EXH. JPH-11C
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**

TENTH EXHIBIT (CONFIDENTIAL) TO THE PREFILED DIRECT TESTIMONY OF

JAMES P. HOGAN

ON BEHALF OF PUGET SOUND ENERGY

REDACTED VERSION

FEBRUARY 15, 2024

2023 CEO Cover Memo Excerpts of Lower Baker Dam
Monthly Asset Management Committee report sent to all Directors

January

- Lower Baker Dam (green) – The contractor completed all grouting/stressing operations associated with tie-down anchors. To support the foundation elements of the temporary working platform, the contractor continues with construction activities associated with the left and right abutment. The contractor also commenced with preparatory activities associated with construction of the right abutment seepage seal.

February

- Lower Baker Dam (green) – The contractor continues with activities associated with construction of the temporary working platform, focusing on work at the left and right abutments. The contractor commenced with activities associated with construction of the right abutment seepage seal as well as preparation of the pad for grout plant.

March

- Lower Baker Dam (green): The contractor continues with activities associated with construction of the temporary working platform. The left abutment is complete, and the right abutment is 75% complete. Work across the center of the dam has commenced. The contractor continues with construction associated with the right abutment seepage seal, completed preparation of the grout plant pad, and commenced with mobilization of grouting equipment and setup of the grout control center.

April

- Lower Baker Dam (green): The contractor continues with activities associated with assemblage and installation of the temporary working platform, specifically structural steel across the center section of the dam. Steel and concrete work at left and right abutments is complete. The contractor also continues with activities associated with the right abutment seepage seal, as well as mobilization and setup of the grout batch plant and grout control building.

May

- Lower Baker Dam (green): Contractor continues with construction activities associated with assemblage and installation of the temporary working platform across center section of dam. Contractor also continues with mobilization and setup activities associated with the grout batch plant and grout control building.

June

- Lower Baker Dam (green): The contractor continues with Phase 2A construction activities associated with assemblage and installation of the temporary working platform across the upstream side of the dam. The contractor completed mobilization and commenced with grout batch test mixing at the grout plant. The contractor continues to program/develop IntelliSystem (Automated Grout Monitoring System). PSE consultants anticipate 'higher order grout holes' will be required for Phase 2B. These increased requirements will add time and cost in order to complete construction of the grout curtain.

July

- Lower Baker Dam (green): The contractor continues with Phase 2A construction activities associated with assemblage and installation of the temporary working platform across upstream side of dam. The contractor completed grout batch test mixing and commenced with commission of various drill/grout equipment. The contractor continues to program/develop IntelliSystem (Automated Grout Monitoring System). PSE consultants anticipate 'higher order grout holes' will be required for Phase 2B. These additional holes will add time and cost to the overall project schedule; detailed impacts to scope, schedule, and budget are pending.

August

- Lower Baker Dam (yellow): The contractor continues with Phase 2A construction activities associated with assemblage and installation of the temporary working platform across the upstream side of the dam. The contractor completed commissioning of drill/grout equipment and commenced with the Test Drilling and Grouting Program (conducted on three production drill holes). The contractor continues to program/develop IntelliSystem (Automated Grout Monitoring System). PSE consultants anticipate that 'higher order grout holes" will be required for Phase 2B. These additional holes will add time and cost to the overall project schedule with impacts to scope, schedule, and budget pending.

September

- Lower Baker Dam (yellow): The contractor continues with Phase 2A construction activities associated with assembling and installation of the temporary working platform across the upstream side of dam. The contractor continues drilling and grouting three production drill holes as part of the Test Drilling and Grouting Program. PSE expanded the test program to include another eight production holes (11 total holes). PSE's consultants anticipate 'higher order grout holes' will be required for Phase 2B. These additional holes will add time and cost to the overall project schedule, the impacts of which are pending.

October

- Lower Baker Dam (yellow): Contractor completed Phase 2A construction activities associated with assemblage and installation of the temporary working platform across upstream side of dam. Project officially moved into Phase 2B, Drill and Grout Production on August 14th. Contractor continues drilling and grouting at the left abutment (where test program was conducted) and has commenced with drilling and grouting at the right abutment and center of dam. PSE consultants anticipate 'higher order grout holes' will be required for Phase 2B. These additional holes will add time and cost to overall project schedule, the impacts of which are pending.

November

- Lower Baker Dam (yellow): PHASE 2B: the contractor continues to drill/grout at the left abutment and at the center of the dam (debris grouting). The contractor demobilized all marine equipment not needed to support drill and grout operations. PSE consultants anticipate that 'higher order grout holes' will be required for Phase 2B. These additional holes will add time and cost to the overall project schedule; detailed impacts to scope, schedule, and budget are pending.

December

- Lower Baker Dam (yellow): PHASE 2B: The contractor continues to drill/grout at the left and right abutments. The contractor completed fore bay debris grouting at the center of the dam and continued with installation of riser pipes. PSE consultants anticipate 'higher order grout holes' will be required for Phase 2B. These additional holes will add time and cost to the overall project schedule, with detailed impacts to scope, schedule, and budget pending.

assetMANAGEMENT

PUGET SOUND ENERGY

Dashboard & Results Report – November 2022 YTD
Appendix: November 2022 Financial Package

APPENDIX A:
Lower Baker Status Report

PUGET SOUND ENERGY

Note:
The following consists of the Lower Baker Dam project updates, due to the size of the project.

assetMANAGEMENT

PUGET SOUND ENERGY

Lower Baker Project Status Report

PROJECT INFORMATION			
Project Name:	LBK Seepage Reduction	Sponsor:	Dam Safety
Total Budget: (Execution Phase)	[redacted]	Business Owner:	T. Danielson
Capital WO:	103007361 (internal) 103007901 (external)	Project Manager:	J. Bickford

REPORTING SUMMARY				
Reporting Period:	11/02/2022 to 12/06/2022			
Project Status:	Budget	Resources	Scope	Schedule
				

Budget	2021	2022	2023	2024	2025	2026	Total
Projected Spend:	[redacted]						
Actual Spend:							
Cumulative Actuals to date (Execution Phase Only):							

BACKGROUND	
Objective:	Address the category II and III potential failure modes for Lower Baker Dam; primarily leakage through abutments and foundation.
Delivery Team:	**PM:** J. Bickford | **Technical:** J. Oppenheimer, N. Verretto, M. Likavec, E. Cassady | **Support:** M. Clemmer, E. Hagin
Vendors:	LBC (Contractor) | HDR (Construction Mgmt) | Shannon & Wilson (design) | Sixense (Instrumentation) | GeoEngineers (Environmental Compliance)
Stakeholders:	FERC, Baker Operations, local communities, PSE power users, ARG, BRCC, CRAG

PUGET SOUND ENERGY

assetMANAGEMENT

Lower Baker Project Status Report *(Continued)*

MAJOR UPDATES	
Current Phase:	Execution
Next Phase:	Closeout – Q1 2026
Last 30 Days:	• Provided project update at BRCC Meeting • **Tiedown Drilling** – LBC completed drilling of tiedown anchor T1, T45 and T46 (100% complete or 46ea of 46ea). • **Tiedown Grouting/Stressing/Cover Plates** – LBC completed grouting/stressing/cover plates for tiedowns T1 and T30 thru T46 (100% complete or 46ea of 46ea). • **Intake Structure** – LBC commenced with installation of platform steel across top of intake structure. • **Left Abutment** – LBC completed excavation and concrete placement of abutment grade beam. LBC completed drilling and grout of 4ea tieback anchors (80% complete) for support of platform steel column support. • **Right Abutment** – LBC completed drilling and grouting of 12ea tieback anchors (80% complete). LBC completed rock scaling/chipping for soldier pile buttress wall (5ea). LBC commenced with erection of concrete formwork/bracing for concrete buttress.
Next 30 Days:	• **Intake Structure** – Continue with installation of structural steel for temporary platform. • **Left Abutment** – Complete installation of steel column and commence with installation of platform stringers. • **Right Abutment** – Complete installation/stressing of 15ea tieback anchors. Complete installation of 5ea soldier piles and complete placement of concrete buttress. • **Seepage Seal** – LBC to commence with placement of rock/sand aggregate at "high-flow" fractures. • **Woody Debris Management** – LBC to survey existing sluice gates and commence with removing debris towards west side of sluice gates.
Upcoming Meetings	• *CRAG Meeting Dec 07 – providing project update* • *Meet with ACT Dec 07 & 08 (at their facility in Toronto) to discuss drill/grout scope including: IntelliSystem programming and monitoring, drilling sequencing, plant commissioning and testing program and proposed equipment review.* • *Partnering Meeting Dec 13, 1 to 5 pm at Skagit Service Center* • PSE Team (PSE, SW, HDR) Coordination Meetings (every Monday) • PSE 'Internal' Team Coordination Meetings (every Tuesday) • PSE/FERC-PRO 'Check-in' Meetings (every other Tuesday) • Project Construction Meetings (every Thursday) • Scope Specific 'Preparatory' and 'Initial' Meetings (as needed)

assetMANAGEMENT

Lower Baker Project Status Report *(Continued)*

CRITICAL MILESTONES			
Critical Milestones:	Health (G/Y/R)	Target Date	Comments
~~Complete Tiedown Anchor Drilling~~		~~11/18/2022~~	Completed 11/19/22
~~Complete Tiedown Grouting/Stressing~~		~~11/23/2022~~	Completed 11/23/22
~~Left Abutment - Pile Supported Concrete Grade Beam~~		~~11/15/2022~~	Completed 12/05/22
Right Abutment - Concrete Block		12/09/2022	Concrete block currently scheduled to be complete Dec 23

