

Bull Run
TREATMENT
PROJECTS

*Our water: Safe and abundant
for generations to come*

PORTLAND WATER BUREAU

Bull Run Treatment Projects

City Council

April 10, 2024



Today's Council Actions

1. Report to Council – Bull Run Treatment Projects Annual Report
2. Report to Council – Filtration Guaranteed Maximum Price (GMP) 2
3. Report to Council – Pipelines Guaranteed Maximum Price (GMP) 2

Bull Run TREATMENT PROJECTS | *Our water: Safe and abundant for generations to come*

The Water Bureau is making long-term investments with the Bull Run Treatment Projects to help keep Bull Run water safe and abundant for nearly one million people who rely on it today and for future generations. The new facilities are needed to protect public health and comply with safe drinking water regulations.

For our health
Making sure our water is safe for everyone.

- In 2023, the Oregon Health Authority confirmed our Improved Corrosion Control Treatment for lead is "optimized," bringing the Water Bureau into full compliance with the federal Lead and Copper Rule.
- With these treatment upgrades, we have taken a big step to further reduce the risk of lead in water for homes with lead plumbing materials.

For our economy
Creating jobs and investing in infrastructure to help our community thrive.

- The generational investments the Water Bureau is making in the Bull Run system are creating thousands of construction jobs.
- The Bull Run Treatment Projects are estimated to generate \$1.59B economic activity through construction and \$14.9M annually when complete.

For our future
Providing a more resilient water system and greater protection.

- The filtration facility we are building will remove contaminants and sediment from our water, making our supply more resilient to water quality risks from events like the Camp Creek Fire in 2023 that burned 2,000+ acres in the Bull Run Watershed.
- Filtration will greatly reduce the threat of the Bull Run supply being disrupted following a wildfire or extreme weather event and is one of the ways we are preparing for a changing climate.

Portland Water Bureau | Bull Run Treatment Projects Annual Report

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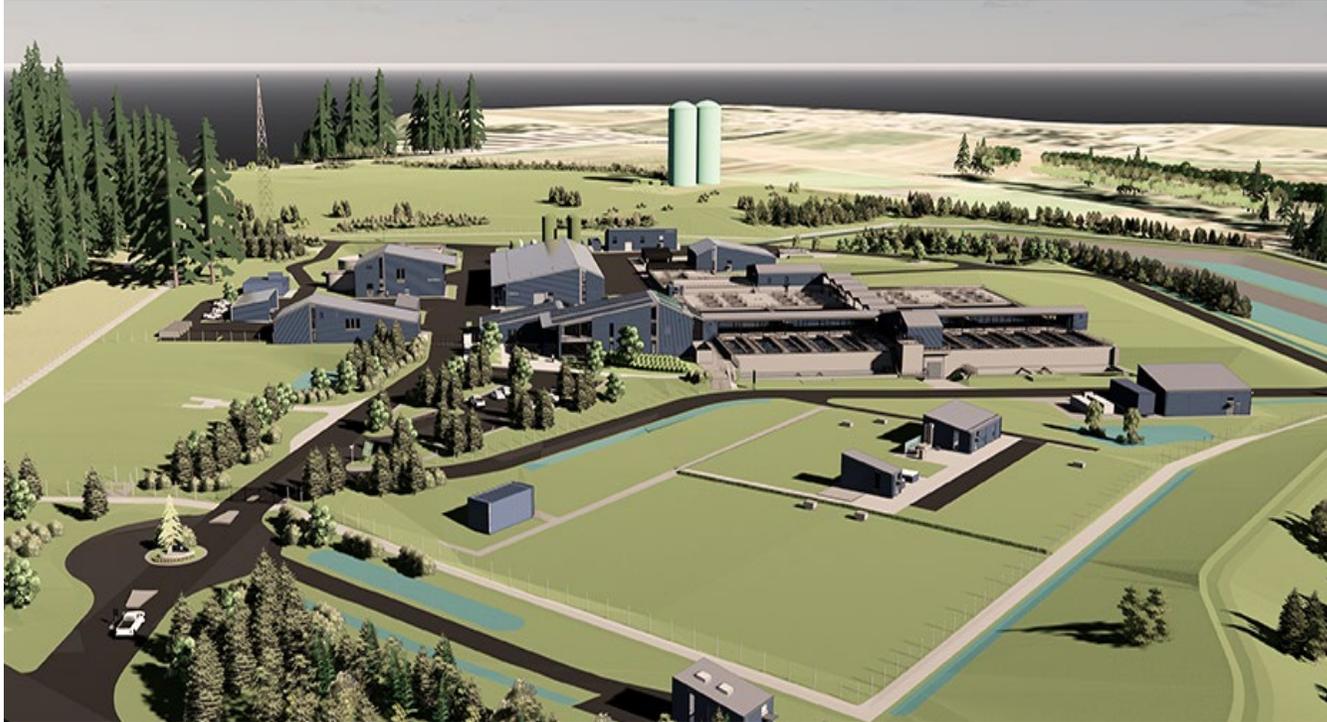
Water System Legacy

