



# West Point Treatment Plant 2023 update





Protecting public health and our environment





# Historical Context

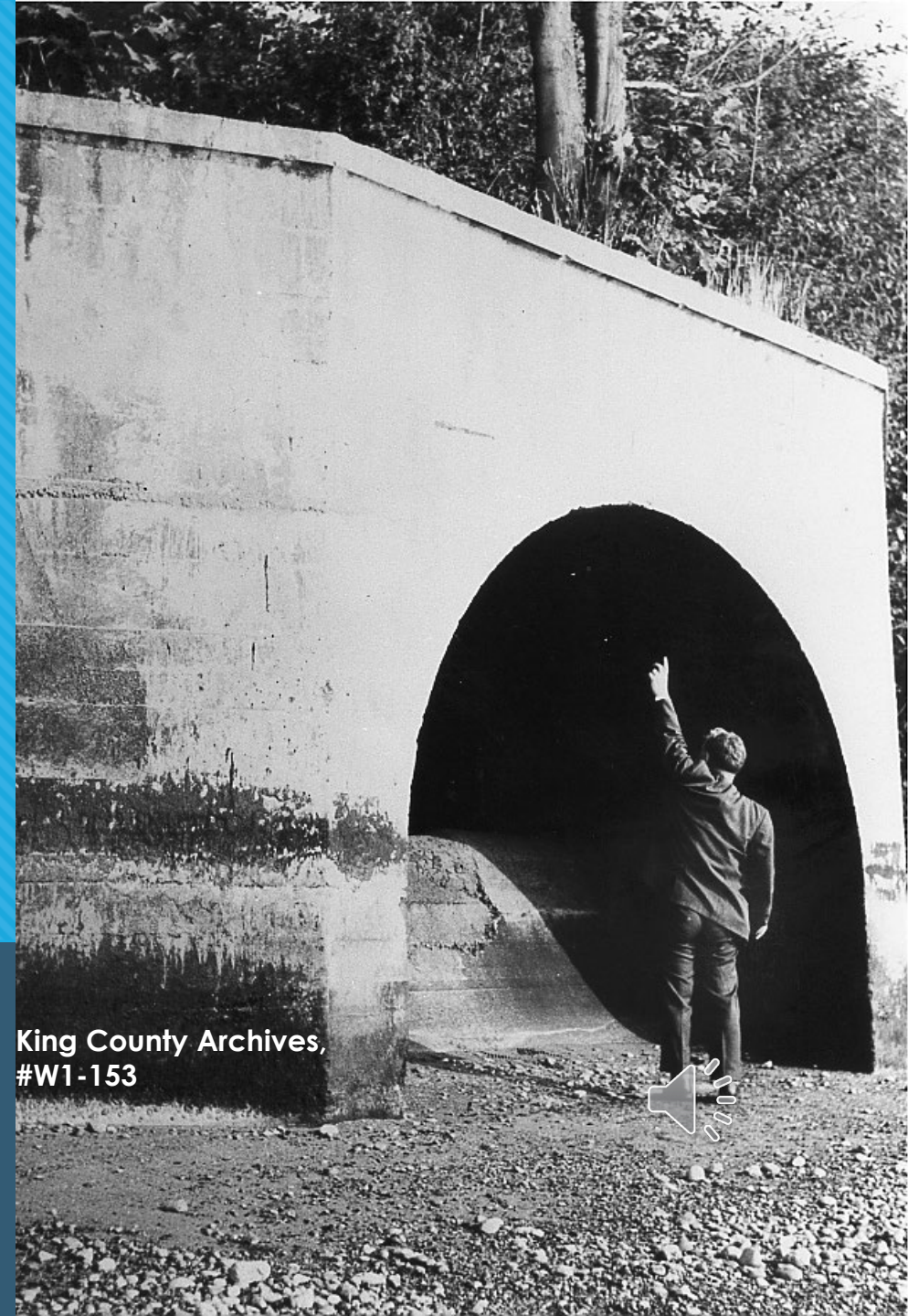
Why West Point is where it is



# Turn of the 20<sup>th</sup> century:

- Seattle area growing rapidly
- Raw sewage being dumped in Lake Union, Lake Washington, and adjacent rivers
- Several disease outbreaks tied to contaminated water

King County Archives,  
#W1-153



**Study says  
beach area off  
Fort Lawton  
always has  
outflow north in  
1910s**

The raw sewage plume from the outfall taken while the site is prepared for the construction of West Point.



