

**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



# Water System Legacy

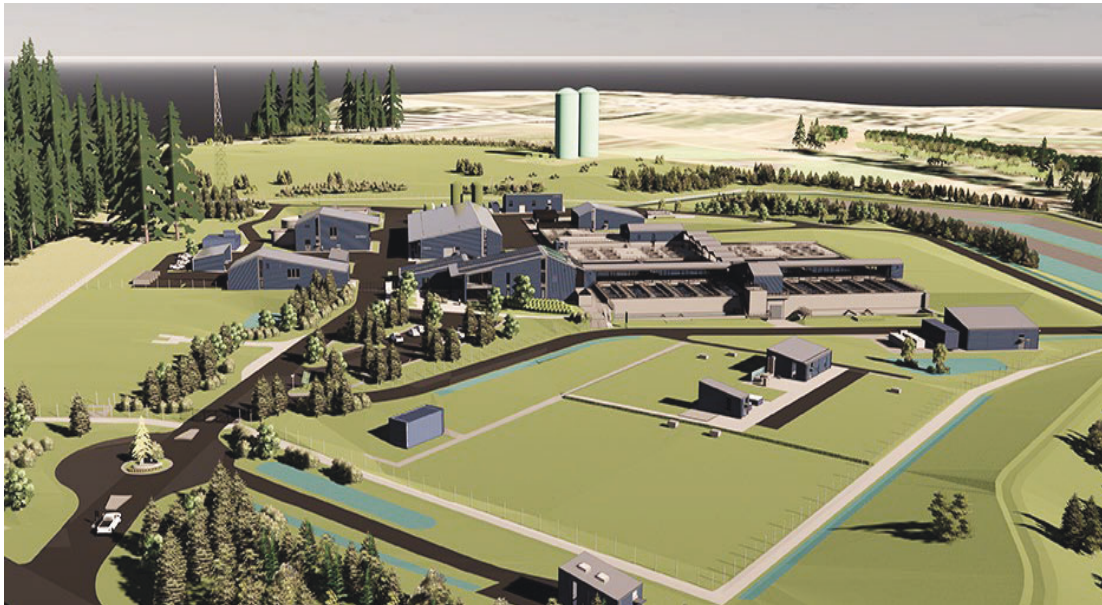
- 1880's-1900 creation of Portland Water Committee, the Bull Run Reserve created, conduits were constructed, and Portland begins using Bull Run water in 1895
- System designed to be gravity fed
- Closed and protected watershed with no public access and protection from logging and recreation
- Portlanders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





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## Filtration Facility



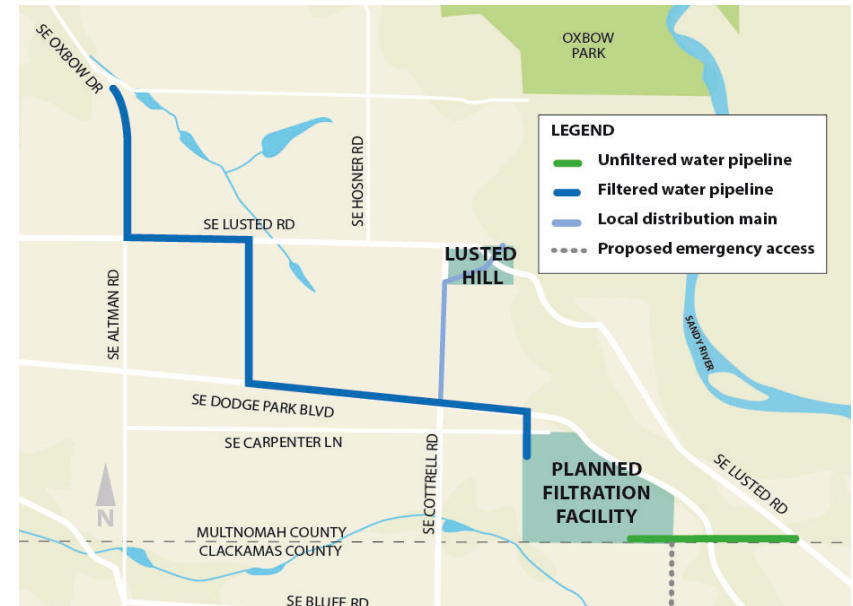
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## Improved Corrosion Control Treatment

