Enhanced Geothermal 101

May 12, 2026

Rich Flanigan, VP Energy Supply Markets
Brett Lenz, Manager Cultural Resources
Dave Dempsey, Engineer V

Grant PUD

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Agenda

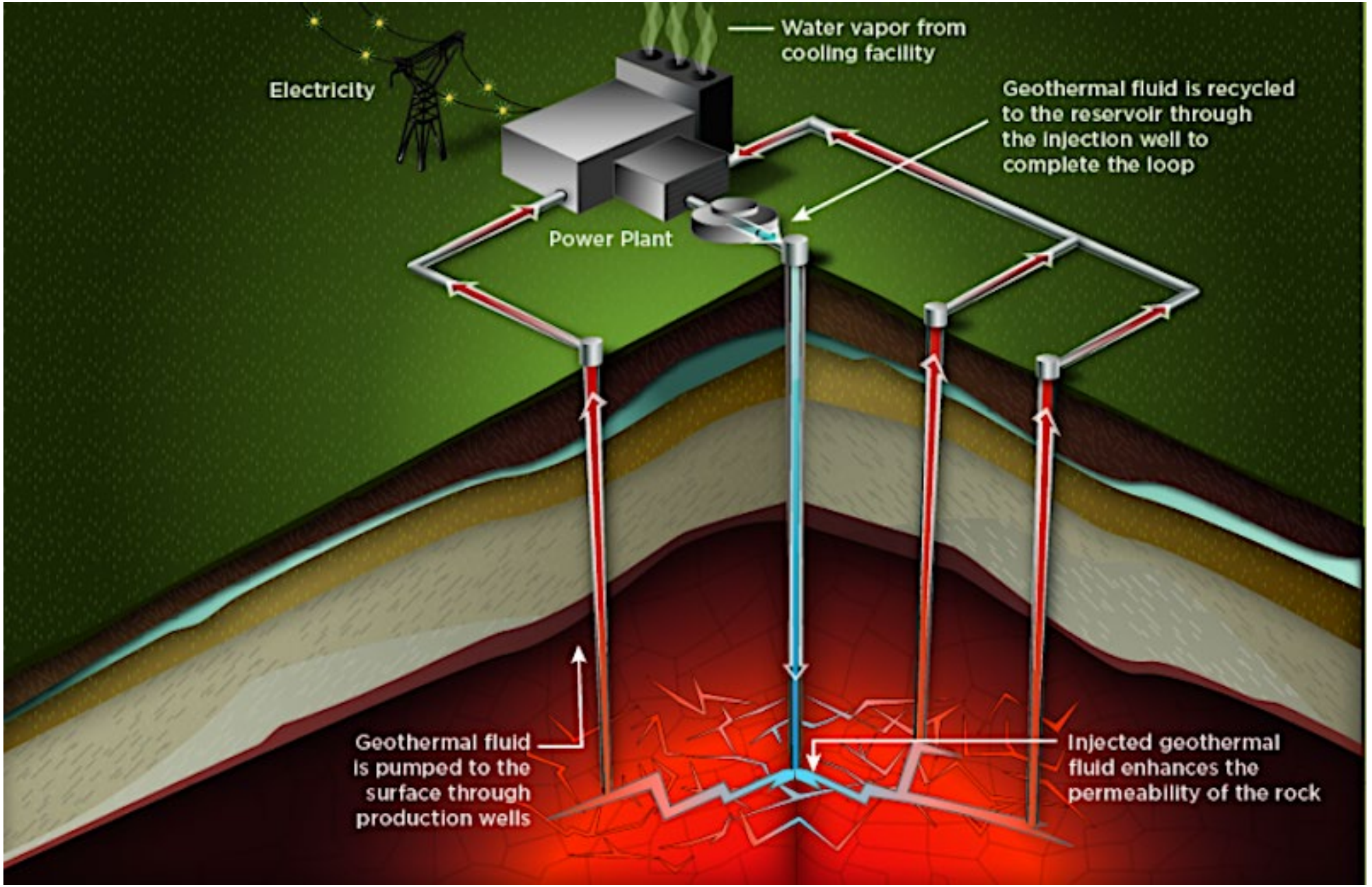
- Executive Summary
- EGS High-Level Overview
- Why EGS in Central Washington
- Commission Questions & Responses (Appendix)
- Agreement Scope, Cost Share, and Next Steps

Executive Summary

High-level overview of enhanced geothermal in Central Washington to prepare for Commission decision to authorize the Mid-C PUD interlocal study agreement for Phases 1, 2, 3 exploration and shared costs.

Geothermal Power

Category	Conventional hydrothermal	Engineered/enhanced geothermal (EGS)
Reservoir	Naturally permeable hot-water reservoir	Engineered flow paths in hot rock; circulated water
Temperature	100–200°C	>200°C (target)
Depth	Typically <3 km	Drilled to required temperature (often deeper)
Setting & Wells	Tectonic/magmatic zones; production + injection wells	Injection + multiple production wells; pump, heat, recover



Data source: U.S. Department of Energy

Key Benefits of Enhanced Geothermal Systems

- **Vast and Widely Available Energy Resource**
  - Unlike conventional geothermal, which requires naturally hot water and permeable rock, EGS can be developed almost anywhere with sufficiently hot rock underground. This dramatically expands the geographic potential for geothermal power, including most of the United States.
- **Reliable, 24/7 Baseload Power**
  - EGS provides continuous, dispatchable electricity independent of weather or time of day. This makes it especially valuable for grid reliability and complements intermittent renewables such as wind and solar.
- **Very Low Greenhouse Gas Emissions**
  - Once constructed, facilities produce near-zero operational CO_2 emissions, supporting deep decarbonization goals.

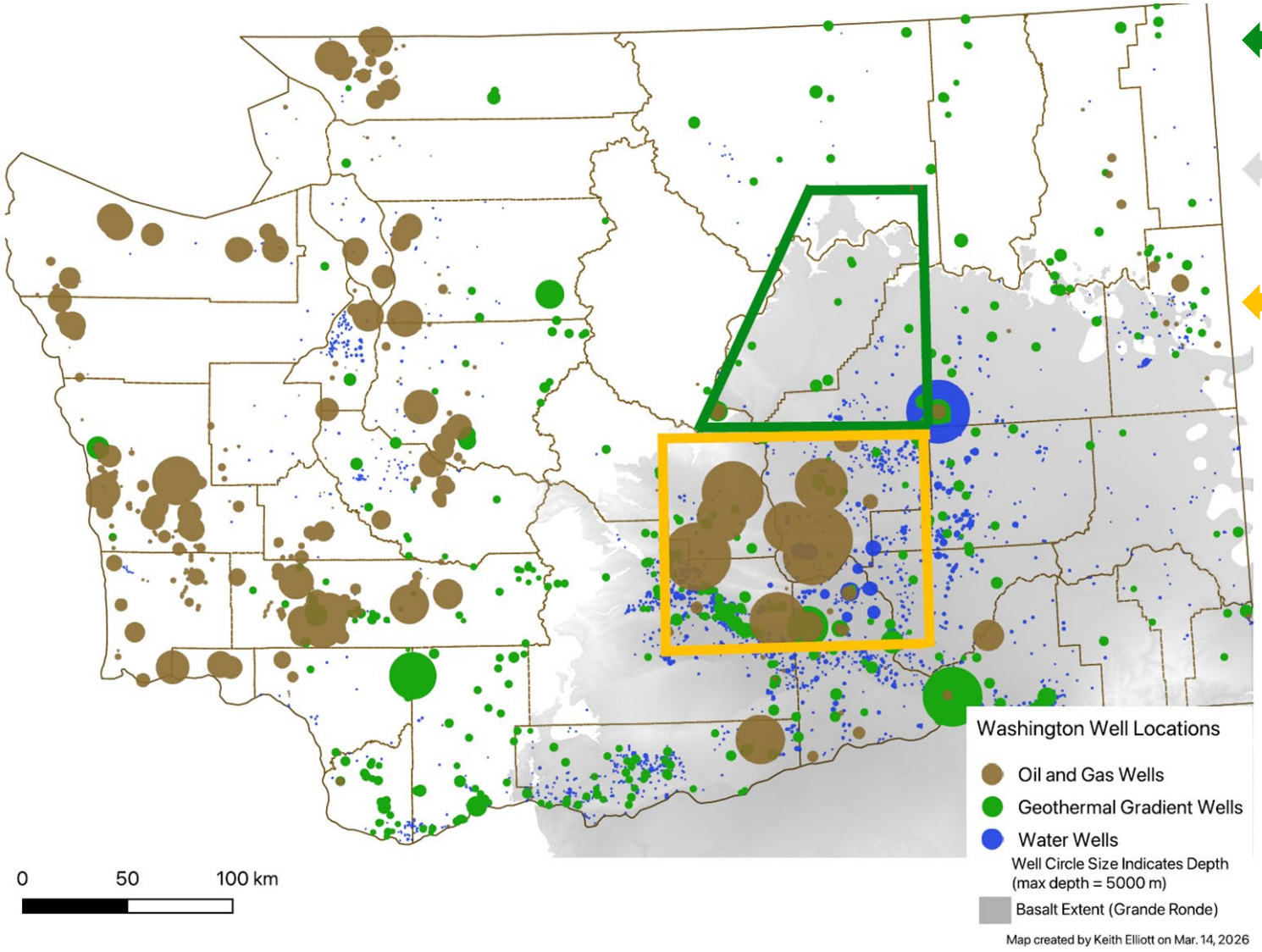
Key Benefits of Enhanced Geothermal Systems

- **Small Land and Environmental Footprint**
  - EGS plants have minimal surface land use compared to solar or wind and avoid large-scale fuel extraction or combustion. Water is recycled in a closed-loop system, reducing ongoing water consumption.
- **Long Asset Life and Price Stability**
  - EGS facilities can operate for decades (often 30–50+ years) with no fuel costs.
- **Leveraging Existing Oil & Gas Expertise**
  - EGS development uses drilling, reservoir engineering, and subsurface modeling skills already common in the oil and gas sector. This can lower development risk and reduce costs over time.
- **EGS is scalable**
  - While Hydrothermal systems are limited by the unique thermal attributes, often less than 20 MW, EGS can scale up to 500 MW helping lower per MWh cost.

Why Central Washington?