Metro King County Archives. Circa 1963.

# Fast forward to the 1950's

Voters approve the creation of a regional  
wastewater treatment system in 1958 –  
known as METRO

Leads to the construction of the West Point  
Treatment Plant

**CLEAN UP OUR  
FILTHY WATERS**



**VOTE METRO**

**1966: West Point  
is operational,  
treating up to 125  
million gallons of  
combined  
wastewater and  
stormwater**





# Clean Water Act requires West Point to upgrade to a secondary treatment process

## Completed in 1995

- 95 percent of solids from wastewater must be removed
- Helps address local Combined Sewer Overflows (CSOs)
- Design fit expanded treatment facilities onto 32 acres – most plants of West Point's size are on 80 acres or more.





# West Point's Capital Projects:

Maintaining operations 24/7/365 with 25 active projects underway:

- 20 projects managed by the West Point Capital Program
- 7 projects in construction phase
- 2024 to be even busier – nearly 11 projects in active construction


- Structural
- Mechanical
- Electrical

- Retrofitting
- Refurbishing
- Upgrading





# Projects we will cover

1. Power Quality Improvement project
  2. Intermediate Pump Station (IPS) Refurbishment
  3. PE/RAS (Primary Effluent/ Raw Activated Sewage) pipe replacement and refurbishment
  4. Instrument and Service Air replacement and refurbishment
  5. Administration/Operations Center Seismic Upgrades
  6. Passive Weir Replacement
  7. Grit Classifier Replacement
  8. Raw Sewage Pump (RSP) Replacement
  9. Additional projects
- 

# Power Quality Improvement project

## Purpose:

Provide plant equipment with stable power to reduce equipment shutoffs during power disruption events.

## Benefits:

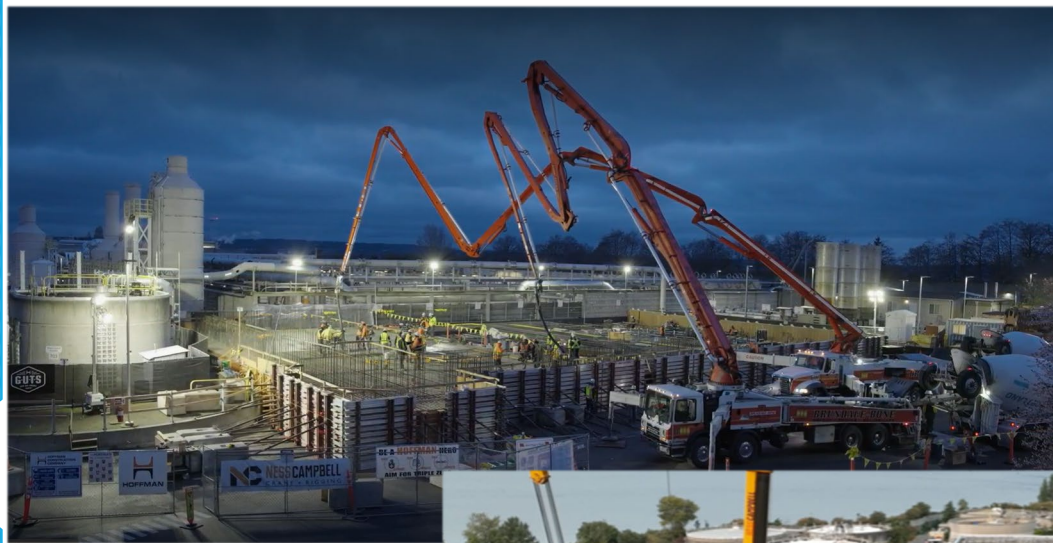
- Reduced untreated overflows because of power disruptions.
- Seismically sound building prepped for future sustainability efforts and electrical upgrades.

## Cost:

\$167.5 million

## Schedule:

2021 – 2024



# IPS Refurbishment

## Purpose:

Refurbish three Intermediate Pumps that have been in constant use since installation in the 1990's.

