

**INFORMATION ON  
THE LAKE DAVIS PIKE ERADICATION PROJECT**

**California Department of Fish and Game  
U.S. Forest Service, Plumas National Forest**

**Updated August 20, 2007**

In January 2007, the California Department of Fish and Game (DFG) approved a project to eradicate the northern pike in Lake Davis and its tributaries, using liquid rotenone.\* The project calls for treating the reservoir at a volume between 38,000 and 45,000 acre-feet (its 84,000 acre-feet at its fullest), which is just slightly less than the current volume (volume on June 29, 2007: 48,338 acre-feet). The incoming streams containing pike will also be treated. Implementation is scheduled to begin in September 2007 after the Labor Day weekend. A Forest Closure will be in place during the treatment to ensure that operations can be carried out smoothly and that the public will be safe.

The decision on the project, and the U.S. Forest Service decision to issue a special use permit for forest closure were made after careful consideration of the joint Environmental Impact Report/Environmental Impact Statement (EIR/EIS) the agencies prepared with valuable input from the public. The public had opportunities to provide input during the environmental review process, which began with public scoping meetings in September 2005, and continued through the 45-day public comment period on the draft EIR/EIS, which ended October 16, 2006. In addition, DFG and USFS have held numerous public workshops on various aspects of the project.

**Q. What is the reason for the project?**

The purpose of the Lake Davis Pike Eradication Project is to remove northern pike, a non-native, invasive fish species from Lake Davis and its tributaries. The northern pike have adversely affected the local trout fishery and the associated local economy. If they escape or are moved from Lake Davis to other areas of the State or region, they could endanger fish in other streams, rivers, lakes, and reservoirs where they become established. Therefore, the intent of the DFG is twofold: 1) to restore the trout fishery in Lake Davis, which once supported an outstanding trout population; and 2) to prevent serious ecological damage to other areas of the State or region, including downstream in the Sacramento-San Joaquin Delta. This leaflet is intended to answer general questions about the pike problem and the eradication project.

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\* (The approved Project is described in the DFG's findings made pursuant to the California Environmental Quality Act (CEQA Findings), which can be viewed on the DFG's website at: [www.dfg.ca.gov/lakedavis](http://www.dfg.ca.gov/lakedavis).)

**Q. What is the issue with the northern pike?**

A. Northern pike are an extremely aggressive fish. Pike can seriously affect aquatic ecosystems by eating lots of other fish such as trout and salmon. Pike have the potential to cause irreversible negative impacts in portions of the Feather River, Sacramento River, the Sacramento-San Joaquin delta, San Joaquin River system, and their tributaries, as well as many other waters.

**Q. How did the pike get into Lake Davis?**

A. A person or persons illegally introduced pike to Lake Davis and to nearby Frenchman Reservoir and Sierra Valley. Pike were successfully eradicated from Frenchman Reservoir and Sierra Valley. A similar rotenone treatment of Lake Davis was conducted in 1997 appeared to be successful until pike were rediscovered 18 months later.

**Q: Why are northern pike back in Lake Davis after the earlier treatment?**

A: It is most likely one of two things: either some pike survived the treatment in 1997, or someone put them back into the reservoir. A definite answer will probably never be known.

**Q: What kind of guarantee is there it will work this time?**

A: There is no guarantee that northern pike can be eradicated from Lake Davis. Rotenone has been shown to be an effective eradication tool. Rotenone treatments have eradicated northern pike from other reservoirs, including nearby Frenchman Reservoir. A carefully crafted eradication strategy, including extensive mapping and planning, along with the support of the community, gives us the best chance of success.

**Q: Won't somebody just replant them in Lake Davis?**

A: We are working with community leaders to improve public understanding of why pike are such a problem for Lake Davis and California. Keeping pike out of Lake Davis and other California waters is a benefit to everyone. It is a crime to introduce pike to waters in California, with a maximum penalty of \$50,000 and up to a year in jail. In addition, violators are liable to pay damages caused to property, sport and commercial fisheries, and local communities who depend on those fisheries. Any future introductions of pike will be investigated and will be prosecuted to the extent allowed under the law.

**Q: Why don't we just hold a big fishing derby and have people fish them out?**

A: Several hundred pike have been caught by anglers at Lake Davis, and more than 65,000 pike have been removed by DFG fishery staff over the same period using such techniques as electro-fishing and gill netting. Still, the pike population has grown and

they are dominating the trout fishery. In Lake Davis pike can reproduce faster than humans can remove them with traditional removal methods. Possession of pike is illegal. If you do catch a pike, kill it immediately and throw it back into the reservoir.

**Q: Will DFG continue to stock trout?**

A: The DFG is not planting trout in Lake Davis for the 2007 season. Other nearby rivers and lakes have or will receive the allotment that was to go to Lake Davis in 2007. Liberal restocking of Lake Davis will begin as soon as possible after the treatment in order to restore Lake Davis back to the trout trophy fishery it was before the introduction of pike.

