



**US Army Corps
of Engineers®**
Engineer Research and
Development Center

Ice Harbor Lock and Dam Physical Model Study

Description

The Ice Harbor Lock and Dam is located at rivermile 9.7 on the Snake River. The project includes a powerhouse, navigation lock, and a 10-bay spillway. The structure is about 2,800 feet long and has about 100 feet of head. The six-unit powerhouse has a capacity of 603,000 kilowatts.

Issue

At the request of the US Army Corps of Engineers, Walla Walla District (CENWW), the US Army Corps of Engineer Research and Development Center (ERDC), Coastal and Hydraulics Laboratory (CHL), reproduced a 1:55-scale physical general model to evaluate spillway flow deflector impacts on hydraulic conditions in and downstream of the spillway stilling basin. It was also used to evaluate fish guidance structures such as a Behavioral Guidance Structure (BGS) and Removable Spillway Weir (RSW).

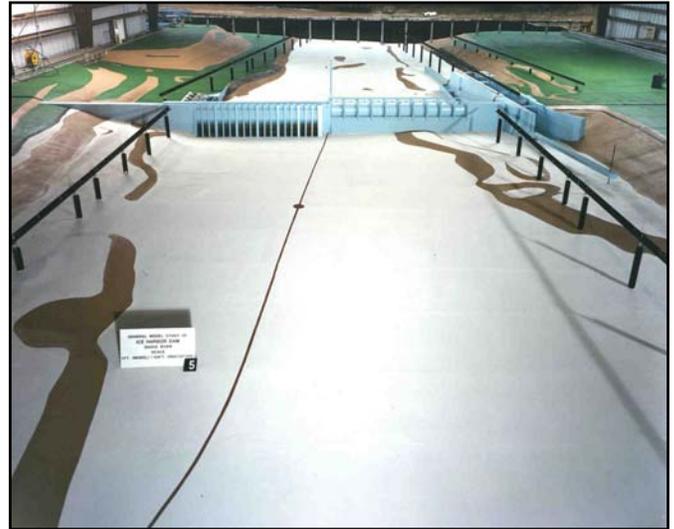
The flow deflectors are intended to reduce the amount of dissolved gas in the tailrace, thus decreasing mortality of salmon. The BGS and RSW are intended to guide downstream traveling juvenile salmon to specific areas of the dam for safe passage.

Sponsors

US Army Corps of Engineers, Walla Walla District (CENWW)

Point of Contact

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