Wastewater Treatment Division – Capital Projects Update

Ann Grothe, Portfolio Development Supervisor, WTD

Sibel Yildiz, Project Management Unit Manager, WTD

In Today's Briefing

- Overview of WTD's Capital Portfolio
- Updates on key, priority projects located throughout WTD's service area

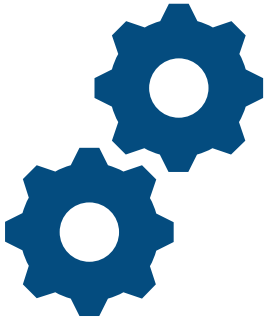
Capital Portfolio Overview

The Big Picture

Selecting the right projects, at the right time, for the right reasons

- WTD uses a rigorous portfolio management process to guide its capital program
- A structured evaluation process is applied to hundreds of projects to identify those that provide the most value
- Project needs are balanced against staff availability and funding to make responsible regional investments
- Projects are selected to protect public health, maintain safe and reliable service, and support our region's future

WTD's Capital Portfolio Is Complex and Growing

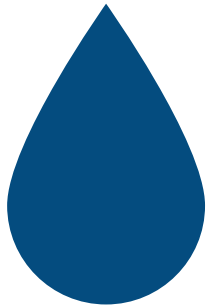


250

Approximate number of active projects managed by WTD yearly

$14M

Median project estimate at completion – WTD's projects range from <$500K to over $1B



$429M

Actual expenditures in 2025

$575M

Forecasted expenditures in 2026 (for sewer rate planning purposes, this is adjusted for schedule risk)

Selected Projects

Zooming in on projects in delivery throughout the service area

New Capabilities Delivered in 2025

Computerized Maintenance Management System Upgrade

Enables more data-informed decisions about asset maintenance, renewal, and replacement

Supports better long-term planning and prioritization

Medina Motor Control Center and Generator Replacement

Improved electrical reliability and safer pump station operations

Reduced risk of sanitary sewage overflows

West Point Treatment Plant Passive Weir

Increased plant protection from flooding

Reduced risk of combined sewer overflows in the upstream system

North Mercer Island & Enatai Interceptors Upgrade

Improving reliability and future capacity to protect communities and support growth

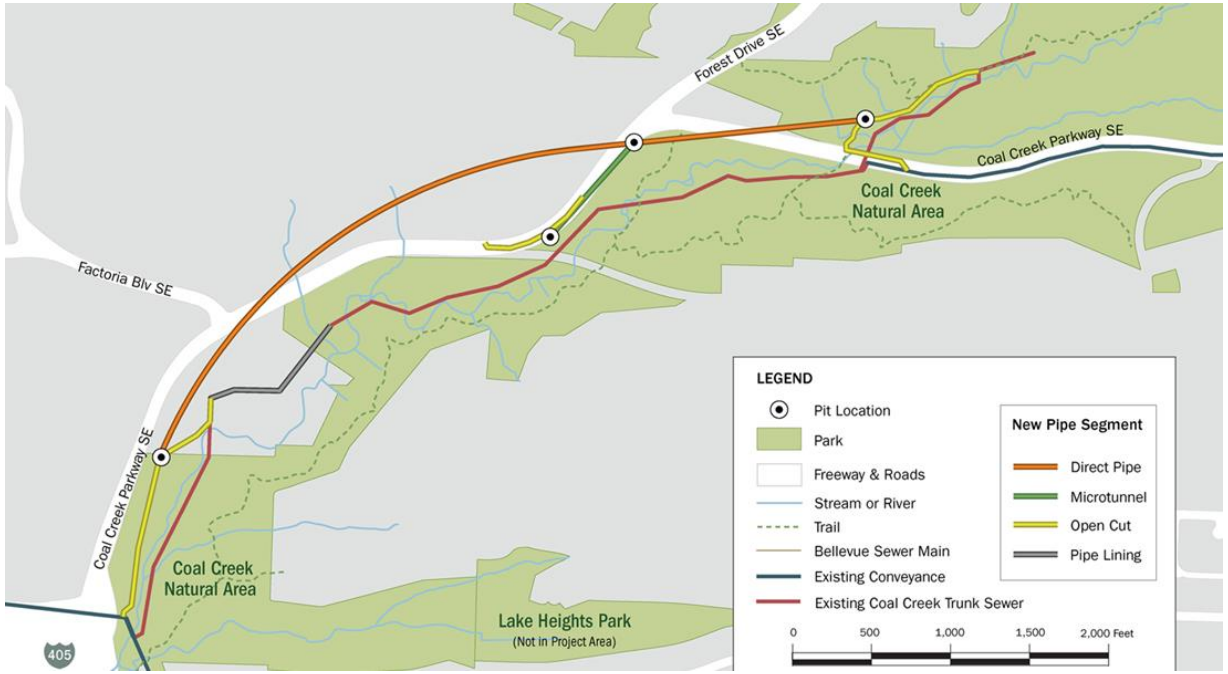
- Upgrades 1970s era pipelines serving areas in North Mercer Island and Bellevue near Enatai Beach, and the Town of Beaux Arts Village.
- Increases capacity to meet projected 2060 flows to reduce overflow risk.
- Rehabilitates aging lake pipelines and improves pump station reliability.
- Estimated Cost at Completion: $192M
- Cost Estimate Classification: Executed Lump Sum Construction Contract
- Substantial Completion: 2027

