

ITEM: 21

SUBJECT: Lake Davis Pike Eradication Project, Department of Fish and Game, Plumas County

BOARD ACTION: *This is an information item only. No Board action will be taken*

BACKGROUND: The California Department of Fish And Game (CDFG) is proposing to apply the pesticide Rotenone, which is toxic to fish and other gill breathing organisms, to Lake Davis and its tributaries in a second effort to eliminate non-native Northern Pike from the lake. The pike are a voracious predator and rapidly overcome the native fish species. CDFG is concerned that if the pike manage to escape from Lake Davis and enter the Feather River, they may eventually make their way downstream to the Sacramento River Delta with devastating results, displacing important fish species, including stripe bass and migrating salmon.

Northern Pike were first discovered in Lake Davis in 1994, possibly illegally introduced by an unwitting sport fisherman. CDFG, amid intense public opposition, attempted to eradicate the pike from the lake with Rotenone in 1997. Due to a number of potential reasons, including the failure to achieve a complete kill in 1997 and the possibility of re-introduction by disgruntled individuals, pike were rediscovered in Lake Davis in 1999.

CDFG plans another attempt at pike eradication and will hopes to avoid past methodologies which may have contributed to the survival of a viable population. After the eradication effort and when the Rotenone has dissipated, the lake will be restocked with a trout fishery.

The Regional Board will be asked to adopt a NPDES permit for the discharge of any residual Rotenone from Lake Davis downstream into Big Grizzly Creek. The permit will require concentrations of Rotenone downstream of Lake Davis dam to be below levels that impact beneficial uses, including the support of fish in Big Grizzly Creek. CDFG, in their Draft EIR/EIS, has proposed several scenarios for assuring concentrations of Rotenone in Big Grizzly Creek are below levels toxic to aquatic life. Two of the options supported by staff include 1) shutting off the dam outlet and allowing the Rotenone to degrade naturally in the lake for a period up to 45 days and 2) neutralizing the Rotenone, using potassium permanganate as per the pesticide label instructions, in an off-stream treatment system and polishing the effluent with granular activated carbon prior to discharge.

Other options for reducing Rotenone concentrations in Big Grizzly Creek require the application of potassium permanganate directly to the dam discharge and using Big Grizzly Creek itself as the

reactor vessel. Neutralization of the Rotenone requires at least 30 minutes of contact time which means, depending on the discharge rate, fish and other gill breathing organisms could be eliminated from a significant reach of Big Grizzly Creek.

Staff believes the latter options have a high potential for failure due to potential variations in the concentration of Rotenone in the discharge. This variation could allow for too little or too much potassium permanganate added to the stream, each condition potentially toxic to fish. A similar methodology used in 1997 resulted in a significant fish kill several miles downstream.

Mgmt. Review \_\_\_\_\_

Legal Review \_\_\_\_\_

7/8 December 2006

Central Valley Regional Water Quality Control Board  
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