- Columbia River Basin (CRB) oil & gas wells show temps >200 °C
- 76 MW/m2 (relatively high) heat flow from the core of the earth
- 40 °C/km geothermal gradient observed in deep oil & gas wells in Kittitas, Yakima and Grant Counties
- High probability of 1000's of MW's
- Levelized Cost of Electricity (LCOE) estimate $80/MW for > 200 MW plant
- Access to transmission, land, water
- Mid-C PUD's have capability to own and operate their own EGS plants

Current Status

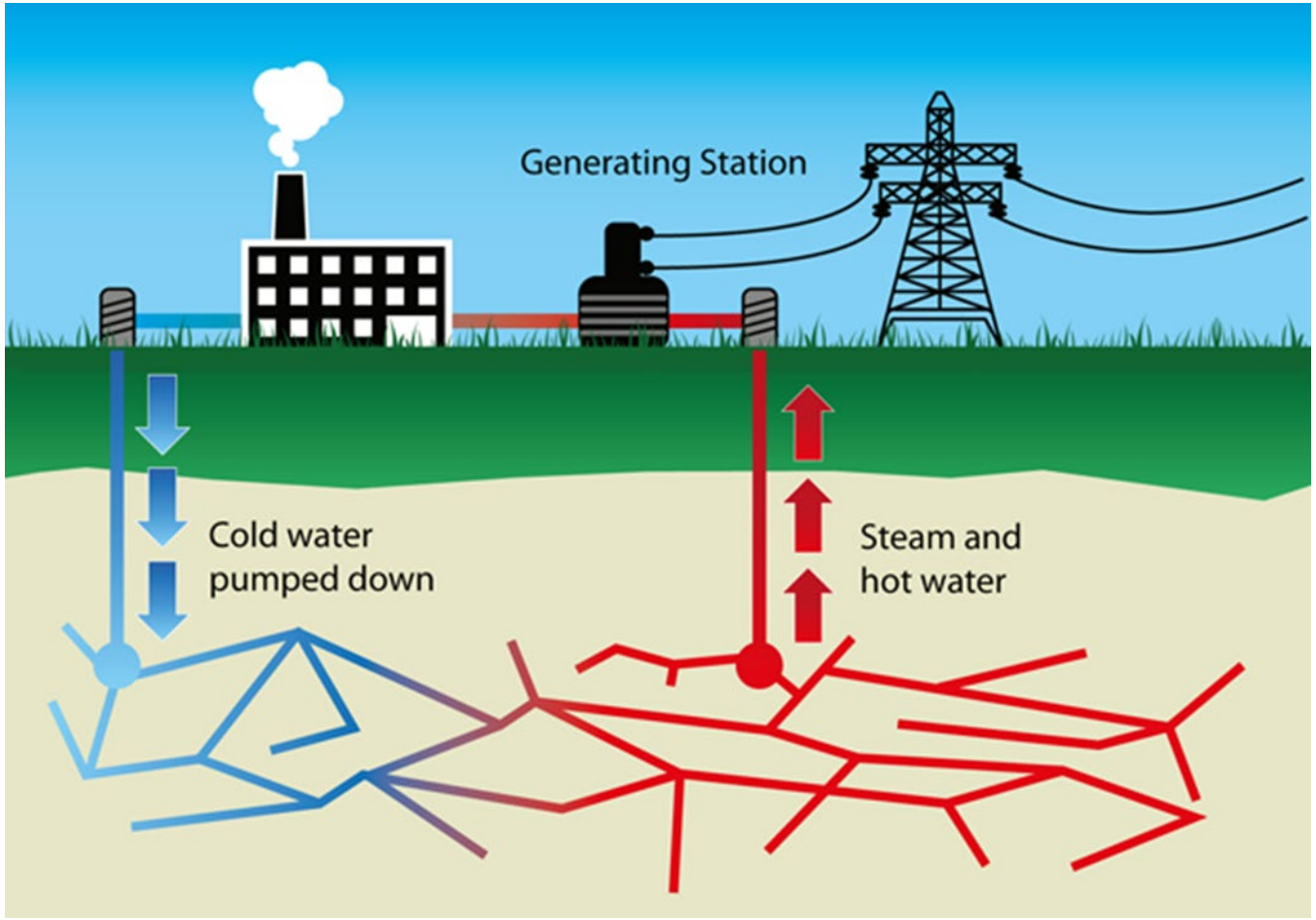


- Well Locations
- Columbia River Basalt
- DOPD/CHPD Studies

Follow-Up Information

- Injected Water Effect
- Aquifer Protection
- ESG Drilling and Plant Technology

*See Appendix



Next Steps

- Identify potential drilling sites in Grant county
    - Use data compiled by Chelan and Douglas along with internal data
    - Engage with Chelan and Douglas on their sites

Preliminary Timeline

- Two consulting contracts
- Permits: DNR & Ecology
- One drilling contract

- Gravity & MT contract
- First well drilled

- Fourth well, Grant County

- Review well results
- Issue recommendation

Closing Summary

- Endorse moving forward with an Interlocal Agreement with Douglas and Chelan PUDs to complete shared geothermal studies and confirm scope, roles, and cost share.

- May 26 – Execute a Mid-C PUD Interlocal Agreement for Phases 1, 2, 3.
  - Equally share estimated cost of $22 million.
    - Grant cost $7.3 million

  - Receive periodic staff updates throughout the process.

Thank you!

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Appendix

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Question #1

- **Q:** Won't the injected cold water cool the rock and cause the power output from the project to decrease over time?
  - **A:** Yes, the injected water cools the rock right next to the water pathways, but only in a very thin layer. The surrounding rock is massive and extremely hot, so heat naturally flows back in and reheats the cooled zone. That's why EGS systems can operate for 30-50+ years without "running out" of heat.*

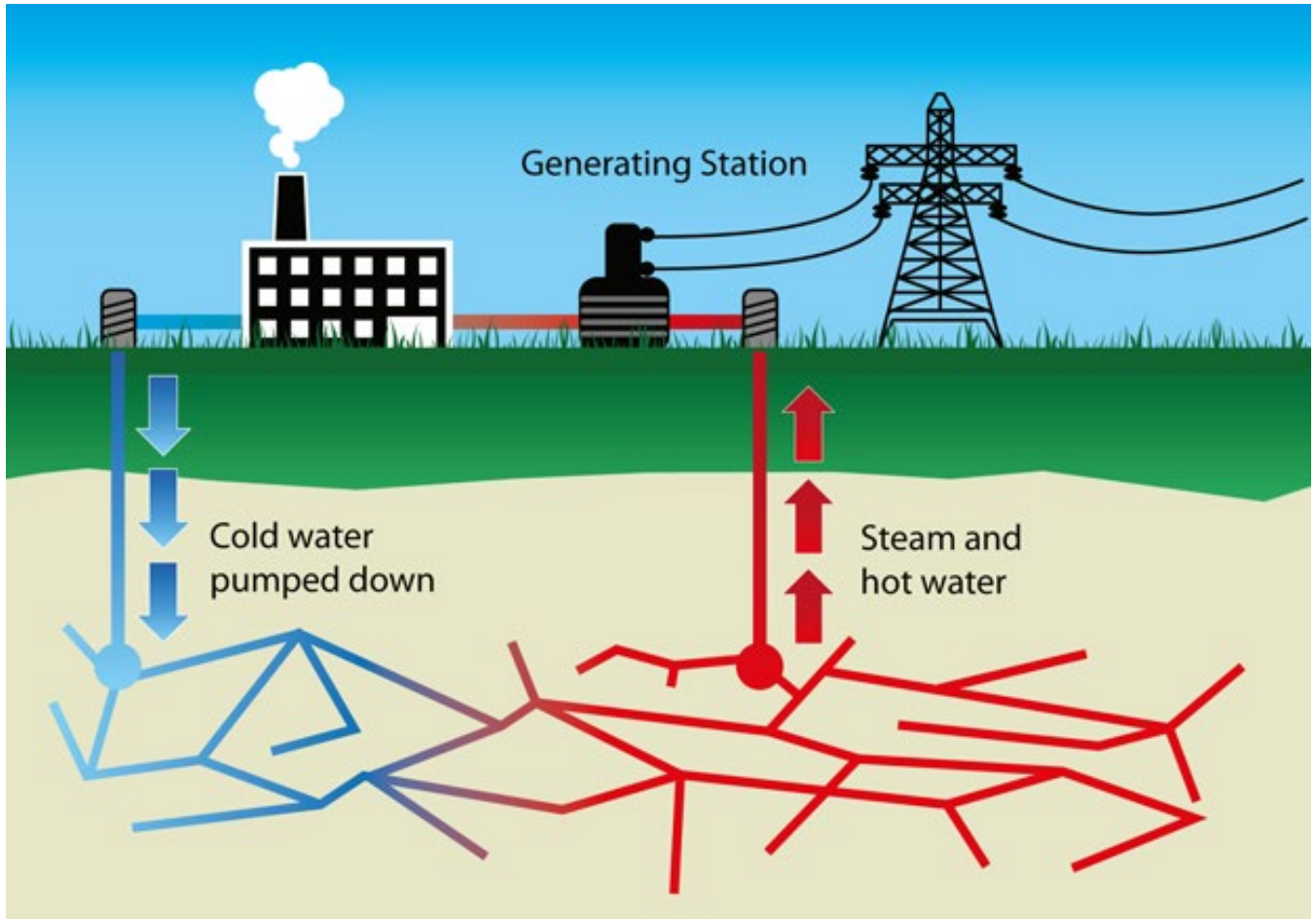
**Lin, S., Wang, Y., & Wang, S. (2020). An Analytical Study of the Thermal-Hydraulic-Mechanical Processes During Cold Water Injection Into EGS Reservoirs. Proceedings of the 45th Stanford Geothermal Workshop. https://pangea.stanford.edu/ERE/db/GeoConf/papers/SGW/2020/Lin2.pdf (pangea.stanford.edu in Bing) This paper shows that cooling is confined to a small region near the water pathways and that heat is continuously replenished from the surrounding hot rock mass – the key mechanism that supports long-term EGS performance.*

Question #2

- **Q:** How do you protect the aquifer?
  - **A:** Aquifers are protected by multiple layers of steel casing and cement that isolate all freshwater zones, and geothermal systems operate in a sealed, closed loop – so groundwater is never exposed to drilling fluids or geothermal fluid. *[U.S. DOE – Well Construction & EGS Overview]*
- **Related Q:** Does EGS contaminate water? How do these risks compare to those of oil and gas (fracking)? Do geothermal power plants dispose of nasty fluids to surface water or groundwater?
  - "Water contamination risks due to EGS reservoirs are low for two reasons:
    1. EGS reservoirs are generally much deeper than oil and gas reservoirs which means they are disconnected hydrologically from any groundwater or near surface drinking water supplies both through natural geology and well casing; and
    2. Geothermal power plants do not release any water on the surface; rather, all water is reinjected into the same underground reservoir from which it was drawn, again and again.
  - This design is essential to protect aquifers as well as to ensure continuous operation of geothermal plants because they rely on sufficient fluid to bring geothermal heat to the surface" *[U.S. DOE – Enhanced Geothermal Shot - 2022]*

Question #3

- **Q:** What is the drilling and plant technology of ESG?
  - **A:** Geothermal uses the same proven drilling technologies as deep oil and gas wells – directional drilling, high-temperature tools, and strong casing systems – and the surface plant is a closed-loop binary system that recycles water and produces clean, 24/7 power. *[U.S. DOE – FORGE & Binary-Cycle Plants]*



Grant PUD Commission Geothermal Questions/Info Requests

May 7, 2026

Note: Staff and our technical experts are continuing to learn about Enhanced Geothermal Systems (EGS), and our understanding will evolve as the Mid-C PUD study advances. The responses below reflect our initial, best-available analysis and will be refined as new information emerges.

Drilling:

- Information on the drilling- both for discovery drilling and production drilling

  A: Discovery (exploration) wells are drilled to characterize temperature, permeability, and stress, while production wells are larger-diameter, completed with full casing and surface facilities for long-term flow and injection.

  The work proposed in the Inter Local Agreement (ILA) phase 3 will be Core Holes as defined in RCW 78.60.070, which is to determine heat flow, temperature gradients, and rock conductivity. The ILA contemplates that if sufficient heat is identified, then phase 4 (future funding) would be initiated to drill a Well(s) (RCW definition) to better evaluate the amount of electricity that can be produced. Wells support production or injection of fluids.

- How are the existing aquafers protected during drilling?

  A: Freshwater aquifers are protected by setting and cementing surface casing across all potable water zones, then drilling deeper inside that sealed casing string, so geothermal fluids never contact shallow groundwater. Core Hole and Well drilling programs are required to be submitted to DNR for review and approval. DNR requires a casing to be used to protect ground water.

- How long will the drilling take for a discovery well (Core Hole)?

  A: With modern oilfield-style rigs and bits, deep geothermal/EGS exploration wells (3–5 km) typically take on the order of several weeks to a few months, depending on depth, rock hardness, and learning curve. Phase 3 scope (core holes) contemplates a maximum depth of 2000 meters. The estimate is 6 weeks, but will be dependent on the depth of the basalt we expect to be present at each core hole.

- How long will the drilling take for a production well?

  A: Production wells are similar in depth but may require more complex completions, so timelines are comparable – often a month or more per well, with faster times as

the project gains experience. A Phase 4 production or confirmation well would accommodate flowing fluids, but we are proposing these wells would only be completed vertically. If economically feasible, the final EGS project would have a vertical and horizontal component. Drilling time depends on the sum of vertical and horizontal depth. The first production wells could take 4 months (4 km depth, 1.5 km lateral). After the learning curve has matured, it is hoped drilling time would be reduced to 2-3 months.