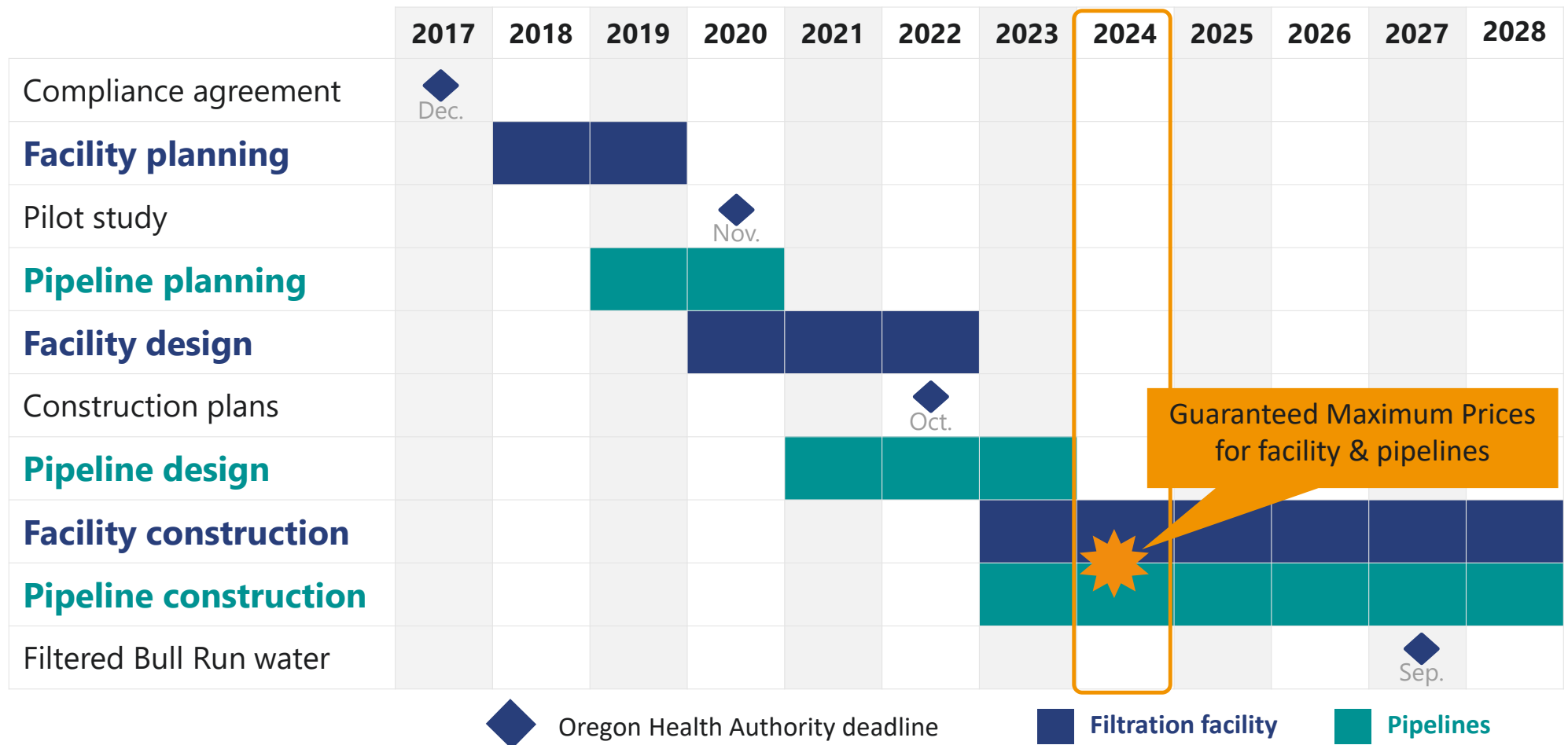
**Completed April 2022**

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## Filtration Pipelines

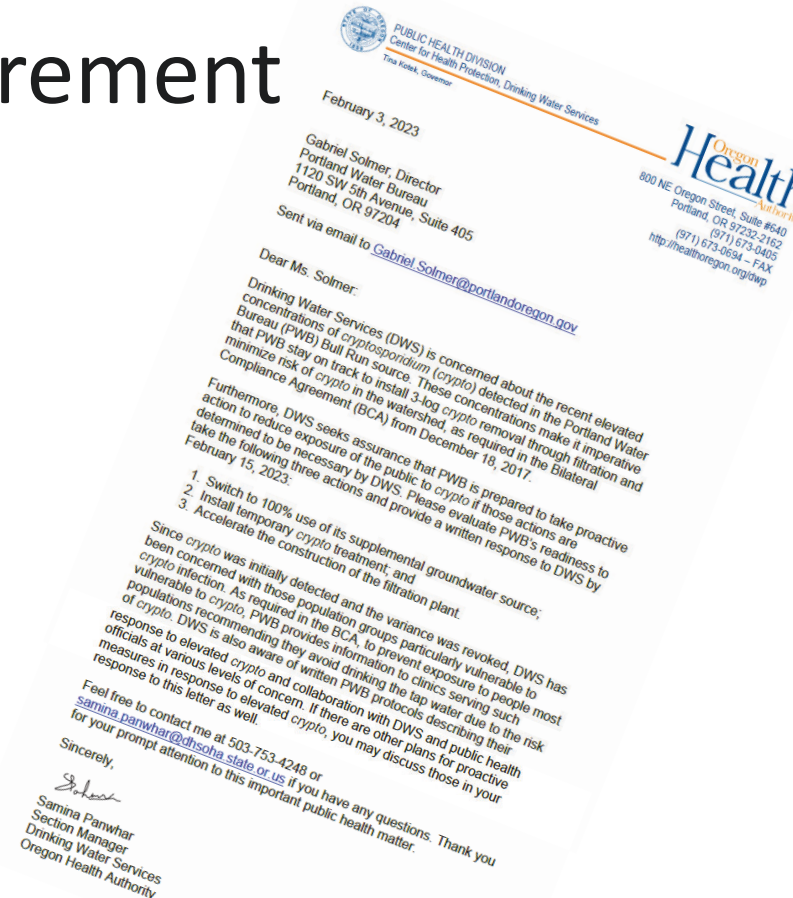


# Bull Run Filtration critical path to compliance



# 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