## Benefits:

- Extend useful life of pumps for at least another 20 years.
- Reduce chance of pump failure from wear, causing plant shutdown.
- Finished one year ahead of schedule, saving \$5 million

## Cost:

\$11.5 million

## Schedule:

2022 – 2024-2023



# PE/RAS pipe replacement and refurbishment

## Purpose:

Replace and restore corroded pipes for Primary Effluent and Waste-Activated Sludge, replace flow meters, install new valves and improve seismic bracing.

## Benefits:

- Reduce possible pipe failure from corrosion
- Increase resiliency from natural disasters
- Easier maintenance on flow meters and associated equipment

## Cost:

\$30.6 million

## Schedule:

2025 – 2027



# Instrument and Service

## Air replacement and refurbishment

### Purpose:

Replace equipment, parts, and pipes at the end of their useful life and refurbish additional equipment, parts, and pipes to extend their useful life.

### Benefits:

- Improve reliability
- Lower maintenance costs
- Workers safety
- Energy saving
- Increased service capacity
- Extends service life

### Cost:

\$16.7 million

### Schedule:

2026 - 2027



# RSP Replacement

## Purpose:

Replacement of four gas powered influent pumps with larger capacity, electrically powered pumps

## Benefits:

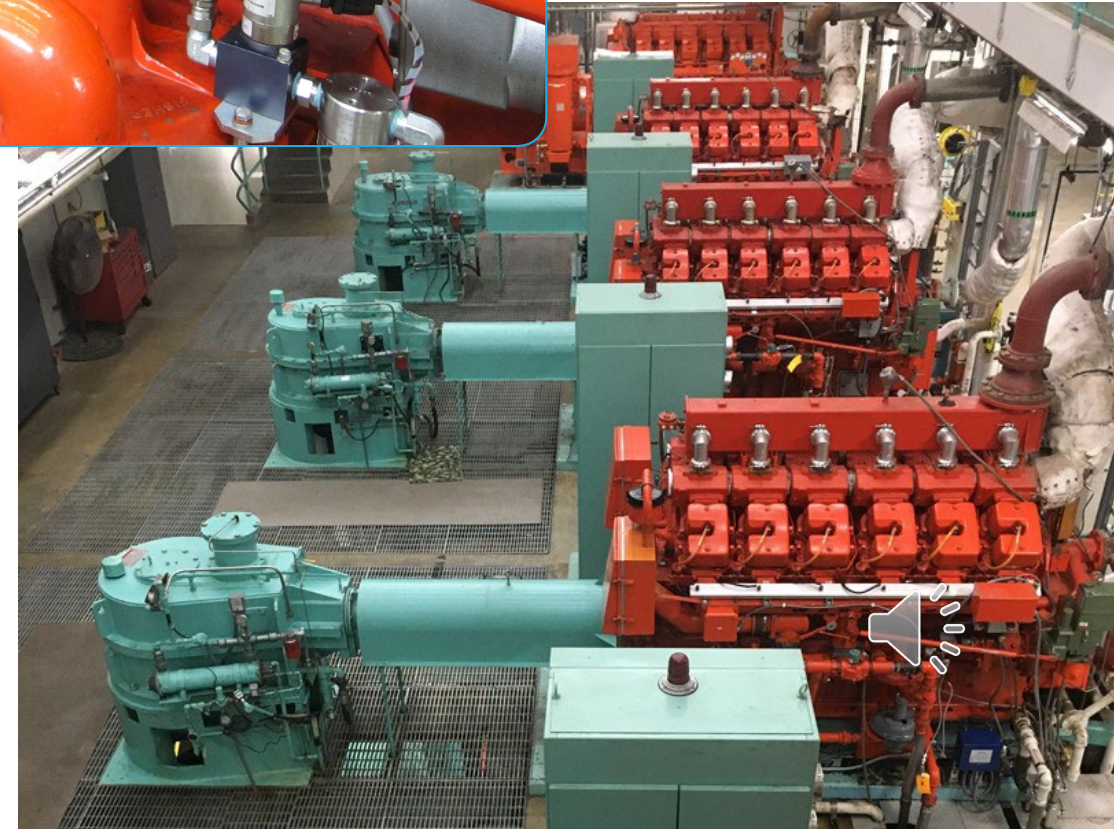
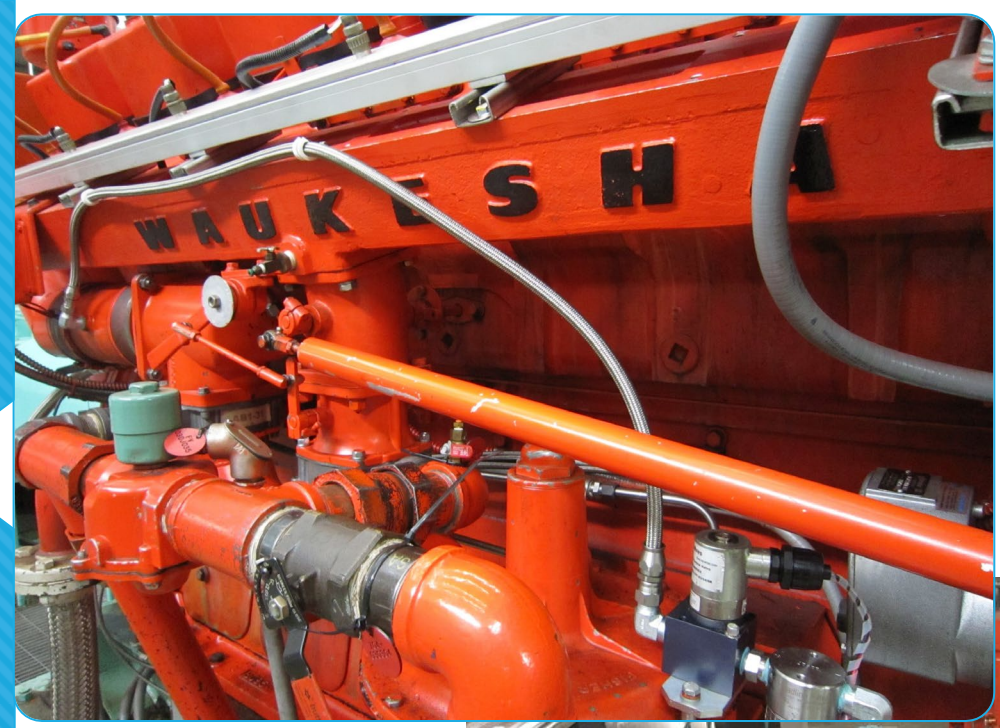
- Only three pumps required to treat at peak flow
- Reduced maintenance costs
- Higher reliability
- Seismic improvements

