



MEMORANDUM

EUGENE WATER & ELECTRIC BOARD

Rely on us.

TO: Commissioners Carlson, Mital, Helgeson, Schlossberg and Brown
FROM: Mark Zinniker, Generation Engineering Supervisor
DATE: March 22, 2019
SUBJECT: Update on Leaburg Canal Dam Safety Investigations
OBJECTIVE: Information Only

Issue

The Leaburg Canal remains out of service pending remediation of excessive seepage conditions near Cogswell Creek Road that were discovered to be causing slow but worrisome internal erosion of the canal embankment. EWEB staff continue to work with geotechnical engineers at Cornforth Consultants to prepare for subsurface investigations at the site and plan to submit a canal repair design for approval by Federal Energy Regulatory Commission (FERC) dam safety engineers as soon as possible.

Discussion

The FERC approved EWEB's Drilling Program Plan on February 21st. EWEB's specialty drilling contractor's first window for the performing the work begins on March 25th. The anticipated duration for the drilling effort is three weeks.

In parallel to preparation for the drilling work, EWEB and Cornforth staff have advanced a conceptual repair design and presented the concept to FERC engineers for review. Pending analysis of results from the subsurface investigations and associated confirmations of our conceptual design assumptions, FERC has indicated openness to the repair concept. As such, EWEB and Cornforth are proceeding with preparations to convert the conceptual design into final design documents as soon as confirmations from the subsurface investigation results become available. The design documents and supporting analysis will be submitted to the FERC for approval as soon as possible following completion of the drilling program.

While EWEB staff will continue to expedite work to return the Leaburg Canal to service, schedule projections are highly uncertain due to the slow rate of progress gaining FERC approvals and the challenge of scheduling contractors to perform work with minimal notice. As a result, EWEB has been notifying stakeholders of the risk that the canal outage will persist into the dry weather season. Stakeholders such as the McKenzie Hatchery and some neighbors with canal-dependent irrigation systems are pursuing contingency plans accordingly.

Despite the shutdown condition, there remains a minimal amount of flow in the canal. Leakage at the canal intake gates, combined with flows from tributary streams that the canal intercepts, results in a small baseline flow through canal. The baseline flow is on the order of 100 cubic feet per second (cfs; canal capacity is 2,500 cfs for perspective). This flow is critical for the resident fish population in the canal, a mix of native and invasive species that became established prior to fish screening infrastructure at the canal intake. EWEB has indicated openness to accommodating contingency plans by stakeholders wanting to continue drawing an established and permitted water supply from the available baseline flow.

The McKenzie Hatchery staff and their supporting engineers at the Oregon Department of Fish and Wildlife (ODFW) are preparing a coffer dam design that would pond baseline flow at their intake facility and allow diversion of a portion of their normal water supply from the canal. EWEB engineering staff are facilitating FERC review and approval of the ODFW coffer dam design. EWEB Environmental Management staff are providing ODFW with permitting support to gain Army Corps of Engineers (ACOE) and Oregon Division of State Land (DSL) approval for the coffer dam installation. Presuming success obtaining FERC, ACOE, and DSL approval, hatchery staff would like to install the coffer dam in June.

In a similar manner, EWEB expects to be able to accommodate a modified irrigation withdrawal system with appropriate fish screening equipment as proposed by the Spring Creek Holly Farm. There may be other established water withdrawal system owners along the canal that also propose contingency plans for maintaining supply from the baseline canal flow.

ODFW is also investigating the potential for installing a temporary fish trap in the left bank fish ladder at Leaburg Dam. The purpose of the trap would be to capture hatchery salmon that are unsuccessful finding the McKenzie Hatchery due to the anticipated reduction in available attraction water flows at that facility. ODFW needs to obtain approval from the National Marine Fisheries Service (NMFS) to install the temporary fish trap. EWEB's initial review of ODFW's conceptual trap design indicates that it could be feasible to install without substantial conflict with the existing facilities and normal operations of the ladder.

Requested Board Action

Information only. No Board action requested.