- 1880's-1900 creation of Portland Water Committee, the Bull Run Reserve created, conduits were constructed, and Portland begins using Bull Run water in 1895
- System designed to be gravity fed
- Closed and protected watershed with no public access and protection from logging and recreation
- Portlanders have been thriving on that legacy of safe, clean Bull Run drinking water for more than a century



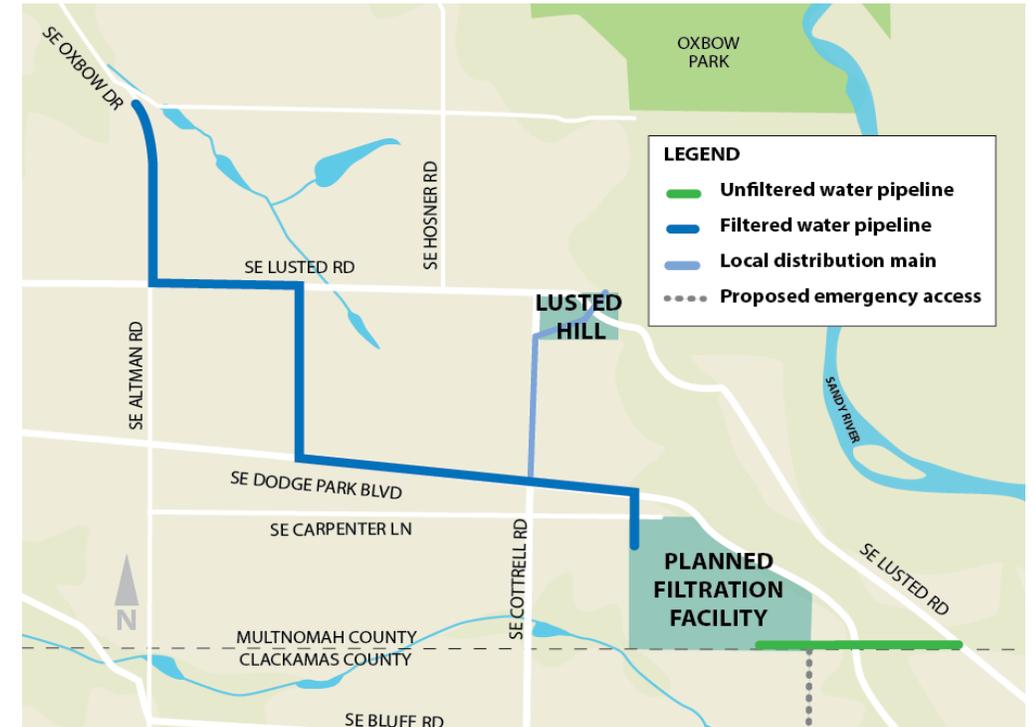
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Filtration Facility