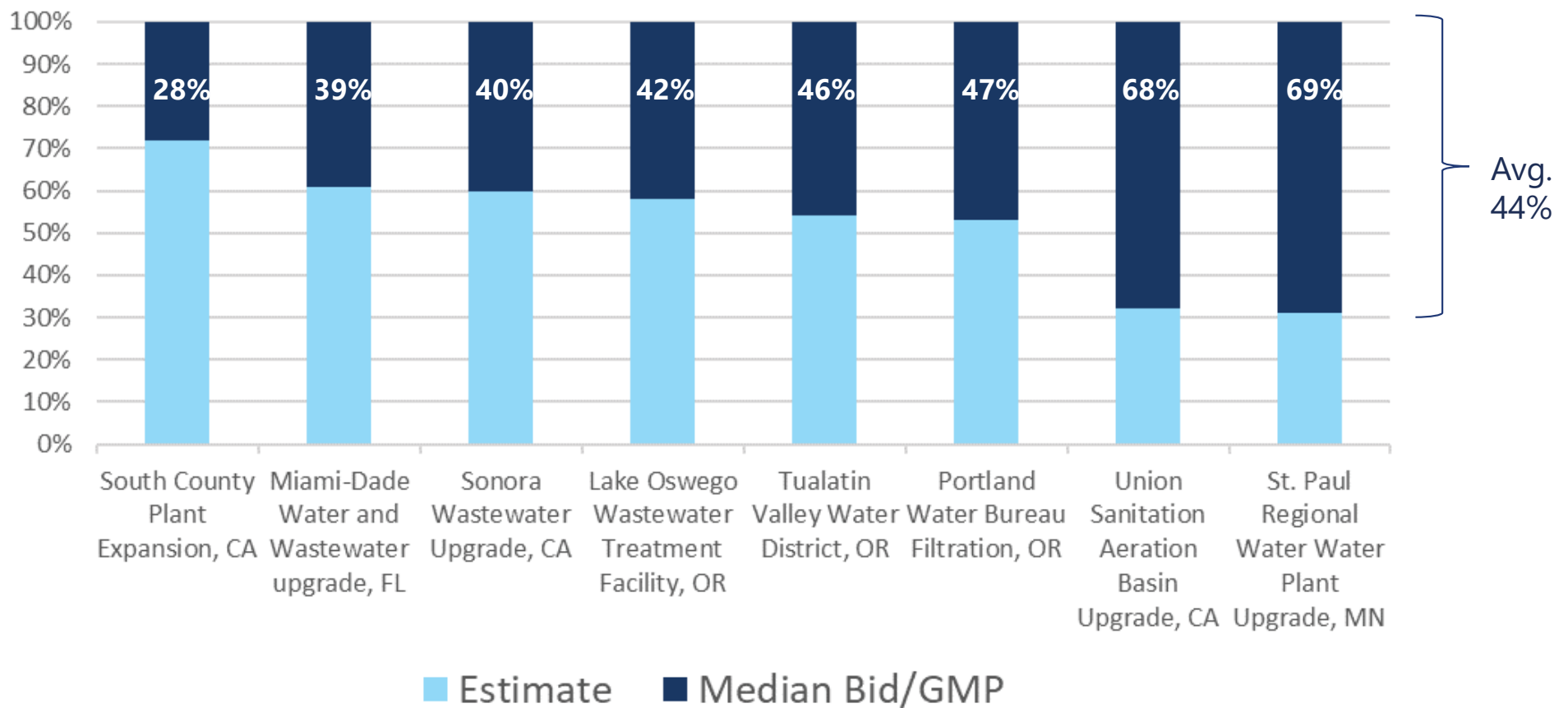
PORTLAND, Ore. ([Portland Tribune](#)) — The Portland Water Bureau has temporarily switched the city's water supply to the Columbia South Shore Well Field because of turbidity in the **Bull Run Reservoir** caused by recent heavy rains.

