Lake Trout Suppression In Lake Pend Oreille Idaho – Will It Work?

Ned J. Horner, Idaho Fish and Game, 2885 W. Kathleen Ave. Coeur d'Alene, ID. 83815, nhorner@idfg.idaho.gov

Michael J. Hansen, University of Wisconsin, Stevens Point, 800 Reserve Street, Stevens Point, WI 54481, mhansen@uwsp.edu

The lake trout population in Lake Pend Oreille, Idaho has been increasing exponentially since about the mid 1990s threatening the collapse of the kokanee population and one of the best adfluvial bull trout populations remaining in the Pacific Northwest. Traditional sport angling has done little to curb lake trout population growth. Deep water trap nets were used to estimate lake trout population abundance and evaluate harvest efficiency. Lake trout abundance was estimated at 6400 fish > 52 cm in 2003 and 10,700 in 2005. The steep sides and extreme depth of Lake Pend Oreille limited harvest efficiency by trap netting to about 12 percent. Based on recaptures in gill nets, the estimated population was 35,800 fish with 15,600 > 52 cm. An aggressive angler incentive program using $110,000 of Avista mitigation funding was used to encourage harvest of rainbow and lake trout to reduce predation on kokanee. A $10/fish bounty was more effective at motivating anglers than rewards based on PIT tags ($100-$2000), lottery tickets, or monthly cash drawings for every fish entered. Anglers harvested 5800 rainbow trout and 10,800 lake trout between May and November. The combined exploitation from netting and angling resulted in a total annual exploitation rate on lake trout of 44 percent and total annual mortality rate of 60 percent. We conclude that lake trout suppression can only be achieved through a combination of netting and angling. Next, we will employ population models to estimate the number of years needed to collapse the lake trout population in Lake Pend Oreille.