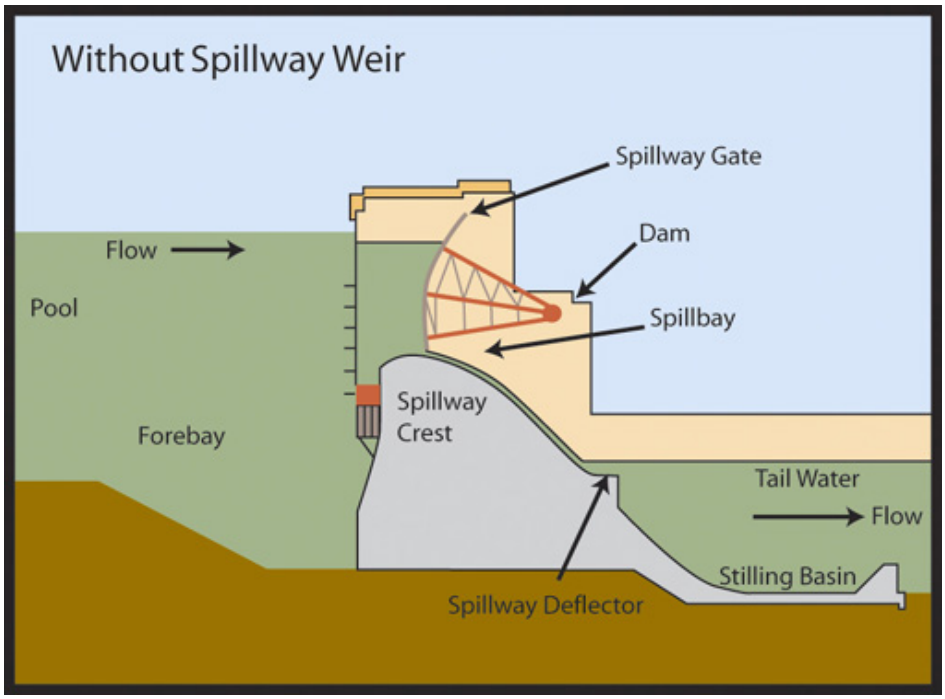
NORTHWESTERN DIVISION
Lower Monumental Lock and Dam
Spillway Weir

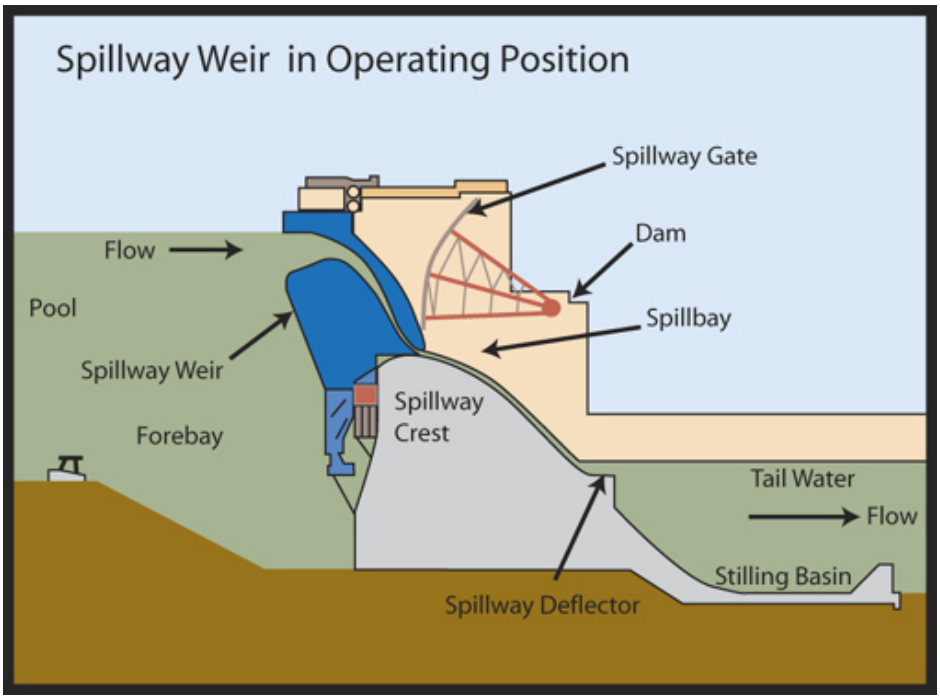
A Removable Spillway Weir (RSW) is being installed at Lower Monumental Lock and Dam in 2007. The spillway weir is designed to allow safe passage of juvenile fish at the face of the dam. The system is based on previous prototype RSW's installed and tested at Lower Granite Lock and Dam and Ice Harbor Lock and Dam. The spillway weir is being constructed by Advanced American Construction Incorporated of Portland Oregon. Oregon Iron Works of Clackamas Oregon is the subcontractor responsible for steel fabrication and painting.

