MEMORANDUM

EUGENE WATER & ELECTRIC BOARD

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TO: Commissioners Barofsky, Schlossberg, Brown, Carlson, and Morris

FROM: Lisa Krentz, Generation Manager; Laura Ohman, Dam Safety Program Supervisor/Chief Dam Safety Engineer

DATE: September 26, 2025

SUBJECT: Dam Safety Program Update

OBJECTIVE: Information

Issue
This memo provides an update on EWEB's Owner's Dam Safety Program (ODSP).

Background
EWEB owns and operates three hydroelectric projects that are licensed by the Federal Energy Regulatory Commission (FERC). Under 18 CFR Part 12 Subpart F, licensees (owners) develop and implement an ODSP if any dam or other project works are classified as high or significant hazard potential. Two of EWEB's hydroelectric projects, Carmen-Smith and Leaburg-Walterville, are classified as high hazard, in whole or in part, meaning a failure or mis-operation could result in loss of human life. Accordingly, EWEB is required to maintain an ODSP to comply with regulations and to ensure that dam safety remains a top organizational priority.

The regulations require that the licensees submit an ODSP to FERC; review the ODSP implementation and discuss with senior management at least annually; and submit the annual review results, including findings, analyses, corrective actions, and/or revisions, to FERC. This memo and presentation to the Board on October 7, 2025, serve as the required annual review of the ODSP with the EWEB Board.

The following six components are minimum requirements of the ODSP:

1. Dam safety policy, objectives, and expectations
2. Responsibilities for dam safety
3. Dam safety training program
4. Communication, coordination, reporting, and reports
5. Record keeping and databases
6. Continuous improvement

In addition, an independent external audit of the ODSP must be conducted at least once every five years. Audits were completed in 2019 and 2024. The 2024 are results summarized below.

EWEB's ODSP is still a relatively young program that will continue to mature over the next few years. Program development efforts focus on 1) dam safety program staffing, onboarding, and skills development; 2) dam safety awareness education for all EWEB staff working on projects that could affect dams and reservoirs; and 3) enhancing relationships with FERC. EWEB's Chief Dam Safety Engineer (CDSE) serves as a liaison for FERC's Division of Dam Safety and Inspections (FERC D2SI) and provides technical and regulatory advice to project managers.

ODSP 2024 Audit

The required external audit of EWEB's ODSP was completed in 2024. The auditors judged EWEB's ODSP to be well-documented and suitable for its portfolio of dams. The auditors noted that a dam safety culture exists throughout EWEB's organization, starting with a recognition of the stewardship responsibilities and necessary commitment to resources by the EWEB Board and Executive Team, and culminating with Hydro Generation Operators' day-to-day attention to their role associated with surveillance and monitoring. The auditors recognized the significant progress that has been made in addressing recommendations from the 2019 external audit, resulting in a robust dam safety program that extends beyond just regulation compliance, as intended by FERC. The 2024 external auditors provided 25 detailed recommendations, primarily focused on the ODSP and procedures documentation, the development and documentation of a comprehensive staff training program, and improvements to communication practices related to dam safety and public safety.

Dam Safety Program Staffing

EWEB's ODSP was formally established in 2019 with the creation of the Dam Safety Department within the Generation Division. The department currently consists of three Professional Engineers, one Engineering Associate, and one Regulatory Compliance Specialist. The supervisor of the Dam Safety Department serves as the CDSE. Laura Ohman has served as the Dam Safety Program Supervisor since July 2023 and was acknowledged and accepted as CDSE and key point of contact to FERC D2SI in September 2024. In September 2025, the Dam Safety Team welcomed one new staff member, a Senior Civil Engineer who filled an engineering position vacancy that occurred in February 2025. These staff are critical to ensuring that the dam safety team has capacity to ensure safe operation of our hydroelectric projects.

Project and Status Updates

Carmen-Smith Project Operations and Safety Status

The Carmen-Smith Hydroelectric Project consists of the Carmen Diversion dam and reservoir, Smith dam and reservoir, and Trail Bridge dam and reservoir. All are being operated safely and in compliance with regulations. The performance of the dams is monitored with instrumentation and inspected routinely following the approved Dam Safety Surveillance and Monitoring (DSSM) plan. Several dam safety concerns exist at the Carmen-Smith project.

- FERC ANNUAL DAM SAFETY INSPECTION – FERC Part 12D regulations require an annual dam safety inspection by FERC. The 2025 inspection was conducted April 21-22 and found no conditions that require immediate remedial action to protect the safety of the project. FERC provided four items which required follow-up actions by EWEB:

    - Verification of instrumentation at the Smith Conduit Tunnel
    - Removal of sediment accumulation in check dams within the Smith Conduit Tunnel
    - Investigation, documentation, and continued monitoring of two holes discovered beyond the toe of Carmen Diversion Dam
    - Investigation of an apparent linear ground disturbance at Trail Bridge Reservoir

    All four actions were completed by June 27, 2025. The findings were as follows:

    - One pressure gauge was replaced and is now functioning properly
    - Sediment appears to be biofouling. It was cleared, and biofouling accumulation will be measured annually going forward
    - Two holes near Carmen Diversion Dam may have been caused by soil settlement; the voids will be backfilled and monitored

- The linear ground disturbance near Trail Bridge Reservoir appears longstanding and is more visibly noticeable now that vegetation has been cleared in this area. Monitoring will continue.

