PSE efforts aim to boost Baker River salmon population

FISH ENHANCEMENT



The Baker River Hydroelectric Project, Puget Sound Energy's largest hydropower operation, is a 175megawatt facility on a tributary of the Skagit River in northwest Washington. The Skagit River and its tributaries, including the Baker River, constitute one of Washington state's most prolific waterways for fish. PSE has long worked to enhance the watershed's fish populations.

## **Baker River Hydro Project profile**

- Features two dams, each with its own powerhouse: 285-foot-high Lower Baker Dam (completed in 1925), and 312-foot-high Upper Baker Dam (completed in 1959)
- Dams' reservoirs are Lake Shannon (behind Lower Baker Dam) and Baker Lake

## Fish in Skagit-Baker watershed

- Contains a variety of anadromous (migratory) fish species; Baker River's most abundant stocks are coho and sockeye salmon
- Baker River's adult-sockeye returns have averaged about 3,000 since 1926
- Baker's sockeye return hit all-time low of 99 fish in 1985
- Collaborative efforts by PSE, public resource agencies and Native American tribes have produced a dramatic turnaround for Baker sockeye since mid-'80s: six of 10 best sockeye returns in history were in past decade (a record 20,225 returned to spawn in 2003)

## Settlement agreement for new project license

- The project's long-term federal operating license expired in 2006 (project currently operates under one-year license extension)
- After five years of effort, PSE and 23 other parties (government agencies, Indian tribes, environmental organizations, and others) unanimously agreed in 2004 on proposed conditions for new long-term project license
- Group's 162-page settlement, now under consideration by Federal Energy Regulatory Commission, contains major proposals for further enhancing fish populations in Skagit-Baker watershed, including new upstream and downstream fish-passage facilities, riparian-habitat protection, and new fish hatchery

## **Floating Surface Collector**

- Settlement agreement's primary plan for improving downstream migration of juvenile salmon is replacement of PSE's decades-old "floating surface collector" (FSC, or "gulper") and guide nets in Baker Lake
- New, state-of-art FSC and guide nets, together with other license-related proposals, aim to quadruple Baker sockeye population
- Key FSC features:
  - Shore-to-shore, surface-to-lakebed guide nets
  - Newly designed "net transition structure"
  - Larger, variable-speed pumps to simulate fish-attracting river current in Baker Lake
  - Specially designed FSC return-flow screening to protect juvenile fish
  - On-board "science lab" and electrical-control room
  - Enhanced fish-loading facilities for downstream transport past dams
- Completion: scheduled to be operational in March 2008

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