Kathleen M. Goforth, Manager
Environmental Review Office (CED-2)

Enclosure: Summary of EPA Rating Definitions
 EPA's Detailed Comments

cc: Stafford Lehr, California Department of Fish and Game
 Ken Harris, State Water Resources Control Board
 Lahontan Regional Water Quality Control Board

PISCICIDE USE

Decision-making regarding piscicide choice

The DEIS identifies 3 piscicide products - CFT-Legumine, Noxfish and Nusyn-Noxfish - for potential use for the proposed project. Appendix B mentions that CFT-Legumine is the preferred choice of approved piscicides for this project (p. B-8), but there is no mention of this in the DEIS proper, nor is there any discussion as to how product selection will occur¹. Nusyn-Noxfish contains piperonyl butoxide (PBO), a registered pesticide, which increases the toxicity of rotenone. The DEIS describes PBO as a synergist (p. 5.4-13) and does not clearly communicate that this is an additional pesticidal ingredient. The document also implies on p. 3-8 that two or more of the products would be used when it states that CFT-Legumine, Noxfish *and/or* Nusyn-Noxfish would be applied, so clarification as to how product mixing decisions would be made should be included.

Recommendation: In the Final EIS (FEIS), include the factors or criteria that will be used in determining which product(s) will be selected for use in the proposed project. We recommend that PBO be clearly identified in the FEIS as a registered pesticide product when referencing its use as a synergist for rotenone.

Generally, EPA encourages use of the least toxic, least chemical intensive options first. Because CFT Legumine contains much lower levels of contaminants, especially naphthalene, and does not contain PBO, this product appears environmentally preferable. We encourage the Agencies to plan effectively so that inadequate supplies of a first-choice product are not justification for using less desirable products.

Ecological risk assessment/monitoring

The ecological and human health risk assessment in Appendix C evaluates the risk associated with rotenone, but does not contain an assessment of risks due to PBO, which is, as mentioned, a registered pesticide, not just a synergist. Appendix B notes that when Nusyn-Noxfish was used in Lake Davis in 1997, PBO did not degrade as readily as other compounds and was the most persistent chemical in the standard liquid formulation (p. B-7).

Page C-52 of the risk assessment equates the rotenone risks of Noxfish and Nusyn-Noxfish, and states they are less than significant. However, the risks of these two products are not the same, even with the same rotenone concentrations, since PBO increases the toxicity of rotenone, and PBO has toxicity itself.

The DEIS identifies the water quality objectives for California Department of Fish and Game rotenone projects, which includes maximum concentrations of rotenone residues (p. 5.4-8). It's

¹ Appendix B says only that the agencies would reserve the option of using Noxfish or Nusyn-Noxfish should issues arise with acquisition or approval to use CFT-Legumine based upon formulation approvals.

not clear whether PBO will be among the chemicals monitored.

Recommendation: EPA recommends that additional analysis of the fate and potential effects of PBO be disclosed in the risk assessment/FEIS for Nusyn-Noxfish, and that the document differentiate the risks of Noxfish and Nusyn-Noxfish. The toxicity of PBO should be considered in selecting piscicides for the proposed project. EPA recommends PBO be among the chemicals monitored in the monitoring program.

Potassium permanganate use for Nusyn-Noxfish

Table 5.3-1 shows a rotenone in-water concentration of 25 micrograms per liter (ug/L) for both Noxfish and Nusyn-Noxfish (using 0.5 milligrams per liter (mg/L) and 1.0 mg/L respectively). Since Nusyn-Noxfish contains PBO, it's not clear why there would need to be the same in-water concentration of rotenone (25 ug/L). The PBO is a synergist, so less active ingredient should be required. Also, if the in-water concentration of rotenone is at 25 ug/L after application of 1 mg/L of Nusyn-Noxfish, then why is 4 mg/L of potassium permanganate for rotenone neutralization indicated for this product, and 2 mg/L indicated for the same concentration of rotenone for NoxFish?

Recommendation: Clarify the rationale for above-mentioned figures presented in Table 5.3-1. If these figures are in error, provide corrections for the FEIS.

Additional piscicide comments

- The background discussion of NPDES permitting on page 5.3-5 may need revision to reflect the current state of court decisions. In January 2009, the 6th Circuit Court vacated the EPA rule that exempted certain pesticide applications from NPDES permitting.
- Table 5.1-8 gives toxicity values, but it's not clear whether they are expressed as ug/L formulation or ug/L active ingredient.
- Table 5.3-1 does not include the PC code for PBO, which is 067501.