SCHEDULE	2021	2022				2023				2024				2025			
	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Planning/Permitting																	
Design																	
Execution																	
Closeout																	

ID #	RISKS	RISK RESPONSE
	Tiedown Anchor T1 – drilling impacts due to steel	T-1 anchor install complete. PSE waiting for differing site conditions claim from LBC.
	Intake Structure (north) – existing beam conflict with (1) grout hole location	PSE coordinated revised hole location with LBC. PSE waiting for change order request from LBC.

asset**MANAGEMENT**

PUGET SOUND ENERGY

Dashboard & Results Report – December 2022 YTD
Appendix: December 2022 Financial Package

APPENDIX A:
Lower Baker Status Report

PUGET SOUND ENERGY

Note:
The following consists of the Lower Baker Dam project updates, due to the size of the project.

assetMANAGEMENT

Lower Baker Project Status Report

PROJECT INFORMATION			
Project Name:	LBK Grouting Program (aka Seepage Reduction)	**Executive Sponsor:**	Ron Roberts
Total Budget: (Execution Phase)	[redacted]	**Director Sponsor:**	Mark Carlson Michael Likavec
Capital WO:	103007361 (internal) 103007901 (external)	**Project Manager:**	J. Bickford

REPORTING SUMMARY				
Reporting Period:	12/07/2022 to 01/03/2023			
Project Status:	**Budget**	**Resources**	**Scope**	**Schedule**
				

Budget	2021	2022	2023	2024	2025	2026	Total
Projected Spend:	[redacted]						
Actual Spend:							
Cumulative Actuals to date (Execution Phase Only):							

BACKGROUND	
Objective:	Address the category II and III potential failure modes for Lower Baker Dam; primarily leakage through abutments and foundation.
Delivery Team:	**PM:** J. Bickford | **Technical:** J. Oppenheimer, N. Verretto, M. Likavec, E. Cassady | **Support:** M. Clemmer, E. Hagin
Vendors:	LBC (Contractor) | HDR (Construction Mgmt) | Shannon & Wilson (design) | Sixense (Instrumentation) | GeoEngineers (Environmental Compliance)
Stakeholders:	FERC, Baker Operations, local communities, PSE power users, ARG, BRCC, CRAG

assetMANAGEMENT

Lower Baker Project Status Report *(Continued)*

MAJOR UPDATES	
Current Phase:	Execution
Next Phase:	Closeout – Q1 2026
Last 30 Days:	• Provided project update at CRAG Meeting • Held Partnering Meeting (Health Check Report) at PSE Skagit Service Center • **Intake Structure** – LBC completed installation of miscellaneous platform steel across top of intake structure. • **Left Abutment** – LBC completed (5ea) tiedown anchor installation and grouting for concrete grade beam. LBC completed installation of steel pipe column and 5ea rock anchors at base of pipe column. LBC installed steel girder between top of intake and pipe column. • **Right Abutment** – LBC completed drilling and grouting of 3ea tieback anchors (100% complete). LBC completed installation of 5ea soldier piles (100% complete). LBC completed installation of first lift of steel lagging (33% complete). • **Seepage Seal** – LBC completed placement of approximately 2.5 CY of sand at "high flow" fracture (DYE Point #1). • **Existing Sluice Gates** – LBC conducted diving operations to as-built existing sluice gates.
Next 30 Days:	• **Left Abutment** – Tension 5ea tiedown anchors for concrete grade beam. Commence with installation of platform stringers. • **Right Abutment** – Complete installation of steel lagging and commence placement of concrete buttress. • **Seepage Seal** – Complete placement of rock/sand aggregate at "high-flow" fractures. • **Woody Debris Management** – Commence with removing debris towards west side of sluice gates.
Upcoming Meetings	• PSE Team (PSE, SW, HDR) Coordination Meetings (every Monday) • PSE 'Internal' Team Coordination Meetings (every Monday) • PSE/FERC-PRO 'Check-in' Meetings (every other Tuesday) • Project Construction Meetings (every Thursday) • Project QC Meetings (every other Thursday) • Scope Specific 'Preparatory' and 'Initial' Meetings (as needed)

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Lower Baker Project Status Report *(Continued)*

CRITICAL MILESTONES			
Critical Milestones:	**Health (G/Y/R)**	**Target Date**	**Comments**
Right Abutment Concrete Block		12/09/2022	Concrete block currently scheduled to be complete Jan 27. *Delay does not appear to affect overall project schedule.*
Intelli-System Trailer Setup		01/27/2023	Includes power and fiber installation
Grout Plant Pad – General Pad Setup		02/03/2023	Includes all finish grading and construction of sog's, portable tents and drainage system
Seepage Seal Installation		02/17/2023	

SCHEDULE	2021	2022				2023				2024				2025			
	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Planning/Permitting																	
Design																	
Execution																	
Closeout																	

ID #	RISKS	RISK RESPONSE
	Tiedown Anchor T1 – drilling impacts due to steel	T-1 anchor install complete. PSE waiting for differing site conditions claim from LBC.
	Intake Structure (north) – existing beam conflict with (1) grout hole location	PSE coordinated revised hole location with LBC. PSE waiting for co request from LBC.

asset**MANAGEMENT**

PUGET SOUND ENERGY

Dashboard & Results Report – January 2023 YTD
Appendix: January 2023 Financial Package

APPENDIX A:
Lower Baker Status Report

PUGET SOUND ENERGY

Note:
The following consists of the Lower Baker Dam project updates, due to the size of the project.

assetMANAGEMENT

Lower Baker Project Status Report

PROJECT INFORMATION			
Project Name:	LBK Grouting Program (aka Seepage Reduction)	**Executive Sponsor:**	Ron Roberts
Total Budget: (Execution Phase)	[redacted]	**Director Sponsor:**	Mark Carlson Michael Likavec
Capital WO:	103007361 (internal) 103007901 (external)	**Project Manager:**	J. Bickford

REPORTING SUMMARY				
Reporting Period:	01/04/2023 to 01/31/2023			
Project Status:	**Budget**	**Resources**	**Scope**	**Schedule**
				

Budget	2021	2022	2023	2024	2025	2026	Total
Projected Spend:	[redacted]						
Actual Spend:							
Cumulative Actuals to date (Execution Phase Only):							

BACKGROUND	
Objective:	Address the category II and III potential failure modes for Lower Baker Dam; primarily leakage through abutments and foundation.
Delivery Team:	**PM:** J. Bickford | **Technical:** J. Oppenheimer, N. Verretto, M. Likavec, E. Cassady | **Support:** M. Clemmer, E. Hagin
Vendors:	LBC (Contractor) | HDR (Construction Mgmt) | Shannon & Wilson (design) | Sixense (Instrumentation) | GeoEngineers (Environmental Compliance)
Stakeholders:	FERC, Baker Operations, local communities, PSE power users, ARG, BRCC, CRAG