- Can discovery wells be used for production?

  A: Yes, if the discovery well encounters adequate temperature and permeability, it can often be completed or recompleted as a production or injection well. The project is not contemplating using Core Holes as production wells. To save money, the original casing and conductor sizes would not be large enough to accommodate a production well. See page 5 for a Core Hole diagram.

- What diameter are the holes and what is the process?

  A: EGS production wells commonly start with a large surface hole (e.g., 17–20 inches) and progressively smaller diameters with each casing string, ending in a production interval often in the 6–9⅝-inch range, drilled with rotary rigs, drilling mud, and staged casing/cementing.

- How many holes would be drilled for a production plant?

  A: A commercial EGS plant typically uses multiple wells—often at least one or two injectors and two or more producers—with total well count scaling with plant size (e.g., several to a dozen+ wells for tens of MW). Power production could vary from 3 to 10 MW per production well.

- Is any of this considered to be fracking?

  A: EGS does use high-pressure fluid injection to stimulate fractures (sometimes called “hydraulic stimulation”), which is technically similar to fracking but targets hot crystalline rock, not hydrocarbon-bearing formations, and uses water rather than complex chemical mixes.

- Any environmental issues with the drilling?

  A: Key issues are induced seismicity risk caused by flowing fluids, drilling waste/mud management, noise, and surface disturbance, all of which are managed through casing design, traffic-light seismic protocols, and standard environmental controls and permitting. An induced seismic hazard assessment is underway and

will be completed prior to flowing fluids and is included in the Phase 1 to 3 work scope to help guide where we look for the heat resources.

- How many production wells would be drilled at a site?

  A: For firm power in the tens of MW, you typically see a well field of multiple producers and injectors—often 4–10+ production wells, depending on resource temperature and flow rates. 200 MW minimum is the target resource. Shallower drilling most likely requires more wells (lower temperatures) than drilling deeper to get higher heats. Our current economic model assumes 38 production wells.

<u>Plant Operation:</u>

- Can the water injection cause long-term issues/damage to the geology?

  A: Injection alters stresses and can reactivate existing fractures or faults (induced seismicity), but when sited away from major faults and managed with careful pressure control and monitoring, long-term damage is generally limited and localized.

- From an environmental/public & employee health perspective, are there any possibilities that in 20-40 years we would regret the decision?

  A: Main long-term concerns are induced seismicity, potential subsidence, and any surface leaks of geothermal brine, which projects address via conservative siting, robust well integrity, continuous monitoring, and regulatory oversight. The largest hydrothermal geothermal resources in the United States are in California. See page 6 for list of CA plants.

- How much make-up water will be needed for operation and for what size of a plant?

  A: Once the reservoir is saturated, EGS plants are designed as mostly closed-loop systems, with make-up water primarily to offset minor losses—often a small fraction of total circulation (e.g., a few percent of flow, varying by site and plant size). It depends on the naturally occurring amount of fractures in the rock.

- What, if any, geologic changes will happen with the water injection over time.

  A: Over time, injection can enhance permeability along some fractures, seal others via mineral scaling, and slightly change stress fields, which is why reservoir models and monitoring are updated throughout the project life.

- Will heat transfer/plant efficiency degrade over time?

A: Yes, reservoir cooling gradually reduces production temperature, but multi-well designs, flow management, and periodic well additions are used to maintain output and extend project life.

- Provide some examples of existing plants (especially using the deep well technology). How well are they operating? What kind of issues have they had?

  A: Soultz-sous-Forêts (France) and other EGS projects in Europe and the U.S. (e.g., Helsinki, Utah FORGE as a test site) have demonstrated sustained circulation and power/heat production, but have faced challenges like induced seismicity, scaling/corrosion, and pump reliability.

- The new Nevada project with its new technology, are we looking at the same or different?
  A: The new Nevada geothermal project – Fervo Energy's Project Red – uses next-generation closed-loop and enhanced-fracture technologies, and the Mid-C PUD study is evaluating the same class of modern EGS approaches, not older legacy geothermal designs. Project Red is in northern Nevada on the Humbolt River Basin near the town of Wadsworth.
- Are there examples out there of facilities that have been built that have failed?

  A: Yes—projects in Basel (Switzerland) and Pohang (South Korea) were halted after larger-than-expected induced earthquakes raised public concern and regulatory intervention. Chelan has heard from their consultants that these 2 projects did not perform seismicity studies before developing the well field.

- How are the existing aquafers protected during drilling?

  A: As noted above, freshwater aquifers are isolated behind steel casing and cement, with all deeper drilling and geothermal circulation occurring inside that sealed barrier.

Sources:

EGS Fundamentals & Drilling

- U.S. DOE – Enhanced Geothermal Systems Overview
- CRS – *Enhanced Geothermal Systems (EGS): Frequently Asked Questions*
- Sandia National Labs – *Handbook of Best Practices for Geothermal Drilling*
- Utah FORGE | Frontier Observatory for Research in Geothermal Energy

Induced Seismicity & Environmental Considerations

- USGS – Induced Seismicity & Fluid Injection
- CRS – *Earthquakes Induced by Underground Fluid Injection*

EGS Project Examples

- Soultz-sous-Forêts EGS Project (Europe) – Stanford Geothermal Workshop Paper
- Soultz-sous-Forêts EGS (Springer summary)
- Basel EGS Project – Wikipedia summary of shutdown
- Fervo Energy - Next-Generation Geothermal Projects Utah project
- Newberry - Mazama Energy Oregon project
- Quaise Energy Oregon Project

Priest Rapids Oil Discharge Root Cause Report

May 12, 2026

Rey Pulido, VP of Power Production Operations
Ross Hendrick, Director Environmental Affairs

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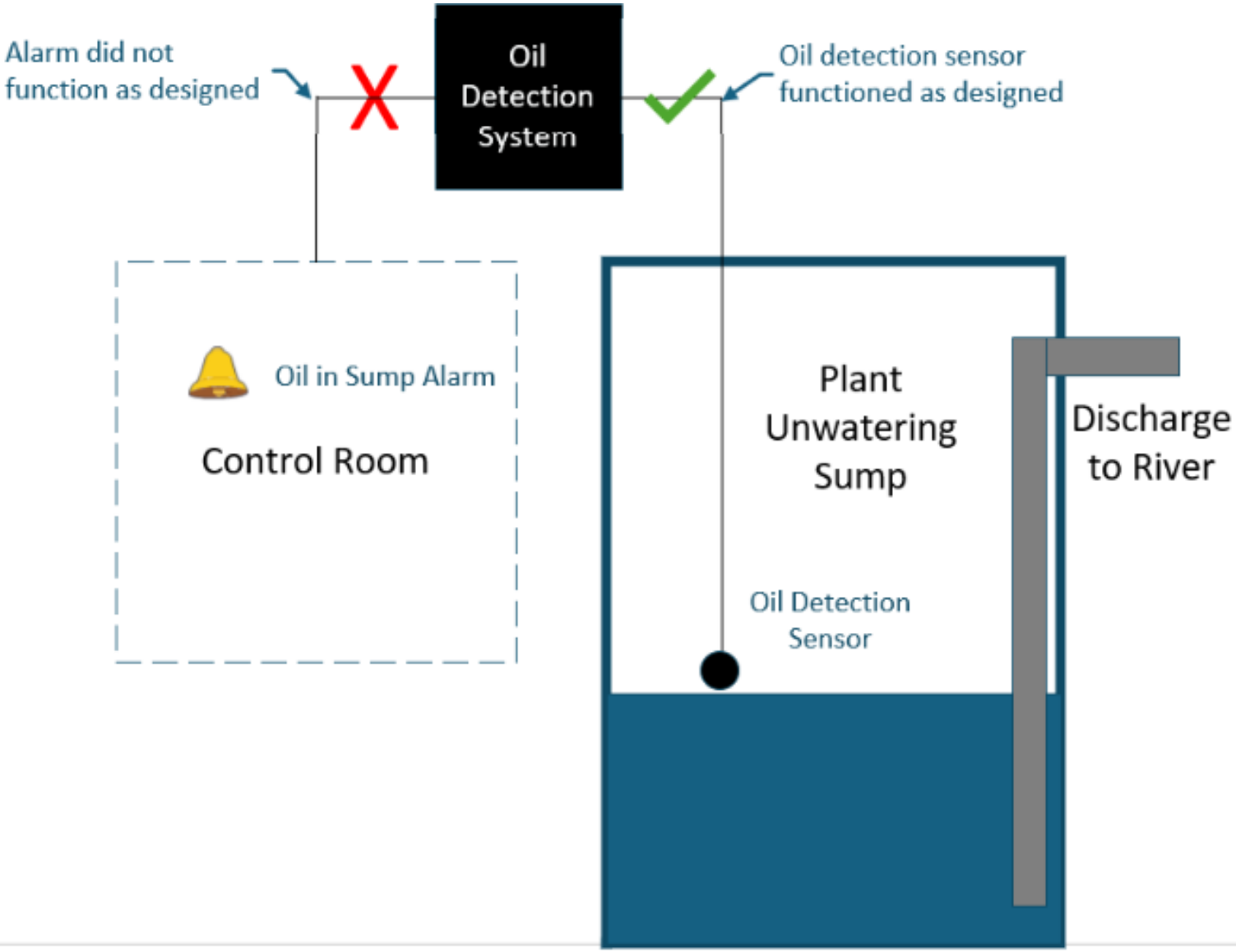
Agenda

- Event Description
- Root Cause Evaluation
- Corrective Actions
- Summary/Next Steps

Event Description

- **Incident:** Unintentional release of approximately 84 gallons of turbine oil into the Priest Rapids tailrace
- **Source:** Turbine guide bearing pot on generating unit P06
- **Context:** Occurred during maintenance activities
- **Timeline:** November 30 through December 3, 2025
- **Cause sequence:** Related to draining and refilling the turbine guide bearing pot during maintenance

Graphic of Event



Impacts

- Major cleanup and restoration efforts
- Extended unit outage, disruption to operational activities
- Significant financial impacts tied to response and downtime
- Introduced potential environmental impacts
- Risked damage to Grant PUD's reputation and public trust
- Mitigating factors:
  - Prompt, effective, and collaborative spill response efforts
  - Transparent communication and information sharing
  - No documented impacts to fish or wildlife

Corrective Actions

Interim Actions:

- Ensure oil detection systems were configured and tested to function as designed (Priest and Wanapum).

Future Actions:

- Strengthen preventative maintenance practices for all oil related components (totalizers, detection systems, level measuring devices, etc.)
- Develop a formal oil-movement program supported by documented Standard Operating Procedures (SOPs), job plans, and training
- Address institutional knowledge gaps through developing a formal project turnover process, targeted training, and documentation
- Install/replace and properly configure localized totalizers at each generating unit

Timeline

2026

Strengthen preventative maintenance plans for all oil related components.

Develop a formal oil-movement program.

2027

Address institutional knowledge gaps through developing a formal project turnover process

2028

Install and properly configure localized totalizers at each generating unit.

