



MEMORANDUM

EUGENE WATER & ELECTRIC BOARD

Rely on us.

TO: Commissioners Mital, Schlossberg, Helgeson, Brown and Carlson

FROM: Daniel Huang, Chief Dam Safety Engineer,
Mike McCann, Generation Manager, and
Rod Price, Chief Operations Officer

DATE: March 30, 2020

SUBJECT: Draft of Strategic Policy – Board Dam Safety Policy

OBJECTIVE: Request for Review and Feedback

Issue:

The Board's Strategic Direction Policy SD1 states the organizational core values as: safety, reliability, responsibility and community. In support of these core values, staff are proposing to establish a new stand-alone dam safety policy to guide the management of our organization's hydroelectric assets and infrastructure.

Background:

EWEB owns and operates three hydroelectric projects on rivers in Oregon. The projects consists of five power houses, three embankment dams and reservoirs, two diversion dams, and nine miles of power canals. All EWEB hydroelectric projects are regulated by the Federal Energy Regulatory Commission (FERC). Operation of the projects must be in compliance with the FERC dam safety regulations. Two of the embankment dams and a portion of the canals are classified as "High Hazard" according to federal guidelines. The High Hazard rating is attributed to facilities where any failure of the dams and canals can cause a downstream loss of human life.

Discussion:

FERC requires that all licensees of high hazard potential dams provide an Owner's Dam Safety Program (ODSP) in accordance with 18 CFR Part 12 Section 4(b) (2) (ii) regulation. The ODSP assures that dam safety is of the highest priority within the owner's organization.

In late 2018, EWEB commissioned three experts through the Association of State Dam Safety Officials (ASDSO) to audit our dam safety program, as required by FERC. The audit report concluded that many elements of the EWEB dam safety program were successful but significant improvements were necessary to establish a robust owner's dam safety program. The results of the audit report were presented to the Board in September 2019.

One recommendation from the audit report called for inclusion of a Dam Safety strategic level directive. Staff recommends that the Board adopt a Strategic Directive that will outline EWEB's dam safety program commitment to meet FERC requirements. A draft of the Dam Safety Strategic

Direction is included in the attachment for review and comments.

Staff will integrate Board feedback and bring the final version to the Board for adoption at the May Board meeting as a consent item.

Requested Board Action:

Review and provide feedback on the draft Dam Safety Strategic Direction.

References:

1. “Federal Guidelines for Dam Safety, Glossary of Terms”, by FEMA, April 2004
<https://www.ferc.gov/industries/hydropower/safety/guidelines/fema-148.pdf>
2. “Federal Guidelines for Dam Safety, Hazard Potential Classification System for Dams”, by FEMA, April, 2004
<https://www.ferc.gov/industries/hydropower/safety/guidelines/fema-333.pdf>
3. FERC Requirement Letter on ODSP and Components of ODSP Document
<https://www.ferc.gov/industries/hydropower/safety/initiatives/odsp/letter-submit-odsp.pdf>
4. “Audit Report of the Owner’s Dam Safety Program, Eugene Water & Electric Board”, by Association of State Dam Safety Officials, March 2019

Attachment

ATTACHMENT

Policy Number: SD xx
Policy Type: Strategic Direction
Policy Title: Dam Safety Policy
Effective Date: May 5, 2020

Eugene Water & Electric Board (EWEB) is committed to ensuring public and employee safety, minimizing risk from our facilities and operations, and protecting the environment in which we work and live. This commitment extends to our electric generating dams, waterways and powerhouses through our Dam Safety Program.

Safety, including public safety and employee safety, takes priority in the operation, maintenance and management of our generation facilities and infrastructure. EWEB's dam safety risks will be identified, evaluated, prioritized and managed in a manner that minimizes these risks to the public. Dam safety risks will be communicated regularly to the EWEB Board, executives, employees and stakeholders.

EWEB's Dam Safety Program relies on commitment and engagement from all levels of the organization. Accordingly,

Roles and Responsibilities:

- The Federal Energy Regulatory Commission (FERC) regulates the hydroelectric projects owned and operated by EWEB under their FERC licenses and requires dam owners to establish an Owner's Dam Safety Program (ODSP) in accordance with federal regulations.
- The Board is committed to adopt the strategic plan and approve budgets that are necessary to support the EWEB's ODSP in order to ensure that all EWEB dam assets are designed, constructed, operated, and maintained as safely and effectively as is reasonably possible.
- The Chief Engineering and Operations Officer, as the Responsible Executive for the ODSP, is accountable for:
 - Establishing, communicating and maintaining EWEB policies pertaining to dam safety with the emphasis that public safety is paramount.
 - Ensuring that resources are properly aligned and sufficient to address public safety priorities, risks at EWEB dams and associated infrastructure, and successful execution of the EWEB's Dam Safety Program.
 - Engaging the General Manager, Generation Manager, and Chief Dam Safety Engineer (CDSE) on program performance.
 - Ensuring communication of dam safety program activities to all stakeholders.
- The Generation Department Manager is responsible for:
 - Aligning resources to address the program priorities as recommended by the CDSE and

- approved by the responsible executive.
- Developing and implementing effective procedures, instructions, and standards that fulfill the program elements.
- Developing and implementing best practices in the design, construction, operation, and maintenance of EWEB dams and their appurtenances.
- The Chief Dam Safety Engineer is responsible for:
 - Administering, monitoring, and continuously improving the EWEB Dam Safety Program. This includes maintenance of the ODSP document which shall further define roles, responsibilities, and the program elements.
 - Prioritizing dam safety projects and activities in alignment with EWEB’s capital and maintenance program policies.
 - Timely communication of significant dam safety issues and risk reduction measures to the responsible executive.
 - Serving as the program contact with the dam safety regulator.
- The Generation Department staff shall support the ODSP by escalating known or perceived dam safety issues to the CDSE for evaluation.

EWEB Owner’s Dam Safety Program:

The EWEB ODSP shall be implemented in compliance with the FERC regulations, standards, and requirements including the following elements:

1. Surveillance and Monitoring – Monitor performance of dams and their appurtenances through inspections, instrumentation, and data collections and analyses.
2. Dam Safety Assessments –Evaluate asset conditions with modern standards and methodologies in compliance with FERC regulations.
3. Operations and Maintenance – Operate reservoirs and canals to ensure public safety and protect downstream communities; and maintain facilities to meet or exceed industry standards.
4. Procedures – Establish and document guidelines and procedures to ensure that dam safety is addressed in project planning, design, construction, and operation phases.
5. Risk Management – Prioritize dam safety issues with risk-informed approaches considering likelihood of failure and potential consequences.
6. Asset Management and Planning – Effectively plan, budget, and schedule dam assets update and renewal.
7. Emergency Preparedness – Maintain Emergency Action Plans (EAPs) and exercise the EAPs collaboratively with affected emergency management agencies and communities.
8. Communication – Timely communicate and report dam safety issues and program status to internal and external stakeholders.
9. Records Keeping – Assure retention of critical and relevant project documents and data.

10. Technical Expertise – Develop in-house expertise through hiring qualified staff and documented training programs. Partner with external experts.
11. Continuous Improvement – promote continuous improvement through self-assessment, performance metrics, and external audits.