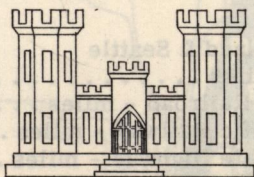


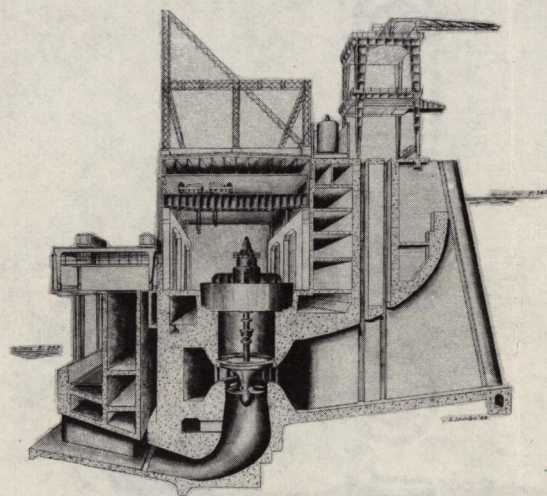
McNARY DAM

OREGON AND WASHINGTON

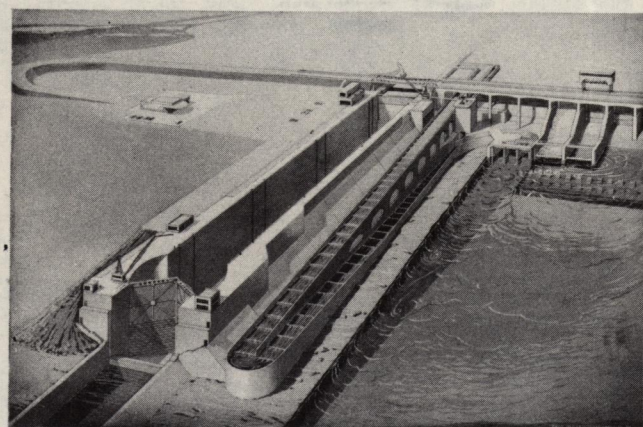
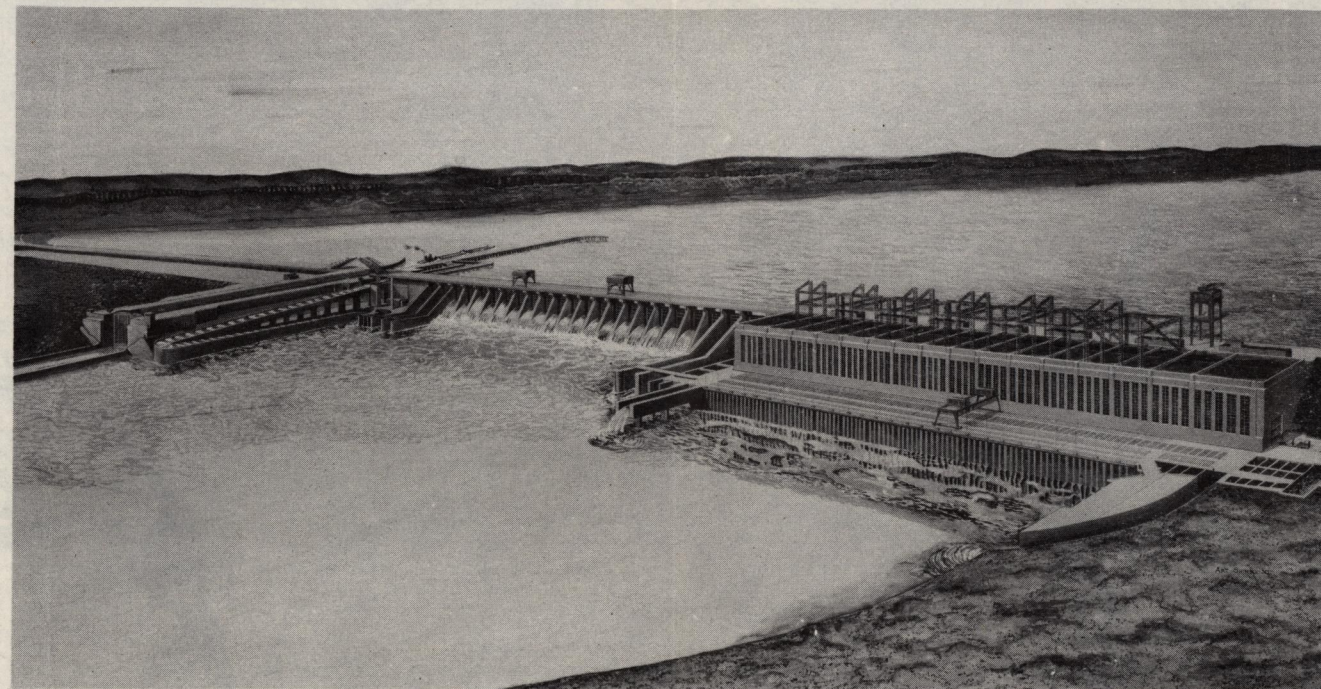


