Land Letter
THE NATURAL RESOURCES WEEKLY REPORT

5. INVASIVE SPECIES: Calif. officials struggle to rid Lake Davis of stubborn pike

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Ten years and $20 million later, California fish and game officials are once again planning to inject a powerful poison into Lake Davis and kill off all fishlife there in an attempt to eradicate the invasive northern pike before it spreads into key waterways.

A similar effort in 1997 not only ended in failure but also raised significant community opposition to the complete poisoning of the lake, which is part of a reservoir system on U.S. Forest Service land in Plumas County. This time, however, the state Department of Fish and Game (DFG) claims more support from locals, including a Lake Davis steering committee, which has been working with the agency for over eight years to devise an acceptable approach to eliminating the pike.

In the meantime the pike population has been growing steadily at the expense of trout and other fish, which the pike attack and eat.

While the issue has been simmering for a decade, it gained impetus last winter, when some small pike were discovered near the reservoir spillway and Lake Davis came within 27 inches of overflowing following heavy rains. State officials and the recreational fishing community alike were alarmed about the potential that pike could escape the confines of the lake and spread all the way down to the San Francisco Bay-Delta region, potentially adversely affecting already vulnerable salmon and delta smelt.

California Department of Fish and Game officials try to net northern pike in Lake Davis. Despite efforts to eradicate the voracious fish, its population density keeps increasing. Photo courtesy DFG.

On Jan. 23, DFG Director Ryan Broddrick formally announced the plan to inject CFT Legumine, a liquid form of the organic fish poison rotenone, into Lake Davis in September after drawing down the reservoir's volume from its peak capacity of 84,000 acre-feet to less than 48,000 acre-feet.

The plan, worked out in cooperation with the local group, "represents the safest and most effective means, with the fewest environmental and associated economic effects possible, to eliminate the northern pike from the only place they are known to exist in California," Broddrick said.

In a draft environmental impact statement issued in 2005, the department wanted to bring the lake down to 15,000 acre-feet before injecting the poison but compromised with locals who feared the economic consequences of such a drastic reduction in water levels. At the higher levels, there will be no need for restrictions on recreational boating, although it will require more of the chemical.

Project manager Ed Pert said that the choice of water levels represents a successful outcome of the public process. "We learned treating at a level of 45,000 to 48,000 acre-feet would have the fewest recreational and

other environmental and associated economic impacts on the local community," he said. In addition, he said, it became apparent that "a lower amount of water in the reservoir doesn't necessarily mean rotenone would be more effective."

Hostility and failure

Officials say the agent being used to kill off the fish is a newer formulation of rotenone not available in 1997 that does not contain the carcinogenic chemical naphthalene. When state department first tried to eradicate the pike from the lake in October 1997, it incurred tremendous hostility from the adjacent town of Portola, which was the hub for lake recreational activities and until that time had used Lake Davis as a major source for drinking water. The situation grew so tense that the state sent armed state highway patrol troopers to guard agency officials against possible assaults as they conducted the program.

After the incident, Lake Davis water remained unusable for domestic purposes, although the agency said that six years of monitoring groundwater indicated no contamination of aquifers. DFG also was fined $250,000 by the Department of Water Resources for using a chemical that had been banned in the state.

The state also committed to an extensive trout-restocking program, including importation of the brown trout, which was thought to be able to fend off the pike.

Nonetheless, within two years it became apparent that the effort was a failure when pike reappeared in the lake. Subsequent efforts, including an involved "Y2K" plan adopted in 2000, also proved unsuccessful. According to a 2003 review of the program, about 28,000 pike were removed from the lake in the 2000-2003 period, with the vast majority less than a year old when caught. "These data indicate that the abundance of pike increased during that time period," the report found.

The increasing density of pike essentially negated efforts to bolster the trout populations, and the risk of pike escaping remained significant. "Although both education and enforcement activities may have reduced the risk of human movement of pike," the study concluded, increases in pike density "may have cancelled out these effects."

In all, DFG reports that more than 60,000 pike have been taken from Lake Davis since 2000.

As a contingency for its adopted plan, DFG said it would still apply the poison at water levels somewhat below 45,000 acre-feet, and that in the event enough CFT Legumine cannot be obtained, it would supplement with Noxfish, an alternative formulation.

With the announcement this week, a 30-day California Environmental Quality Act period and a 45-day Forest Service appeal period were triggered. Officials will begin drawing down the lake though September and expect to kill off Lake Davis' fish population sometime after Labor Day. Refilling the reservoir and restocking the lake will commence in early 2008.