Are Anglers Able To Reduce Lake Trout Abundance In Flathead Lake?

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Flathead Lake's native fish fauna have declined in large part from predation by introduced lake trout (*Salvelinus namaycush*). The state and tribal co-managers completed a plan in 2000 to reduce the lake trout population. The primary strategy to accomplish this goal is recreational angling. We improved access and increased bag limits, number of lines, and publicity, but have yet to substantially increase harvest > 40,000 fish. While catch rates are high and increasing, anglers resist keeping large numbers of fish. We addressed this behavior with fishing contests where participants receive lottery tickets for every fish they harvest. The contests are growing rapidly, accounting for > 11,000 fish in 2006. Many have equated the success of these contests with reduction of the lake trout population, but our data contra-

dict this conclusion. We estimated the harvest needed to reduce the population so we could better evaluate which tools were capable of achieving that harvest. We estimated that a total harvest of 60,000 lake trout would result in a mortality rate sufficient to cause the population to decline. With increased angler incentives this harvest may be achievable in two years However, the degree of compensation that the increased harvest will cause is unknown. We have measured reductions in growth rates and increases in age at maturity of lake trout that indicate a large compensatory reserve that must be overcome. While reaching the 60,000 target by angling appears imminent, it is presently speculative whether the additional compensatory recruitment can be removed by angling alone.