Construction Under Supervision
of
CORPS OF ENGINEERS
U.S. ARMY

WALLA WALLA DISTRICT



Typical cross section view of generating unit in powerhouse at McNary Dam



Navigation Lock & Washington Shore Fishways

PUBLIC USE OF McNARY RESERVOIR

The orderly development of recreational and other public-use resources of McNary Reservoir will be provided for under a master plan for reservoir management and public use which is being studied by the Corps of Engineers. Under this plan, state and local governmental agencies and local groups are encouraged to participate in developing, maintaining and operating recreational facilities. Recreational opportunities which will accrue to the public include boating, fishing, lakeshore picnicking and sightseeing at the dam. An overlook building on the Oregon shore will provide visitors with a general view of the dam and reservoir. An

inspection gallery will be provided in the generator room with large soundproof viewing windows in the control room walls to allow visitors to watch operations. A transparent section in the Oregon shore fish ladder will enable the public to watch fish ascending the ladder. A darkened room for the observer will provide the view without disturbing the fish. On the Washington shore the navigation lock and its operation may be viewed from the visitors gallery in the control building. Vehicular access to the reservoir at convenient locations and right of access to the shoreline by the pedestrian public will be maintained.

GENERAL INFORMATION

McNARY PROJECT

McNary Lock and Dam is one unit of the main control plan for comprehensive development of the water resources of the Columbia River and its tributaries. It is located 292 miles above the mouth of the river, 190 driving miles east of Portland, Oregon, on U. S. Highway 730.

This multi-purpose project provides for navigation and power with incidental irrigation and recreation benefits. The project cost is estimated at approximately \$21,650,000. Construction was initiated in 1948 and the first power installation of two units is scheduled for late in 1953 with additional units to be installed until the ultimate capacity of 14 is reached.

The dam includes a gate-controlled spillway 1310 feet long, a powerhouse 1422 feet long, and with the earth abutments has a combined total length of 7400 feet.

The navigation lock is 86 feet wide, 675 feet long and will provide the world's highest single lift of 92 feet.

A fish ladder, 30 feet wide and rising on a slope of one foot in 20, is located on each shore. Also, a fish lock is included in the project and is located in the non-overflow section between the navigation lock and spillway. A collection system across the downstream face of the powerhouse is designed to attract fish to the ladder on the Oregon shore.

McNary Dam reservoir provides slack water navigation for 67 miles in the Columbia River and lower Snake River. Relocation of 82 miles of railroad and 24 miles of state highways, as well as other utilities, was required by the improvement. About 16 miles of levees provide protection to low areas where justified.

Benefits to irrigation consist in part of lowered pumping costs. Approximately 400,000 acres of land in Oregon and Washington have been found feasible for irrigation from the reservoir.

McNARY LOCK AND DAM

PROJECT DATA

General

Stream Columbia River
 Drainage area - square miles 214,000
 Overall length of dam - feet 7,400
 Maximum height - headwater to tailwater - feet 92

Reservoir

Normal pool elevation - feet 340
 Length normal pool - miles 59
 Normal pool area - acres 37,900
 Levee construction - miles 16

Relocations

Spokane, Portland & Seattle Railway - miles 35
 Union Pacific Railroad - miles 33
 Northern Pacific Railway - miles 14
 Washington State Highway - miles 17
 Oregon State Highway - miles 7
 County roads - miles 20

Spillway Dam

Length - feet 1,310
 Spillway crest elevation - feet 291
 Deck elevation - feet 361
 Maximum height - foundation to deck - feet 158
 Number of split-leaf type gates 22
 Size of gates - feet 50 by 53

Navigation Lock

Type Single lift
 Maximum lift - feet 92
 Net clear length - feet 675
 Width - feet 86
 Depth over miter sill - feet 12
 Filling system Wall culverts and ports
 Upstream gate height - feet 23
 Downstream gate height - feet 106
 Length of upstream guard wall - feet 1,400
 Length of downstream guard wall - feet 1,500

Powerhouse

Length - feet 1,422
 Number of power units 14
 Turbines Automatic adjustable blade propellor
 Revolutions per minute 85.7
 Horsepower 111,300
 Generator capacity - kilowatts 70,000
 Installed capacity - 14 units - kilowatts 980,000

Abutment Embankments

Length, Washington shore - feet 1,620
 Length, Oregon shore - feet 2,500
 Crest elevation - feet 365
 Width of crest - feet 30

Fish Facilities

Ladders 2
 Width - feet 30
 Slope 1 on 20
 Fish lock - single 1
 Size of chamber - feet 20 by 30

Scheduled Completion Date

December 1956

HIGHWAY DISTANCES

TO McNARY DAM

Portland 190
 Spokane 193
 Pasco 42
 Walla Walla 54
 Pendleton 35
 Yakima 129
 Seattle 270

