

DEPARTMENT OF AGRICULTURE**Forest Service****Diamond Lake Restoration Project,
Umpqua National Forest, Douglas
County, OR**

AGENCY: Forest Service, USDA.

ACTION: Notice of intent to prepare an environmental impact statement.

SUMMARY: The USDA Forest Service will prepare an environmental impact statement (EIS) for improvement of water quality and the recreational fishery at Diamond Lake in the Umpqua National Forest. Eradication or control of the existing tui chub (*Gila bicolor*) population, an introduced minnow species, is considered essential for accomplishing restoration objectives. Proposed actions include: canal reconstruction, lake draw down, mechanical fish removal and utilization, a September rotenone (fish toxicant) treatment, fish carcass removal and utilization, water management during lake refilling, monitoring, fish restocking, educational activities, and contingency measures for controlling tui chub if they are reintroduced to Diamond Lake in the future. The planning area is located approximately 61 miles east of Roseburg, Oregon and 11 miles north of Crater Lake. The project is expected to be implemented in 2004 through 2006. The agency gives notice of the full environmental analysis and decision-making process that will occur on the proposal so that interested and affected people may become aware of how they can participate in the process and contribute to the final decision.

DATES: Comments concerning the scope of the analysis should be received in writing, by May 30, 2003.

ADDRESSES: Send written comments and suggestions concerning this proposal to James A. Caplan, Forest Supervisor, Umpqua National Forest, 2900 NW Stewart Parkway, Roseburg, Oregon 97470.

FOR FURTHER INFORMATION: Direct questions about the proposed action or EIS to Sherri L. Chambers, ID Team Leader, North Umpqua Ranger District, 18782 North Umpqua Highway, Glide, Oregon 97443, or (541) 496-3532.

SUPPLEMENTARY INFORMATION: The area being analyzed in the Diamond Lake Restoration Project EIS encompasses Diamond Lake proper, Lake Creek, Lemolo Lake, and the North Umpqua River. The project area is Diamond Lake proper, an approximately 3,031 acre lake located on National Forest System

land on the Diamond Lake Ranger District. The project area is bounded to the North by the North Umpqua River, to the South by Crater Lake, to the East by Mt. Thielsen, and to the West by Mt. Bailey. The project area includes all or portions of sections 30 through 32, T27S, R6E; sections 25 and 36, T27S, R5E; sections 4 through 9 and sections 16 through 21, T28S, R51/2E; and sections 1 and 12, T28S, R5E Willamette Meridian, Douglas County, Oregon.

Purpose and Need for Action. The proposed action is based on the need for improvement of Diamond Lake's water quality and recreational fishery. Diamond Lake is included in the Oregon Department of Environmental Quality's (ODEQ) 303(d) list of water quality limited water bodies for the parameters of pH and algae. In the summers of 2001 and 2002, Diamond Lake experienced severe blooms of the blue-green "algae" *Anabaena flos-aquae*. This type of algae produces a neuro-toxin that in high concentrations is harmful to humans and other animals. To protect public health and safety, the Umpqua National Forest in cooperation with the Douglas County Health Department closed Diamond Lake to some public uses (wading, swimming, water skiing, and boating) during portions of both summers. Changes in lake ecology associated with overpopulation of the lake by tui chub are believed to be the primary factors influencing the development of toxic algae blooms at Diamond Lake.

For several decades, Diamond Lake has supported a large and popular recreational trout fishery of some importance to the local and regional economy. In recent years, the recreational fishery at Diamond Lake has declined dramatically from a high annual average harvest rate of about 270,000 trout during the 1963-1978 time period to a 1999 low annual harvest rate of 5,000 trout. Failure of the formerly successful recreational fishery is attributed largely to changes in lake ecology caused by overpopulation of the lake by tui chub.

Proposed Action. The proposed action is to eradicate tui chub from Diamond Lake as an essential step in improving water quality and the recreational fishery. Proposed activities are described below in the order in which they would be implemented.

—A blocked and debris-filled existing earthen canal that connects Diamond Lake to Lake Creek would be reconstructed to facilitate a lake draw down. The portion of the canal within Diamond Lake would be dredged to its original depth using a floating suction dredge. Dredge spoils would be used to

expand an existing wetland. From the lakeshore to the canal outlet, the canal would be excavated to its original configuration and fitted with a new head-gate structure to control water flow. If necessary, new bridges or culverts would be constructed over the canal to maintain access to the bike trail and summer cabins using Forest Service Road 4795.

—Diamond Lake's water level would be lowered by eight feet from its normal summer level, by using both the reconstructed canal and Lake Creek for water transport. The lake draw down would begin on or around September 15 in the year prior to a chemical treatment. A gravity-driven draw down would occur at a discharge rate approximating a bankfull flow in Lake Creek.

—Several methods would be used to remove and utilize fish biomass from Diamond Lake prior to chemical treatment including: liberalizing catch limits on fishing at the lake; harvest of fish by individual crews using traps, nets and seines; and harvest of fish through commercial fishing operations. Harvested fish carcasses would be converted to an organic fish emulsion product on site (lake shore) or trucked to an off-site plant for utilization as fertilizer.

—The powdered formulation of the fish toxicant rotenone would be applied to Diamond Lake in September. This would happen when water temperature and chemistry reached conditions considered optimal for achieving a complete fish kill. Rotenone would be administered according to label instructions at the necessary amounts based on water volume, temperature, and chemistry in Diamond Lake at the time of application. Sections of Silent Creek and Lake Creek would also be treated with liquid rotenone.

—A commercial fishing or professional fish mortality recovery and recycling operation would be employed to collect fish carcasses following a chemical treatment of the lake. Fish carcasses would be converted to an organic fish emulsion product on site or trucked to an off-site plant for utilization as fertilizer.

—An active water management strategy would be implemented to limit the length of time that Lake Creek is reduced to no or very low flows. When water in Diamond Lake becomes suitable for release (about November), canal headgates would be opened to allow approximately 10 cubic feet per second (cfs) of water to flow into Lake Creek and through the North Umpqua River system.