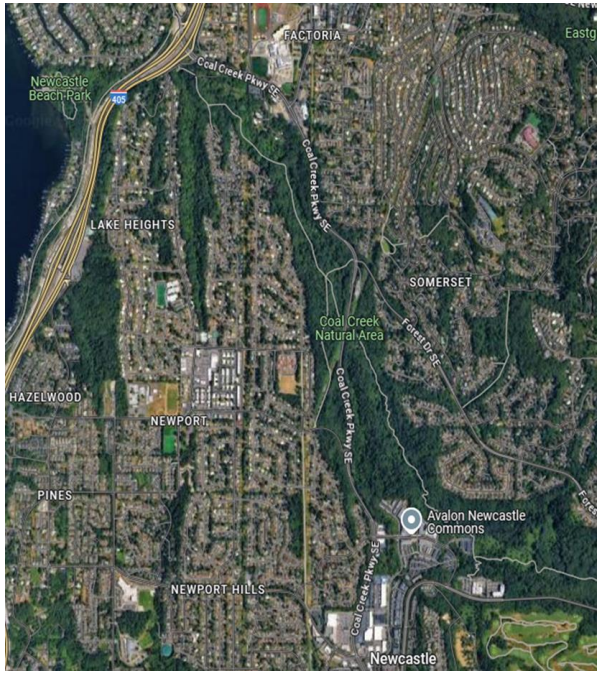
McELROY

Coal Creek Siphon & Trunk Parallel

Protecting critical areas and ensuring reliable service through sewer system renewal