Lower Baker Project Status Report *(Continued)*

MAJOR UPDATES	
Current Phase:	Execution
Next Phase:	Closeout – Q1 2026
Last 30 Days:	• **Intake Structure** – LBC completed installation of timber decking. • **Left Abutment** – LBC completed installation of platform stringers and timber decking. • **Right Abutment** – LBC completed installation of steel lagging. LBC completed first of three concrete pours (placed ~210 CY). • **Seepage Seal** – LBC continued with tremie placement of aggregate at high flow fracture points. • **Existing Sluice Gates** – LBC completed as-built dimensioning of existing sluice gates. LBC commenced with debris removal in between existing sluice gates. • **Grout Plant** – LBC completed finish grading and slab-on-grade construction. • **Grout Control Room** – LBC commenced with mobilization/setup of Intelli-System trailers. • **Temp Platform, Brackets** – LBC commenced with assembling platform brackets (3ea of 12ea complete).
Next 30 Days:	• **Right Abutment** – Complete placement of concrete backfill (total volume ~700 CY). • **Seepage Seal** – Complete placement of rock/sand aggregate at "high-flow" fractures and commence with placement of 'blankets'. • **Existing Sluice Gates** – Complete removal of all debris at sluice gates. • **Grout Plant** – Commence with mobilization/setup of grouting equipment. • **Grout Control Room** – Continue with setup/commissioning of Intelli-System. • **Temp Platform, Brackets** – Complete assemblage (12ea) and install 3ea towers on upstream side of dam. • **Temp Platform, Guide Pipe Frames** – Commence with delivery of GPF's and storage in quarry.
Upcoming Meetings	• PSE Team (PSE, SW, HDR) Coordination Meetings (every Monday) • PSE 'Internal' Team Coordination Meetings (every Monday) • PSE/FERC-PRO 'Check-in' Meetings (every other Tuesday) • Project Construction Meetings (every Thursday) • Project QC Meetings (every other Thursday) • Scope Specific 'Preparatory' and 'Initial' Meetings (as needed)

assetMANAGEMENT

Lower Baker Project Status Report *(Continued)*

CRITICAL MILESTONES			
Critical Milestones:	**Health (G/Y/R)**	**Target Date**	**Comments**
Right Abutment Concrete Block		12/09/2022	Concrete block currently scheduled to be complete Feb 17. *Delay does not appear to affect overall project schedule.*
Seepage Seal Installation		02/17/2023	Currently scheduled to be complete Mar 10. *Delay does not appear to affect overall project schedule.*
Temp Platform, Brackets, complete installation		03/15/2023	
Grout Control Room (Intelli-System), complete setup		03/17/2023	Includes networking and individual working stations
Grout Plant, complete equipment mob/setup		03/17/2023	
Temp Platform, Guide Pipe Frames, complete installation		04/11/2023	
Temp Platform, Towers, complete installation		04/20/2023	

SCHEDULE	2021	2022				2023				2024				2025			
	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Planning/Permitting																	
Design																	
Execution																	
Closeout																	

ID #	RISKS	RISK RESPONSE
	Tiedown Anchor T1 – drilling impacts due to steel	T-1 anchor install complete. PSE waiting for differing site conditions claim from LBC.
	Intake Structure (north) – existing beam conflict with (1) grout hole location	PSE coordinated revised hole location with LBC. PSE waiting for co request from LBC.

assetMANAGEMENT

PUGET SOUND ENERGY

Dashboard & Results Report – February 2023 YTD
Appendix: February 2023 Financial Package

APPENDIX A:
Lower Baker Status Report

PUGET SOUND ENERGY

Note:
The following consists of the Lower Baker Dam project updates, due to the size of the project.

assetMANAGEMENT

PUGET SOUND ENERGY

Lower Baker Project Status Report

PROJECT INFORMATION			
Project Name:	LBK Grouting Program (aka Seepage Reduction)	**Executive Sponsor:**	Ron Roberts
Total Budget: (Execution Phase)	[redacted]	**Director Sponsor: Cost Center Mgr.:**	Mark Carlson Michael Likavec
Capital WO:	103007361 (internal) 103007901 (external)	**Project Manager:**	John Bickford

REPORTING SUMMARY				
Reporting Period:	02/01/2023 to 02/28/2023			
Project Status:	**Budget**	**Resources**	**Scope**	**Schedule**
				

Budget	2021	2022	2023	2024	2025	2026	Total
Projected Spend:	[redacted]						
Actual Spend:							
Cumulative Actuals to date (Execution Phase Only):							

BACKGROUND	
Objective:	Address the category II and III potential failure modes for Lower Baker Dam; primarily seepage through abutments and foundation.
Delivery Team:	**PM:** J. Bickford | **Technical:** J. Oppenheimer, N. Verretto, M. Likavec, E. Cassady | **Support:** M. Clemmer, E. Hagin
Vendors:	LBC (Contractor) | HDR (Construction Mgmt) | Shannon & Wilson (design) | Sixense (Instrumentation) | GeoEngineers (Environmental Compliance)
Stakeholders:	FERC, Baker Operations, local communities, PSE power users, ARG, BRCC, CRAG

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Lower Baker Project Status Report *(Continued)*

MAJOR UPDATES	
Current Phase:	Execution
Next Phase:	Closeout – Q1 2026
Last 30 Days:	• **Right Abutment** – LBC completed concrete backfill (~660 CY) and tensioned/locked-off three rows of tieback anchors. • **Seepage Seal** – LBC continued with tremie placement of aggregate at high flow fracture points. • **Grout Plant** – LBC commenced with mobilization/setup of grout plant equipment. • **Grout Control Room** – LBC continued with mobilization/setup of Intelli-System trailers. • **Temp Platform, Brackets** – ✓ LBC continued with assembling brackets (10ea of 12ea complete). ✓ LBC hung 7ea brackets and tensioned horizontal thru bolts (2ea per bracket). ✓ LBC drilled/consolidation grouted/re-drilled 5ea rock anchors to support fdn of bracket 'c', adjacent to right abutment concrete block • **Temp Platform, Guide Pipe Frames** – ✓ LBC commenced with receipt of materials for GPF.
Next 30 Days:	• **Seepage Seal** – Complete placement of rock/sand aggregate at "high-flow" fractures and commence with placement of 'blankets'. • **Grout Plant** – Complete mobilization/setup of grouting equipment and commence with grout batch testing. • **Grout Control Room** – Continue with setup/commissioning of Intelli-System. • **Temp Platform, Brackets** – ✓ Complete assemblage (12ea) ✓ Complete *full* installation of 10ea brackets (including hang/tension thru bolts/grout shear plate/install concrete shear bolts). • **Temp Platform, Guide Pipe Frames** – ✓ Continue receipt of GPF materials. ✓ Commence with assemblage of GPF (5ea). • **Temp Platform, Towers –** ✓ Commence receipt of tower materials
Upcoming Meetings	• PSE Team (PSE, SW, HDR) Coordination Meetings (every Monday) • PSE/FERC-PRO 'Check-in' Meetings (every other Tuesday) • Project Construction Meetings (every Thursday) • Project QC Meetings (every other Thursday) • Project Drill & Grouting Coordination Meeting (every other Thursday, opposite QC Meeting) • Scope Specific 'Preparatory' and 'Initial' Meetings (as needed)

assetMANAGEMENT

Lower Baker Project Status Report *(Continued)*

CRITICAL MILESTONES			
Critical Milestones:	**Health (G/Y/R)**	**Target Date**	**Comments**
~~Right Abutment Concrete Block~~		~~12/09/2022~~	~~Concrete block currently scheduled to be complete Feb 17.~~ *Work completed on Feb 25*
Seepage Seal Installation		02/17/2023	Currently scheduled to be complete Mar 10. *Delay does not appear to affect overall project schedule.*
Temp Platform, Brackets, complete installation		03/18/2023	
Grout Control Room (Intelli-System), complete setup		03/21/2023	Includes networking and individual working stations
Grout Plant, complete equipment mob/setup		03/21/2023	
Temp Platform, Guide Pipe Frames, complete installation		04/14/2023	
Temp Platform, Towers, complete installation		04/24/2023	

SCHEDULE	2021	2022				2023				2024				2025			
	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Planning/Permitting																	
Design																	
Execution																	
Closeout																	

ID #	RISKS	RISK RESPONSE
	Tiedown Anchor T1 – drilling impacts due to steel	T-1 anchor install complete. PSE waiting for differing site conditions claim from LBC.
	Intake Structure (north) – existing beam conflict with (1) grout hole location	PSE coordinated revised hole location with LBC. PSE waiting for co request from LBC.

assetMANAGEMENT

PUGET SOUND ENERGY

Dashboard & Results Report – March 2023 YTD
Appendix: March 2023 Financial Package

APPENDIX A:
Lower Baker Status Report

PUGET SOUND ENERGY

Note:
The following consists of the Lower Baker Dam project updates, due to the size of the project.

assetMANAGEMENT

PUGET SOUND ENERGY

Lower Baker Project Status Report

PROJECT INFORMATION			
Project Name:	LBK Grouting Program (aka Seepage Reduction)	**Executive Sponsor:**	Ron Roberts
Total Budget: (Execution Phase)	[redacted]	**Director Sponsor: Cost Center Mgr.:**	Mark Carlson Michael Likavec
Capital WO:	103007361 (internal) 103007901 (external)	**Project Manager:**	John Bickford

