

## **CASE STUDIES – ECOSYSTEM RESTORATION**

### **Lake Davis Pike Eradication Project**

Ecosystem Restoration Program actions in the CALFED Record of Decision (CALFED ROD) call for implementing an invasive species program, including prevention, control, and eradication of non-native species and reduction of the negative ecological and economic impacts of established non-native species in the Bay-Delta estuary and its watershed.



One of the most harmful species was discovered more than a decade ago in Lake Davis, a small mountain feeder lake that ultimately flows into Oroville Dam through the Middle Fork of the Feather River. The Northern Pike is regarded as a top predator in most aquatic systems. It is a cool water species and is a popular freshwater game fish in most of their native range.

Northern Pike are an extremely aggressive fish can seriously affect aquatic ecosystems by eating lots of other fish, such as trout and salmon. They have the potential to cause irreversible negative impacts in portions of the Feather, San Joaquin and Sacramento river systems, the Sacramento-San Joaquin Delta and many other waters. Unfortunately, there is no guarantee that they can be eradicated from Lake Davis as unsuccessful eradication attempts already have already been made.

The Lake Davis Pike Eradication Project's goal is to remove Northern Pike from Lake Davis and its tributaries, where they have adversely affected the local trout fishery and local economy. CALFED has provided \$16 million in funding for the Lake Davis Pike Eradication Project to eradicate Northern Pike from the lake and its tributaries. Ultimately, the intent of the project is to restore the trout fishery in Lake Davis, which once supported an outstanding trout population; and to prevent serious ecological damage to other areas of the state, including downstream in the Delta.

The Departments of Fish and Game and Water Resources have partnered on the project, which to date, has successfully captured Northern Pike from the outfalls of Lake Davis and unsuccessfully tried to remove them by prior use of chemicals, fishing, explosives, netting or electro-fishing. In Lake Davis pike can reproduce faster than humans can remove them with traditional removal methods. The partnership has also prevented Northern Pike from entering the downstream ecosystems. The current eradication attempt is planned for sometime after Labor Day, 2007.

The chemical rotenone, which has been successfully used to eradicate Northern Pike from other reservoirs, will be used in Lake Davis. Rotenone is a naturally occurring compound derived from the roots of a tropical plant of the bean family. It has been used worldwide for centuries to stun and kill fish. During the process of eliminating the Northern Pike in Lake Davis, a commercially available rotenone formulation has been used, and is planned for use in this most recent effort. It is approved by the U.S. Environmental Protection Agency for fishery management use.