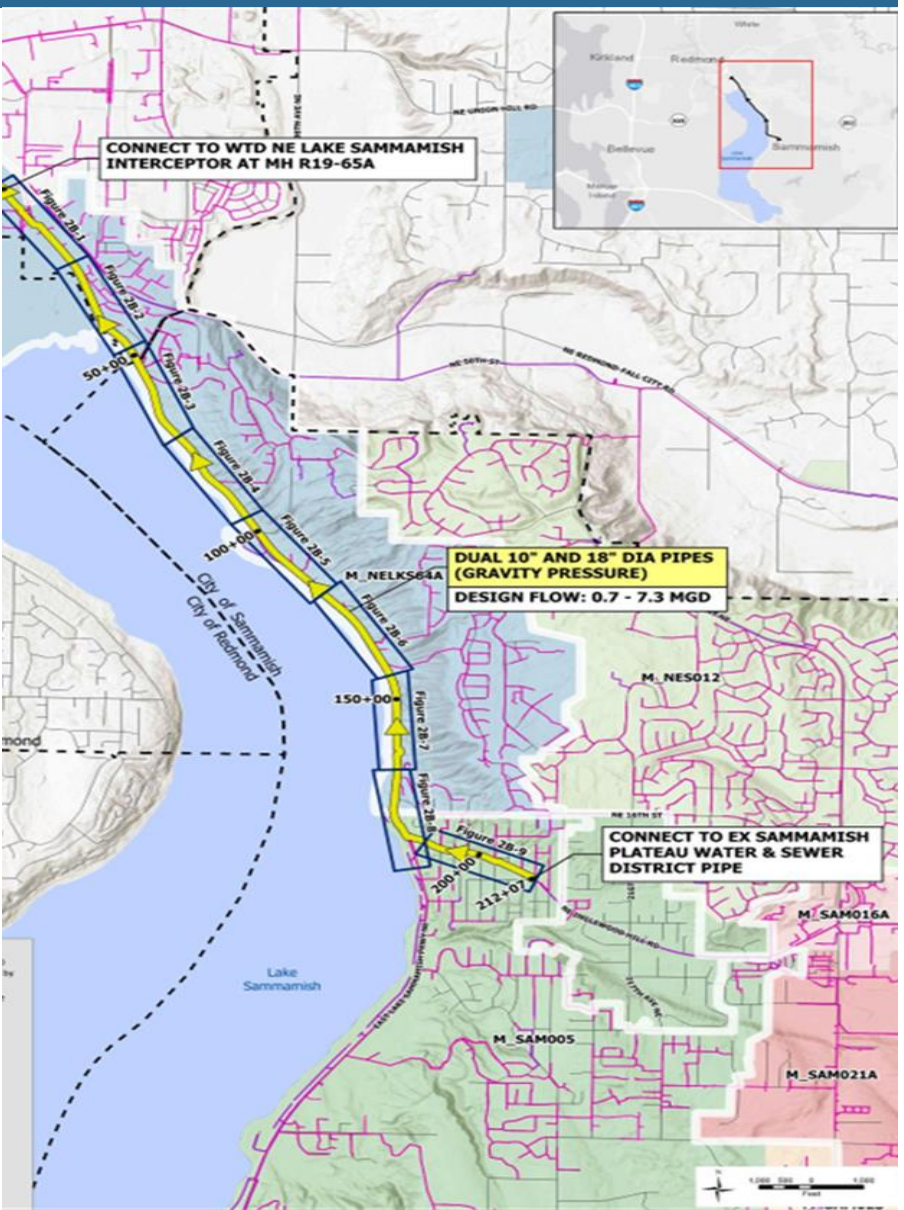
- Upgrades a regional sewer line that serves Bellevue and Newcastle.
- Increases capacity to meet projected 2060 flows to reduces longstanding risk of sewer overflows and supports environmental compliance.
- Restores wetlands and improves stream and trail areas within the Coal Creek Natural Area.
- Estimated Cost at Completion: $173M
- Cost Estimate Classification: Executed Lump Sum Construction Contract
- Substantial Completion: 2030


Forest Drive SE
Coal Creek Parkway SE
Coal Creek
Natural Area
Factoria Blv SE
Coal Creek Parkway SE
Coal Creek
Natural Area
Lake Heights Park
(Not in Project Area)
405
LEGEND
Pit Location
Park
Freeway & Roads
Stream or River
Trail
Bellevue Sewer Main
Existing Conveyance
Existing Coal Creek Trunk Sewer
New Pipe Segment
Direct Pipe
Microtunnel
Open Cut
Pipe Lining
0
500
1,000
1,500
2,000 Feet


FACTORIA
Newcastle
Beach Park
405
Coal Creek Pkwy SE
LAKE HEIGHTS
SOMERSET
Coal Creek
Natural Area
HAZELWOOD
NEWPORT
PINES
Avalon Newcastle
Commons
NEWPORT HILLS
Newcastle