- BOARD OF CONSULTANTS FOR CARMEN-SMITH PROJECT – In 2021, as required by FERC, the CDSE worked in coordination with FERC D2SI to assemble a team of four nationally recognized dam safety experts, known as a Board of Consultants (BOC). The BOC reviews infrastructure project designs, evaluates dam safety issues, and provides recommendations. BOC review meetings are conducted periodically following FERC protocols and guidelines. The BOC functions independently from EWEB and FERC to review technically challenging matters and designs affecting dam safety, including probable maximum flood routing, hydraulic performance of emergency spillways, embankment erodibility, sinkhole investigations, spillway modifications, and FERC license required designs for fish passage facilities and water release structures. EWEB held its 6th BOC Meeting in October 2024. Topics included Trail Bridge debris boom design review, and structural monitoring of habitat structures as it relates to dam safety. The next BOC meeting is scheduled for December 2025. Meeting topics are anticipated to include Smith Spillway and Flow Release Structure 60% design review, Trail Bridge Fish Passage designs, and Smith Bypass Reach habitat designs.

Leaburg-Walterville Project Operations and Safety Status

The Leaburg-Walterville Hydroelectric Project consists of the Leaburg canal development and the Walterville canal development. Although the Leaburg Canal has been out of service for power generation since 2018, the canal is used for stormwater management and is required to meet all dam safety rules and regulations. The Walterville Canal has been dewatered since February 27, 2024, when a known seepage flow that had been under close surveillance at the Walterville Canal forebay spiked. Dam safety and operations staff continue to monitor canal embankments and control systems following the DSSM procedures and FERC requirements.

- FERC ANNUAL DAM SAFETY INSPECTION –The 2025 annual dam safety inspection occurred on August 13-14 and found no conditions that require immediate remedial action to protect the safety of the project. FERC has provided four review comments which require follow-up actions by EWEB:

  - Update the EAP to reflect current FERC D2SI interim Regional Engineer contact information
  - Commendation of EWEB's vegetation management program effectiveness along both canals, and a requirement to continue the efforts and document progress
  - Clear blackberry bushes and remove irrigation piping to restore visual access to the toe of the canal
  - FERC coordination regarding rip rap repair planning at Walterville Canal

  All four items are in progress and anticipated to be complete prior to the end of the year.

- LEABURG CANAL – In January 2023, the Board approved Management's recommendation to move towards decommissioning the Leaburg project. Dam safety staff are responsible for dam safety surveillance and monitoring and working with operations staff to ensure the canal remains safe to the public. Since it was taken out of service, several ongoing dam safety issues have been investigated, including embankment sinkholes, instabilities, and excessive seepage. The 2020 semi-quantitative risk analysis identified the need for near-term risk reduction measures to reduce hydraulic loading that must be implemented prior to a long-term solution. Work progresses on these measures, including creating a low-level outlet at the powerhouse to pass additional flows, which was completed in December 2023. In addition, a drilling program plan was developed and submitted to FERC in 2023 that will provide subsurface information necessary to move forward with near term risk reduction designs. EWEB received FERC's approval of the drilling program plan on August 5, 2025, and is working to schedule the first phase of drilling work.

  During a load rating inspection, EWEB's consultant identified concrete cracking at the trashrack, which requires a repair prior to the wet weather season. The consultant completed a detailed inspection,

evaluation, and repair plan that was submitted to FERC on September 15, 2025. Upon approval of the plan, EWEB will procure a contractor to complete the repair work before winter wet weather season.

- WALTERVILLE CANAL – The Walterville Canal has been dewatered since February 27, 2024, when a known seepage flow that had been under close surveillance at the Walterville Canal forebay dramatically increased. EWEB has been directed by FERC to maintain the drawn-down condition until they authorize increased water levels. EWEB has been working with consulting engineers to develop a repair plan for the forebay. A Potential Failure Modes Analysis (PFMA) is scheduled for the project in October, which will help identify any additional measures which may be necessary to improve the project design and construction planning. Final design will be submitted to FERC for review by the end of the year. The work is planned for fall 2026. Additional investigations are underway that will support the canal liner project, including a canal embankment and concrete structures stability analyses under seismic loading conditions.

Additional Projects

- DAM SAFETY PUBLIC OUTREACH BROCHURE – Every five years, EWEB is required to provide a public outreach information brochure to property owners adjacent to our hydroelectric projects and within the inundation zone of a breach of a canal or dam. The content includes situational awareness for living next to canals and dams, activities that can jeopardize safe operation of the canals, dam safety awareness, and dam safety emergency planning. EWEB Dam Safety staff have worked with the Communications and Marketing team, Business Continuity team, and Property teams to update the brochure and identify recipients. The brochure was mailed to residents in November 2024 and discussed with participants at the Upriver Board Meeting held in May 2025.

- EMERGENCY ACTION PLAN (EAP) and EXERCISE – FERC requires licensees to complete several annual activities related to the EAP, including a flow-chart call-down drill, EAP refresher training for Operations and Power Trading staff, an external agency plan holder seminar, and EAP updates. In addition, every five years EWEB must conduct Tabletop and Functional Exercises for each licensed project with an EAP.

  In October 2024, EWEB held a combined Tabletop and Functional Exercise for the Leaburg-Walterville Project with participation from county, city, and local emergency management agencies, along with EWEB staff. The exercises focused on education about EWEB's hydroelectric facilities, inter-agency collaboration, and a simulated dam safety emergency, all of which improved awareness and emergency readiness. The next required EAP Tabletop and Functional Exercises will be held for the Carmen-Smith Project in 2026.

Requested Board Action

No Board action is requested at this time. This memo is for information only.