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Filtration Pipelines

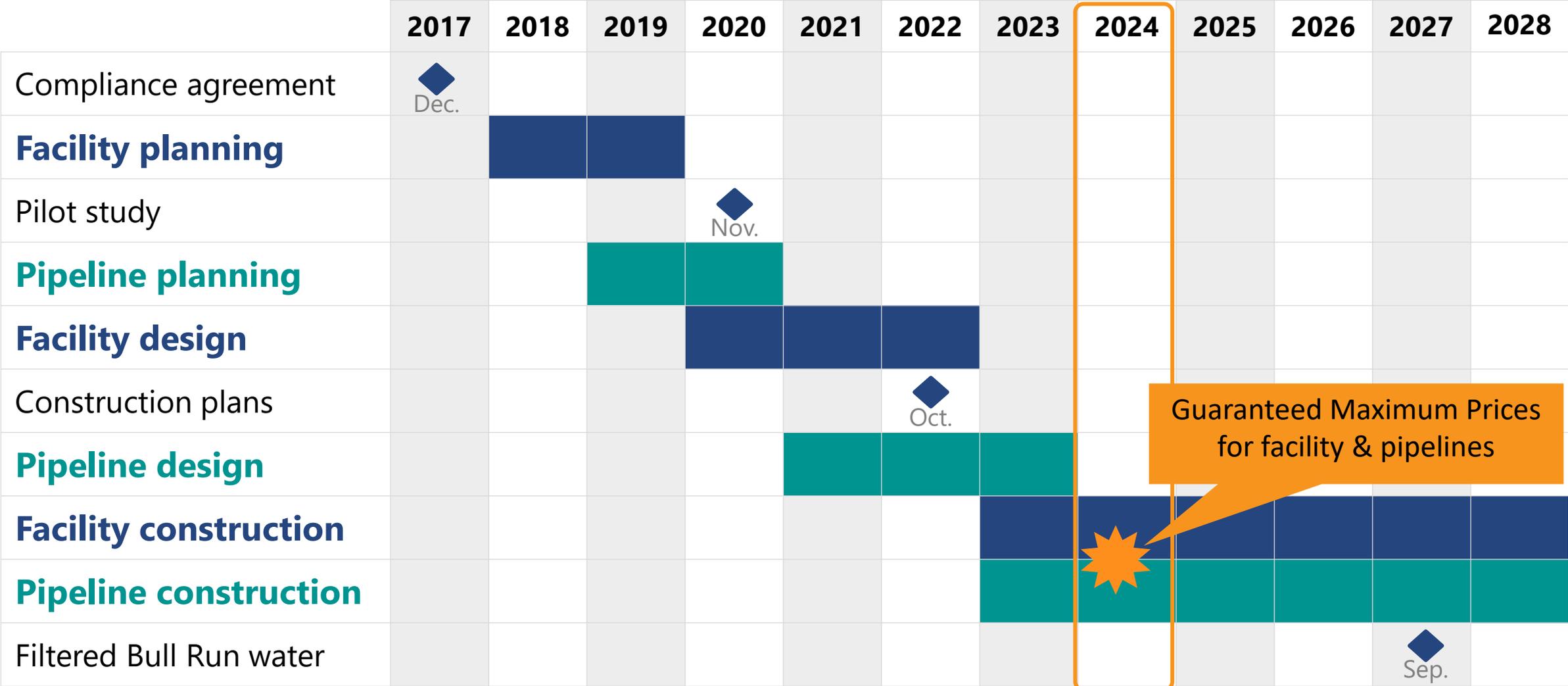


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Improved Corrosion Control Treatment

Completed April 2022

Bull Run Filtration critical path to compliance



Guaranteed Maximum Prices for facility & pipelines

◆ Oregon Health Authority deadline

■ Filtration facility

■ Pipelines

Filtration is a Regulatory Requirement

1. Treatment to address *Cryptosporidium* required by the Oregon Health Authority (OHA) and federal Environmental Protection Agency under a Safe Drinking Water Regulation called LT2.
2. Specific terms of compliance directed by OHA in a 2017 Bilateral Compliance Agreement (BCA) include type of treatment (filtration) and schedule for completion (September 2027).
3. Portland City Council chose to comply with LT2 treatment requirements using filtration instead of ultraviolet (UV) treatment despite higher costs due to the multiple resilience benefits of filtration.
4. BCA is a compliance order – not a contract. Portland cannot renegotiate the terms due to cost. Only *force majeure* events can drive changes to existing requirements.



Filtration provides multiple benefits

- ✓ Excellent treatment option by removing *Cryptosporidium*
- ✓ Reduces cancer-causing disinfection byproducts
- ✓ Addresses high turbidity due to erosion, wildfires, or increasingly intense storms
- ✓ Will enable availability and use of Bull Run water during most emergency events including earthquakes, floods, and wildfires
- ✓ Includes corrosion control improvements that will further reduce the risk of lead exposure for Portlanders
- ✓ UV disinfection would not provide these benefits

Heavy rains cause switch to Portland well water

by: Jim Redden, Portland Tribune
Posted: Nov 6, 2022 / 02:12 PM PST
Updated: Nov 6, 2022 / 02:12 PM PST

