

WANAPUM DEVELOPMENT

Progress Report • 2nd Quarter 1964

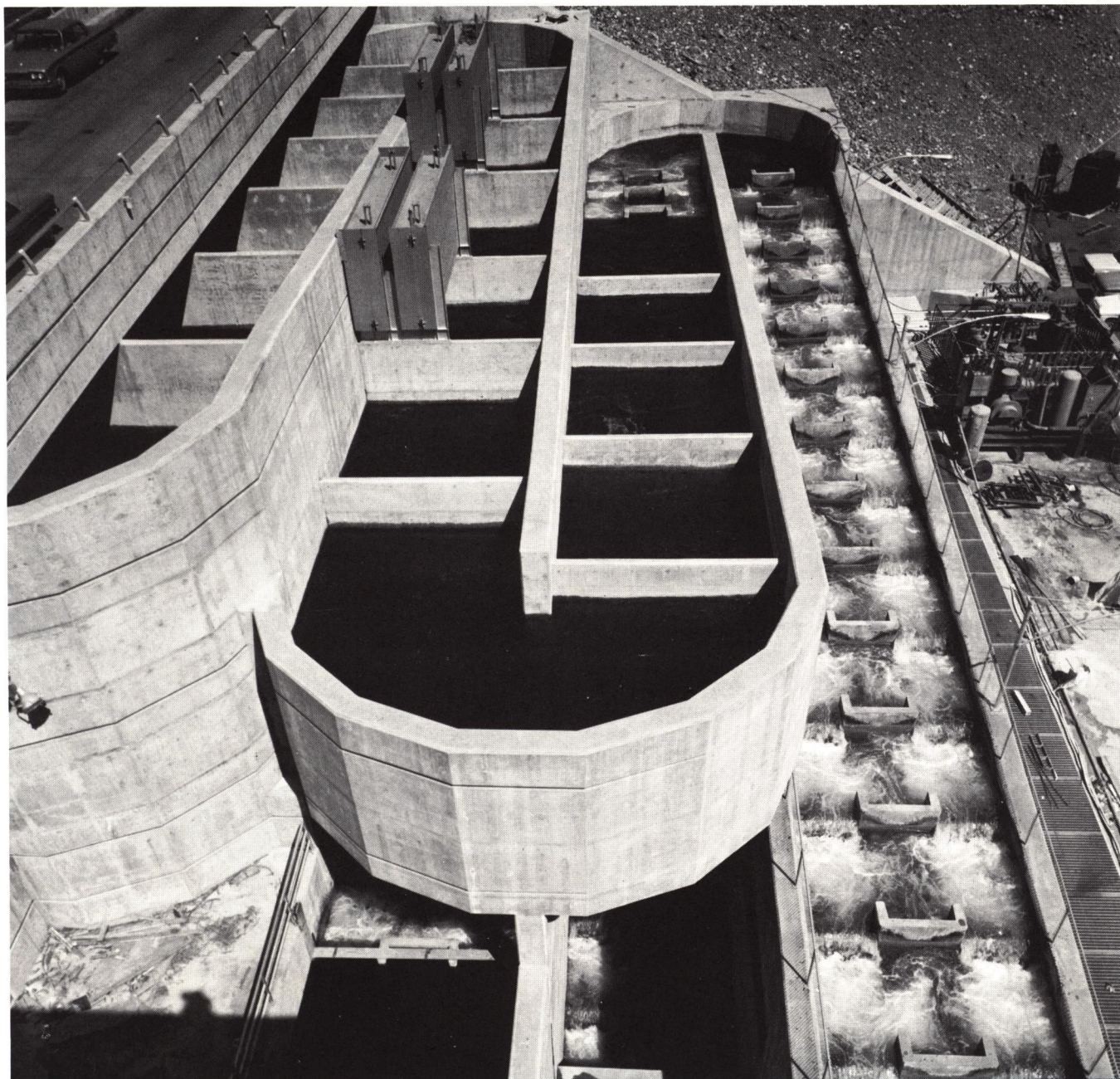
Prepared by

HARZA ENGINEERING COMPANY

Construction Engineer for

GRANT COUNTY PUBLIC UTILITY DISTRICT No. 2

Left bank fish facility. Costing about \$12 million, the two Wanapum fish ladders (left bank and right bank) pass about 1/4 million fish upstream each year.