REPORTING SUMMARY				
Reporting Period:	03/01/2023 to 04/04/2023			
Project Status:	**Budget**	**Resources**	**Scope**	**Schedule**
				

Budget	Previous Years	2021	2022	2023	2024	2025	Total
Projected Spend:	[redacted]						
Actual Spend:							
Cumulative Actuals to date:							

BACKGROUND	
Objective:	Address the category II and III potential failure modes for Lower Baker Dam; primarily seepage through abutments and foundation.
Delivery Team:	**PM:** J. Bickford | **Technical:** J. Oppenheimer, N. Verretto, M. Likavec, E. Cassady | **Support:** M. Clemmer
Vendors:	LBC (Contractor) | HDR (Construction Mgmt) | Shannon & Wilson (design) | Sixense (Instrumentation) | GeoEngineers (Environmental Compliance)
Stakeholders:	FERC, Baker Operations, local communities, PSE power users, ARG, BRCC, CRAG

assetMANAGEMENT

PUGET SOUND ENERGY

Lower Baker Project Status Report *(Continued)*

MAJOR UPDATES	
Current Phase:	Execution
Next Phase:	Closeout – Q4 2025
Last 30 Days:	• **Intake Structure –** ✓ LBC installed 1ea 'relocated' guide pipe assemblage during PSE outage. Relocation due to conflict with original design location. • **Seepage Seal –** ✓ LBC completed aggregate placement at "high-flow" fractures. ✓ LBC installed 17ea concrete blankets. Area covered ~4,800 sf (40' wide x 120' high). • **Grout Plant –** ✓ LBC completed mobilization of grout plant equipment and commence with commissioning. • **Grout Control Room –** ✓ LBC completed mobilization/setup of Intelli-System trailers and commenced with development of Intelli-System program. • **Temp Platform, Brackets –** ✓ LBC hung 3ea brackets and tensioned thru bolts (10ea of 12ea complete). ✓ LBC grouted base shear plates and installed shear bolts at 7ea brackets (7ea of 12ea complete). • **Temp Platform, Guide Pipe Frames –** ✓ LBC assembled 17ea guide frames (17ea of 56ea, 31% complete). ✓ LBC hung 8ea guide frames (8ea of 56ea, 14% complete). • **Schedule/Submittal/RFI/NCR Review** ✓ PSE completed review and comment of various LBC equipment and construction work plans, periodic schedules, rfi's and ncr's.
Next 30 Days:	• **Seepage Seal –** ✓ Complete placement of concrete blankets (remaining area ~ 1,650 sf) • **Grout Plant –** ✓ Complete commissioning of grouting equipment and commence with grout batch testing. • **Grout Control Room –** ✓ Continue with setup/commissioning of Intelli-System. • **Temp Platform, Brackets –** ✓ Complete installation of Bracket B (including hang/tension thru bolts/grout shear plate/install concrete shear bolts). • **Temp Platform, Guide Pipe Frames –** ✓ Assemble 17ea GPF (34ea of 56ea, 61% complete). ✓ Hang 10ea GPF (18ea of 56ea, 32% complete).

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PUGET SOUND ENERGY

Lower Baker Project Status Report *(Continued)*

	• **Schedule/Submittal/RFI/NCR Review** ✓ PSE review and comment of various LBC equipment and construction work plans, updated periodic schedules, rfi's and ncr's.
Upcoming Meetings	• PSE Team (PSE, SW, HDR) Coordination Meetings (every Monday) • PSE/FERC-PRO 'Check-in' Meetings (every other Tuesday) • Project Construction Meetings (every Thursday) • Project QC Meetings (every other Friday) • Project Drill & Grouting Coordination Meeting (every Thursday after Project Construction Meeting) • Scope Specific 'Preparatory' and 'Initial' Meetings (as needed)

CRITICAL MILESTONES

Critical Milestones:	Health (G/Y/R)	Target Date	Comments
Seepage Seal Installation		02/17/2023	Currently scheduled to be complete Apr 30. *Delay may impact overall project schedule. Currently being evaluated.*
Temp Platform, Brackets, complete installation		03/18/2023	Currently scheduled to be completed late April. *Delay does not appear to affect overall project schedule.*
Temp Platform, Guide Frames, complete installation		05/22/2023	
Temp Platform, Towers, complete installation		05/23/2023	
Temp Platform, Stringers, complete installation		06/02/2023	
Grout Plant, Commissioning and batch testing		06/22/2023	
Temp Platform, decking, drainage system		08/07/2023	

SCHEDULE	2021	2022				2023				2024				2025			
	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Planning/Permitting																	
Design																	
Execution																	

assetMANAGEMENT

PUGET SOUND ENERGY

Dashboard & Results Report – April 2023 YTD
Appendix: April 2023 Financial Package

APPENDIX A:
Lower Baker Status Report

PUGET SOUND ENERGY

Note:
The following consists of the Lower Baker Dam project updates, due to the size of the project.

assetMANAGEMENT

PUGET SOUND ENERGY

Lower Baker Project Status Report

PROJECT INFORMATION			
Project Name:	LBK Grouting Program (aka Seepage Reduction Project)	**Executive Sponsor:**	Ron Roberts
Total Budget:	[redacted]	**Director Sponsor:** **Cost Center Mgr.:**	Mark Carlson Michael Likavec
Capital WO:	103007361 (internal) 103007901 (external)	**Project Manager:**	John Bickford

REPORTING SUMMARY				
Reporting Period:	04/05/2023 to 05/02/2023			
Project Status:	**Budget**	**Resources**	**Scope**	**Schedule**
	🟡	🟢	🟢	🟡

Budget	Previous Years	2021	2022	2023	2024	2025	Total
Projected Spend:	[redacted]						
Actual Spend:							
Cumulative Actuals to date:							

BACKGROUND	
Objective:	Address the category II and III potential failure modes for Lower Baker Dam; primarily seepage through abutments and foundation.
Delivery Team:	**PM:** J. Bickford | **Technical:** J. Oppenheimer, N. Verretto, M. Likavec, E. Cassady | **Support:** M. Clemmer
Vendors:	LBC (Contractor) | HDR (Construction Mgmt) | Shannon & Wilson (design) | Sixense (Instrumentation) | GeoEngineers (Environmental Compliance)
Stakeholders:	FERC, Baker Operations, local communities, PSE power users, ARG, BRCC, CRAG

assetMANAGEMENT

PUGET SOUND ENERGY

Lower Baker Project Status Report *(Continued)*

MAJOR UPDATES	
Current Phase:	Execution
Next Phase:	Closeout – Q1 2026
Last 30 Days:	• **Grout Plant** – ✓ LBC completed commissioning of grout plant (1 of 2) and commenced with batch testing add mixtures. • **Grout Control Room** – ✓ LBC continued development of Intelli-System program. • **Temp Platform, Brackets** – ✓ LBC hung 1ea bracket and tensioned thru bolts (11ea of 12ea, 92% complete). ✓ LBC grouted base shear plates and installed shear bolts at 5ea brackets (12ea of 12ea, 100% complete). • **Temp Platform, Guide Pipe Frames** – ✓ LBC assembled 14ea guide frames (31ea of 56ea, 55% complete). ✓ LBC hung 12ea guide frames (20ea of 56ea, 36% complete). ✓ LBC hung 6ea single guide pipes adjacent to exist sluice gates (6ea of 12ea, 50% complete). • **Temp Platform, Towers –** ✓ LBC assembled and installed 1ea tower (1ea of 5ea, 20% complete). • **Temp Platform, Stringers –** ✓ LBC installed 8ea stringers (8ea of 55ea, 15% complete). • **Schedule/Submittal/RFI/NCR Review** ✓ PSE completed review and comment of various LBC equipment and construction work plans, periodic schedules, rfi's and ncr's.
Next 30 Days:	• **Seepage Seal** – ✓ Complete placement of geotextile membrane at interface of dam and concrete blankets. • **Grout Plant** – ✓ Continue with test batching add mixtures and commence with grout mix testing. • **Grout Control Room** – ✓ Continue with development of Intelli-System program. • **Temp Platform, Guide Pipe Frames** – ✓ Assemble 16ea GPF (47ea of 56ea, 84% complete). ✓ Hang 16ea GPF (36ea of 56ea, 64% complete). ✓ Hang 6ea single guide pipes, at exist sluice gates (12ea of 12ea, 100% complete)