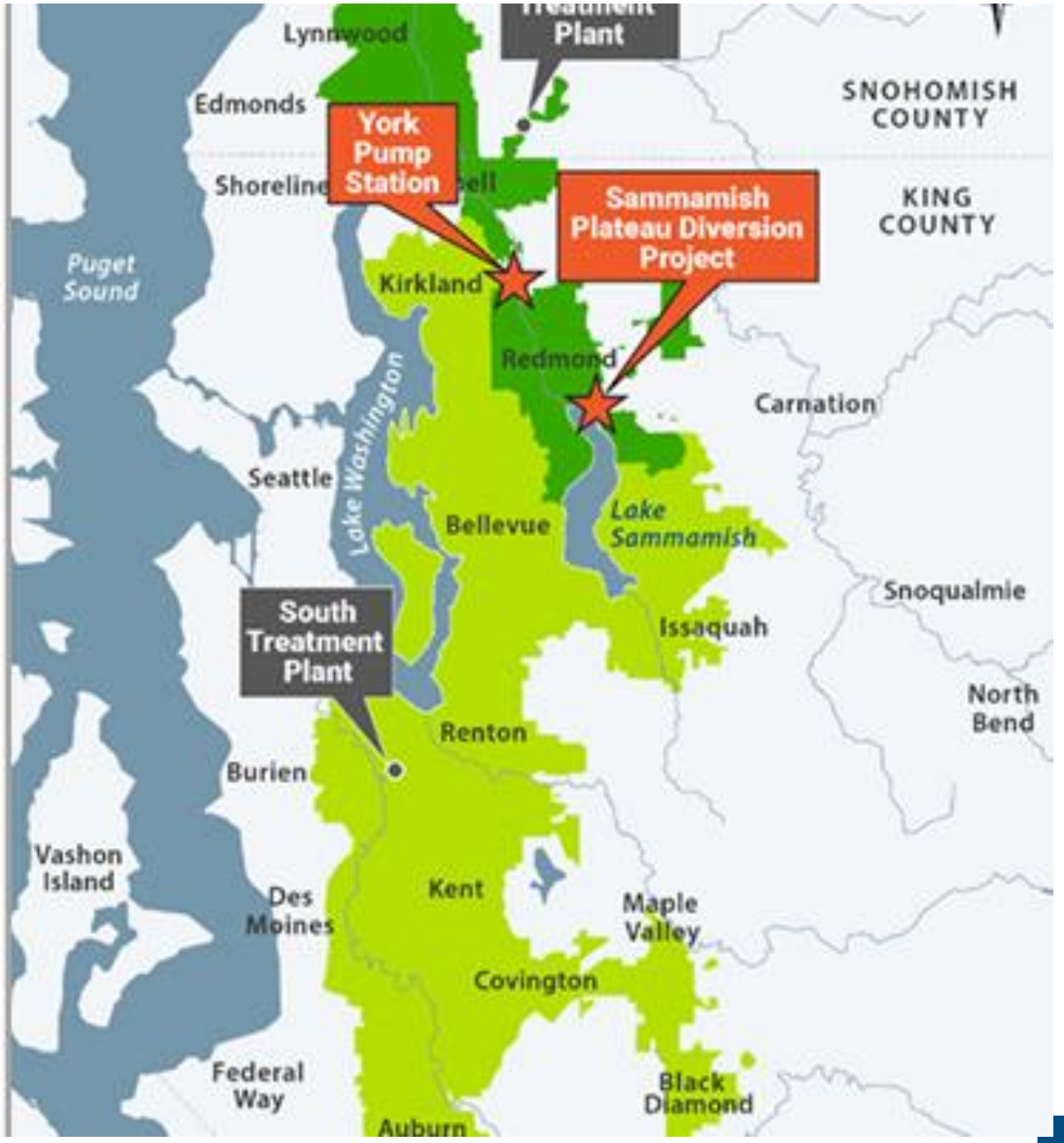
11/16/2016

Sammamish Plateau Diversion

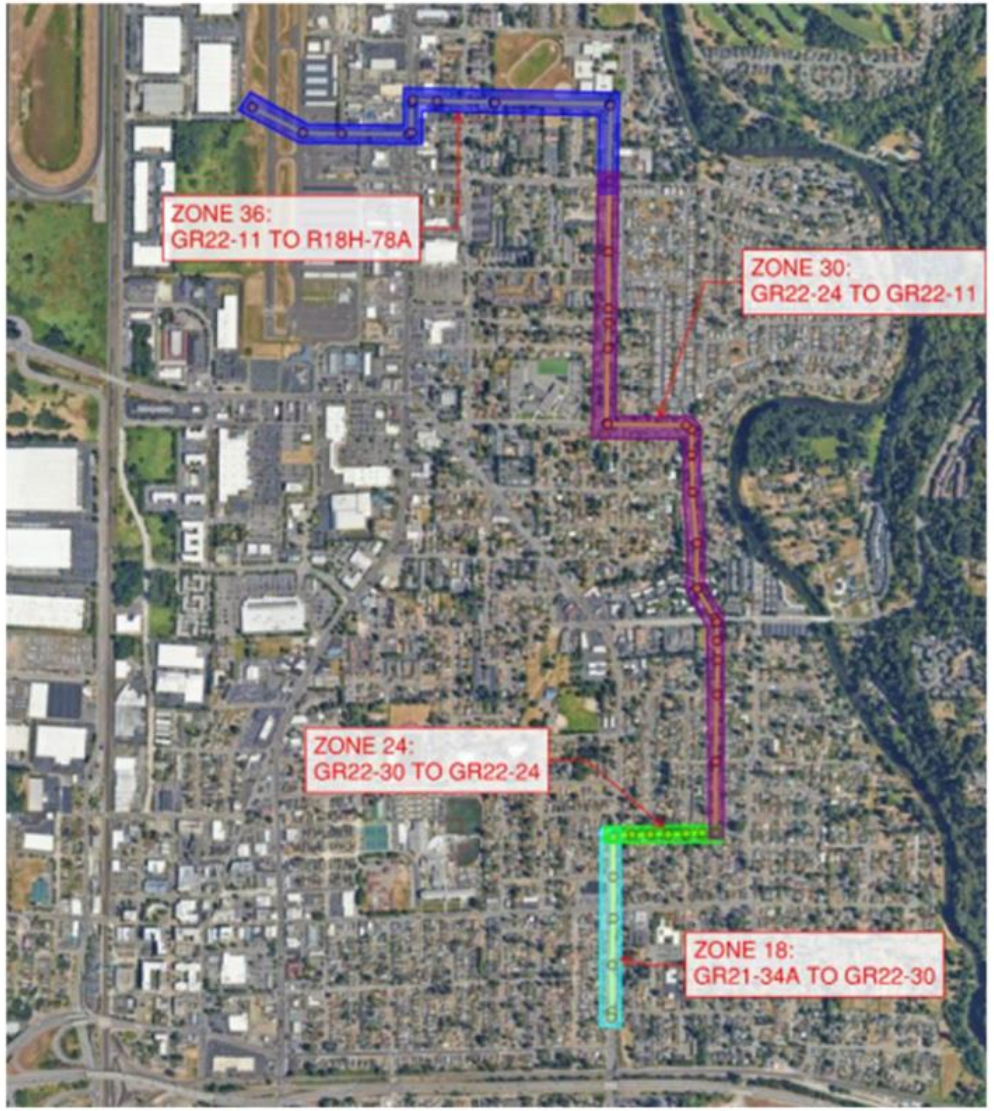


Expanding conveyance capacity to honor capacity commitments and improve regional system performance

- Supports regional capacity needs and aligns with the County's agreement with Sammamish Plateau Water.
- Includes new underground pipes in the East Lake Sammamish area and upgrades to the York Pump Station near Redmond
- Improves operational flexibility and upgrades aging infrastructure.
- Estimated Cost at Completion: $712M
- Cost Estimate Classification: Class 5
- Substantial Completion: 2034


Lynnwood
Edmonds
Shoreline
Puget Sound
Lake Washington
Seattle
Kirkland
Redmond
Bellevue
Lake Sammamish
Carnation
Snoqualmie
Issaquah
North Bend
Renton
Burien
Vashon Island
Des Moines
Kent
Maple Valley
Covington
Federal Way
Auburn
Black Diamond
SNOHOMISH COUNTY
KING COUNTY
York Pump Station
Sammamish Plateau Diversion Project
South Treatment Plant
Plant