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WANAPUM DEVELOPMENT QUARTERLY REPORT TO BONDHOLDERS SECOND QUARTER 1964

Production of electrical energy was approximately 895,000,000 kilowatt-hours for the quarter. Final mechanical, electrical, and architectural pickup and corrective work was in progress. Concrete finishing, painting, and general cleanup continued in the powerhouse. Installation of District-furnished electric lamps was in progress. Removal of surplus construction buildings consisting of shops, warehouses, sheds, office buildings, and general cleanup of the construction area continued.

Work under contract with Grant County Constructors was approximately 99.98% complete at the end of the quarter. Contractor's earnings for the three months totalled \$120,402.

The Contractor is experiencing some difficulties in placing the plant in satisfactory operation. These difficulties include (1) conditions of excessive cavitation on the blades of the turbines, (2) damage to a spillway gate, and (3) insulation breakdown on 15-kilovolt power cable. Corrective efforts are proceeding on each of these problems.

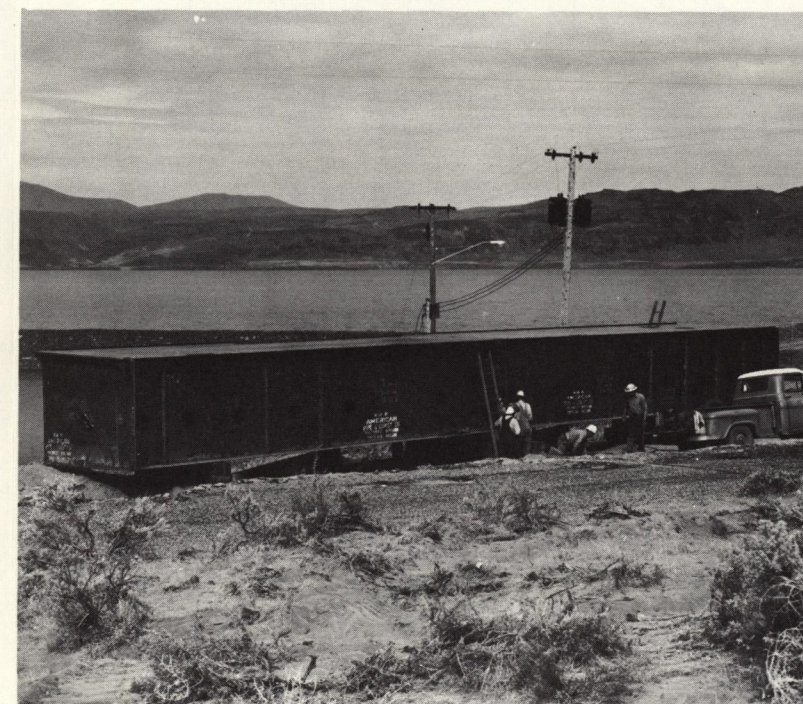
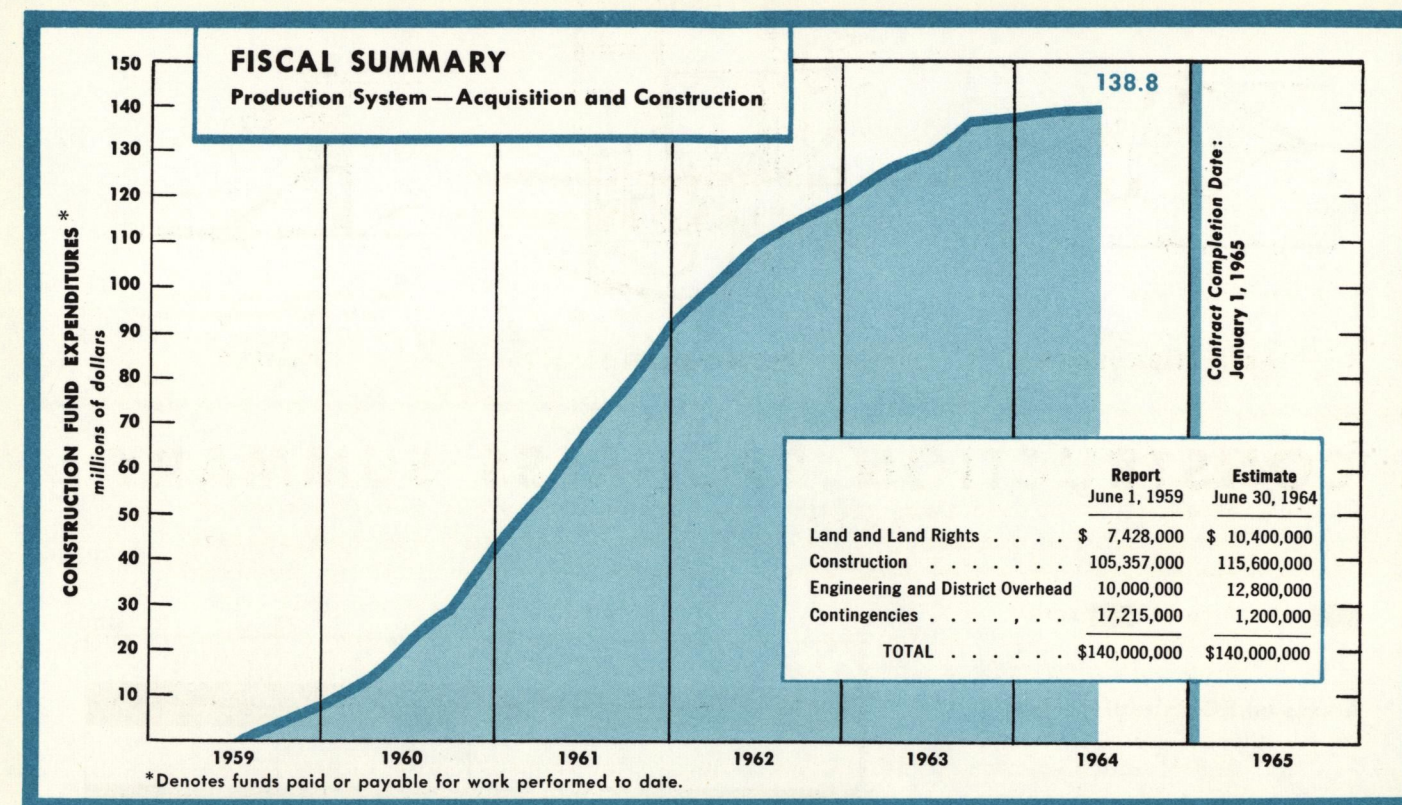
Generator, oil storage room, and transformer fire protection systems were tested by the Fire Insurance Underwriters.

Construction of the spillway floating bulkhead was started and at the end of the quarter six of eighteen sections had been delivered to the jobsite and field welding and assembly was in progress. Factory fabrication of the remainder of the sections was well ahead of schedule.

Installation of District-furnished machine shop equipment in the Wanapum-Priest Rapids Maintenance Center was completed. The fire protection sprinkler system was tested. Storage bins and racks were installed in the warehouse area. Installation of cranes, heating and ventilating equipment, and electrical equipment was in progress. Asphalt paving of the yard was completed. The Center was approximately 99 percent complete at the end of the quarter.