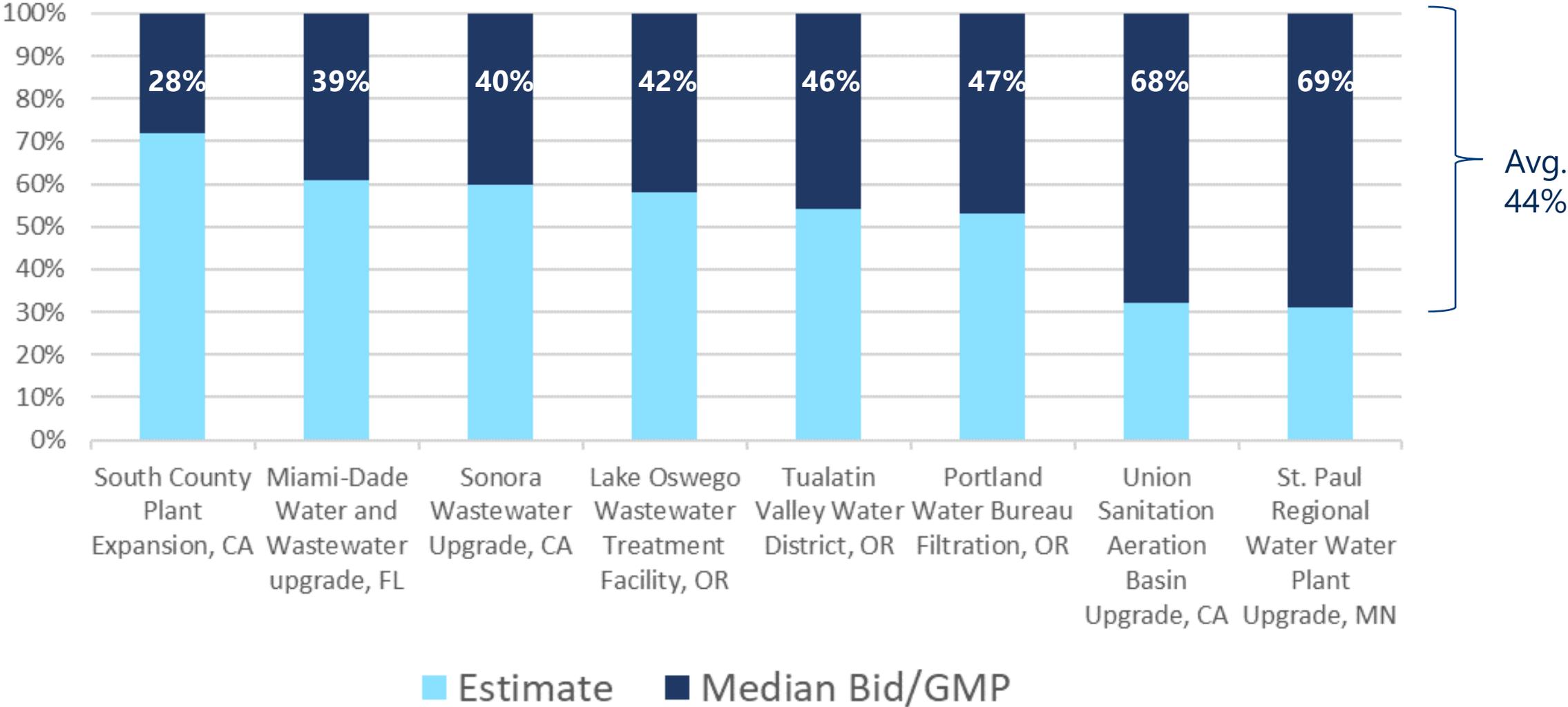
PORTLAND, Ore. ([Portland Tribune](#)) — The Portland Water Bureau has temporarily switched the city's water supply to the Columbia South Shore Well Field because of turbidity in the **Bull Run Reservoir** caused by recent heavy rains.

Turbidity is organic material suspended in the water. Operations Manager Chris Wanner said the transition from Bull Run water to 100% groundwater went smoothly.



2023 Camp Creek Fire

Market conditions are impacting projects across the country



Current estimated program costs

	2019 estimated costs	2022 estimated costs	2023 estimated costs	Current estimated costs
Capital Costs	\$0.967B	\$1.249B	\$1.578B	\$1.962B
Other WIFIA-eligible Costs (financing costs, overhead, and interest)	\$0.106B	\$0.106B	\$0.106B	\$0.106B
Available Contingency	\$0.410B	\$0.128B	\$0.150B	\$0.066B*
TOTAL PROGRAM FUNDING	\$1.483B	\$1.483B	\$1.834B	\$2.134B

* \$0.038B in additional contingency is available in the capital costs for a total of **\$0.104B total Water Bureau contingency.**

Key cost drivers

- Market capacity
- Continued supply chain issues, especially for some materials and equipment
- Continued inflation and escalation
- Labor shortages leading to labor wage increases
- Schedule compression
- **Maintaining momentum on construction is our best opportunity to achieve compliance deadline and control cost increases**

“Economic conditions, interest rates, and market demand contribute to strong market conditions and tight skilled labor markets. Trade contractors have experienced wage rate impacts to attract and retain skilled labor in several regions.”

