

**EXH. JPH-7
DOCKETS UE-240004/UG-240005
2024 PSE GENERAL RATE CASE
WITNESS: JAMES P. HOGAN**

**BEFORE THE
WASHINGTON UTILITIES AND TRANSPORTATION COMMISSION**

**WASHINGTON UTILITIES AND
TRANSPORTATION COMMISSION,**

Complainant,

v.

PUGET SOUND ENERGY,

Respondent.

**Docket UE-240004
Docket UG-240005**

**SIXTH EXHIBIT (NONCONFIDENTIAL) TO THE
PREFILED DIRECT TESTIMONY OF**

JAMES P. HOGAN

ON BEHALF OF PUGET SOUND ENERGY

FEBRUARY 15, 2024



Lower Baker Dam Seepage Reduction Project
Corporate Spending Authorization (CSA)

Date Created:	Friday, February 10, 2023
Discretionary/ Non-Discretionary:	Non-Discretionary
Multi Year Rate Plan:	Specific
Equity Impact:	Yes
Strategic Alignment:	Operate the Business-Reliability
Estimated In-Service Date:	Monday, December 1, 2025

Current State (Business Need): Potential Failure Modes Analyses (PFMA) were undertaken in 2014 and 2019 as part of the FERC Part 12D inspections. These PFMA's identified several Potential Failure Modes (PFMs) related to foundation erosion and abutment leakage that could potentially lead to failure of the dam. With no action, the abutment leakage and foundation erosion will likely continue to increase over time and result in higher risk of uncontrolled release of reservoir and could ultimately lead to dam failure. If the rate of leakage is allowed to continue to increase it could get to a point beyond which it would be difficult, if not impossible, to repair. This project aims at stemming the rate of leakage such that foundation erosion can no longer occur. The PFMs related to stability of the left rock abutment which could result in loss of the dam's arch support and failure of the dam were investigated as part of the Project planning phase. The execution phase of this Project does not negatively impact the PFMs related to the stability of the left rock abutment and no further action is planned pending FERC acceptance of the left rock abutment stability report.



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Desired State (Proposed Solution):

The project proposes to mitigate the abutment and foundation leakage/erosion by constructing a leakage cut-off barrier (grout curtain). Grouting will occur at the reservoir water/rock interface and within the rock foundation and abutments. The injected grout will effectively seal the leakage pathways in the abutments and foundation and prevent the pathways from reestablishing in the future. Concentrated points of leakage above the reservoir bottom and in close proximity to the upstream dam face will be sealed using geotextiles prior to grouting to maximize grouting effectiveness.



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Outcome/Results
(What are the
anticipated benefits):

Upon completion, abutment and foundation leakage will be sufficiently stemmed such that foundation erosion can no longer occur thereby eliminating foundation leakage as a PFM.



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Dependencies:

Dependencies comment:

Escalation Included:

Total Estimated Costs:

Estimated Five Year Allocation:

Funds Type	ID	Line Item Description	Previous Years Actuals	Fiscal 2024 Requested	Fiscal 2025 Requested	Fiscal 2026 Requested	Fiscal 2027 Requested	Fiscal 2028 Requested
Capital	K.10003.01.01.02	LBK Dam Grouting Program	\$ 243,284,412	\$ 102,474,295	\$ 36,632,153	\$ -	\$ -	\$ -

Incremental O&M:

Qualitative Benefits:

The Lower Baker Dam Grouting Project is being pursued to address the current leakage through the dam's abutments and foundation in order to comply with FERC Dam Safety standards and to extend the life of the project to meet the 50 year FERC license. This project will also avoid future costs and risks associated with an increasing rate of leakage leading to loss of the ability to control the reservoir level in Lake Shannon and/or dam failure.

Quantitative Benefits:

Quantitative Benefits	Benefit Type	Previous Years	Fiscal 2023	Fiscal 2024	Fiscal 2025	Fiscal 2026	Fiscal 2027	Fiscal 2028	Remaining Costs	Life Total

Risk Summary:

Dam failure How Monitored : Robust dam safety and surveillance monitoring program including automated instrumentation and visual monitoring. Mitigation : Lower reservoir elevation as low as possible if indication develops Regulatory Approval (Rejection) How Monitored :The wide number of local, state, and federal permits required and even larger number of agencies involved presents the opportunity for some impact to schedule. To date, the principal agencies (USFWS, NMFS, USACE, and FERC) have been very responsive. Mitigation : Regular communication with agencies, provide thorough and well supported permit applications, and promptly respond to requests for additional information. External Stakeholders : How monitored : The project has been presented to external stakeholders through a variety of means including ARG and CRAG Meetings. No objections to date but there may be more pushback once it is officially presented to tribes through NEPA process. Mitigation : Continue to keep lines of communication open and be transparent with both the need for the project as well as risks associated with the project. Construction Cost How Monitored : Working with contractor in an early-contractor involvement relationship to minimize costs/risks. Mitigation : Re-evaluate design options and/or project objectives if needed Schedule Monthly evaluation of project schedule. Re-sequence activities, parallel activities, or extend schedule. Design/Scope How Monitored : defined. As a FERC regulated project with a mandatory board of consultants there remains the risk that additional scope be required (as investigations or mitigation measures), particularly in the stability of the left abutment. Mitigated: Regular BOC/FERC meetings to identify potential issues. Pushing back on scope creep of BOC.



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Change Summary:

Planning Cycle	Change Summary	Last Update Date
2022 Baseline Cycle	This CSA has been migrated into the EPPM tool at go-live as part of the Phase 1 EPPM implementation effort. The projects in this CSA were previously approved for the 2023-2027 capital plan. Please refer to the original CSA document for additional information (if available.)	2/10/2023
2023 Cycle 1	Annual dollars spend changed based on delayed initial start of construction in 2022.	2/23/2023
2023 Cycle 1	Updated Risk and Equity Ratings	3/27/2023



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Approval History:

Approved By	Date
Approved by Cost Center Owner: Likavec , Michael	3/9/2023
Approved by Cost Center Owner: Likavec , Michael	3/28/2023
Approved by Director Sponsor: Carlson , Mark	3/28/2023
Approved by Executive Sponsor: Roberts , Ron	3/29/2023
CSA Status changed to Approved	3/29/2023
Approved by Cost Center Owner: Olsen , Mauren	12/5/2023
Approved by Director Sponsor: Olsen , Mauren	12/5/2023
Approved by Executive Sponsor: Olsen , Mauren	12/5/2023
CSA Status changed to Approved	12/5/2023
Approved by Cost Center Owner: Likavec , Michael	1/30/2024
Approved by Director Sponsor: Carlson , Mark	1/31/2024
Approved by Executive Sponsor: Roberts , Ron	1/31/2024
CSA Status changed to Approved	1/31/2024