## Cost:

\$221 million

## Schedule:

2024 – 2029



# Administration/Operations Center Seismic Upgrades

## Purpose:

Retrofit the administration/operations center building to improve seismic resiliency

## Benefits:

- Continue operations in case of seismic event

## Cost:

\$17.3 million

## Schedule:

Late 2020's – contingent factors





# Passive Weir Replacement

## Purpose:

Construct a passive weir along emergency bypass channel in case of gate failures to avoid flooding the plant

## Benefits:

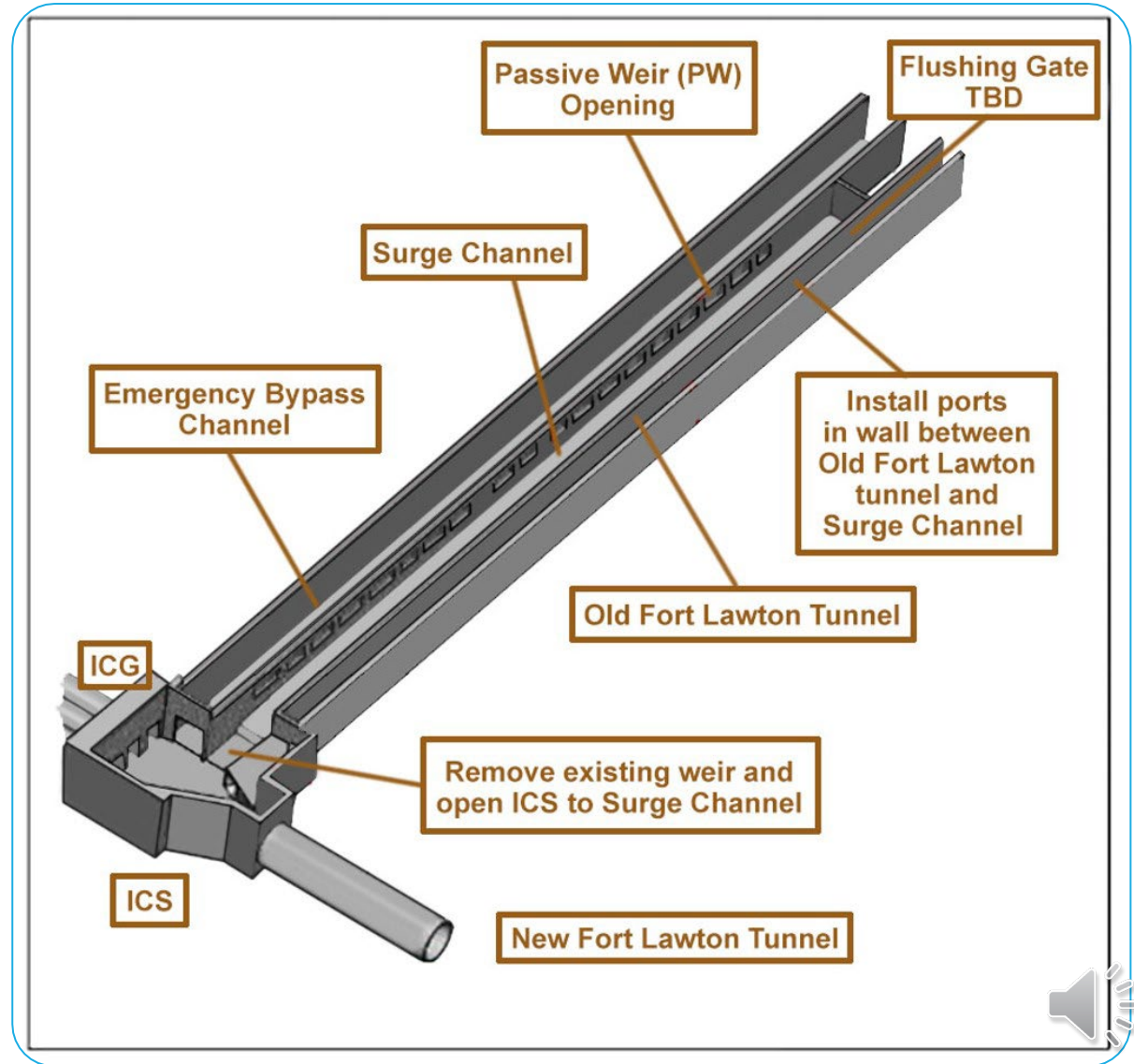
- Prevent flooding at plant
- Reduce CSO events at Ballard Regulator and 3<sup>rd</sup> Ave West Weir