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*
<b>TOTAL PROGRAM FUNDING</b>	<b>\$1.483B</b>	<b>\$1.483B</b>	<b>\$1.834B</b>	<b>\$2.134B</b>

\* \$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**

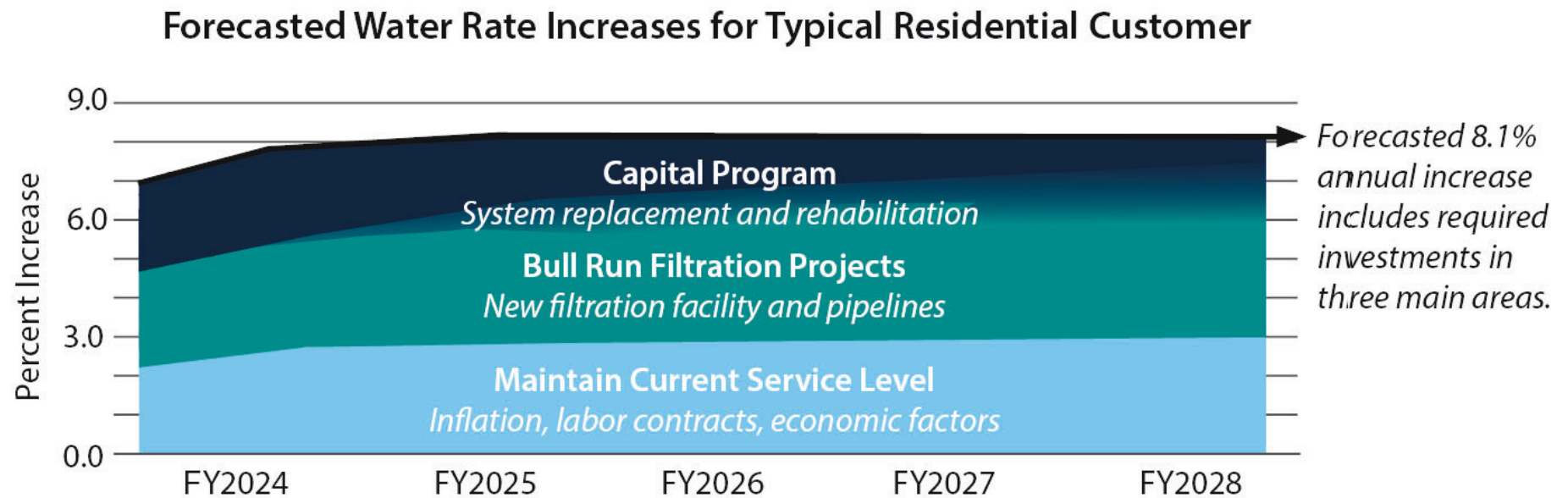
“Economic conditions, interest rates, and market demand contribute to strong market conditions and tight skilled labor markets. Trade contractors have experienced wage rate impacts to attract and retain skilled labor in several regions.”

