



US Army Corps
of Engineers®
Walla Walla District

FACT SHEET

ICE HARBOR LOCK AND DAM

BURBANK • Washington



Authorization

The project was authorized by the River and Harbor Act of 1945.

Progress

Construction of the Ice Harbor project began in January 1956. Generators one through three were put in operation in December 1961. Powerhouse units four through six were later installed, with all units producing power by January 1976. The entire project including recreational facilities is now complete.

Project

This project consists of Ice Harbor Dam, powerhouse, navigation lock, two fish ladders, a removable spillway weir and a juvenile fish bypass facility. It provides navigation, hydropower, flood risk management, fish and wildlife habitat, recreation and incidental irrigation.

Ice Harbor Lock and Dam

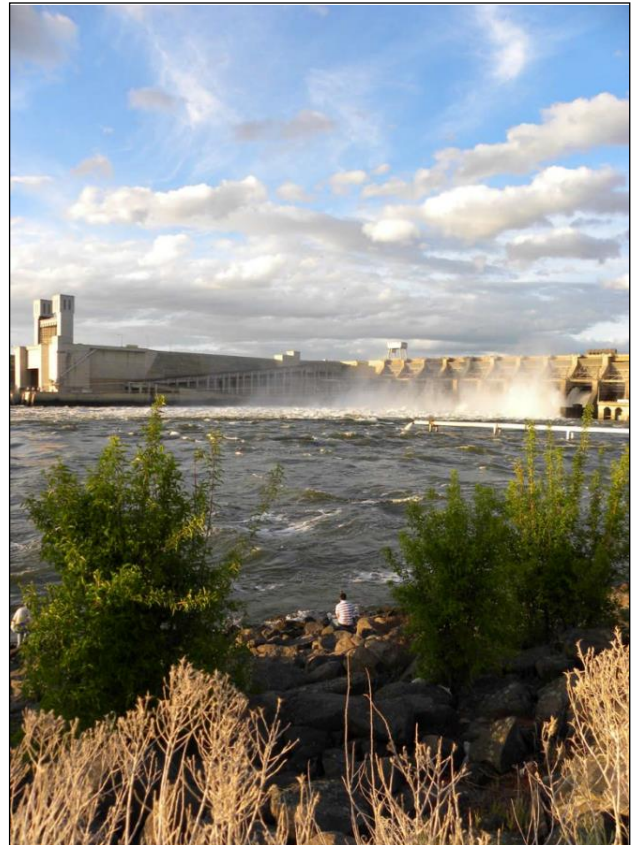
Located upstream of McNary Lock and Dam and Lake Wallula, Ice Harbor Dam is 2,822 feet long with an effective height of 100 feet. It is a concrete gravity type dam, with an earthfill embankment section at the north abutment. It includes a navigation lock with clear dimensions of 86 by 675 feet. The dam has a 10-bay spillway that is 590 feet long and includes ten 50-foot tainter gates.

Reservoir

Lake Sacajawea, created by Ice Harbor Dam, extends upstream about 32 miles to Lower Monumental Lock and Dam and has a surface area of 9,200 acres.

Navigation Lock

This is a single-lift lock, 86 feet wide by 675 feet long, with a 100-foot vertical lift. In fiscal year 2021, traffic through the navigation lock consisted of grains, petroleum products, fertilizer, wood products, and miscellaneous cargo that amounted to 3,504,819 tons.





Hydropower Generators

The powerhouse has three 90,000-kilowatt units and three 111,000-kilowatt units – 603-megawatt total powerhouse capacity. The first of three new, advanced-technology turbine runners designed to improve fish passage was installed and became operational in 2018. The work also includes structural modifications to the turbine draft tube exits, wicket gates and stay vanes to improve hydraulic conditions for fish. Small-scale model testing of the new fixed-blade runner design indicate increased power generation by 3 to 4 percent. During fiscal year 2017, 1.93 billion kilowatt hours of electricity were produced.

Fish Passage

Two fish ladders provide adult fish upstream passage through Ice Harbor Lock and Dam. In 2005, a spillway weir was also installed to improve passage conditions for juvenile salmon downstream outmigration. Modifications to a lamprey fish ladder entrance were made in 2018, and lamprey passage orifices, and installation of metal plating have been made to assist adult lamprey upstream passage. Juvenile fish survival is anticipated to improve further with completed installation new turbine runner installation in unit 2 during 2018.

Lands

There are 7,446 acres of project lands surrounding Lake Sacajawea. These project lands include fee lands that are federally owned and managed by the U.S. Army Corps of Engineers (USACE), as well as easement lands to which USACE has specific rights or easements (i.e., flowage or access). The USACE-managed lands at Ice Harbor are used for public recreation, wildlife habitat, wildlife mitigation and water-connected industrial development. The project maintains four intensively-managed habitat management areas, four developed recreation areas and three public access areas. Public boat launching facilities are available at seven locations around the lake. In 2020, Ice Harbor recreation areas hosted more than 205,918 visits.

People

More than 80 Walla Walla District employees work at the Ice Harbor project. They serve as electricians, mechanics, lock operators, welders, riggers, painters, utility workers, heavy equipment operators, park rangers, environmental resource specialists, biologists, administrative support staff, engineers and maintenance workers. Together, they manage the safe and continuous operation of the project.

Recreation

Ice Harbor project lands provide opportunities for all sorts of recreational activities, including fishing, hunting, hiking, birding, camping, swimming and horseback riding. The Ice Harbor Visitor Center is open April through October and offers fish viewing, dam tours, and wildlife displays, as well as movies and information about the dam. Amenities within the parks include camping sites, volleyball, horseshoe pits, playgrounds, swim beaches, picnic shelters, restrooms, and boat launches.



U.S. ARMY CORPS OF ENGINEERS – WALLA WALLA DISTRICT

201 North 3rd Avenue; Walla Walla, WA 99362
509-527-7020 cenww-pa@usace.army.mil
www.nww.usace.army.mil
April 2024



U.S. ARMY

US Army Corps
of Engineers