Closing Summary & Next Steps

- Prompt response, cleanup efforts, transparency and collaboration with agencies likely to limit regulatory risk
- Corrective actions will result in stronger environmental protection and operational reliability
- Root Cause Evaluation Report to be provided to Washington State Department of Ecology on May 13

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Environmental Affairs

May 12, 2026

Ross Hendrick, Director

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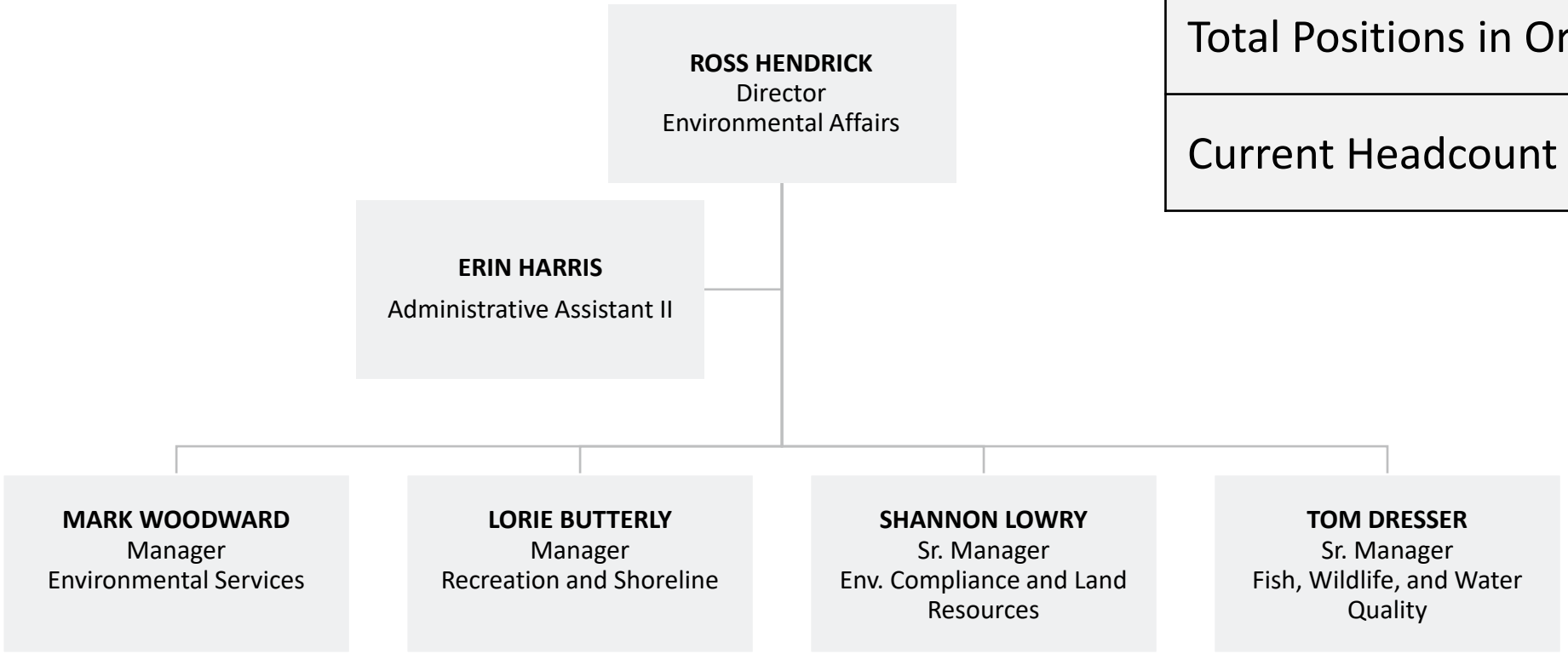
Team



Total Positions in Org	4 7
Current Headcount	4 4

Staff Updates:

- Lands Specialists (2 backfills, 1 new) – Matthew Hope, Kasey Gray, Michelene Torrey
- Fish and Wildlife Sr. Biologist (backfill) - Cody Tisdale

Enterprise Balanced Scorecard

- No enterprise-level Balanced Scorecard measures owned/reported by EA.
- Development of Power Marketing & Operations Divisional Balanced Scorecard measures is underway.

Executive Financial Overview

MARCH 2026

O&M: Favorable, Out of Target | **Labor**: Favorable, Out of Target

O&M DIRECTS YTD

YTD BUDGET	ACTUALS	YTD VARIANCE	YTD VAR %
$6,861K	$5,041K	($1,820K)	-26.5%

O&M DIRECTS YE PROJECTION

TOTAL BUDGET	YEP	YE VARIANCE	YE VAR %
$20,040K	$19,081K	($959K)	-4.8%

LABOR YTD

YTD BUDGET	ACTUALS	YTD VARIANCE	YTD VAR %
$1,255K	$1,172K	($83K)	-6.6%

LABOR YE PROJECTION

TOTAL BUDGET	YEP	YE VARIANCE	YE VAR %
$5,550K	$5,567K	$17K	0.3%

COST CATEGORY TYPE	YTD BUDGET	ACTUALS	YTD VARIANCE	YTD VAR %
Purchased Services	$2,734,286	$1,629,357	($1,104,929)	-40.4%
Operating Materials & Equipment	$1,059,000	$375,118	($683,883)	-64.6%
Total	**$3,793,286**	**$2,004,475**	**($1,788,811)**	**-47.2%**

Purchased Services: $1,105K Favorable | Outside of target; Budget allocated in work months and not expense months; expected to align by year end.

Operating Materials & Equipment: $684K Favorable | Outside of Target; ADTS coding error ($772K) of OME expensed to Purchased Services

Labor: $83K Favorable | Outside of Target; 2 FTRs transferred to other departments (February). 1 FTR hiring delay (delayed 1 month, to April, was planned)

Fish Survival Study: Spring Chinook & Steelhead

10 yr check in

- Daily releases: April 22-mid May
- Staff working 10 hr days, 7 days/week
- Coordination with Chelan PUD for fish source

Stakeholder consultation on-going:

- Confirmation on standard
- Next steps if standards not met

Potential risks

1. Additional No-Net-Impact payments
2. Additional studies

Potential cost impacts ~ $2M-$8M over 10 yrs

3. Additional hatchery production
4. Additional spill
5. Additional Operational constraints

Potential cost impacts: Unknown/TBD

Near-Term Business Plan

- Support energy growth projects
- Fish Survival Study
- White River
- Recreation season “start up”

- Support energy growth projects
- Fish Survival Study
- Recreation Surveys
- Appraisals for Cresent Bar leases

- Support energy growth projects
- Fish Survival Study results; next steps
- Recreation survey results

- Support energy growth projects
- Crescent Bar appraisals complete
- Recreation Plan update - consultation

Long-Term Business Plan

2027

- Support energy growth projects
- Fish Survival Study (Sockeye)
- Recreation Plan Update
- Asset Management

2028

- Support energy growth projects
- Fish Survival Study (potential)
- Shoreline Management Plan update
- Asset Management

2029

- Support energy growth projects
- Asset Management

Closing Summary

- Shoreline Community HOA meetings:
  - Cresent Bar Condos – Complete
  - Cresent Bar South Park - Complete
  - Crecent Bar North Park – June 6 at 9am
  - Sunland – August 8 at 9am
- State Environmental Policy Act (SEPA): Board review/approval – June Workshop
- Recreation Resource Management Plan Update – staff updated in Q4 2026

Thank You!

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QBR Summary

Department Name:	Key Presenters:	Date:
Environmental Affairs	Ross Hendrick	May 12, 2026

RECAP	
Issues and Drivers	Staff Updates: Lands Specialists (2 backfills, 1 new); Fish and Wildlife Sr. Biologist (backfill) Spring Chinook and Steelhead Fish Survival Study – ongoing through mid-may Finical Overview: O&M and Labor favorable, but outside of targets, projected to be within targets by end of year.

NEAR-TERM PLANS (CURRENT THROUGH Q1 2027)	
Project Updates	Support energy growth projects Fish Survival Study White River Recreation season "start up" and surveys Cresent Bar lease area appraisals Recreation Plan updates

LONGER-TERM STRATEGY (2027 THROUGH 2029)	
Roadmap	Support energy growth projects Fish Survival Studies Recreation and Shoreline Management Plan updates Asset Management – planning and implementation
Strategy	Continue to operate responsibly while meeting our environmental regulatory obligations

COMMISSION SUPPORT: KEY ASKS	
Specific Requests	Shoreline Community HOA meetings: • Crecent Bar North Park – June 6 at 9am • Sunland – August 8 at 9am State Environmental Policy Act (SEPA): Board review/approval – June Workshop Recreation Resource Management Plan Update – staff updated in Q4 2026

Cultural Resources

May 12, 2026

Brett Lenz, Cultural Resource Manager

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Agenda

- Executive Summary
- Core Team
- Financial Performance
- Archeology Overview
- Wanapum Interface Office Overview
- Traditional Program Overview
- Commission Support

Executive Summary

- The Cultural Resources program ensures compliance with License Articles 416 and 417 while fostering the Heritage value.

- In Q1 2026, the program maintained full compliance and supported major projects through early cultural review and continued coordination with the Cultural Resources Working Group (CRWG) stakeholders.

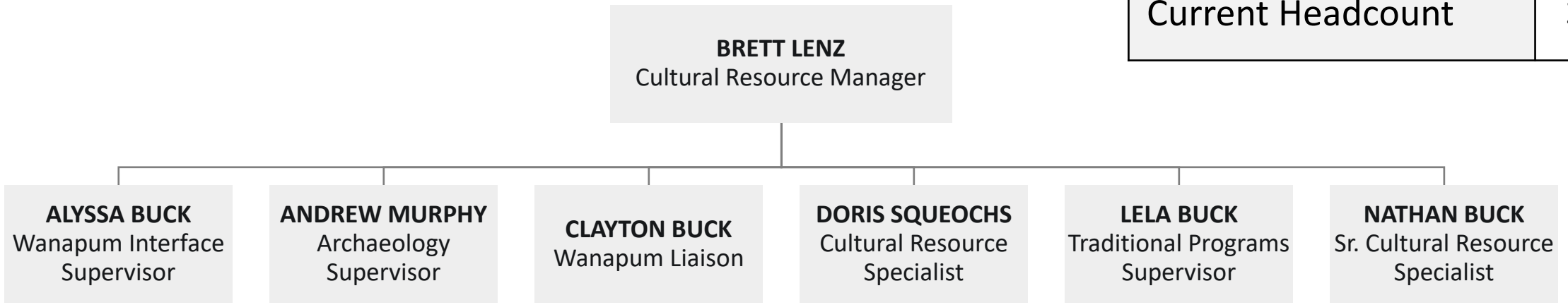
- Looking ahead, the program is advancing long-term mitigation planning and strengthening stakeholder engagement to ensure compliance and maintain project readiness aligned with Grant PUD's strategic direction.

Executive Summary - Revised

- The Cultural Resources program remains fully compliant with License Articles 416 and 417 while advancing Heritage value.
- In Q1 2026, early cultural review and continued coordination with the Cultural Resources Working Group (CRWG) supported major projects and protected delivery timelines.
- Long-term mitigation planning and expanded outreach are strengthening project readiness and aligning cultural resources work with Grant PUD's strategic direction.

Team

Total Positions in Org	2 6
Current Headcount	2 0



Staff Updates:

- Four graduate interns begin late Q2 and continue through Q3.

Financial Performance

MARCH 2026

O&M: Favorable, Out of Target | **Labor**: Favorable, Out of Target

O&M DIRECTS YTD			
YTD BUDGET	ACTUALS	YTD VARIANCE	YTD VAR %
$255K	$147K	($107K)	-42.1%

O&M DIRECTS YE PROJECTION			
TOTAL BUDGET	YEP	YE VARIANCE	YE VAR %
$1,458K	$1,582K	$124K	8.5%

LABOR YTD			
YTD BUDGET	ACTUALS	YTD VARIANCE	YTD VAR %
$477K	$405K	($72K)	-15.1%

LABOR YE PROJECTION			
TOTAL BUDGET	YEP	YE VARIANCE	YE VAR %
$2,008K	$1,985K	($24K)	-1.2%

COST CATEGORY TYPE	YTD BUDGET	ACTUALS	YTD VARIANCE	YTD VAR %
Purchased Services	$226,349	$123,802	($102,547)	-45.3%
Travel	$6,499	$1,108	($5,391)	-83.0%
Total	**$232,848**	**$124,909**	**($107,939)**	**-46.4%**

Purchased Services: $103K Favorable | Outside of target; Flatline budget showing underspend YTD. Will align by year end due to compliance expenses.

Travel: $5K Favorable | Outside of Target; WNADU travel season budget flatlined but is now beginning. Expected to align by year end.

Labor: $72K Favorable | Outside of Target; Unfilled student helper positions (4), projected out into June.