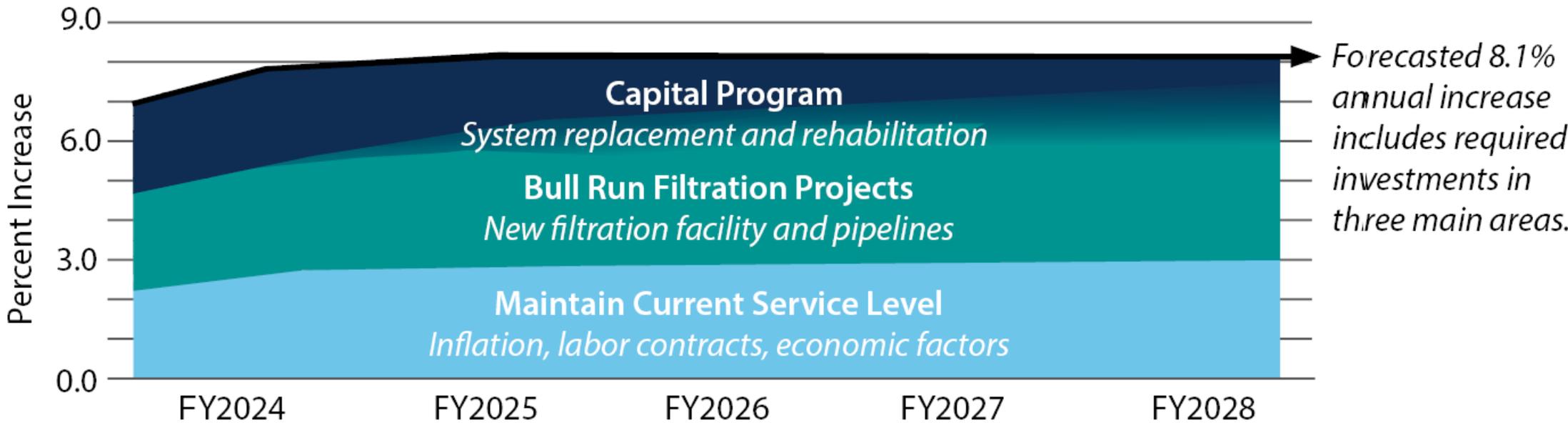
- Turner Construction 2023
4th Quarter Forecast

Risks and Contingency

- Significant cost risk reduction with this council action
 - Approval of the GMPs addresses the highest cost risks of escalation and market response
- Still have cost risks
 - Primary risk going forward is delay, such as delays due to land use appeals, supply chains, or weather
 - Another large risk is differing site conditions, such as what is encountered when tunneling or excavating on site
 - Other unknowns
- Contingency
 - Water Bureau contingency is \$104M and Contractor contingency is \$52M, for a total of \$156M

Water rates

Forecasted Water Rate Increases for Typical Residential Customer



Rate Mitigation

- Revising the 10-yr capital plan to offset increases
- Continuing to seek external funding opportunities
 - Applying for second Water Infrastructure Finance and Innovation Act (**WIFIA**) Loan
 - Grants from Energy Trust of Oregon
- Cost management:
 - Value engineering reduced estimated construction costs by \$200M+
 - Strong contract processes and controls will manage cost increases
 - Annual financial audits



2021 WIFIA loan:

- Very low 1.89% interest rate
- Saves ratepayers at least \$247M
- Repayment can begin in 2032

The Bull Run Treatment Projects will help keep our water **safe and abundant** for generations to come



