

Project Title: Intake Gate Refurbishment

Dam and Reservoir Projects: Lower Granite, Lower Monumental, and Little Goose

Estimated Total Costs: Greater than \$3 million but less than \$7 million for Lower Granite  
Greater than \$7 million but less than \$12 million for Lower Monumental  
and Little Goose

Estimated Schedule for Completion of the Project: Lower Granite Fiscal Year (FY) 2020  
Lower Monumental FY 2025  
Little Goose FY 2025

Current Status as of September 2019: Lower Granite and Lower Monumental in construction

### Summary:

**History:** Intake gates are large steel structures, approximately 50-feet tall and 24-feet wide, that are lowered in front of the main unit intake slots to stop water flow to protect the unit and powerhouse in case of an overspeed event, which is a loss of operational control that can lead to catastrophic failure of the unit. Intake gates also provide the means of unwatering main units to protect workers during maintenance and construction activities. Refurbishment assures that the intake gates meet current safety criteria as defined in USACE Engineering Manual EM 1110-2-6054 for the Inspection, Evaluation, and Repair of Hydraulic Steel Structures, and provides a reliable, watertight structure so that personnel can safely work behind the intake gate. Failure of a seal or structural member of the gate would result in uncontrolled flooding of a dewatered unit, placing personnel and the powerhouse at risk. The intake gates at Lower Granite have been in service since 1974; since 1969 at Lower Monumental; and since 1970 at Little Goose. These assets have an expected service life of 50 years. The work associated with these projects is a complete rehabilitation of the gates, to extend their service life.

Originally, expense funding was approved for the work associated with the refurbishment of the intake gates at the Lower Granite, Lower Monumental, and Little Goose powerhouses. New accounting guidance changed the classification of the planned refurbishment from expense to capital funding; however, there is no change to the original scope of work.<sup>1</sup>

To date, 17 gates at Lower Granite dam and reservoir project have been refurbished and 2 gates are planned to be rehabilitated by the close of FY 2020. At Lower Monumental dam and

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<sup>1</sup> New accounting guidance, published in the *2017 Federal Hydropower Replacements Book*, states the following: a capital improvement is an activity that extends the useful life of a Property, Plant, and Equipment (PP&E) asset, expands the capacity or efficiency of an asset, or otherwise upgrades an asset to serve needs different from, or significantly greater than, an asset's current use. According to the Statement of Federal Financial Accounting Standards (SFFAS 6), costs for work that either extend the useful life of existing general PP&E, or enlarge or improve its capacity shall be capitalized and depreciated/amortized over the extended service life of the associated general PP&E.

reservoir project, 3 gates have been refurbished to date and 16 gates are planned for refurbishment between now and FY 2025. The refurbishment of the intake gates at Little Goose dam and reservoir projects have not started; some materials have been purchased, but project staff has yet to start the rehabilitation effort.