Delayed hires: Senior Archeologist & Cultural Project Worker and projected out to June. Two Elders are intermittently available.

Wanapum–Mountain View / Program Analysis

- Final Area of Potential Effects (APE) determination issued mid-March, enabling continued review.
- High density of Traditional Cultural Places increases consultation complexity and schedule sensitivity.
- Leadership and program management transition in consultation creates near-term coordination risk; mitigation plan focuses on continuity, cadence, and clear escalation.

Archaeology Program

- Q1 CRWG meeting was held March 18.
  - Finalized 2025 reporting.
  - Continued stakeholder engagement on PRP mitigation for project-wide effects.
- Maintained Wanapum–Mountain View Transmission Line as a standing topic; coordinated with Bureau of Reclamation (BOR) as a top priority.
- Initiated annual Priest Rapids Project (PRP) archaeological site visits and effects monitoring starting in late May.
- Completed Crescent Bar Island encroachment investigation; no cultural resource concerns identified.
- Supported the Living Culture Kunch project through Reservoir Patrol.
- Provided Geo Services and Wanapum Community support on-site for Priest Rapids Spillway Stability Improvement Project (PRSSIP) construction (start date April 1).

Wanapum Interface Office

Priest Rapids (PR) Spillway Stability Project

- Community Meeting #2 (3/25/26): Incorporated two pre-construction commitments—limit crane visibility during ceremonial periods; provide timely traffic-change notifications.
- Monthly Solution Group meetings continue to track consultation and compliance milestones.
- Mitigation memo is in final joint review (Wanapum Liaison and General Manager (GM)).

Wanapum Interface Office

Cultural Resource Working Group – Wanapum Consultation

- Monthly federal coordination continues to protect Wanapum interests (Bonneville Power Administration (BPA), Pacific Northwest Service Office (PNSO), U.S. Fish and Wildlife Service (USFWS), U.S. Department of Energy (DOE), U.S. Army Corps of Engineers (USACE)).
- Bureau of Reclamation (BOR) consultation ongoing as lead agency for Clearway Solar (Royal Slope).
- Priest Rapids Battery Energy Storage System (BESS): Malaga Power Plant tour (Fresno, 4/7) supported assessment of environmental and visual impacts.
- Increased pace of Small Modular Reactor (SMR), data center, and solar proposals across Wanapum homelands over the past 12 months.
- Mattawa Comprehensive Use Plan: initial consultation held (March 2026).

Wanapum Interface Office

Cultural Resource Working Group – Wanapum Consultation (Continued)

- Vernita Bridge Boat Launch (Washington Department of Fish and Wildlife (WDFW)): meetings underway to minimize impacts to Traditional Cultural Properties (TCPs) and cultural resources.
- Native American Graves Protection and Repatriation Act (NAGPRA): Plateau Tribal Working Group participation continues.
- USACE Payos Kuus Cuukwe working group: regular participation reaffirmed following Wanapum Integration Office (WIO) Full-Time Equivalent (FTE) addition.
- Wanapum language and cultural visibility: peace message to Rotary Global Peace Pole Program (to be displayed at Regional Education and Community History (REACH) Center museum); street names in Wanapum language provided to the City of Mattawa for two new streets.

Traditional Program

Wanapum Heritage Center

Hours:

- Tuesday: Open for local schools only
- Wednesday-Friday 8:30-4:30
- Saturday-Sunday 9:00-5:00

Activities:

- **Kuunch Project:** Living culture programming is active, including earth oven use.
- **Wanapum Native American Discovery Unit (WNADU):** Now operational, with 14 events scheduled to date.
- **Repository:** Compactor shelving installation is complete, expanding storage capacity for collections.

Timeline

Initiate archaeological monitoring program

May 30

June 30

Initial review of archaeological mitigation plan by CRWG

Submission of high priority archaeological sites

August 31

Closing Summary

- Sustain financial support for the Cultural Resources program to uphold Grant PUD's strong compliance standing.
- Continue support for the Heritage Value to uphold and strengthen the Wanapum relationship.
- Provide ongoing support for comprehensive Grant PUD archaeological mitigation as the program addresses adverse effects associated with project operations.

Thank you!

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Office of the Washington State Auditor
Pat McCarthy

Entrance Conference: Public Utility District No. 2 of Grant County

The Office of the Washington State Auditor's vision is increased trust in government. Our mission is to provide citizens with independent and transparent examinations of how state and local governments use public funds, and develop strategies that make government more efficient and effective.

The purpose of this meeting is to share our planned examination scope. We value and appreciate your input.

Compliance Examination Scope

We will perform the following compliance examinations required by the Energy Independence Act (EIA):

Interim examination of the energy conservation target for the biennial period January 1, 2026 through December 31, 2027

We will perform an interim examination of compliance in developing your energy conservation target in accordance with the EIA with assistance from SBW Consulting, Inc.

This work will also inform our examination of your compliance in developing the interim energy efficiency target required under the Clean Energy Transformation Act.

Renewable energy compliance examination for the annual period January 1, 2025 through December 31, 2025

We will provide an opinion on the fair statement of your renewable energy target and the renewable resource energy and / or renewable energy credits (RECs) acquired to meet this target. We do not expect we will need assistance from our contracted subject matter expert to complete our examination.

Energy conservation compliance examination for the biennial period January 1, 2024 through December 31, 2025

We completed our examination of compliance with EIA requirements for developing your energy conservation target as interim work performed during the compliance period with the assistance of SBW Consulting. To complete the engagement, we will verify the acquired energy conservation is sufficient to meet your target by testing energy savings from select projects acquired during the compliance period. We have contracted with Washington State University Extension's Energy Program for subject matter expert services to examine support for select commercial, industrial, and agricultural energy efficiency projects.

Engagement Letter

We have provided an engagement letter that confirms both management and auditor responsibilities, and other engagement terms and limitations. Additionally, the letter identifies the cost of the compliance examination, estimated timeline for completion and expected communications.

Levels of Reporting

Findings

Findings formally address issues in an examination report. Findings report significant deficiencies and material weaknesses in internal controls; misappropriation; and non-compliance with laws, regulations or policies. You will be given the opportunity to respond to a finding and this response will be published in the examination report.

Management Letters

Management letters communicate control deficiencies or non-compliance that are less significant than a finding, but still important enough to be formally communicated to the governing body. Management letters are referenced, but not included, in the examination report.

Exit Items

Exit items address control deficiencies or non-compliance with laws or regulations that have an insignificant effect on the examination objectives. These issues are informally communicated to management.

Important Information

Confidential Information

Our Office is committed to protecting your confidential or sensitive information. Please notify us when you give us any documents, records, files, or data containing information that is covered by confidentiality or privacy laws.

Examination Costs and Timeline

We summarized the estimated costs of each of the compliance examinations we will perform in the following table.

Compliance area	Audit number	Estimated examination cost	Estimated travel cost
Energy Independence Act (EIA)			
• Energy conservation target – Interim testing (2026 - 2027)	62616	$30,000*	$0
• Renewable energy compliance (2025)	59598	$9,500	$0
• Energy conservation acquisition testing (2024 - 2025)	59599	$30,000*	$0

*The estimated cost cited for this engagement represents the full scope of the examination (interim testing of the target and testing of energy conservation acquisitions, including anticipated consultant services).

Expected Communications

During the compliance examinations, we will communicate with Emma Welch, Energy Services Manager, on the examination status, any significant changes in our planned examination scope or schedule and preliminary results or recommendations as they are developed.

Please let us know if, during the engagement, any events or concerns come to your attention of which we should be aware. We will expect Emma to keep us informed of any such matters.

Audit Dispute Process

Please contact the Audit Manager or Assistant Director to discuss any unresolved disagreements or concerns you have during the performance of our examination. At the conclusion of the engagement, we will summarize the results at the exit conference. We will also discuss any significant difficulties or disagreements encountered during the engagement and their resolution.

Loss Reporting

Washington state law requires all state agencies and local governments to immediately notify SAO if staff know or suspect loss of public resources, or of other illegal activity including a cyber-attack if it resulted in a loss of public resources or potentially impacted financial records or systems. State and local government employees should alert us to suspected fraud through the online Report a Suspected Fraud or Loss form below. These notifications can be made on our website at www.sao.wa.gov/report-a-concern/how-to-report-a-concern/fraud-program/.

Peer Reviews of the Washington State Auditor's Office

To ensure that our audits satisfy *Government Auditing Standards*, our Office receives external peer reviews every three years by the National State Auditors Association (NSAA). The most recent peer review results are available online at www.sao.wa.gov/about-sao/who-audits-the-auditor/. Our Office received a "pass" rating, which is the highest level of assurance that an external review team can give on a system of audit quality control.

Working Together to Improve Government

Engagement Survey

When your reports are released, you will receive an engagement survey from us. We value your opinions on our attestation services and hope you provide us feedback.

Local Government Support Team

This team provides support services to local governments through the Budget, Accounting, and Reporting System (BARS) and annual online filing technical assistance, provides accounting, reporting and BARS training. Our website and client portal offers many resources, including a client Help Desk that answers auditing and accounting questions, updated BARS manuals, access to resources and recorded trainings, and additional accounting and reporting resources. Additionally this team assists with the online filing of your financial statements.

Stay informed on current and upcoming accounting implementations at https://sao.wa.gov/sites/default/files/bars--files/GASB_Accounting_Changes.pdf

The Center for Government Innovation

The Center for Government Innovation of the Office of the Washington State Auditor offers services designed to help you help the residents you serve at no additional cost to your government. What does this mean? They provide expert advice in areas like building a Lean culture to help local governments find ways to be more efficient, effective and transparent. The Center also provides financial management technical advice and best practices and resources. These can be accessed from the "Improving Government" tab of our SAO website and help you act on accounting standard changes, comply with regulations, protect public resources, minimize your

cybersecurity risk and respond to recommendations in your audit. The Center also offers the Financial Intelligence Tool, better known as FIT, to help you assess and monitor your finances and compare your financial operations to other local governments like you. You can email the Center for a personal training session to learn all the benefits using the FIT tool can provide. The Center understands that time is your most precious commodity as a public servant and wants to help you do more with the limited hours you have. Learn more about how the Center can help you maximize your effect in government at https://sao.wa.gov/improving-government/center-government-innovation.

Explore the latest resources in our Resource Library at https://sao.wa.gov/improving-government/resource-library.

Audit Team Qualifications

Tina M. Watkins, CPA, Director of Local Audit – Tina has been with the Washington State Auditor's Office since 1994. In her role, she oversees the audit teams that perform the audits for over 2,200 local governments. She serves on the Washington Finance Officers Association Board. She served as Assistant Director of Local Audit for 8 years prior to becoming the Director of Local Audit. Phone: (360) 260-6411 or Tina.Watkins@sao.wa.gov

Kristina Baylor, Assistant Director of Local Audit - Kristina has been with the Washington State Auditor's Office since 2005. In her role as Assistant Director, she assists with statewide oversight and management of all the audits for local government. She is also the program manager for housing authorities and water and sewer districts. She served as an Audit Manager for 11 years prior to becoming an Assistant Director of Local Audit. Phone: (425) 951-0290 or Kristina.Baylor@sao.wa.gov

Tom Bernard, CPA, Energy Program Manager – Tom has been with the Office of the Washington State Auditor since 2002. He serves as Energy Program Manager and has supervised and conducted our examinations of compliance with the Energy Independence Act since 2012. He also serves as Program Manager for Public Utility Districts, and as a subject matter expert in sampling methodologies. For six years, Tom conducted and supervised local government financial, federal and compliance audits, and has four years of experience on government performance audits. Phone: (360) 676-2153 or Thomas.Bernard@sao.wa.gov

Travis Beyerl, CPA, Assistant Audit Manager – Travis has been with the State Auditor's Office since 2015. He has led accountability, financial, and single audits for a variety of local governments, including cities, schools, PUDs, hospitals, and a variety of special purpose districts. Travis serves as a Subject Matter Expert for our examinations of compliance with the Energy Independence Act and our audits of Public Utility Districts. Phone: (509) 699-3813 or Travis.Beyerl@sao.wa.gov

Heather Peterson, CPA, Audit Lead – Heather joined Team Energy in November 2022 and has been with the State Auditor's Office since 2013 after earning her Master of Accountancy degree from Gonzaga University. She served as a lead auditor for accountability, financial statement and federal compliance audits of local governments. She has led audits for cities, counties, and various special purpose districts. Phone: (509) 606-8496 or Heather.Peterson@sao.wa.gov

Employee Recognition

5/12/2026

Crystal James
Ralph Gonzalez
Brad Harshman

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Crystal James

Introduction

- Customer Solutions System Analyst
- Length of Service Award – 25 years
- Current Supervisor – Cary West

Background

- Crystal began her career at Grant PUD in 1991 in a temporary Customer Service position. She moved into a limited assignment as a Customer Service Representative in 1996, transitioned to on-call status in 1998, and returned to a limited assignment in 2001 before moving into a full-time role later that year. She became a Customer Accounting Representative in 2008 and advanced to Customer Solutions System Analyst in 2018.

