



U.S. Fish & Wildlife Service

Salmon Enumeration Weir Projects

Fairbanks Fish & Wildlife Field Office

The Fairbanks Fish & Wildlife Field Office uses resistance board weirs in several important drainages to gather accurate information about spawning salmon stocks. Weirs allow biologists to determine the escapement and run timing of salmon stocks, as well as determining their sex and size composition.

A weir consists of interlinked floating panels that stretch across the whole river. The panels are anchored to the river bottom on the upstream side. This allows water to flow through, but stops the upstream passage of fish. The center of the weir has a chute with a gated holding pen.

As salmon swim into the pen, biologists count the fish and identify the species, then release them to continue swimming upstream to spawn. A subset of the total salmon passing through the weir are sampled to record the sex and length of the fish, and a scale is pulled to determine



Science camp students help biologists capture and sample fish in the weir trap.



Resistance board weirs like this one are an important tool to determine salmon run timing and total numbers of spawning fish.

age. This information is used to help predict run-strength in future years.

This office currently operates weirs on the Gisasa and Andreafsky Rivers.

The Gisasa River weir has operated seasonally since 1994. This project is located in the lower Koyukuk River drainage, a major tributary to the Yukon River. This project primarily counts summer chum and Chinook salmon as they return to spawn.

The Andreafsky River weir was initiated in 1994. It is located in the lower Yukon River drainage near the community of St. Mary's. This project monitors all five species of Pacific salmon.

Weirs can also be used to evaluate the effectiveness of aerial surveys in estimating escapement. Salmon escapement recorded at the Gisasa River weir has thus far been between 7.5 and 19.4 times greater than the number derived from aerial surveys conducted in the same area.