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Engineer Research and
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Dalles General Model Study

Description A physical model investigation was conducted to investigate the location of a juvenile fish outfall site to minimize predation and tailrace egress time, and to evaluate and design spillway modifications that will improve fish passage survival at Dalles Dam, Washington.

Issue The Dalles Dam is located 192 miles upstream from the mouth of the Columbia River, two miles east of the city of The Dalles, Oregon. The dam extends 1.5 miles from the Oregon shore to the navigation lock on the Washington shore. Because the boundary between the two states follows the old river channel, The Dalles Dam is almost entirely in the state of Washington.



Physical model of Dalles Dam, Washington

Products At the request of the U.S. Army Engineer District, Portland, a 1:80 scale physical model was designed and constructed at the U.S. Army Engineer Research and Development Center by the Coastal and Hydraulics Laboratory. The model reproduces the Dalles Powerhouse, spillway, navigation lock, 7900-ft of the upper pool and 5300-ft of the tailrace.

Benefits Model results provided multiple alternatives to improve juvenile fish passage survival at The Dalles Dam.

Sponsors U.S. Army Engineer District, Portland.

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