Ralph Gonzalez

Introduction

- Senior Engineering Tech - CS
- Length of Service Award – 20 years
- Current Supervisor – Daniel Niehenke

Background

- Ralph began his career at Grant PUD in 2006 as a Senior Engineering Technician and transitioned to a Senior Engineering Tech – CS role in 2021.

Brad Harshman

Introduction

- Senior GIS Analyst
- Length of Service Award – 20 years
- Current Supervisor – Larry Lehman

Background

- Brad began his career at Grant PUD in 2006 as a Lands Specialist and was promoted to Senior GIS Analyst in 2025.

Moses Lake Transmission Expansion Plan (MTEP)

May 12, 2026

Susan Manville, Director Transmission Strategy & Development
Jesus Lopez, Sr. Manager Transmission System Planning

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Agenda

- Executive Summary
- Existing 230 kV System and Power Flow
- MTEP Overview
  - Phase 1 & 2 Scope
  - Conceptual Schedule and Rough-order-magnitude Cost Estimates
- Questions

Executive Summary

- Capacity constraint: Moses Lake 230 kV system is fully subscribed.
- Compliance & risk: Industrial load service does not meet adopted planning guidelines; a single contingency can drive a large load interruption.
- Consequence of inaction: No additional industrial load can be served; existing customers remain exposed to outage risk.
- Recommended path: Advance a two-phase MTEP solution—Phase 1 restores guideline conformance; Phase 2 adds 230 kV capacity.

Moses Lake 230 kV System: Before vs. After MTEP

Current

Capacity:
- Fully subscribed

Configuration:
- Single backbone

Reliability:
- Single point of failure

Operability:
- Planned outage maintenance
- Limited switching flexibility

MTEP Phases 1-2

Future

Capacity:
- +445 MW

Configuration:
- Redundant network

Reliability:
- Redundancy

Operability:
- Non-outage maintenance
- Increased switching flexibility

Existing System & Power Flow

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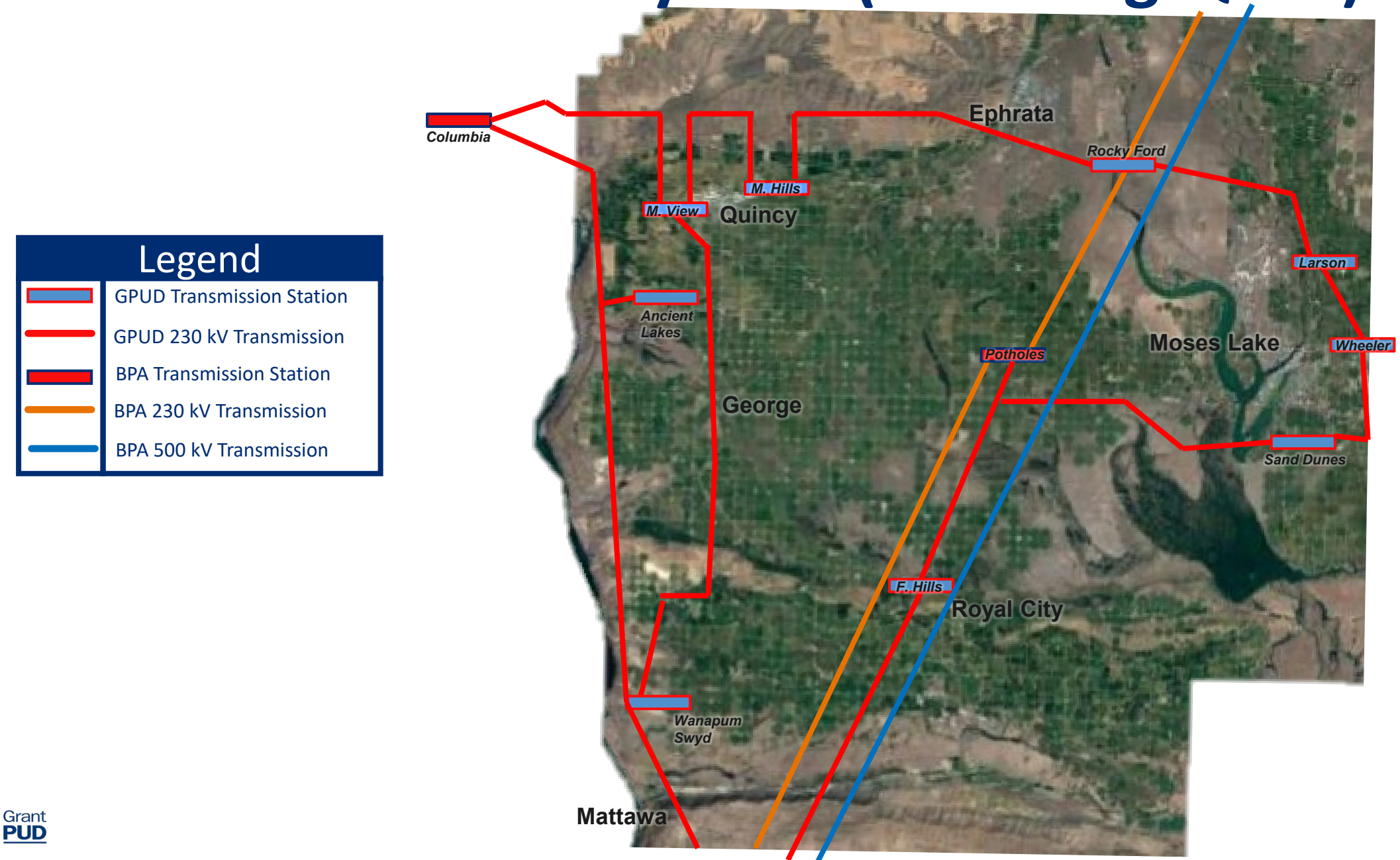
230kV Transmission System (including QTEP)

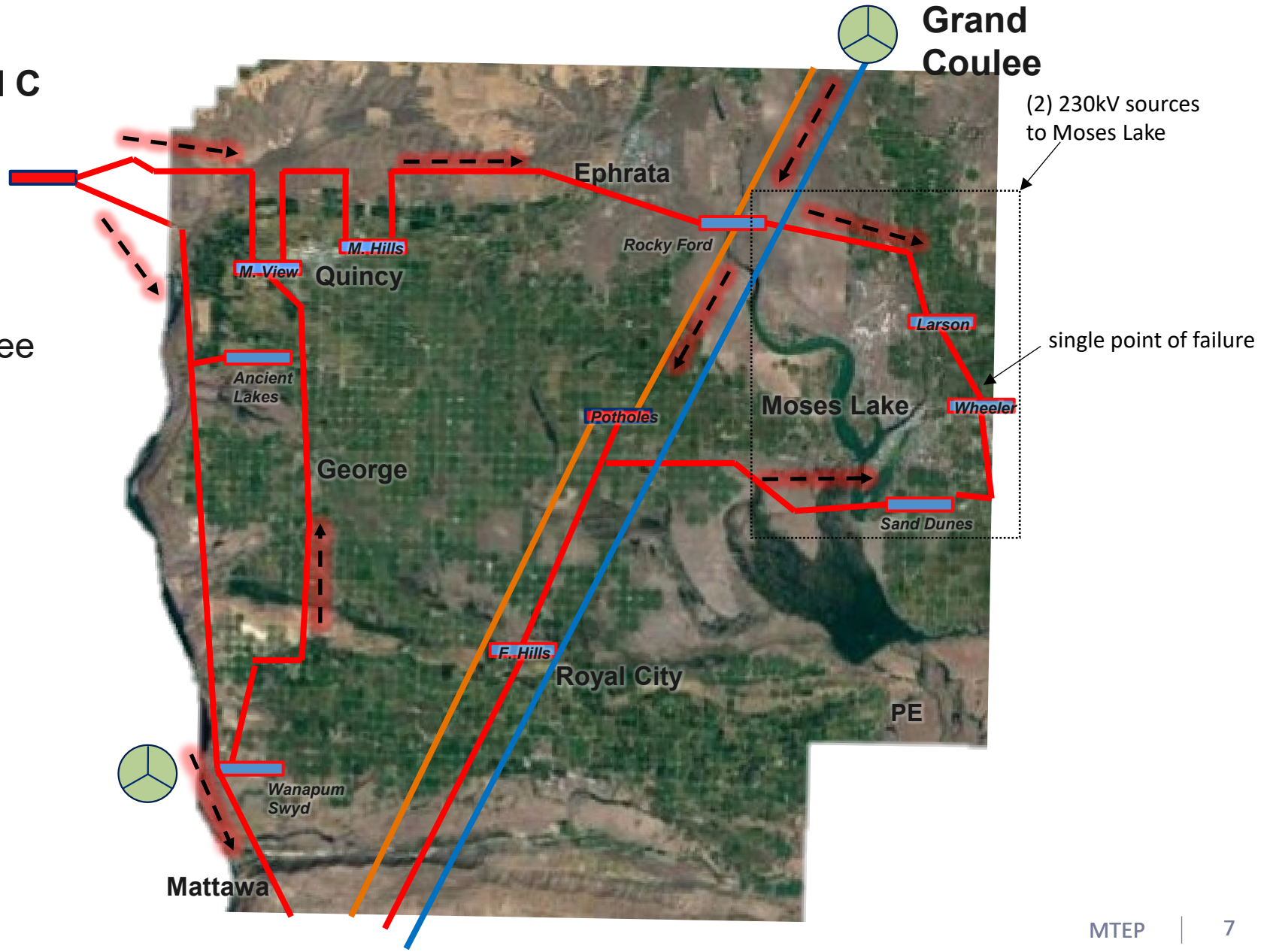


Predominant 230kV Transmission Power Flows

Power Flows: - - - →

(Predominant with All lines in service)

- North – South
  - from N. Mid C & Grand Coulee
- West – East
  - From N. Mid C & PRP