	• **Temp Platform, Decking –** ✓ Install timber decking (2,000sf of 13,000sf, 15% complete). • **Schedule/Submittal/RFI/NCR Review** ✓ PSE review and comment of various LBC equipment and construction work plans, updated periodic schedules, rfi's and ncr's.
Upcoming Meetings	• PSE Team (PSE, SW, HDR) Coordination Meetings (every Monday) • PSE Project & Baker Group Internal Coordination Meetings (every Monday) • PSE/FERC-PRO 'Check-in' Meetings (every other Tuesday) • Project Construction Meetings & Project Drill and Grouting Meetings (every Thursday) • Project QC Meetings (every other Friday) • Project Scheduling Meeting (first Tuesday of each month) • Scope Specific 'Preparatory' and 'Initial' Meetings (as needed) • ***FERC / BOC Site Visit – June 6, 2023***

CRITICAL MILESTONES			
Critical Milestones:	**Health (G/Y/R)**	**Target Date**	**Comments**
Seepage Seal Installation		02/17/2023	Currently scheduled to be complete May 30. *Delay may impact overall project schedule. Currently being evaluated.*
Temp Platform, Brackets, complete installation		03/18/2023	Currently scheduled to be completed mid-May. *Delay does not appear to affect overall project schedule.*
Temp Platform, Guide Frames, complete installation		05/22/2023	
Temp Platform, Towers, complete installation		05/23/2023	
Temp Platform, Stringers, complete installation		06/02/2023	
Grout Plant, Commissioning and batch testing		06/22/2023	
Temp Platform, decking, drainage system		08/07/2023	

assetMANAGEMENT

PUGET SOUND ENERGY

Dashboard & Results Report – May 2023 YTD
Appendix: May 2023 Financial Package

APPENDIX A:
Lower Baker Status Report

PUGET SOUND ENERGY

Note:
The following consists of the Lower Baker Dam project updates, due to the size of the project.

assetMANAGEMENT

PUGET SOUND ENERGY

Lower Baker Project Status Report

PROJECT INFORMATION			
Project Name:	LBK Grouting Program (aka Seepage Reduction Project)	**Executive Sponsor:**	Ron Roberts
Total Budget:	[redacted]	**Director Sponsor:** **Cost Center Mgr.:**	Mark Carlson Michael Likavec
Capital WO:	103007361 (internal) 103007901 (external) 103007362 (BOC)	**Project Manager:**	John Bickford

REPORTING SUMMARY				
Reporting Period:	05/03/2023 to 06/06/2023			
Project Status:	**Budget**	**Resources**	**Scope**	**Schedule**
	🟡	🟢	🟢	🟡

Budget	Previous Years	2021	2022	2023	2024	2025	Total
Projected Spend:	[redacted]						
Actual Spend:							
Cumulative Actuals to date:							

BACKGROUND	
Objective:	Address the category II and III potential failure modes for Lower Baker Dam; primarily seepage through abutments and foundation.
Delivery Team:	**PM:** J. Bickford | **Technical:** J. Oppenheimer, N. Verretto, M. Likavec, E. Cassady | **Support:** M. Clemmer
Vendors:	LBC (Contractor) | HDR (Construction Mgmt) | Shannon & Wilson (design) | Sixense (Instrumentation) | GeoEngineers (Environmental Compliance)
Stakeholders:	FERC, Baker Operations, local communities, PSE power users, ARG, BRCC, CRAG

assetMANAGEMENT

PUGET SOUND ENERGY

Lower Baker Project Status Report *(Continued)*

MAJOR UPDATES	
Current Phase:	Execution
Next Phase:	Closeout – Q1 2026
Last 30 Days:	• **Grout Plant** – ✓ LBC continued with mobilizing and equipment setup. ✓ LBC completed commissioning of 1ea of 2ea grout plants. ✓ LBC commenced with commissioning various drilling/grouting equipment (i.e. calibrating, connectivity to IntelliSystem). ✓ LBC completed grout test batching for all mixes (A thru L), including 'kill' grouts and 'sanded' grouts. • **Grout Control Room** – ✓ LBC continued development of Intelli-System program. • **Temp Platform, Brackets** – ✓ LBC hung 1ea bracket and tensioned thru bolts (12ea of 12ea, 100% complete). • **Temp Platform, Guide Pipe Frames** – ✓ LBC assembled 25ea guide frames (56ea of 56ea, 100% complete). ✓ LBC hung 36ea guide frames (56ea of 56ea, 100% complete). ✓ LBC hung 6ea single guide pipes adjacent to exist sluice gates (12ea of 12ea, 100% complete). ✓ LBC commenced with installation of turnbuckles (attaching guide frames to dam). • **Temp Platform, Towers –** ✓ LBC assembled and installed 3ea tower (4ea of 6ea, 67% complete). • **Schedule/Submittal/RFI/NCR Review** ✓ PSE completed review and comment of various LBC equipment and construction work plans, periodic schedules, rfi's and ncr's. • **FERC / BOC Site Visit**
Next 30 Days:	• **Grout Plant** – ✓ LBC to complete commissioning of second grout plant. ✓ LBC to continue commissioning various drilling equipment. • **Grout Control Room** – ✓ Continue with development of Intelli-System program. • **Temp Platform, Guide Pipe Frames** – ✓ LBC to complete installation of turnbuckles (attaching guide frames to dam).

assetMANAGEMENT

PUGET SOUND ENERGY

Lower Baker Project Status Report *(Continued)*

	• **Temp Platform, Towers –** ✓ LBC assemble and install 2ea towers (6ea of 6ea, 1000% complete). • **Temp Platform, Stringers –** ✓ LBC is install 20ea stringers (28ea of 55ea, 51% complete). • **Temp Platform, Decking –** ✓ Install timber decking (6,000sf of 13,000sf, 46% complete). • **Drilling & Grouting** ✓ LBC to commence with test drill and grout program. • **Schedule/Submittal/RFI/NCR Review** ✓ PSE review and comment of various LBC equipment and construction work plans, updated periodic schedules, rfi's and ncr's.
Upcoming Meetings	• PSE Team (PSE, SW, HDR) Coordination Meetings (every Monday) • PSE Project & Baker Group Internal Coordination Meetings (every Monday) • PSE/FERC-PRO 'Check-in' Meetings (every other Tuesday) • Project Construction Meetings & Project Drill and Grouting Meetings (every Thursday) • Project QC Meetings (every other Friday) • Project Scheduling Meeting (first Tuesday of each month) • Scope Specific 'Preparatory' and 'Initial' Meetings (as needed)

CRITICAL MILESTONES

Critical Milestones:	Health (G/Y/R)	Target Date	Comments
Seepage Seal Installation		02/17/2023	Currently scheduled to be complete July 30. *Scope has been revised/reduced. Delay does not appear to impact overall project schedule.*
~~Temp Platform, Brackets, complete installation~~		~~03/18/2023~~	Scope complete
~~Temp Platform, Guide Frames, complete installation~~		~~05/22/2023~~	Scope complete
Temp Platform, Towers, complete installation		05/23/2023	Currently scheduled to be complete June 6 *Delay does not appear to affect overall project schedule*
Temp Platform, Stringers, complete installation		07/02/2023	

asset**MANAGEMENT**

PUGET SOUND ENERGY

Dashboard & Results Report – June 2023 YTD
Appendix: June 2023 Financial Package

APPENDIX A:
Lower Baker Status Report

PUGET SOUND ENERGY

Note:
The following consists of the Lower Baker Dam project updates, due to the size of the project.

assetMANAGEMENT

PUGET SOUND ENERGY

Lower Baker Project Status Report

PROJECT INFORMATION			
Project Name:	LBK Grouting Program (aka Seepage Reduction Project)	**Executive Sponsor:**	Ron Roberts
Total Budget:	[redacted]	**Director Sponsor:** **Cost Center Mgr.:**	Mark Carlson Michael Likavec
Capital WO:	103007361 (internal) 103007901 (external) 103007362 (BOC)	**Project Manager:**	John Bickford

REPORTING SUMMARY				
Reporting Period:	06/07/2023 to 07/04/2023			
Project Status:	**Budget**	**Resources**	**Scope**	**Schedule**
	🟡	🟢	🟡	🟡

Budget	Previous Years	2021	2022	2023	2024	2025	Total
Projected Spend:	[redacted]						
Actual Spend:							
Cumulative Actuals to date:							

