

Project: Lower Monumental 1:40-scale Sectional Model

PI: Steve Wilhelms

Branch/Group: Inland Hydraulic Structures Branch, Environmental Hydraulics Group

Project Description/Activities/Capabilities:

The purpose of the Lower Monumental 1:40-scale section model was to identify operational and structural changes that may reduce stilling basin erosion and downstream dissolved gas concentrations, while minimizing impacts on other river uses.

Sponsor: Walla Walla District. POC Dan Katz.

Personnel: Steve Wilhelms, TEM Murphy, Laurin Yates, Calvin Buie

Project Location and Description:

Lower Monumental Dam is located at River Mile 41.6 on the Snake River in Franklin and Walla Walla Counties, Washington. The dam is about 3800 feet long and includes a powerhouse, spillway, navigation lock, and two fish ladders (Figure 1). The powerhouse is on the north end of the dam and consists of six Kaplan turbines, each with a 135,000-kilowatt generator. Maximum discharge through the powerhouse is approximately 120 kcfs . The spillway is 512 feet long and has eight 50 ft-wide by 60 ft-high tainter gates. The spillway crest is at elevation 483.0 with a normal pool elevation of 540.0.

Facilities: Bldg. 7001

Related Topic Areas: Physical models, dissolved gas, debris movement, flow deflectors, rivers, reservoirs, hydraulic structures, fish passage, surface water, hydropower, erosion





Tainter Gate

Deflector

Stilling Basin End Sill

Fish Ladder