- 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





# 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

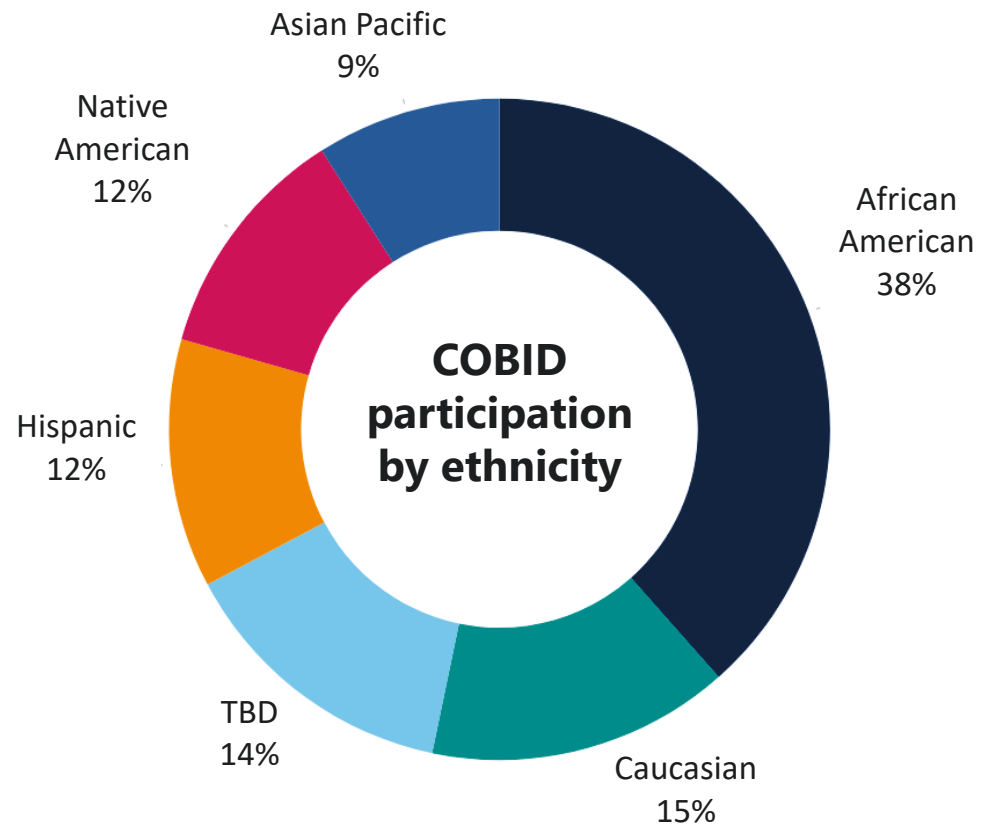
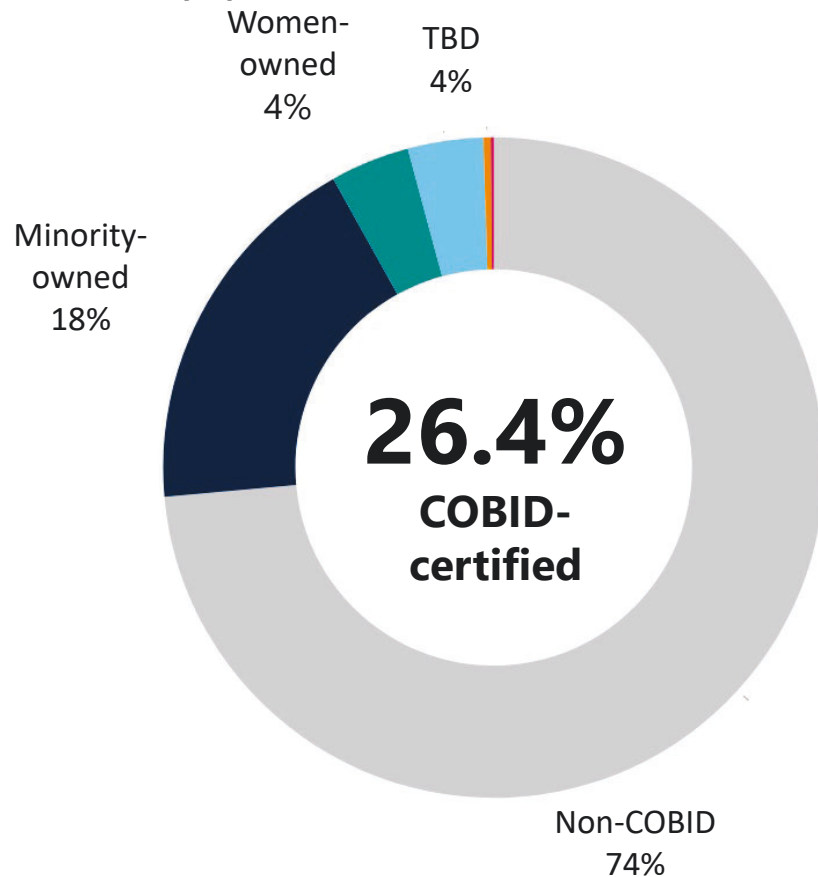