BACKGROUND	
Objective:	Address the category II and III potential failure modes for Lower Baker Dam; primarily seepage through abutments and foundation.
Delivery Team:	**PM:** J. Bickford | **Technical:** J. Oppenheimer (enviro), M. Likavec (dam safety), E. Cassady & N. Dbaibo (instrumentation & monitoring)
Vendors:	LBC (Contractor) | HDR (Construction Mgmt) | Shannon & Wilson (design) | Sixense (Instrumentation) | GeoEngineers (Environmental Compliance)
Stakeholders:	FERC, Baker Operations, local communities, PSE power users, ARG, BRCC, CRAG

assetMANAGEMENT

PUGET SOUND ENERGY

Lower Baker Project Status Report *(Continued)*

MAJOR UPDATES	
Current Phase:	Execution
Next Phase:	Closeout – Q1 2026
Last 30 Days:	• **Agency Site Visits** ✓ Conducted FERC & Board of Consultant Site Visit on June 06. ✓ Conducted Dept of Ecology Site Visit on June 12. • **Grout Plant** – ✓ LBC completed commissioning of second grout plant (2ea of 2ea, 100% complete). ✓ LBC continued commissioning various drilling/grouting equipment (i.e. calibrating and connectivity to IntelliSystem). • **Grout Control Room** – ✓ LBC continued development of Intelli-System program. • **Temp Platform, Guide Pipe Frames** – ✓ LBC continued with installation of turnbuckles (attaching guide frames to dam). Approx. 65% complete. ✓ LBC installed 90ea guide pipe extensions (108ea of 108ea, 100% complete). • **Temp Platform, Towers –** ✓ LBC assembled and installed 2ea tower (6ea of 6ea, 100% complete). • **Temp Platform, Stringers –** ✓ LBC installed 40ea stringers (48ea of 55ea, 94% complete). • **Temp Platform, Decking –** ✓ LBC installed 4ea deck panels (4ea of 42ea, 10% complete). • **Temp Platform, Dam Demolition** ✓ LBC completed relocating electrical and communication services (to applicable spill gates). • **Drilling & Grouting, Test Program** ✓ LBC commenced with drill/grout test program. Test Program includes drilling and grouting of 3ea production holes at left abutment. ✓ LBC completed (3) stages (~30 feet) in two holes and (1) stage (~10 feet) in one hole. • **Schedule/Submittal/RFI/NCR Review** ✓ PSE completed review and comment of various LBC equipment and construction work plans, periodic schedules, rfi's and ncr's.
Next 30 Days:	• **Grout Plant** – ✓ LBC to mobilize and setup second cement silo. • **Grout Control Room** – ✓ LBC to complete development of Intelli-System program. • **Temp Platform, Guide Pipe Frames** –

	✓ LBC to continue with installation of turnbuckles (attaching guide frames to dam). Target 90% complete. • **Temp Platform, Stringers –** ✓ LBC to install 7ea stringers (55ea of 55ea, 100% complete). • **Temp Platform, Decking –** ✓ LBC to install 38ea deck panels (42ea of 42ea, 100% complete). • **Temp Platform, Dam Demolition –** ✓ LBC commence and complete demolition of north parapet wall. • **Drilling & Grouting** ✓ LBC to complete 10 stages in all (3) test holes at left abutment. • **Schedule/Submittal/RFI/NCR Review** ✓ PSE review and comment of various LBC equipment and construction work plans, updated periodic schedules, rfi's and ncr's.
Upcoming Meetings	• PSE Team (PSE, SW, HDR) Coordination Meetings (every Monday) • PSE Project & Baker Group Internal Coordination Meetings (every Monday) • PSE/FERC-PRO 'Check-in' Meetings (every other Tuesday) • Project Construction Meetings & Project Drill and Grouting Meetings (every Thursday) • Project QC Meetings (every other Friday) • Project Scheduling Meeting (first Tuesday of each month) • Scope Specific 'Preparatory' and 'Initial' Meetings (as needed)

CRITICAL MILESTONES			
Critical Milestones:	**Health (G/Y/R)**	**Target Date**	**Comments**
Seepage Seal Installation		02/17/2023	Currently scheduled to be complete July 30. *Scope has been revised/reduced. Delay does not appear to impact overall project schedule.*
~~Temp Platform, Towers, complete installation~~		~~05/23/2023~~	~~Currently scheduled to be complete June 6~~ – ***item complete***
~~Temp Platform, Stringers, complete installation~~		~~07/02/2023~~	***Item complete.***
~~Grout Plant, Commissioning and batch testing~~		~~06/22/2023~~	***Item complete.***
Temp Platform, decking, drainage system		08/07/2023	

asset MANAGEMENT

PUGET SOUND ENERGY

Dashboard & Results Report – July 2023 YTD
Appendix: July 2023 Financial Package

APPENDIX A:
Lower Baker Status Report

PUGET SOUND ENERGY

Note:
The following consists of the Lower Baker Dam project updates, due to the size of the project.

assetMANAGEMENT

PUGET SOUND ENERGY

Lower Baker Project Status Report

PROJECT INFORMATION			
Project Name:	LBK Grouting Program (aka Seepage Reduction Project)	**Executive Sponsor:**	Ron Roberts
Total Budget:	[redacted]	**Director Sponsor:** **Cost Center Mgr.:**	Mark Carlson Michael Likavec
Capital WO:	103007361 (internal) 103007901 (external) 103007362 (BOC)	**Project Manager:**	John Bickford

REPORTING SUMMARY				
Reporting Period:	06/07/2023 to 07/04/2023			
	Budget	**Resources**	**Scope**	**Schedule**
Project Status:				

Budget	Previous Years	2021	2022	2023	2024	2025	Total
Projected Spend:	[redacted]						
Actual Spend:							
Cumulative Actuals to date:							

BACKGROUND	
Objective:	Address the category II and III potential failure modes for Lower Baker Dam; primarily seepage through abutments and foundation.
Delivery Team:	**PM:** J. Bickford | **Technical:** J. Oppenheimer (enviro), M. Likavec (dam safety), E. Cassady & N. Dbaibo (instrumentation & monitoring)
Vendors:	LBC (Contractor) | HDR (Construction Mgmt) | Shannon & Wilson (design) | Sixense (Instrumentation) | GeoEngineers (Environmental Compliance)
Stakeholders:	FERC, Baker Operations, local communities, PSE power users, ARG, BRCC, CRAG

assetMANAGEMENT

PUGET SOUND ENERGY

Lower Baker Project Status Report *(Continued)*

MAJOR UPDATES	
Current Phase:	Execution
Next Phase:	Closeout – Q1 2026
Last 30 Days:	• **Agency Site Visits** ✓ Conducted FERC & Board of Consultant Site Visit on June 06. ✓ Conducted Dept of Ecology Site Visit on June 12. • **Grout Plant** – ✓ LBC completed commissioning of second grout plant (2ea of 2ea, 100% complete). ✓ LBC continued commissioning various drilling/grouting equipment (i.e. calibrating and connectivity to IntelliSystem). • **Grout Control Room** – ✓ LBC continued development of Intelli-System program. • **Temp Platform, Guide Pipe Frames** – ✓ LBC continued with installation of turnbuckles (attaching guide frames to dam). Approx. 65% complete. ✓ LBC installed 90ea guide pipe extensions (108ea of 108ea, 100% complete). • **Temp Platform, Towers –** ✓ LBC assembled and installed 2ea tower (6ea of 6ea, 100% complete). • **Temp Platform, Stringers –** ✓ LBC installed 40ea stringers (48ea of 55ea, 94% complete). • **Temp Platform, Decking –** ✓ LBC installed 4ea deck panels (4ea of 42ea, 10% complete). • **Temp Platform, Dam Demolition** ✓ LBC completed relocating electrical and communication services (to applicable spill gates). • **Drilling & Grouting, Test Program** ✓ LBC commenced with drill/grout test program. Test Program includes drilling and grouting of 3ea production holes at left abutment. ✓ LBC completed (3) stages (~30 feet) in two holes and (1) stage (~10 feet) in one hole. • **Schedule/Submittal/RFI/NCR Review** ✓ PSE completed review and comment of various LBC equipment and construction work plans, periodic schedules, rfi's and ncr's.
Next 30 Days:	• **Grout Plant** – ✓ LBC to mobilize and setup second cement silo. • **Grout Control Room** – ✓ LBC to complete development of Intelli-System program. • **Temp Platform, Guide Pipe Frames** –

assetMANAGEMENT

PUGET SOUND ENERGY

Lower Baker Project Status Report *(Continued)*

	✓ LBC to continue with installation of turnbuckles (attaching guide frames to dam). Target 90% complete. • **Temp Platform, Stringers –** ✓ LBC to install 7ea stringers (55ea of 55ea, 100% complete). • **Temp Platform, Decking –** ✓ LBC to install 38ea deck panels (42ea of 42ea, 100% complete). • **Temp Platform, Dam Demolition –** ✓ LBC commence and complete demolition of north parapet wall. • **Drilling & Grouting** ✓ LBC to complete 10 stages in all (3) test holes at left abutment. • **Schedule/Submittal/RFI/NCR Review** ✓ PSE review and comment of various LBC equipment and construction work plans, updated periodic schedules, rfi's and ncr's.
Upcoming Meetings	• PSE Team (PSE, SW, HDR) Coordination Meetings (every Monday) • PSE Project & Baker Group Internal Coordination Meetings (every Monday) • PSE/FERC-PRO 'Check-in' Meetings (every other Tuesday) • Project Construction Meetings & Project Drill and Grouting Meetings (every Thursday) • Project QC Meetings (every other Friday) • Project Scheduling Meeting (first Tuesday of each month) • Scope Specific 'Preparatory' and 'Initial' Meetings (as needed)