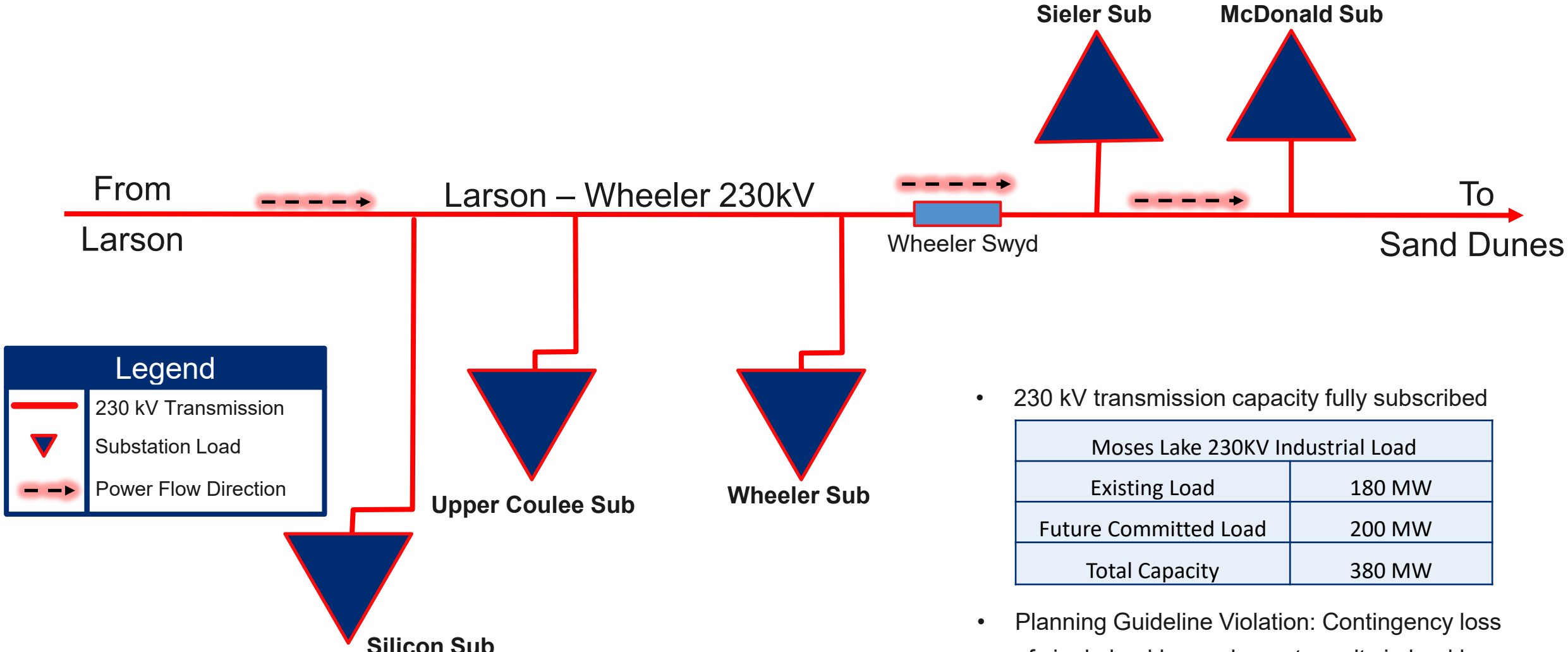


Legend

	GPUD Transmission Station
	GPUD 230 kV Transmission
	BPA Transmission Station
	BPA 230 kV Transmission
	BPA 500 kV Transmission
	Generation Resource

Wheeler Industrial Corridor

Max Capacity: 380 MW – No remaining capacity for new industrial load



- 230 kV transmission capacity fully subscribed

Moses Lake 230KV Industrial Load	
Existing Load	180 MW
Future Committed Load	200 MW
Total Capacity	380 MW

- Planning Guideline Violation: Contingency loss of single backbone element results in load loss (*TPG 2018 4.1.e*)

MTEP Overview

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MTEP – Phase 1

Scope

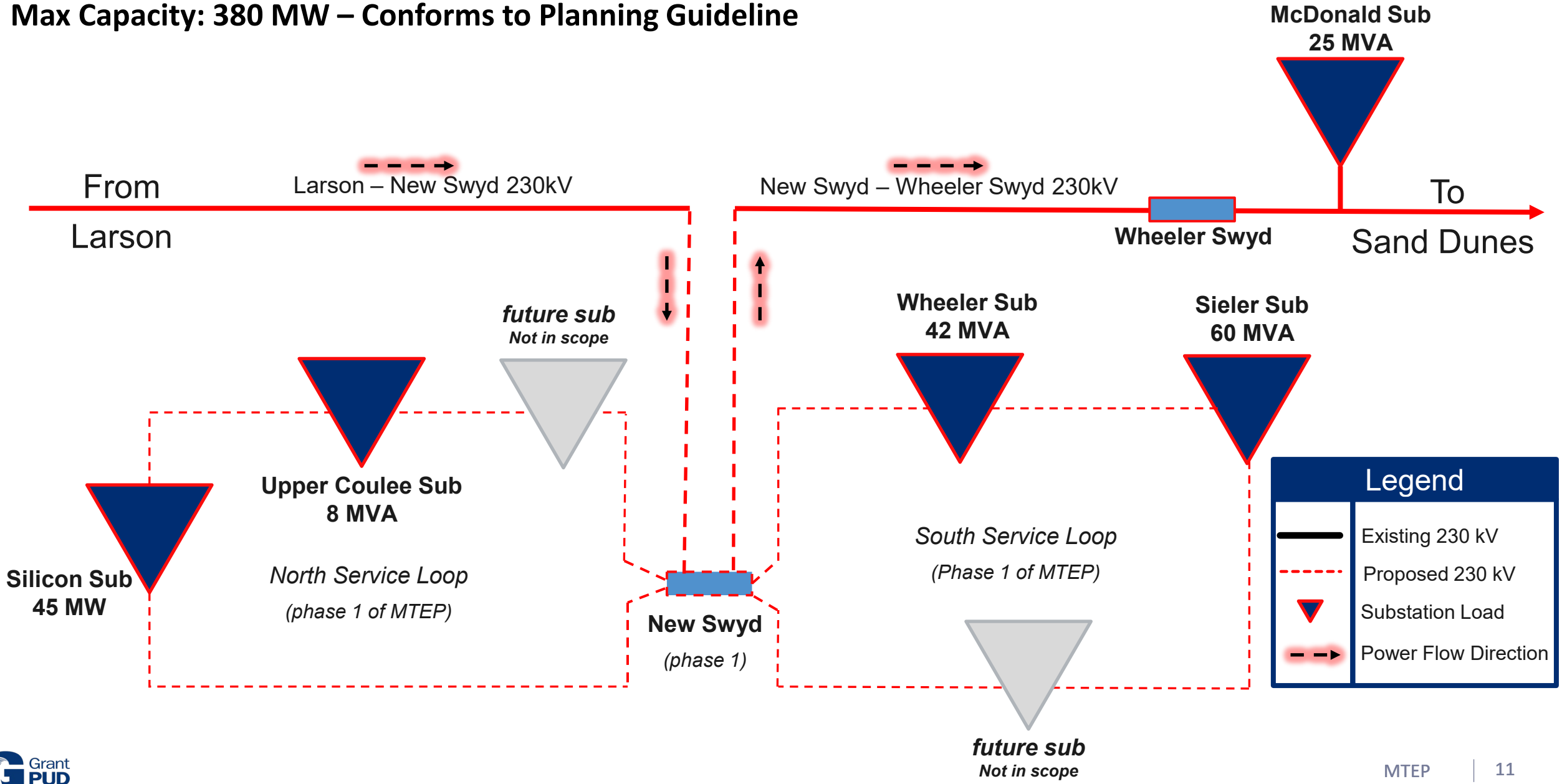
- New Wheeler industrial-corridor switchyard
- Two transmission service loops

Benefits

- Meets planning guideline requirements
- Enables maintenance without customer outages
- Improves switching/operational flexibility
- Positions terminal for a new transmission source
- Supports added 230 kV capacity (new line or local generation)

MTEP Phase 1 – Wheeler Industrial Corridor

Max Capacity: 380 MW – Conforms to Planning Guideline



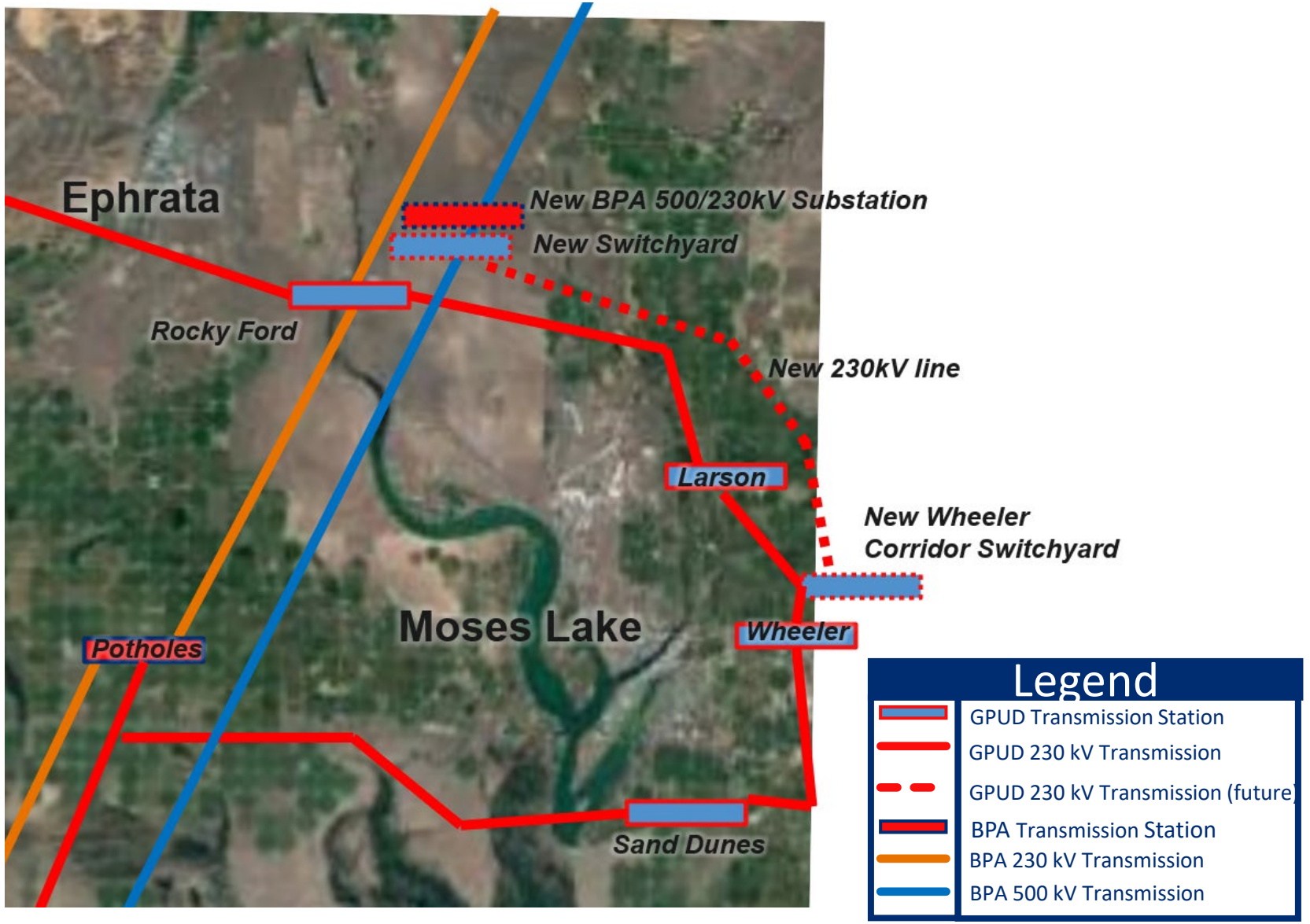
MTEP – Phase 2

Scope

- Interconnect to BPA Grand Coulee–Hanford 500 kV
- Build new Grant PUD switchyard (Rocky Ford)
- Construct new 230 kV line: Rocky Ford → Wheeler Corridor

