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

October 25, 2006

Lake Davis Pike Eradication Project
Attn: Ed Pert
CA Department of Fish and Game
1812 Ninth Street
Sacramento, CA 95814

Subject: Draft Environmental Impact Statement Lake Davis Pike Eradication Project (CEQ# 20060358)

Dear Mr. Pert:

The U.S. Environmental Protection Agency (EPA) has reviewed the above project pursuant to the National Environmental Policy Act (NEPA), Council on Environmental Quality (CEQ) regulations (40 CFR Parts 1500-1508), and Section 309 of the Clean Air Act.

Based upon our review, we have rated this Draft Environmental Impact Statement (DEIS) as EC-2, Environmental Concerns - Insufficient Information (see attached "Summary of the EPA Rating System"). We are concerned with potential impacts on the future operation of the City of Portola drinking water treatment plant, the possible presence of toxic blue-green algae, discharge permit requirements, neutralization options, funding for mitigation, and the overall long-term effectiveness of the eradication project. Our detailed comments are enclosed.

We appreciate the opportunity to review this DEIS and are available to discuss our detailed comments. Please send one hard copy and one CD ROM of the Final EIS to this office at the same time it is officially filed with our Washington, D.C. office. If you have questions, please contact Laura Fujii, the lead reviewer for this project, at (415) 972-3852 or at fujii.laura@epa.gov.

Sincerely,

/s/ by Connell Dunning Acting for

Enrique Manzanilla, Manager
Communities and Ecosystems Division

Enclosures: Summary of EPA Rating System
Detailed Comments

cc: Angela Dillingham, Plumas National Forest
Lahontan Region, Regional Water Quality Control Board
Todd Roberts, Public Works Department, City of Portola

EPA DETAILED COMMENTS, LAKE DAVIS PIKE ERADICATION PROJECT, PLUMAS COUNTY, CA, OCTOBER 25, 2006

Water Resources

Describe how drinking water enhanced surface water treatment regulations would be met during high turbidity events. The drawdown and refilling of Lake Davis could result in elevated lake turbidity from increased erosion, tributary head-cutting, and incision of lake sediments. The City of Portola will soon complete a new drinking water treatment plant which will use Lake Davis surface water as its main source of water supply (p. 13-3). Recently promulgated enhanced surface water treatment regulations require technically challenging treatment operations, especially during high turbidity events. Thus, there is a concern that high turbidity events in Lake Davis could affect operation of the new water treatment plant.

> ***Recommendation:***
> The Final Environmental Impact Statement (FEIS) should address how enhanced surface water treatment regulations for drinking water would be met during high turbidity events. Factors like treatment plant design, plant operations for abnormal conditions, and operator licensure should be included in the evaluation.

Evaluate the potential presence of toxic blue-green algae and potential ecological and human health effects. The Draft EIS (DEIS) states that Lake Davis experiences algae blooms in spring and fall with blue-green algae becoming the dominant species during summer stratification of the lake (p. 3-48). Blue-green algae, such as *Microcystis aeruginosa* (MSAE), can be toxic to humans and animals exposed through direct ingestion of contaminated water, as well as incidental ingestion during recreational water activities and bathing.[1]

> ***Recommendation:***
> The Final EIS (FEIS) should state whether toxic *Microcystis* species are present in Lake Davis and whether there are potential ecological and human health risks. Evaluate whether the proposed action could increase the risk of exposure to toxic blue-green algae.

Describe potential NPDES permit requirements and project compliance with these requirements. The DEIS briefly describes the Clean Water Act's regulation of potentially toxic discharges through the National Pollutant Discharge Elimination System (NPDES) permit program, which is administered by the State of California. Since non-target species may be adversely affected by this pike eradication project, the DEIS states that an NPDES permit may be required (p.14-3). However, the DEIS does not describe possible NPDES permit requirements or how the project would comply with these requirements.