CRITICAL MILESTONES

Critical Milestones:	Health (G/Y/R)	Target Date	Comments
Seepage Seal Installation		02/17/2023	Currently scheduled to be complete July 30. *Scope has been revised/reduced. Delay does not appear to impact overall project schedule.*
~~Temp Platform, Towers, complete installation~~		~~05/23/2023~~	~~Currently scheduled to be complete June 6~~ – ***item complete***
~~Temp Platform, Stringers, complete installation~~		~~07/02/2023~~	***Item complete.***
~~Grout Plant, Commissioning and batch testing~~		~~06/22/2023~~	***Item complete.***
Temp Platform, decking, drainage system		08/07/2023	

asset**MANAGEMENT**

PUGET SOUND ENERGY

Dashboard & Results Report – August 2023 YTD
Appendix: August 2023 Financial Package

APPENDIX A:
Lower Baker Status Report

PUGET SOUND ENERGY

Note:
The following consists of the Lower Baker Dam project updates, due to the size of the project.

assetMANAGEMENT

PUGET SOUND ENERGY

Lower Baker Project Status Report

PROJECT INFORMATION			
Project Name:	LBK Grouting Program (aka Seepage Reduction Project)	**Executive Sponsor:**	Ron Roberts
Total Budget:	[redacted]	**Director Sponsor:** **Cost Center Mgr.:**	Mark Carlson Michael Likavec
Capital WO:	103007361 (internal) 103007901 (external) 103007362 (BOC)	**Project Manager:**	John Bickford

REPORTING SUMMARY				
Reporting Period:	08/02/2023 to 09/05/2023			
	Budget	**Resources**	**Scope**	**Schedule**
Project Status:	🟡	🟢	🟡	🟡

Budget	Previous Years	2021	2022	2023	2024	2025	Total
Projected Spend:	[redacted]						
Actual Spend:							
Cumulative Actuals to date:							

BACKGROUND	
Objective:	Address the category II and III potential failure modes for Lower Baker Dam; primarily seepage through abutments and foundation.
Delivery Team:	**PM:** J. Bickford | **Technical:** J. Oppenheimer (enviro), M. Likavec (dam safety), E. Cassady & N. Dbaibo (instrumentation & monitoring)
Vendors:	LBC (Contractor) | HDR (Construction Mgmt) | Shannon & Wilson (design) | Sixense (Instrumentation) | GeoEngineers (Environmental Compliance)
Stakeholders:	FERC, Baker Operations, local communities, PSE power users, ARG, BRCC, CRAG

assetMANAGEMENT

PUGET SOUND ENERGY

Lower Baker Project Status Report *(Continued)*

MAJOR UPDATES	
Current Phase:	Execution
Next Phase:	Closeout – Q1 2026
Last 30 Days:	• **Temp Platform, Guide Pipe Frames –** ✓ LBC completed installation of turnbuckles (attaching guide frames to dam). • **Temp Platform, Decking –** ✓ LBC completed installation of water proofing membrane and rubber matting. ✓ LBC completed installation of perimeter spoils trough and drainage collection system. • **Drilling & Grouting** ✓ LBC completed Drill & Grout Test Program and moved into Phase 2B, Drill & Grout Production. ✓ LBC continued drilling, grouting (and re-grouting) in Zone 1. ✓ LBC commenced with installation of riser pipes and debris grouting in Zone 5. ✓ LBC continued installing riser pipes in Zone 8.
Next 30 Days:	• **Drilling & Grouting** ✓ Continue production drilling and grouting.
Upcoming Meetings	• 2nd Project Partnering Meeting – Sept 07, 1 pm to 4 pm at PSE Skagit Service Center • Owner Team (PSE, SW, HDR) Coordination Meetings (every Monday) • PSE/FERC 'Check-in' Meetings (every other Tuesday) • Project Construction Coordination Meeting (PSE, LBC, HDR, SW) (every Thursday)

Lower Baker Project Status Report *(Continued)*

CRITICAL MILESTONES			
Critical Milestones:	**Health (G/Y/R)**	**Target Date**	**Comments**
~~Temp Platform, decking, drainage system~~		~~08/12/2023~~	Platform completed on time.
~~Start Phase 2B, Drilling & Grouting~~		~~08/14/2023~~	Phase 2B commenced August 14
~~Install Riser Pipes in Right Abutment, Zone 8 (step 1A)~~		~~09/02/2023~~	Riser pipes installation complete
Install Riser Pipes at Left Abutment, Zones 1, 2, 3 (step 2A)		09/23/2023	
Grout SCC at Left Abutment (step 1B)		10/17/2023	
Grout SCC at Right Abutment (step 1A)		10/31/2023	

asset MANAGEMENT

PUGET SOUND ENERGY

Dashboard & Results Report – September 2023 YTD
Appendix: September 2023 Financial Package

APPENDIX A:
Lower Baker Status Report

PUGET SOUND ENERGY

Note:
The following consists of the Lower Baker Dam project updates, due to the size of the project.

assetMANAGEMENT

PUGET SOUND ENERGY

Lower Baker Project Status Report

PROJECT INFORMATION			
Project Name:	LBK Grouting Program (aka Seepage Reduction Project)	**Executive Sponsor:**	Ron Roberts
Total Budget:	[redacted]	**Director Sponsor:** **Cost Center Mgr.:**	Mark Carlson Michael Likavec
Capital WO:	103007361 (internal) 103007901 (external) 103007362 (BOC)	**Project Manager:**	John Bickford

REPORTING SUMMARY				
Reporting Period:	09/06/2023 to 10/05/2023			
	Budget	**Resources**	**Scope**	**Schedule**
Project Status:				

Budget	Previous Years	2021	2022	2023	2024	2025	Total
Projected Spend:	[redacted]						
Actual Spend:							
Cumulative Actuals to date:							

BACKGROUND	
Objective:	Address the category II and III potential failure modes for Lower Baker Dam; primarily seepage through abutments and foundation.
Delivery Team:	**PM:** J. Bickford | **Technical:** J. Oppenheimer (enviro), M. Likavec (dam safety), E. Cassady & N. Dbaibo (instrumentation & monitoring)
Vendors:	LBC (Contractor) | HDR (Construction Mgmt) | Shannon & Wilson (design) | Sixense (Instrumentation) | GeoEngineers (Environmental Compliance)
Stakeholders:	FERC, Baker Operations, local communities, PSE power users, ARG, BRCC, CRAG

assetMANAGEMENT

PUGET SOUND ENERGY

Lower Baker Project Status Report *(Continued)*

MAJOR UPDATES	
Current Phase:	Execution
Next Phase:	Closeout – Q1 2026
Last 30 Days:	• **Marine Demobilization** ✓ LBC commenced with demobilizing marine equipment not needed during drill & grout phase. • **Drilling & Grouting** ✓ LBC continued drilling and grouting in Zone 1. ✓ LBC continued installing riser pipes and forebay debris grouting in Zones 5 and 6. ✓ LBC commenced with installing riser pipes in Zone 2 ✓ LBC commenced with working 24-hour shifts, 6 days per week (as of Sept 25)
Next 30 Days:	• **Marine Demobilization** ✓ LBC complete demobilizing marine equipment not needed during drill & grout phase. • **Drilling & Grouting** ✓ LBC continue drilling and grouting in Zone 1. ✓ LBC complete installation of riser pipes and commence with construction of Seepage Cutoff Cap (SCC) in Zone 2. ✓ LBC continue installing riser pipes and forebay debris grouting in Zones 5 and 6. ✓ LBC recommence installing riser pipes and commence with SCC construction in Zone 8.
Upcoming Meetings	• Owner Team (PSE, SW, HDR) Coordination Meetings (every Monday) • PSE/FERC 'Check-in' Meetings (every other Tuesday) • Project Construction Coordination Meeting (PSE, LBC, HDR, SW) (every Thursday)

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PUGET SOUND ENERGY

Lower Baker Project Status Report *(Continued)*

CRITICAL MILESTONES			
Critical Milestones:	**Health (G/Y/R)**	**Target Date**	**Comments**
~~Install Riser Pipes at Left Abutment, Zones 1 and 2~~		~~09/23/2023~~	Completed on Sept 30
Grout SCC at Left Abutment (step 1B)		10/17/2023	
Grout SCC at Right Abutment (step 1A)		10/31/2023	
Forebay Debris Grouting (step 2A)		11/18/2023	

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Dashboard & Results Report – October 2023 YTD
Appendix: October 2023 Financial Package

APPENDIX A:
Lower Baker Status Report

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Note:
The following consists of the Lower Baker Dam project updates, due to the size of the project.