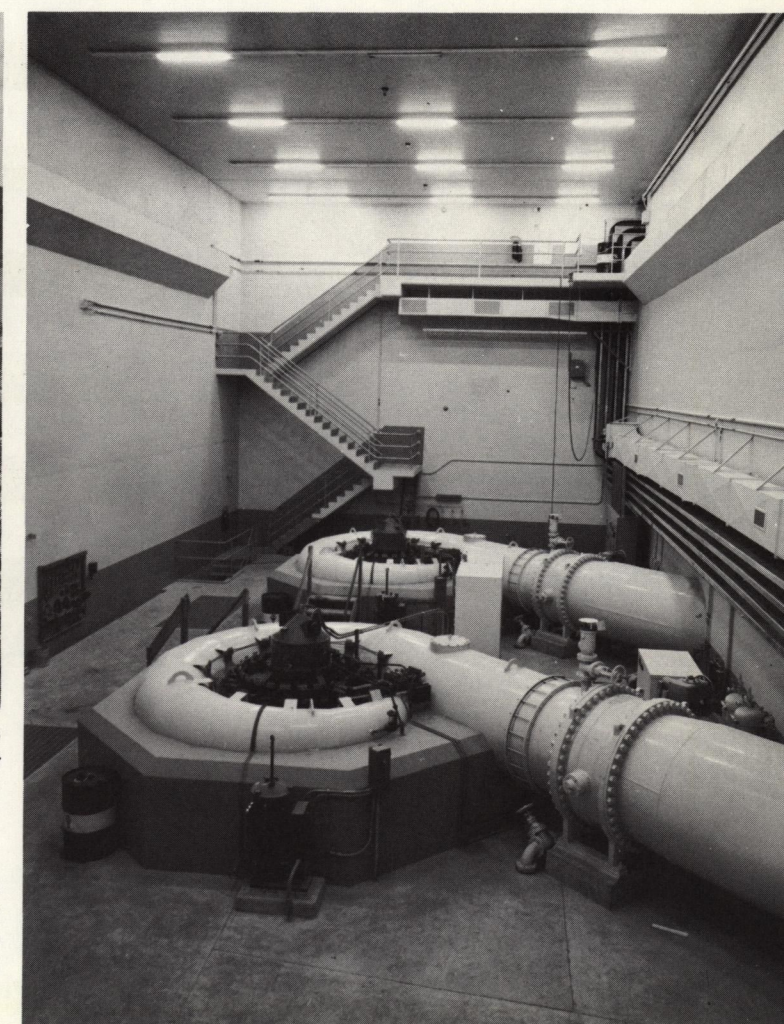
E. Montford Fucik
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President

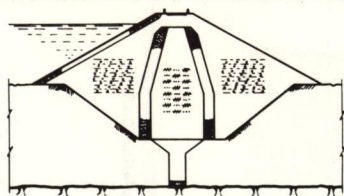
This report is made in compliance with Section 8.3 of Resolution No. 474 of the Public Utility District No. 2 of Grant County, Washington, which resolution authorized the issuance of \$195,000,000 in Wanapum Hydro-Electric Revenue Bonds, Series of 1959, for acquisition and construction of the Wanapum Development.



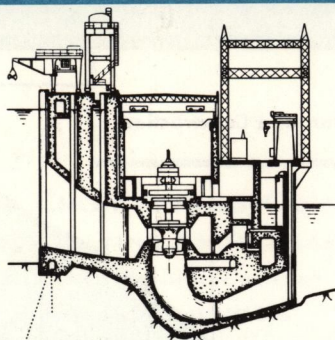
Floating bulkhead for spillway gate opening. Photo shows one of 18 sections which will be welded together to form the bulkhead, 66 feet wide by 76 feet tall. It can be floated into position and tilted by flooding to close off a spillway bay for maintenance and repairs.

Hydraulic turbine-driven pumps for fish facilities. Each pump has a capacity of 1,000 cubic feet per second to supplement gravity flow from the reservoir through the fish ladders. To give an idea of the volume of water required for these facilities, it has been estimated that the system at Wanapum devotes more water to this task than is required by the entire City of Chicago.