**For our
health**



**For our
economy**



**For our
future**

Keeping the community informed and engaged

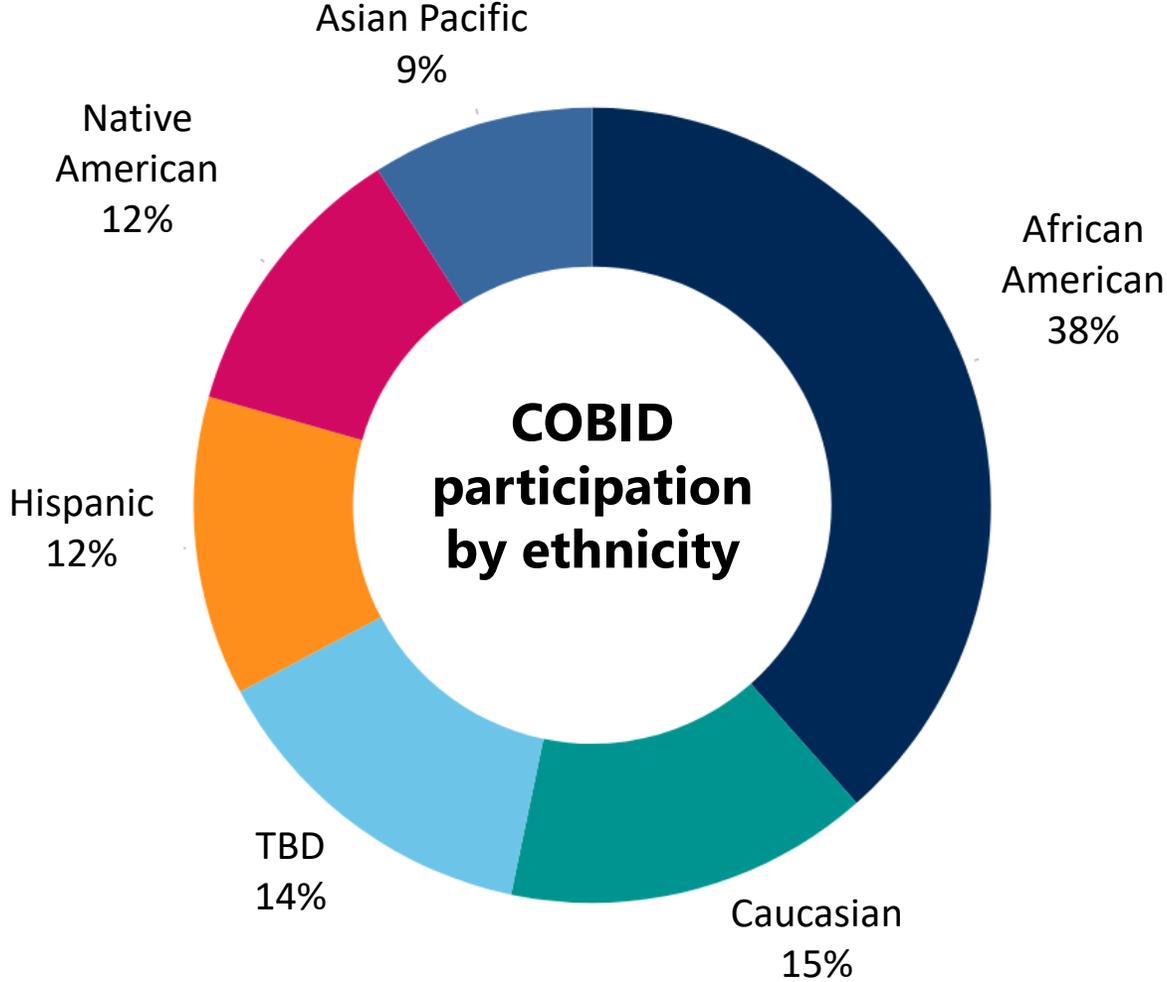
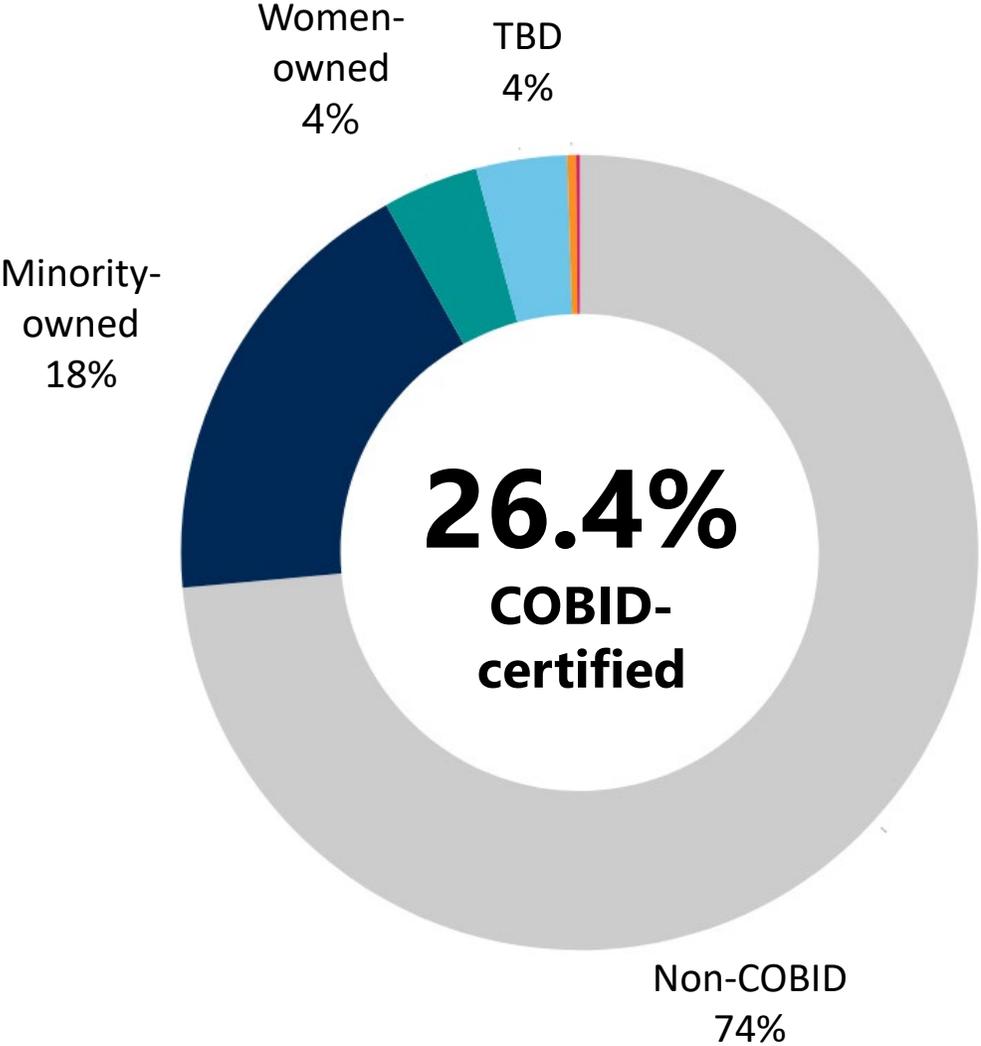