**Q: How about isolating Lake Davis and letting it be a northern pike fishery?**

A: Allowing pike to remain in Lake Davis is a very high risk proposition because of the potentially devastating impacts to downstream aquatic ecosystems, and the threat of their movement to other watersheds. The pike population continues to increase. There is an increasing incidence of anglers catching pike. There are recent known incidents of anglers moving live pike. And, there is the potential for spilling of the dam in extremely wet years, which was a concern the winter of 2005-6. A "no action" alternative was evaluated in the EIR/EIS.

**Q. Why use rotenone?**

A. When a water body cannot be drained completely the only management technique that has been proven to consistently kill all fish from lakes and streams is the use of rotenone. Mechanical removal of fish using electro-fishing, gill nets, and explosives was ineffective in reducing the population, especially in stream environments, and had little effect on pike eggs and larvae. Through the environmental impact analysis, we found that it is not practical to drain all of Lake Davis and its tributaries due to the many springs and seeps in watershed. In addition, we discovered that even if it could be drained, draining of the reservoir tributaries would have greater adverse environmental impacts, and greater associated economic impacts to the local economy.

**Q. What is rotenone?**

A. 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 for centuries to stun and kill fish. We would use a commercially available rotenone formulation. Rotenone has been approved for fishery management use by the U.S. Environmental Protection Agency.

**Q. Aren't there cancer-causing chemicals in rotenone?**

A: The pesticide formulations that we plan to use contain rotenone as the active, fish-killing ingredient. Solvents and dispersants are compounds used to help mix it in water. There may also be trace amounts of other compounds. Some of these compounds have been found to cause cancer when there is exposure to unsafe levels. This project has been designed to avoid exposure to these compounds. The project is required to comply with Section 116751 of the California Health and Safety Code. Under this law, before Lake Davis water can be used as drinking water, the California Department of Public Health must make sure that no detectable residues of rotenone, breakdown products, or other compounds are in the water. The water will have to be cleaner than required under the federal Safe Drinking Water Act, the state Safe Drinking Water Act, and Proposition 65 (Safe Drinking Water and Toxic Enforcement Act of 1986). For more information see:

<http://www.dhs.ca.gov/ps/ddwem/lakedavis/PDFs/LakeDavisDeterminationFinalReport-05-04-07.pdf>

**Q. Is Lake Davis a drinking water supply?**

A. Not currently. The City of Portola and the Grizzly Lake Resort Improvement District (GLRID) use wells and springs for its domestic water source. In a project unrelated to the pike eradication project, the City of Portola is building a brand new state-of-the-art water treatment plant that is expected to be in operation some time in 2008.

**Q: Does Lake Davis contain any residual chemicals from the 1997 treatment?**

A: No. The water in the lake was carefully monitored and found free of any residuals. (California Department of Health Services, July, 1998).

**Q: Will the pesticide build up in the food chain? Are the fish safe to eat?**

A: The fish in Lake Davis are safe to eat. Rotenone and the chemicals in rotenone formulations do not accumulate and remain in fish tissues. They break down quickly and they do not build up in the food chain. We have tested the flesh of fish from Lake Davis and did not find any chemicals from the 1997 treatment. However, it is not recommended that you eat fish that have been killed during a rotenone treatment because bacteria can grow in the fish when they begin to decompose.

**Q: Can you guarantee you won't kill fish downstream?**

A: A portion of Big Grizzly Creek below the dam may be affected by the neutralization of the rotenone, and some fish could be killed in a short stream reach directly below the dam. Our preferred method of neutralizing the rotenone is to keep the outlet valve of the dam closed to allow the rotenone to breakdown naturally in the reservoir. If another method of neutralization is necessary that involves neutralizing the rotenone in a portion of the creek below the dam, some fish will likely be killed. Whichever method is used, we will minimize the number of fish killed by capturing and relocating as many fish as

possible in this stream reach. Due to the extremely difficult access throughout this area, it is recommended that a backpack electroshocker be set on low voltage and used to “herd” as many trout as possible downstream. A block net can be placed to prevent upstream movement of fish into the area where the neutralization of the chemical might occur. Following treatment, the creek will be restocked with appropriate species and numbers of trout.

**Q: Will a treatment affect the wild and scenic river?**

A: The treatment should have no long-term effects on the Middle Fork of the Feather River. Flows in Big Grizzly Creek will be reduced for 5-45 days, which will reduce the flows in the Middle Fork Feather River below Big Grizzly Creek.

**Q: Can't you kill the pike by draining Lake Davis?**

A: Lake Davis will not be drawn down for the treatment. However, draining the reservoir was one of the alternatives considered and analyzed in the EIR/EIS. In analyzing the alternative, we found that dewatering of the streams and completely draining Lake Davis is infeasible. Lake Davis is fed by 3 primary streams that flow all year and are fed along the way to the reservoir by seeps. In addition, we discovered that this alternative would have greater adverse environmental impacts and greater associated impacts to the local economy. For example, the local community was concerned about the economic impacts that could result if the reservoir were drained and we experienced another dry winter preventing the reservoir from quickly filling back up.



**FOR MORE INFORMATION CONTACT:**

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