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[1] 1999 World Health Organization, Toxic Cyanobacteria in Water: A guide to their public health consequences, monitoring and management, Ed. I. Chorus and J. Bartrum (html version found at: http://www.who.int/water_sanitation_health/resourcesquality/toxicyanbact/en/);

Recommendation:
The Forest Service and California Department of Fish and Game (DFG) should consult with the California Regional Water Quality Control Board (RWQCB) to ensure the proposed action meets water quality standards for Lake Davis and downstream waters, and is conducted in accordance with any applicable discharge requirements and permits. The FEIS should describe potential Waste Discharge Requirements (WDR) and NPDES permit requirements for applications of pesticides and any other substances used in the project to or over waters of the U.S. and how the project will meet these requirements.

Provide a more in-depth evaluation of the need for and environmental and human health trade-offs of the neutralization options. The proposed Project and alternatives, except Alternative D Dewatering, include the use of potassium permanganate to neutralize rotenone contaminated water prior to its release into Big Grizzly Creek below Grizzly Valley Dam (pps. 2-18, 3-67). Potassium permanganate is toxic to fish if it is not properly balanced with the concentration of rotenone to be neutralized. As described in the DEIS, the 1997 pike eradication project resulted in a downstream fish kill due to an unintentional overdosing with potassium permanganate (p. 2-18). Rotenone treatment and neutralization also require a reduction in flows from the Grizzly Valley Dam which would have significant adverse impacts on dissolved oxygen and water temperatures in Big Grizzly Creek (p. 3-55). To minimize these effects, DFG would restock the stream with trout species, slowly ramp down the stream flow, and conduct a fish rescue program. The DEIS does not provide a thorough evaluation of the need for and trade-offs of the neutralization options.

Recommendation:
The FEIS should provide a more in depth evaluation of the need for and environmental and human health trade-offs of the neutralization options. This evaluation should describe the resources at risk, the rationale for neutralization, and other possible options to address possible NPDES permit discharge requirements.

Document the funding sources and schedules for erosion repair mitigation measures. The proposed action would have significant impacts on the rate of tributary incisions and head-cuts (p. 3-42). The rate of tributary incisions and head-cuts are a concern due to their contribution to sediment and turbidity water quality effects. Mitigation measures include monitoring to identify whether incision and channel instability have occurred and repair of the identified erosion impacts.

Recommendation:
The FEIS should describe potential mitigation funding sources and the anticipated schedule for the repair of identified erosion impacts.

General Comments

Describe measures to minimize and prevent reintroduction and the spread of northern pike. The DEIS clearly describes the problem of northern pike (pike) introductions and the difficulty in eradicating this invasive species (e.g., Summary, Introduction, Appendix A). For instance, in 2006 wardens discovered live pike being transported from Lake Davis by anglers (p. 3-7, Appendix C Alternatives Formulation Report). We are concerned with the long-term effectiveness of the eradication project. Because of the historical difficulty in eliminating pike, we believe it is important that eradication measures include ways to minimize and prevent the reintroduction and spread of live pike back into Lake Davis and other California waters.

> ***Recommendation:***
> The FEIS should describe measures to minimize and prevent the reintroduction and spread of pike. We recommend the implementation of a complementary statewide education and enforcement program which will highlight the environmental, economic, and health consequences of the spread of pike in California waterways. One idea would be to invite media and nonprofits to develop a documentary of the Lake Davis eradication project for statewide distribution and broadcasting. Another possibility is to work with fishermen and outdoor recreation organizations, bait shops, marina owners, fish wardens, local communities, public television, radio and other media sources to educate the public regarding the threat of pike reintroductions and spread.

Provide a detailed description and comparative analysis of the 1997 Pike Eradication Program, the proposed project, and alternatives. The DEIS briefly describes the 1997 project to eradicate pike in Lake Davis with liquid rotenone. Summaries of the effects of this eradication effort are provided in each resource discussion. However, there is no detailed description or evaluation of the 1997 eradication project -- its design, effectiveness, environmental and health effects, or lessons learned.

> ***Recommendation:***
> The FEIS should provide, in one location, a detailed description of the 1997 pike eradication project. Describe the 1997 project design, observed environmental and human health effects, lessons learned, the differences and similarities with the current proposal, and the reasons why it is believed the current proposal would be more successful. This comparative analysis should include a description and evaluation of the issue of unavoidable by-products of manufacturing and their potential impacts. Discuss the potential need for additional treatments in the future.