Province: Intermountain

Population: Kokanee – Lake Pend Oreille

Biological Objective: Population capable of supporting a fishery that provides an annual harvest averaging 300,000 fish with catch rates of 1.5 fish/hour by 2015

Abundance is estimated by mid-water trawling and hydroacoustics. Fishery objectives are monitored by creel surveys, but kokanee fishery is currently closed.

Status:

Year	Age 4&5 kokanee by trawling	Age 4&5 kokanee by hydroacoustics	Total population estimate by Hydroacoustics
2000	224,070	227,204	17,222,591
2001	49,283	68,816	15,545,121
2002	12,353	38,907	11,913,193
2003	34,200	89,593	10,689,340
2004	108,205	194,543	9,371,032
2005	100,262	139,105	16,045,401
2006	16,636	26,839	15,170,408

Primary Limiting Factors:

- *Predation- primarily from lake trout, rainbow trout, and bull trout.*
- *Physical habitat quality/quantity- hydro-operations affect spawning habitat and egg incubation.*

Limiting Factor: Predation

Primary Threat: *Introduced species (Lake trout and rainbow trout)*

Strategy: *Remove non-native predators.*

Measures: *Continue program of removing lake trout by trap netting and gillnetting. Locate concentrations of lake trout by sonic telemetry to improve harvest. Keep regulations for the sport fishery liberal (no harvest, no season, and no size limits). Pay anglers to harvest lake trout and rainbow trout. Allow harvest of rainbow trout in tributary streams. Evaluate removal program through an adaptive management approach and change methodology as needed. Research the potential for lake level changes to impact lake trout spawning. Assess potential benefits of fertilizing a section of the lake to increase kokanee growth and change their distribution in the lake to avoid predation.*

Limiting Factor: Physical habitat quality/quantity

Primary Threat: *Hydro-operations*

Strategy: Modify hydro-operations. *In some years, lower the winter elevation of the lake to the minimum pool level to allow wave action to clean and re-sort shoreline gravel. Then in subsequent years, hold the lake 4 feet higher to allow kokanee to spawn in the previously cleaned gravel. In any given year consideration should be given to adult kokanee abundance, precipitation forecast, the success of chum salmon spawning during the previous year, and previous frequency of draw downs in deciding on a winter lake level.*

Measures: *Annually during August or September, the IDFG, USACE, BPA, USFWS, NOAA, and the Lakes Commission should meet to decide on winter lake elevations that benefit both kokanee and chum salmon without undue impact to hydropower. A decision tree has been developed to assist in the section of a pool level. To assist in the selection of a lake level, the abundance of kokanee spawners should be estimated annually. Kokanee spawning habitat should be examined by core sampling to determine if lake level changes are having the desired effect.*