

Agenda Item Summary

BACKGROUND

In 1992, tui chub (an invasive species) was discovered in Diamond Lake. This illegally introduced species increased in population to an estimated 100 million fish by the year 2000. Water quality was significantly impacted with public health lake closures due to toxic blue-green algae blooms in 2001, 2002 and 2003. In 2004 and 2005, lake health warnings were also posted for blue-green algae blooms. Diamond Lake's recreational trout fishery also suffered with poor survival and loss of body condition as tui chub consumed all available zooplankton and insect life in the lake. The Diamond Lake Working Group comprised of four federal agencies, five state agencies, Douglas County and the private sector, came together to analyze potential solutions for Diamond Lake. The preferred alternative was to treat the lake with a natural compound called rotenone to remove all fish from the lake, which was accomplished in September 2006. During 2007, efforts were made by Oregon Department of Fish and Wildlife (ODFW) and the U.S. Forest Service (USFS) to monitor water quality improvement. A conservative fish stocking program was conducted to provide fishing opportunity for the public. This briefing documents the results of those monitoring efforts for 2007.

PUBLIC INVOLVEMENT

No public involvement.

ISSUE 1

MONITORING AND ANALYSIS OF DIAMOND LAKE

ANALYSIS

All water quality parameters improved after the 2006 treatment. Water clarity improved from 2 meters to 12.5 meters, which is the clearest on record. PH levels dropped to 8 from a level of 10 measured in 2006. No algae blooms occurred in 2007, the first time since 1999. Edible zooplankton levels increased to 100,000 individuals per square meter from 0 individuals found in 2006, benthic organisms also increased from 6 lbs/acre in 2006 to 230 lbs/acre in 2007. Trout fishing was excellent with over 70,000 anglers fishing at Diamond Lake harvesting over 84,000 trout. This recreation contributed over \$2.5 million to the local economy.

To help prevent future introductions of invasive species, ODFW, Oregon Marine Board, and USFS developed an intensive education and outreach program. Boaters travelled to Diamond Lake from 76 water bodies in three states to participate in the fishery. Weekend "boat blitzes" were conducted to disseminate information and conduct boat inspections for invasive species.

OPTIONS

N/A.

STAFF RECOMMENDATION

N/A.

DRAFT MOTION	N/A.
EFFECTIVE DATE	N/A.