- Project e-news
- Project engagement with local tribes, government agencies and utilities, schools, farmers, and environmental groups
- Neighbor information meetings
- Individual property owner meetings, phone calls, doorhangers
- Mailings (letters, postcards)
- Project area signage
- Contractor recruitment 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

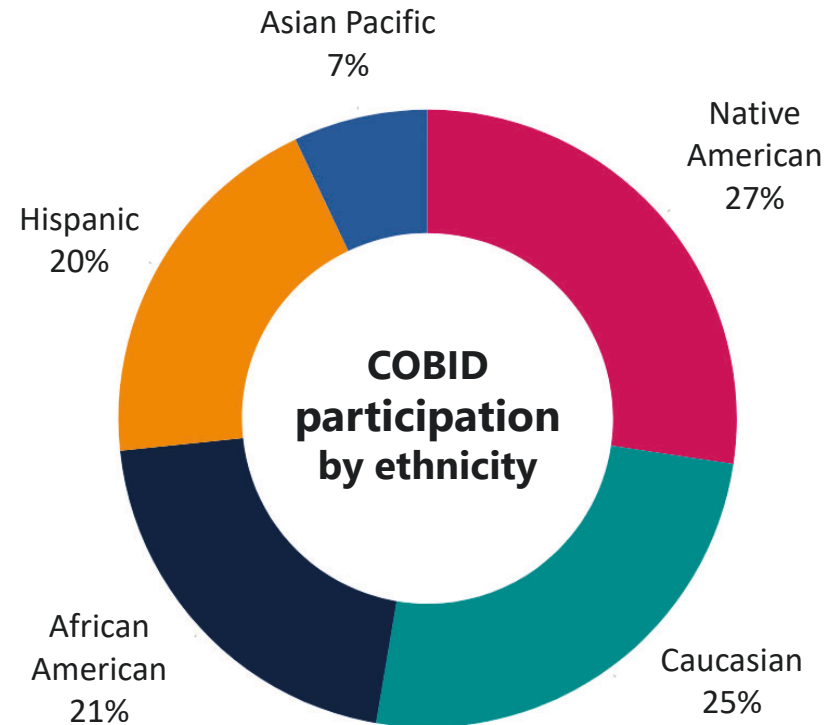
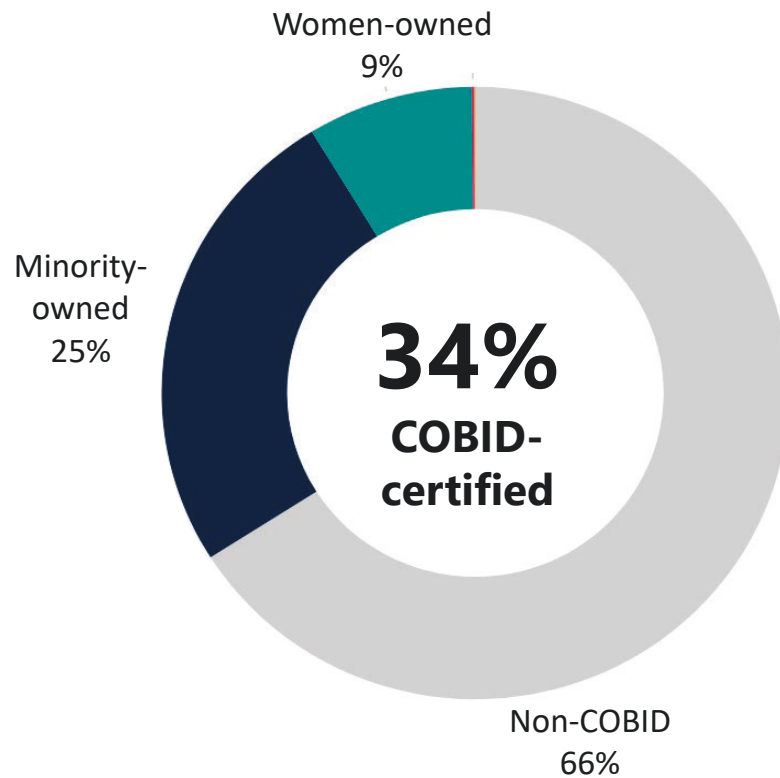
Facility planned construction COBID participation = **\$294 million**