ALTERNATIVES ANALYSIS

Clarify treatment of Tamarack Lake; consider physical treatment only

The treatment of Tamarack Lake is not certain and will be based on whether fish are found during surveys. If they are found, treatment would occur during the 2nd and/or 3rd year. It is not clear why the option of using physical methods only for Tamarack Lake is not being considered. According to the DEIS, gillnetting and electrofishing from the lake shoreline would not cause the level of disturbance that these activities would cause to streams (p. 5.4-19). Physical treatment of Tamarack Lake would also eliminate the significant short-term and unavoidable impacts on water quality in Tamarack Lake from rotenone (p. 5.10-2). The DEIS states that chemical residues in the lake could potentially result in significant impacts on water quality standards and beneficial uses that would be unavoidable because no mitigation measures are available to accelerate the degradation of rotenone in the lake (p. 6-4 through 6-5). Physical treatment would also eliminate the unavoidable adverse effects on potential rare or endemic

benthic macroinvertebrate species in Tamarack Lake (p. 6-4).

Additionally, the DEIS is somewhat vague as to the treatment specifics regarding application of rotenone in Tamarack Lake. For example, it is not clear if the lake levels will be lowered before treatment. Additionally, the DEIS states that “approximately 50 gallons of rotenone” would be used to treat the lake. It is not clear if this refers to 50 gallons of technical rotenone, or 50 gallons of one or more of the products.

Recommendation: Consider and evaluate an alternative that removes any undesirable fish found in Tamarack Lake using physical methods only.

If no additional NEPA analysis will occur for rotenone treatment of Tamarack Lake, additional details regarding treatment should be provided.

Consider or clarify dismissal of physical removal/fisheries management followed by rotenone application alternative

The alternatives formulation report (Appendix B) identified the option of physical removal/fisheries management followed by rotenone application (Section 2.6.2, p. B-16), but dismisses this alternative and any chemical approaches combined with other approaches from consideration because of major technical and logistical challenges as well as environmental impacts, and because combining physical removal would not increase the removal effectiveness (p. B-21).

Additional discussion/consideration of physical removal/Fisheries Management followed by rotenone application should be included. The DEIS states that physical removal programs that allow the public to gather fish for consumption (e.g. a fishing derby, etc.) prior to rotenone treatment may be useful in garnering public support and attention for the action. It states that partnering with such groups as Trout Unlimited could reduce the chance of accidental introduction of undesirable fish above Llewellyn Falls (p. B-16). The existing 3,600-foot fish prohibition area below Llewellyn Falls would also be in effect to reduce accidental introduction.

It is not clear why allowing the use of the resource for consumption is not considered beneficial for the proposed action; additionally, the impacts to recreation and environmental resources do not seem to be fully explored for this option. The proposed action does include some physical removal of fish by seeking Fish and Game Commission approval for an increased daily bag limit of 5 fish per day in an attempt to reduce existing non-native trout populations (p. 1-3, p. 3-3) (page 7-1 instead states that the daily bag limit would be increased from 5 to 10 fish prior to treatment), but it is not clear why any bag limit would be pursued since removing fish for consumption reduces the amount that will be killed in the proposed action. Reducing this number would also seem to bear on environmental impacts, since presumably it would be easier to capture fewer fish in the block nets that will be set up to catch the dead fish. This would reduce the possibility of fish escaping the net and the potential for decomposition of dead fish, which reduce dissolved oxygen and raise bacterial levels in water (p. 5.4-15). Additionally, the dead fish are to be buried away from the creek, and reducing the number of fish to be buried

could reduce the amount of ground disturbance in a designated wilderness area needed to accomplish this. Maximum pre-treatment fish removal would also have beneficial impacts to recreation.

Recommendation: Consider the physical removal/fisheries management followed by rotenone application alternative in the impact assessment or provide additional justification as to why it was dismissed, such as identifying adverse impacts. Consider/discuss the potential reduction in impacts from having to catch and bury fewer fish and the beneficial impacts to recreation that would occur. At a minimum, explain why any pre-treatment fishing bag limit prior to treatment is being proposed for the proposed action, and if a bag limit will remain, clarify whether it is 5 or 10 fish per day.

ADDITIONAL COMMENTS

- Recreation impacts - the FEIS should state whether it is reasonably foreseeable that, should the restoration be successful, reaches downstream from the new northern boundary of Paiute cutthroat (the falls at Silver King Canyon) would be closed to fishing to prevent unauthorized transfer from below the falls into the treatment area (similar to the 3600-foot reach currently closed below Llewellyn Falls). We recommend that the FEIS identify how unauthorized transfer of fish into the treatment area would be prevented, and if a closure is expected, that impacts to recreation and economic resources be included.
- Climate change effects on the project - the DEIS identifies project contributions to greenhouse gases, but does not discuss how climate change effects could impact the success of the project or how the project will enhance adaptation strategies for the species. A brief discussion is recommended.
- Apparent typo - page 5.6-6 says the treatment area would *not* be closed during the chemical treatment process