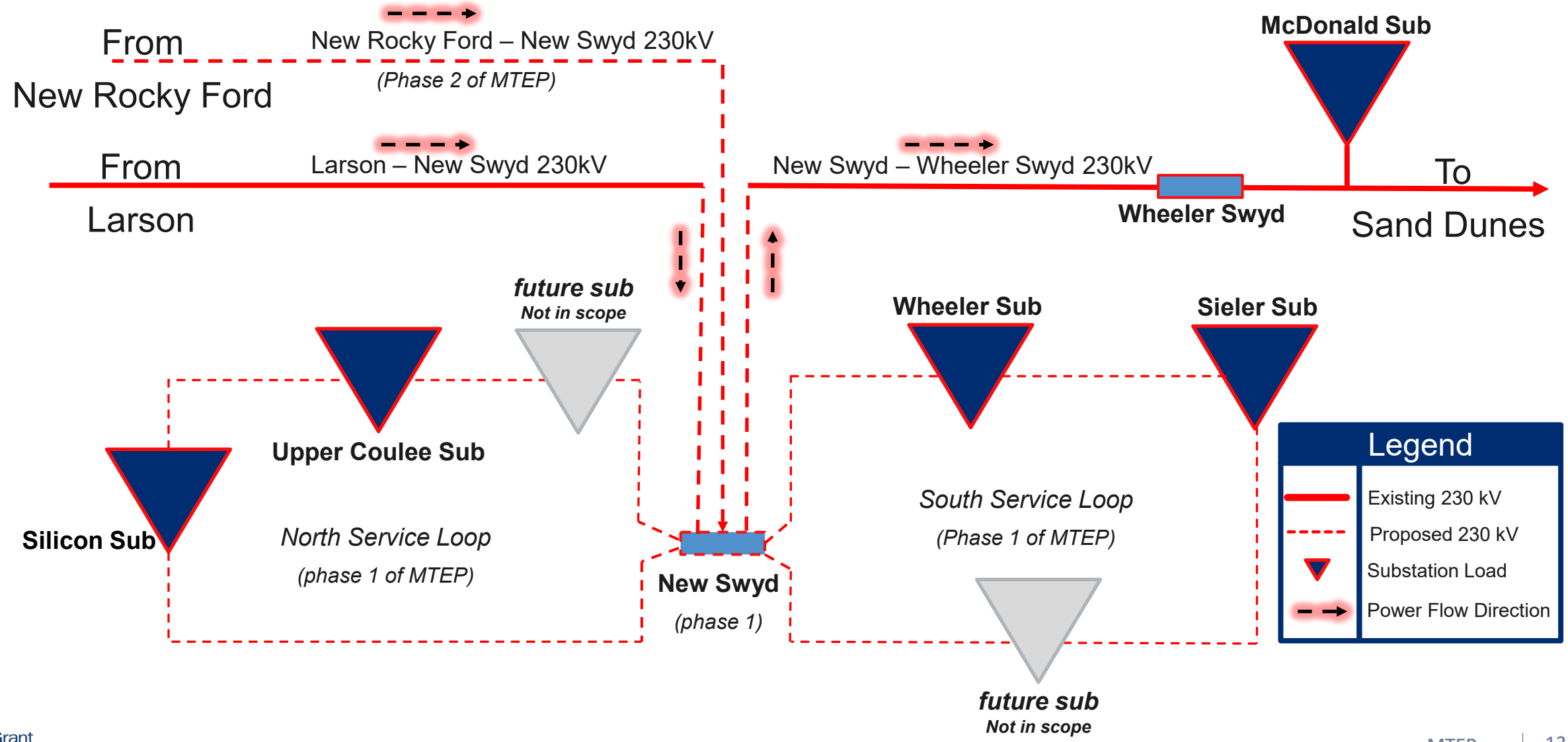
Benefit

- Adds ~445 MW of Moses Lake-area 230 kV capacity



MTEP Phase 2 – Wheeler Industrial Corridor

Max Capacity: 825 MW (445 MW Increase) – Conforms to Planning Guideline



Conceptual Schedule and ROM Cost Estimates

Phase 1 ***Wheeler Area Switchyard & Local Loops***		
Item	**Est. Completion**	**Cost Estimate**
Project Phase 1 Proposal & Approval	4Q 2026	-
New Switchyard at Wheeler	2032	$60 M
Local Loop North	2032	$7.5 M
Local Loop South	2032	$7.5 M
Phase 1 Total Cost		**$75 M**

Phase 2 ***BPA Interconnection, Rocky Ford Area Switchyard, & New 230kV T-line***		
Item	**Est. Completion**	**Cost Estimate**
Project Phase 2 Proposal & Approval	2Q 2027	-
BPA Interconnection (500/230kV Switchyard)	2032	$210 M
Rocky Ford – New Switchyard	2035	$60 M
New Rocky Ford - Wheeler 230kV Line	2037	$67 M
Phase 2 Total Cost		**$337 M**

Phase 1&2 Total Cost	**$412 M**

* Estimates based on QTEP costs & duration, BPA initial interconnection study.

Thank you!

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Business Advancement and Strategy

May 12, 2026

Julie Pyper, Vice President

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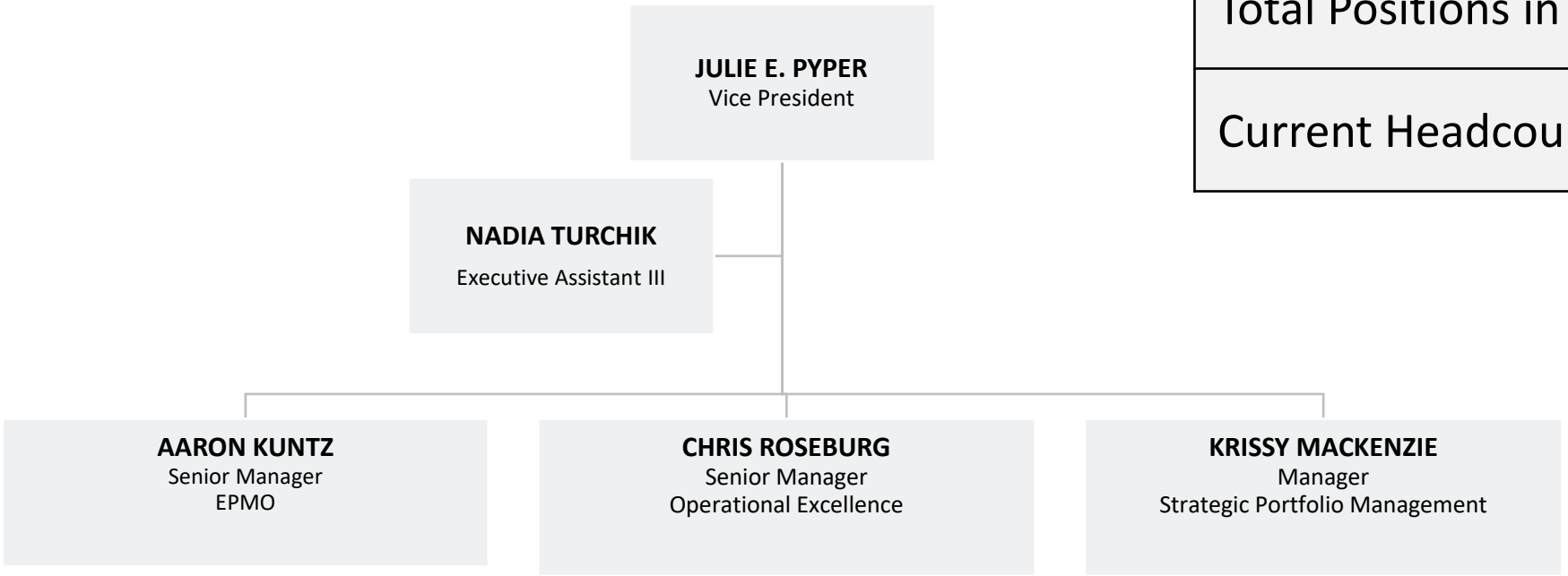
Team



Total Positions in Org	6 0
Current Headcount	6 0

Staff Updates:

- EPMO Manager, Ken Smith, is retiring May 15, 2026. Backfilling position.
- EPMO Power Delivery Project Manager, Austin Walker, joined Asset Management. Backfilling headcount.

Enterprise Balanced Scorecard

Measure	GMS Phase II Implementation	Processes Documented	Project Benefits Realized	SPI Critical Business System Projects
Status Overview	*% compliance with Growth Management Strategy Implementation Workplan*	*% of targeted processes documented to plan*	*% of projects realizing hard benefits*	*Schedule performance index (SPI) average for critical business system projects*
Status	**Blue**	**Green**	**Blue**	**Green**

- Blue measures will start reporting this Month

Executive Financial Overview

MARCH 2026

O&M: Unfavorable, Out of Target | **Labor**: Favorable, Within Target

O&M DIRECTS YTD

YTD BUDGET	ACTUALS	YTD VARIANCE	YTD VAR %
$196K	$312K	$116K	59.4%

O&M DIRECTS YE PROJECTION

TOTAL BUDGET	YEP	YE VARIANCE	YE VAR %
$838K	$3,589K	$2,750K	328.2%

LABOR YTD

YTD BUDGET	ACTUALS	YTD VARIANCE	YTD VAR %
$1,849K	$1,794K	($55K)	-3.0%

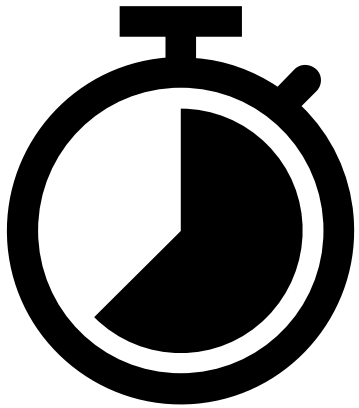
LABOR YE PROJECTION

TOTAL BUDGET	YEP	YE VARIANCE	YE VAR %
$7,944K	$7,883K	($61K)	-0.8%

COST CATEGORY TYPE	YTD BUDGET	ACTUALS	YTD VARIANCE	YTD VAR %
Purchased Services	$130,548	$245,265	$114,717	87.9%
Total	**$130,548**	**$245,265**	**$114,717**	**87.9%**

Purchased Services: $115K Unfavorable | Outside of target; $103K Unplanned and unbudgeted contracted labor for ERP Implementation. $50K from ROI Insight Group & $53K from Volt Management Corp

Management Focus



Pace of building capability – acumen

Expectations for change management: adoption, utilization and proficiency

Near-Term Business Plan

- ERP+ & IMOP Sprints Success
- Growth Management Strategy
- Program and business capability maturity

- Contracts:
  - IQ5 (Painted Hills Rebid) $7.6M
  - ECBID (Ruff Rebuild) $5.2M
  - Quincy East T-lines $5.4M
  - Harris/North Star $ Being finalized

- Contracts:
  - IQ5 (Painted Hills) Cancelled Contract Payment $750k
  - IQ1 (Invenergy) $5M

Long-Term Business Plan

2027 2028 2029

- Continued Maturity – internal and external to Business Advancement and Strategy:
  - Balanced Scorecard
  - Resource Management
  - Culture of Excellence
  - Project implementation
  - Growth Management implementation

Closing Summary

- No actions required from the Commission
- Specific policy changes related to Growth Management Strategy (GMS) will be forthcoming through GM/CEO, Senior VPs, and or VPs.
- Upcoming contracts outlined in near-term business plan
- No critical updates or action items requiring Commission involvement

Thank You!

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QBR Summary

Department Name:	Key Presenters:	Date:
Business Advancement & Strategy	Julie Pyper	May 12, 2026

RECAP	
Issues and Drivers	Management Focus: Pace of building capability – acumen ❙ Expectations for change management: adoption, utilization and proficiency

NEAR-TERM PLANS (CURRENT THROUGH Q3 2027)	
Project Updates	ERP+ & IMOP Sprints Success ❙ Growth Management Strategy ❙ Continuing to build program and business capability maturity: project manager performance expectations ❙ Resource Management

LONGER-TERM STRATEGY (2027 THROUGH 2029)	
Roadmap Strategy	Continued Maturity – internal and external to Business Advancement and Strategy: Balanced Scorecard, Resource Management, Culture of Excellence, Project implementation

COMMISSION SUPPORT: KEY ASKS	
Specific Requests	
June	Harris – Amount being finalized
July	IQ5 (Painted Hills) rebid $7.6M Quincy East Transmission lines $5.4M ECBID (Ruff Rebuild) $5.2M
August	IQ5 (Painted Hills) cancelled contract payment $750,000 IQ1 (Invenergy) $5M