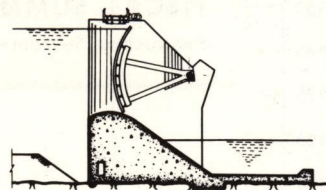




EARTH EMBANKMENT



POWERHOUSE



SPILLWAY

CONSTRUCTION PROGRESS SUMMARY

AS OF JUNE 30, 1964

■ SCHEDULED ■ ACTUAL

Access and Construction Plant

Cofferdams — River Diversion

Excavation

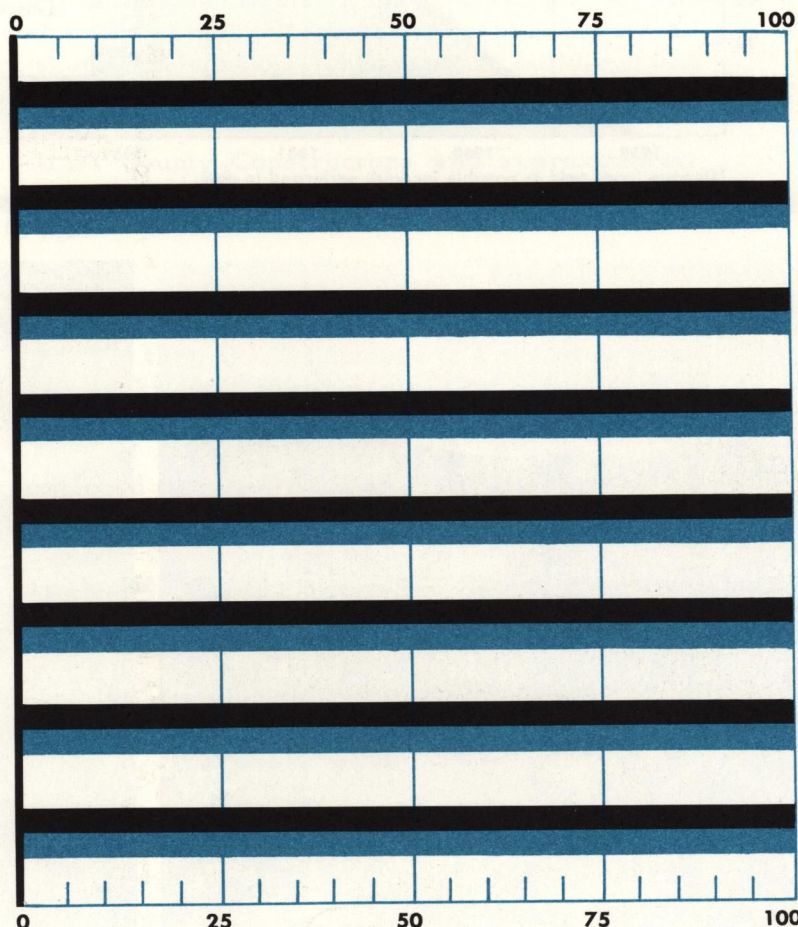
Embankment

Concrete Dam and Spillway

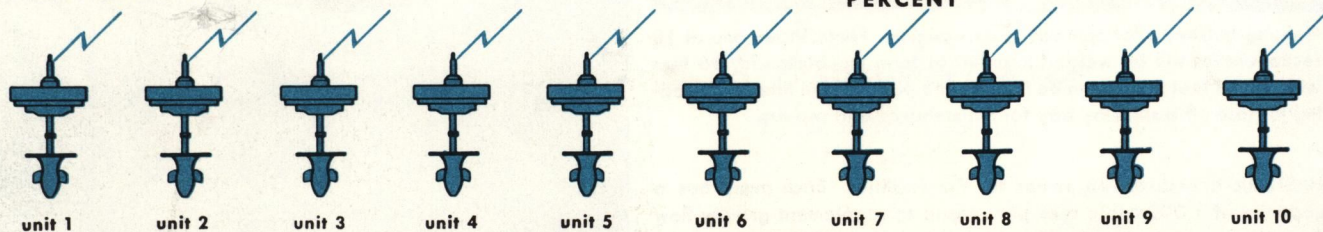
Powerhouse

Turbines and Generator — Manufacture

Turbines and Generator — Installation



POWER GENERATION



Total installed nameplate rating for ten generators: 831,250 kilowatts.

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