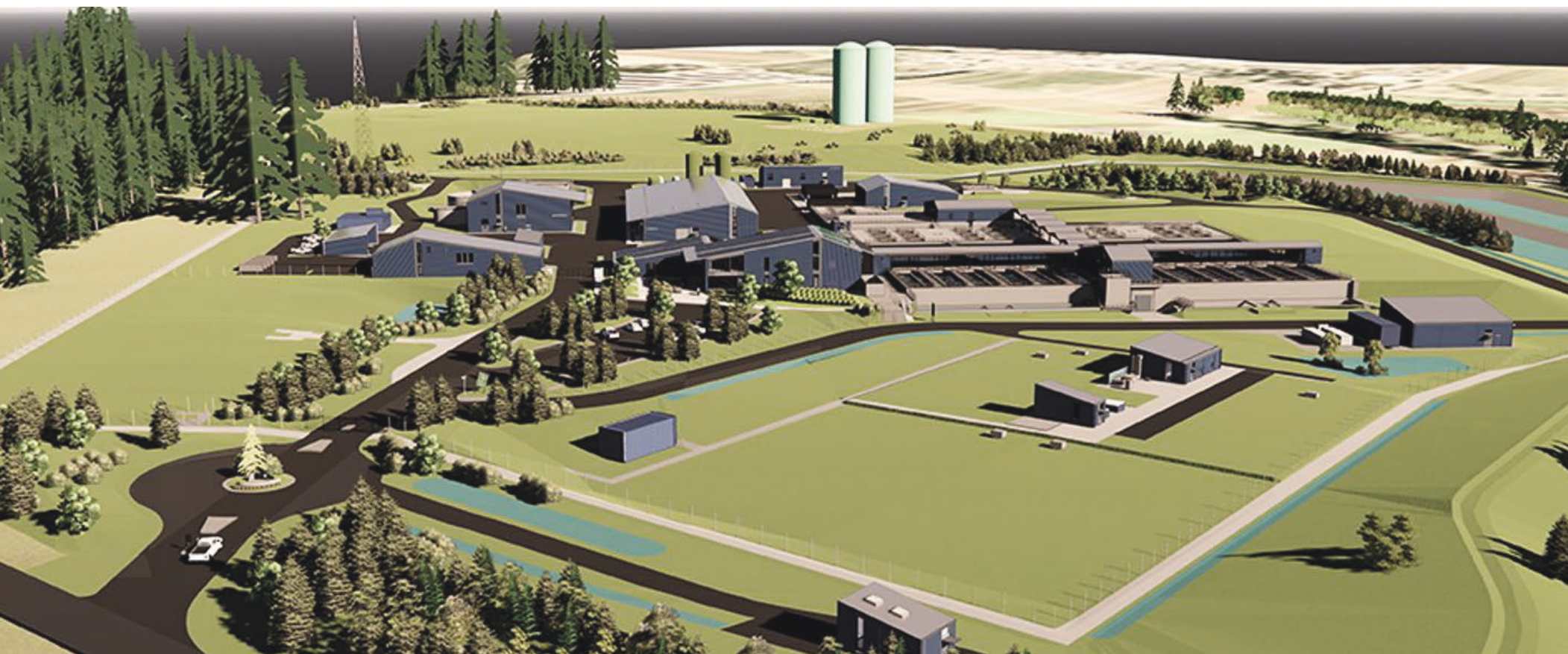




# Workforce

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





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**Learn More** [portland.gov/bullrunprojects](http://portland.gov/bullrunprojects)

**Thank you!**