Lower Monumental is located 41.6 miles upstream from confluence of the Snake and Columbia Rivers in South Central Washington. The weir will be transported upstream approximately 280 river miles to Lower Monumental Dam. After installation, the structure will be used for fish passage and initial biological testing.

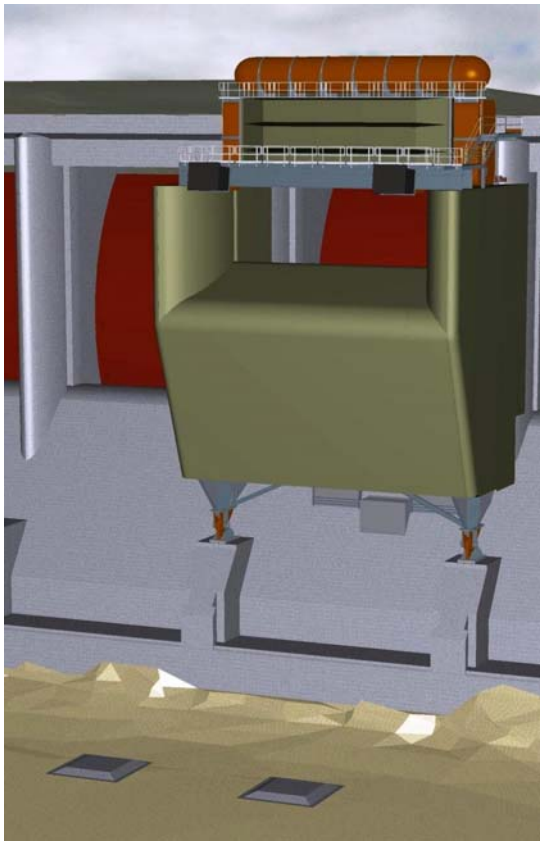
The purpose of the weir is to pass migrating juvenile salmon and steelhead over a raised spillway crest, commonly described as a "fish slide". The juvenile steelhead and salmon migrate seasonally to the Pacific Ocean as small juvenile fish, mature in the oceans, returning to the Snake River as adults to spawn upstream. Alterations at the dams are being implemented to improve survival during the downstream migration.

Existing spillways use operating gates that are 50-feet below the water surface, passing the juvenile fish under deep gates. Under the conventional spillway passage, the small juvenile fish can experience delays at the dams, large pressure changes and rapid accelerations as they pass under the gates. The weir will allow fish to pass over the weir under more gradual accelerations and lower pressures while providing a less stressful passage route for the juvenile fish. Higher numbers of juvenile fish pass over the weir compared to conventional spill operations, saving water for power production and improving water quality by reducing dissolved gas levels in the river.

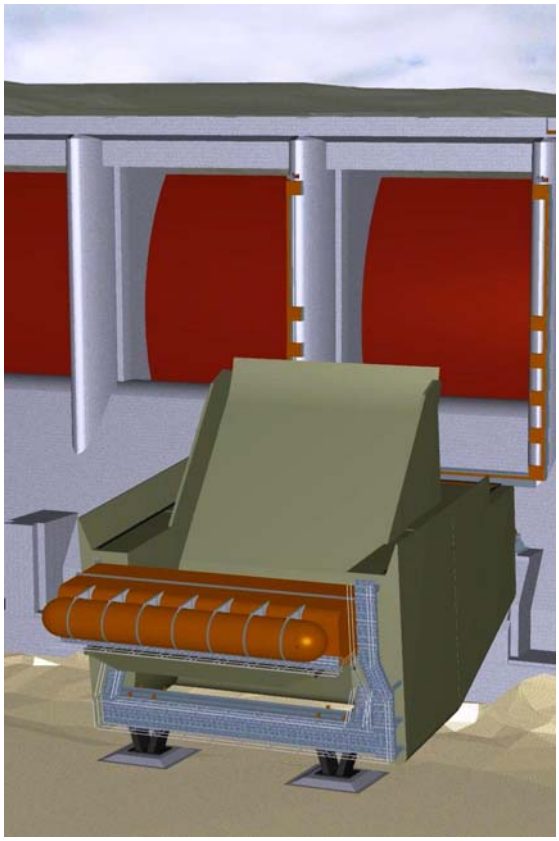




The weir will be retrofitted into spillway bay #8 at Lower Monumental. The structure is designed to be "removable" by controlled descent upstream and downward rotation to the bottom of the dam reservoir. This allows the spillway bay to pass high flow during a major flood event. The structure is designed similar to a submarine, allowing air to be added to ballast tanks to raise the massive structure to the upright operating position after the flood event. The massive device weighs approximately 2 million pounds, and is 120 feet tall, 78 feet wide, and 70 feet deep in the upstream to downstream dimension.



Spillway Weir in the deployed position



Spillway Weir in the removed position