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Lower Baker Project Status Report

PROJECT INFORMATION			
Project Name:	LBK Grouting Program (aka Seepage Reduction Project)	**Executive Sponsor:**	Ron Roberts
Total Budget:	[redacted]	**Director Sponsor:** **Cost Center Mgr.:**	Mark Carlson Michael Likavec
Capital WO:	103007361 (internal) 103007901 (external) 103007362 (BOC)	**Project Manager:**	John Bickford

REPORTING SUMMARY				
Reporting Period:	10/01/2023 to 10/31/2023			
	Budget	**Resources**	**Scope**	**Schedule**
Project Status:				

Budget	Previous Years	2021	2022	2023	2024	2025	Total
Projected Spend:	[redacted]						
Actual Spend:							
Cumulative Actuals to date:							

BACKGROUND	
Objective:	Address the category II and III potential failure modes for Lower Baker Dam; primarily seepage through abutments and foundation.
Delivery Team:	**PM:** J. Bickford | **Technical:** J. Oppenheimer (enviro), M. Likavec (dam safety), E. Cassady & N. Dbaibo (instrumentation & monitoring)
Vendors:	LBC (Contractor) | HDR (Construction Mgmt) | Shannon & Wilson (design) | Sixense (Instrumentation) | GeoEngineers (Environmental Compliance)
Stakeholders:	FERC, Baker Operations, local communities, PSE power users, ARG, BRCC, CRAG

Lower Baker Project Status Report *(Continued)*

MAJOR UPDATES	
Current Phase:	Execution
Next Phase:	Closeout – Q1 2026
Last 30 Days:	• **Marine Demobilization** ✓ LBC completed demobilization of marine equipment not needed during drill & grout phase. • **Drilling & Grouting** ✓ LBC continued drilling and grouting in Zone 1. ✓ LBC completed installation of riser pipes in Zones 2 and 3 and commenced with Seepage Cutoff Cap (SCC) grouting. ✓ LBC continued installing riser pipes and forebay debris grouting in Zones 4, 5 and 6. ✓ LBC continued installing riser pipes and commenced with SCC grouting in Zone 8.
Next 30 Days:	• **Drilling & Grouting** ✓ LBC continue drilling and grouting in Zone 1. ✓ LBC continue Seepage Cutoff Cap (SCC) grouting in Zones 2 and 3. ✓ LBC continue installing riser pipes grouting in Zones 4, 5 and 6 and commence with SCC grouting. ✓ LBC to commence with installing riser pipes in Zone 7. ✓ LBC continue installing riser pipes and SCC grouting in Zone 8.
Upcoming Meetings	• Owner Team (PSE, SW, HDR) Coordination Meetings (every Tuesday) • PSE/FERC 'Check-in' Meetings (every other Tuesday) • Project Construction Coordination Meeting (PSE, LBC, HDR, SW) (every Thursday) • Bi-Monthly Project Status Meeting with FERC and BOC (Nov 21)

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PUGET SOUND ENERGY

Lower Baker Project Status Report *(Continued)*

CRITICAL MILESTONES			
Critical Milestones:	**Health (G/Y/R)**	**Target Date**	**Comments**
Grout SCC at Left Abutment (step 1B)		10/17/2023	Currently 85% complete // Anticipated completed 11/30/23
Grout SCC at Right Abutment (step 1A)		10/31/2023	Currently 50% complete // Anticipated completion 11/30/23
Forebay Debris Grouting (step 2A)		11/18/2023	
Complete Riser Pipe/MPSP Installation		12/22/2023	

SCHEDULE	2021	2022				2023				2024				2025			
	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Planning/Permitting																	
Design																	
Execution																	
Closeout																	

ID #	RISKS	RISK RESPONSE
001	**Tiedown Anchor T1** – drilling impacts due to steel	T-1 anchor install complete. PSE waiting for differing site conditions claim from LBC.
002	**Intake Structure (north)** – existing beam conflict with (1) grout hole location	PSE coordinated revised hole location with LBC. PSE waiting for co request from LBC.
003	**Higher Order Holes (aka Q holes)** – current contract drilling/grouting quantities include 'base design' and exclude higher order holes. In consideration of existing geologic information, it is anticipated 74 to 88 higher order holes will be needed. Higher order holes will be paid for under applicable contract unit pricing. Determining the exact quantity (and depth) cannot be evaluated until drilling/grouting program has commenced and PSE consultants can evaluate; in-situ seepage conditions, orientation and profile of rock fractures, and impacts to seepage characteristic from grout placement.	PSE worked with our design consultant and LBC to evaluate potential cost and schedule impacts. Total cost impacts, including sales tax, consulting fees, and PSE OH range [redacted] PSE is working with our design consultant and LBC to evaluate construction alternatives to reduce the probability of needing higher order holes. Two alternatives that have been identified are; 1) construction sequencing for *Forebay Debris Grouting*, and 2) construction sequencing of the *Seepage Cutoff Cap* (SCC).

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Lower Baker Project Status Report *(Continued)*

004	**Forebay Debris Grouting** – current contract is based on using MPSP to grout the forebay debris. An alternative to this is to grout the debris through the end of the drill pipe. The advantage to this alternative is that larger volumes of grout, at a higher injection rate, can be done, hence increasing the area of treatment. The increased area, in turn, provides more confinement for grouting the SCC below it. The disadvantage to this alternative is this process will add time and cost to the project.	PSE worked with our design consultant and LBC to evaluate potential cost and schedule impacts. Total cost impacts, including sales tax, consulting fees, and PSE OH range [redacted] This proposed alternate affects a treatment area where up to 38 q holes (i.e. 50% of the estimated total) may be required. Total cost for installation of 38 q holes is approx. [redacted] Based on the potential savings, PSE has elected to pursue this alternative and directed LBC accordingly. Thickened and/or sanded grouts are being washed away
004A	**Forebay Debris Grouting** – Along the downstream grout line within the limits of the forebay debris, there has been a significant amount of 'communication' during grout placement with the tailrace. LBC is not able to "build pressure" during grout placement, which means most of the grout is being washed away. LBC has tried their thickest mixes as well as sanded grouts.	PSE is working with our design consultant and LBC to develop a procedure to utilize 'kill grouts' in an attempt to avoid grout washout and communication downstream. The risk associated with kill grout is the unpredictable nature of how quickly the grout cures and its potential impacts in "locking in" the drill casing and/or grout instrumentation. In the event of either of these two things happen, the grout hole is no longer of available (i.e. it is abandoned) and a higher order (q) hole is needed to replace this hole. Higher order holes, as noted above, are currently not in the project budget. ***LBC successfully used kill grouts to complete forebay debris grouting for all but one hole, which is scheduled to be grouted the week of Nov 06. If successful, this risk will be removed from future updates.***
005	**Seepage Cutoff Cap (SCC)** – current contract is to construct the SCC in 10-foot stage lengths. An alternative, is to reduce the stage length 50% (5 feet). The advantage to reducing the stage length is to better treat/target the initial 10 feet of rock, which is expected to be weathered, fractured and incompetent. This, in turn, allows the treatment below the SCC to be done at higher injection pressures, which allows the grout to travel further in each hole. Treating a larger area with the primary holes reduces the probability of needing q holes. The disadvantage to this alternative is that it 'doubles' the length of time to construct the SCC.	PSE worked with our design consultant and LBC to evaluate potential cost impacts. Total cost impacts, including sales tax, consulting fees, and PSE OH is approx. [redacted] This proposed alternate affects the entire treatment area where q holes may be required (as noted in 003 above). [redacted] his alternate "buys" 8 q holes (roughly 10% of total). There is a high probability this alternate will result in reducing more than 10% of the anticipated q holes required. Therefore, PSE has elected to pursue this alternative and directed LBC accordingly.
006	**Revised Grout Hole Layout at Right Abutment** – based on the as-built locations of the tieback anchors for the working platforms concrete block, locations of grout holes at the right abutment needed to be revised. Through this coordination effort, 7 grout holes were no longer required.	This item does not pose a "risk" to PSE. It is noted to reflect a minor cost savings to assist in justifying other decisions noted above. The estimated cost savings associated with elimination of these grout holes is approx. [redacted]