- Project e-news
- Project engagement with local tribes, government agencies and utilities, schools, farmers, and environmental groups
- Neighbor information meetings
- Individual property owner meetings, phone calls, doorhangers
- Mailings (letters, postcards)
- Project area signage
- Contractor recruitment support
- Construction webpage updates
- Onsite Water Bureau liaison during work activities
- Project communications phone, email, comment form
- Monthly coffee with the contractor*
- Construction hotline*
- Subscribe for text notifications*

**New for construction*

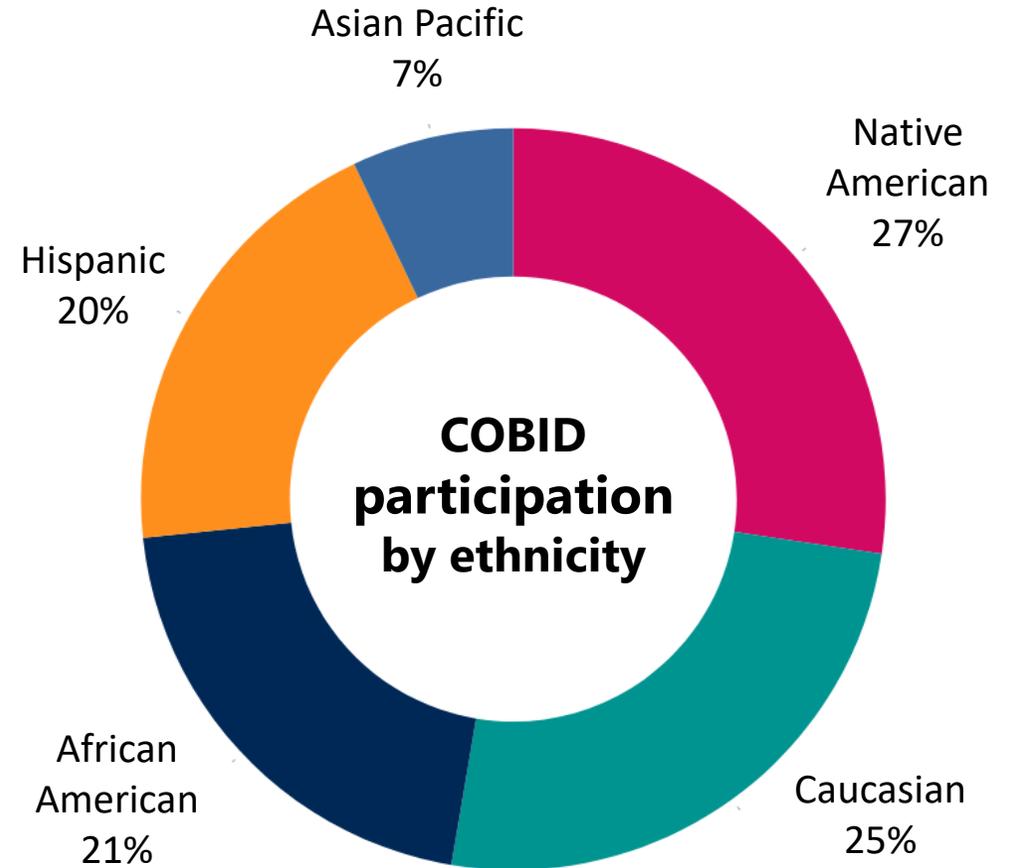
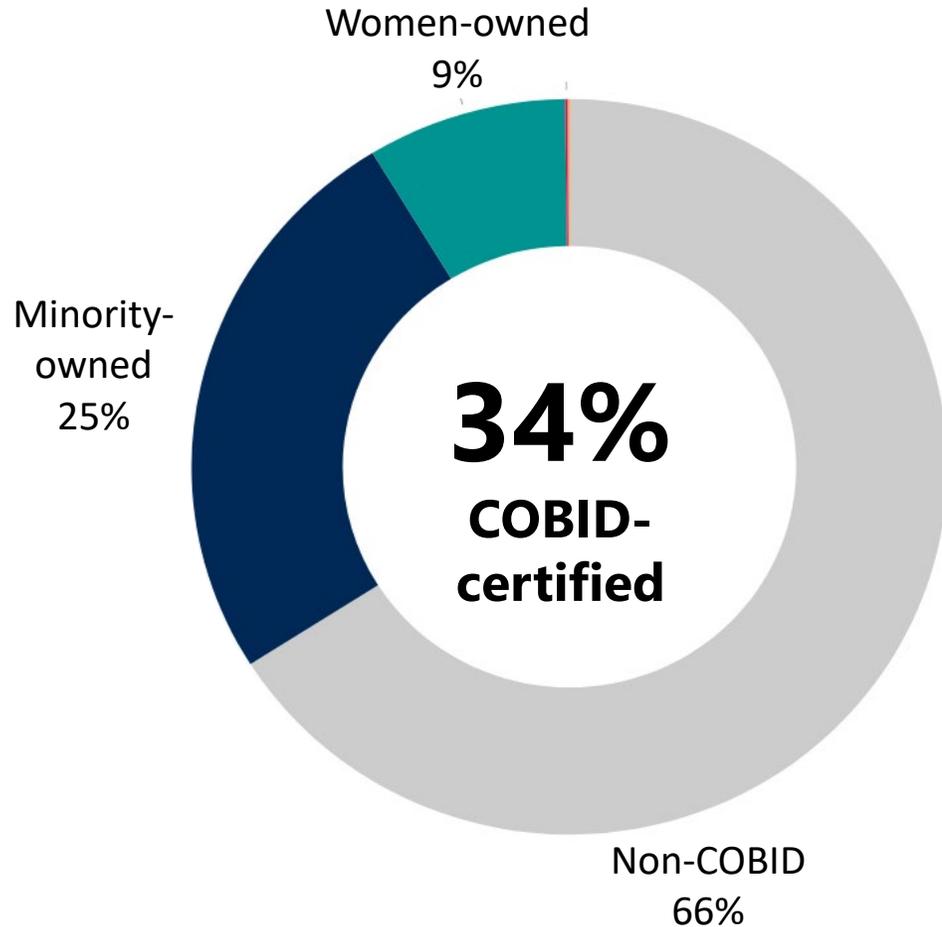
Workforce

