US Army Corps of Engineers ®
Walla Walla District

FACT SHEET
McNARY LOCK AND DAM
UMATILLA • Oregon

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

Progress
Construction of the McNary project began in May 1947. All power units were in operation in February 1957. No significant investments have been made to improve the efficiency of the generating units since they were installed. The U.S. Army Corps of Engineers (USACE) and the Bonneville Power Administration are working together to modernize McNary's turbines and related systems to improve power availability and hydraulic capacity while taking advantage of the technology that has become available since the dam was built to improve turbine passage for fish.

Project
The project includes McNary Dam, Lake Wallula, powerhouse, navigation lock, two fish ladders and a system of levees and pumping plants. The project provides for slack water navigation, hydropower generation, recreation, wildlife habitat and incidental irrigation.

McNary Dam
The dam is 7,365 feet long, rising approximately 183 feet above the streambed. It consists of a concrete structure with an earthfill embankment at the Oregon (south) abutment. The spillway is a concrete, gravity-type spillway dam. It is 1,310 feet long, and contains 22 vertical lift gates, each 50 feet by 51 feet. The crest is at elevation 291 feet mean sea level and is designed to pass a flood of 2,200,000 cubic feet per second.

Reservoir
Lake Wallula lies directly behind McNary Dam. It extends 64 miles upstream to the U.S. Department of Energy's Hanford Site (about 27 miles above Pasco, Washington), on the Columbia River. The lake also extends up the Snake River to Ice Harbor Lock and Dam. Lake Wallula has a water surface area of 38,800 acres with 242 miles of shoreline.

Levees
The cities of Pasco, Kennewick, and Richland, Washington are surrounded by 17 miles of levees. Drainage and groundwater levels landward of these levees are controlled by 11 pumping plants.

Generators
The powerhouse has fourteen 70,000-kilowatt hydroelectric generator units – a 980-megawatt total powerhouse capacity. One megawatt serves approximately 700 homes. At full capacity, McNary's powerhouse can supply enough power for about 686,000 homes. During fiscal year 2017, more than 5.88 billion kilowatt hours of electricity were produced.

Navigation Lock
This is a single-lift lock, 86 feet wide by 683 feet long, with a 75-foot vertical lift. More than 5,652,975 tons of commodities passed through the navigation lock during fiscal year 2021, consisting primarily of grains, petroleum products, fertilizer, wood products and miscellaneous cargo.

Fish Passage
There are two fish ladders for adult migrating salmon and steelhead to use. A new juvenile fish facility (JFF) and bypass system were completed in 1994. Since 2012, collection for transport ceased due to completed construction of a new bypass outfall and juvenile survival improvement. The 10-year average collection of outgoing juvenile salmon and steelhead for 2011 to 2020 at McNary was approximately 2.7 million fish. In 2007, spillway weirs were installed in two spillway bays. The weirs are designed to create a surface-oriented route for juvenile salmon passage at the dam. In 2010, fish ladders were modified to improve lamprey passage by installing new weir orifices and runways to elevated orifices, and in 2014 a special entrance was installed at the south shore fish ladder to improve entry conditions.

Lands
About 13,500 acres of project lands surrounding the lake are used for public recreation purposes, wildlife habitat, wildlife mitigation and water-connected industrial development. At the present time, about 2,400 acres are leased either to state or local park agencies. Port districts own approximately 1,500 acres within the project boundary for industrial development. Facilities operated by commercial concessionaires or boat clubs are available at six locations. Public boat launching facilities are available at 17 locations along the shoreline. Visitation along Lake Wallula during 2020 was about 2,829,508 visits.

People
More than 120 Walla Walla District employees work at the McNary project. They serve as electricians, lock operators, painters, welders, riggers, utility workers, mechanics, biologists, environmental resource specialists, park rangers, heavy equipment operators, administrative staff, engineers, and maintenance workers. Together, they ensure the safe and continuous operation of the project.

Recreation
McNary project lands provide opportunities for all sorts of recreational activities, including fishing, hunting, hiking, birding, camping, swimming, and horseback riding. The Visitor Center and fish viewing room are open year-round. Amenities within the parks include boat launches, campsites, shelters, fire rings, picnic tables, restrooms, and playgrounds.

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