M Street Trunk Rehabilitation



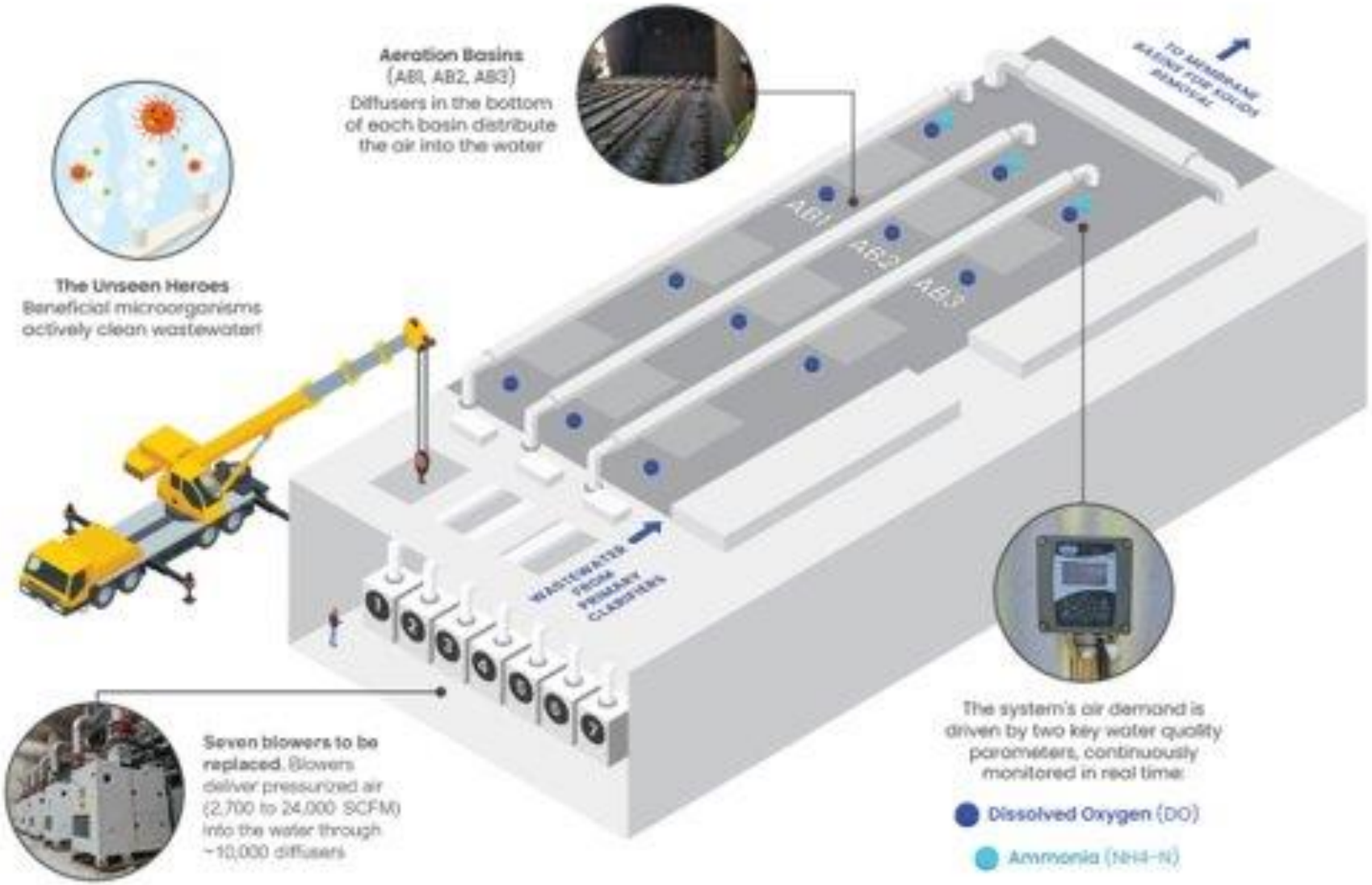
Ensuring a safe, dependable sewer system that protects people and the environment

- Rehabilitates nearly 14,000 feet of deteriorated sewer pipe in Auburn.
- Uses modern lining technology to extend asset life and avoid major pipe replacement.
- Addresses corrosion related failures and protects public health and service reliability.
- Estimated Cost at Completion: $62M
- Cost Estimate Classification: Executed Design-Build Construction Contract
- Substantial Completion: 2027

Brightwater Neuros NX 300 Blower Replacement

Replacing outdated blowers to cut maintenance costs, reduce energy use, and prevent expensive failures

- Replaces seven aging blowers critical to secondary treatment at Brightwater.
- Reduces operational disruptions caused by unreliable and difficult to repair equipment.
- Improves energy efficiency and supports permit compliance.
- Estimated Cost at Completion: $18M
- Cost Estimate Classification: Class 5
- Substantial Completion: 2028


Aeration Basins
(AB1, AB2, AB3)
Diffusers in the bottom of each basin distribute the air into the water
The Unseen Heroes
Beneficial microorganisms actively clean wastewater!
AB1
AB2
AB3
WASTEWATER FROM PRIMARY CLARIFIERS
Seven blowers to be replaced. Blowers deliver pressurized air (2,700 to 24,000 SCFM) into the water through ~10,000 diffusers
The system's air demand is driven by two key water quality parameters, continuously monitored in real time:
Dissolved Oxygen (DO)
Ammonia (NH4-N)

West Point Electrical Improvements Program

Upgrading aging electrical infrastructure to improve reliability, safety, and long-term performance.

- Modernizes electrical systems by replacing over 934 aging electrical assets.
- Adds modern protection systems and relocates equipment out of flood prone areas.
- Enhances reliability, safety, and regulatory compliance at a major regional facility.
- Estimated Cost at Completion: $546M
- Cost Estimate Classification: Class 3
- Substantial Completion: 2035

South Treatment Plant RAS Piping and Component Replacement

Replacing end-of-life secondary treatment infrastructure to protect worker safety and meet nutrient-optimization requirements

- Replaces severely corroded return activated sludge (RAS) piping and related components at South Treatment Plant.
- Reduces risk of flooding, equipment damage, and treatment disruptions.
- Supports future nitrogen removal requirements under the PSNGP permit.
- Estimated Cost at Completion: $123M
- Cost Estimate Classification: Class 5
- Substantial Completion: 2034

Q & A

King County | Wastewater Treatment