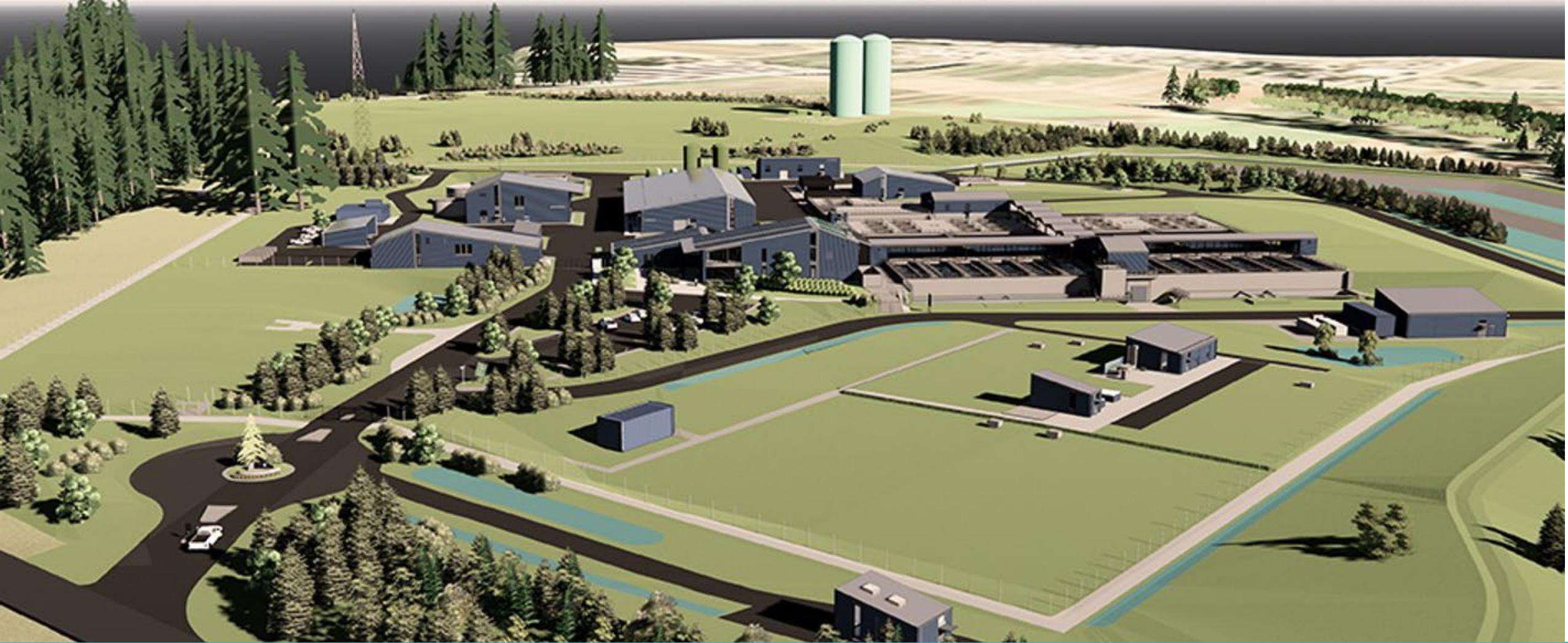
Facility planned construction COBID participation = **\$294 million**



Workforce

Pipelines planned construction COBID participation = **\$102 million**





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for generations to come*

Learn More portland.gov/bullrunprojects

Thank you!