## Cost:

\$10.8 million

## Schedule:

2024 – 2025



# Grit Classifier Replacement

## Purpose:

Replace and refurbish worn out equipment

## Benefits:

- Improved treatment
- Protect plant equipment

## Cost:

\$11.3 million

**Schedule:** 2024 – 2026





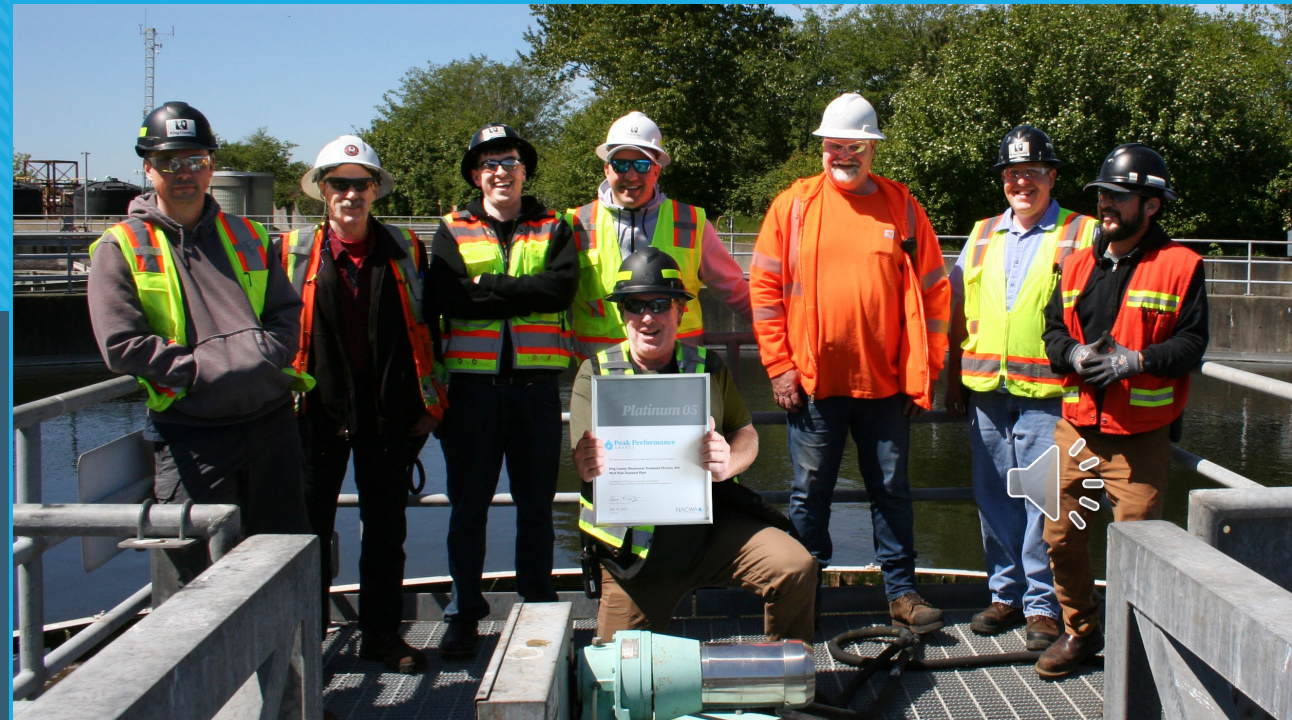
# Additional Projects

Project	Schedule	Cost (\$\$millions\$\$)
OGADS Replacement	2023 - 2024	\$ 32.9
OGADS Media Replacement	2023	\$ 4.0
OGADS VSA Refurbishment	2026 - 2027	\$ 23.0
Primary Sedimentation Roofs	2021 - 2025	\$ 50.1
LSG Piping Replacement	2021 - 2025	\$ 27.6
Power Monitoring Upgrades	2022 - 2023	\$ 8.5
PE & FE Flow Meters Replacement	2024	\$ 1.3
UPS Replacement	2023	\$ 1.8
Warning System Upgrade	2024	\$ 2.4
Waste Gas Burner Control Plant Roofs	2024	\$ 0.4
Maintenance Workshop Replacement	2025	\$ 4.6
Site Cameras	2024 - 2025	\$ 1.6
Fire Supression System	2024	\$ 2.1
EPS Isolation Gate Rehabilitation	2025 - 2026	\$ 12.5
Biogas Utilization Improvement	2026 - 2028	\$ 12.9
Electrical Improvements	2026 - 2028	\$ 131.4
Critical Gate Refurbishment	2026 - 2028	\$ 149.5
		\$ 466.6



# Operational Highlights

- NACWA Platinum 5
- OIT environmental Award
- Maintaining Operations with Construction





# Challenges

- Inflation
- Supply
- Knowledge
- Space





# Regulatory Obligations

A few of our regulatory agencies

The image displays three logos within a rounded rectangular frame. On the left is the circular logo of the United States Environmental Protection Agency, featuring a stylized flower with a blue center and green leaves, surrounded by the text "UNITED STATES ENVIRONMENTAL PROTECTION AGENCY". To the right is the logo for the Department of Ecology of the State of Washington, which includes a graphic of a landscape with a sun, mountains, and water, followed by the text "DEPARTMENT OF ECOLOGY State of Washington". Below that is the logo for the Puget Sound Clean Air Agency, consisting of the stylized letters "CAA" in white on a dark blue background, with the text "PUGET SOUND Clean Air Agency" underneath.





# Community Engagement

If you have a comment or concern, you can always contact us

- West Point's 24-hour hotline for reporting emergencies and odors:  
206-263-3801
- West Point Community Relations Planner:  
Ryan Harlow  
206-848-8014  
[rharlow@kingcounty.gov](mailto:rharlow@kingcounty.gov)
- Subscribe to the West Point Newsletter:





**Thank you**

