Water Pollution Control Plant Project Updates

Crystal City Civic Association Meeting, September 2025

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Brian Balchunas, HDR

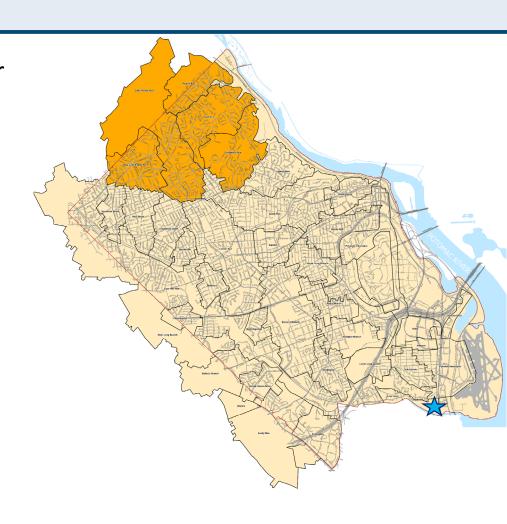


Agenda

- Water Pollution Control Plant overview
- Biosolids Upgrades Project (Re-Gen) overview
- Activities for 2025 and beyond
- Architectural concepts and renderings for new facilities
- Odors

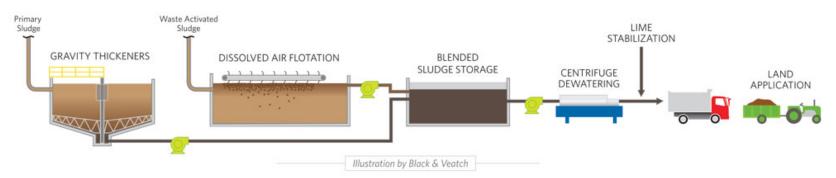
Water Pollution Control Plant (WPCP)

- Opened in the 1930s and currently designed for 40 million gallons per day
- Treat wastewater from Arlington as well as parts of Alexandria, Falls Church, and Fairfax County
- Removal of solids, nutrients, and pathogenic organisms
- Treated effluent flows into Chesapeake Bay
- All wastewater treatment plants generate solids, and residuals must be dealt with



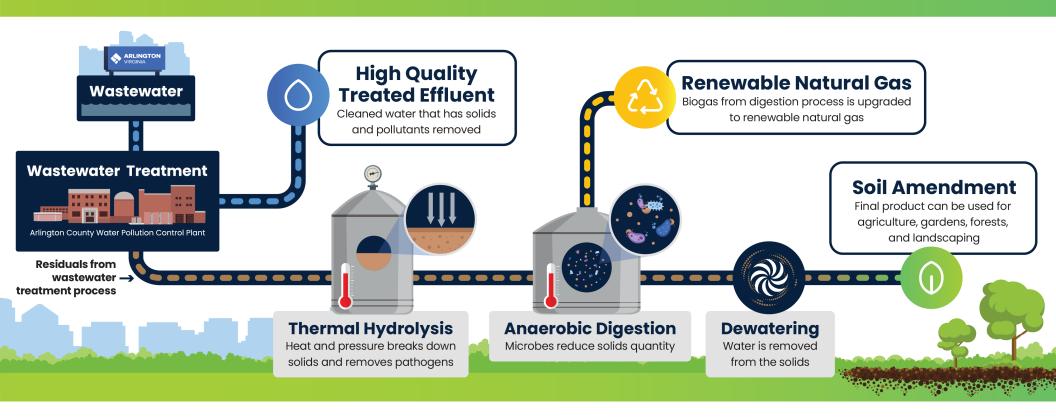
LIQUIDS-**HEADWORKS** FLOW EQUALIZATION TANKS Bar Screens PRIMARY SETTLING **AERATION TANKS** TANKS INFLUENT Vortex Grit 22222222 Removal Primary Sludge to Gravity Thickeners ACTIVATED SLUDGE **EFFLUENT PUMPS DENITRIFICATION FILTERS** SECONDARY CLARIFIERS CHLORINE CONTACT TANKS PLANT EFFLUENT WATER PLANT EFFLUENT WATER PUMPS Waste Activated Sludge to Dissolved Air Flotation Return Activated Sludge POST-AERATION BASIN OUTFALL FOUR MILE RUN (Chesapeake Bay Watershed)

SOLIDS



Re-Gen: Biosolids Upgrades Program

RECOVERING RENEWABLE RESOURCES FROM WASTEWATER



Re-Gen Program Drivers

- Failing equipment solids treatment equipment date from the '90s or before
- Community impacts (odors, truck traffic)
- Desire to achieve more sustainable outcomes









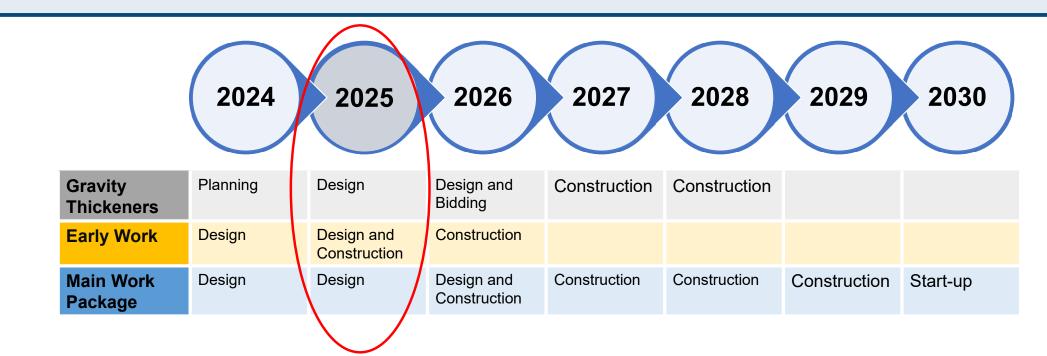




Existing Water Pollution Control Plant

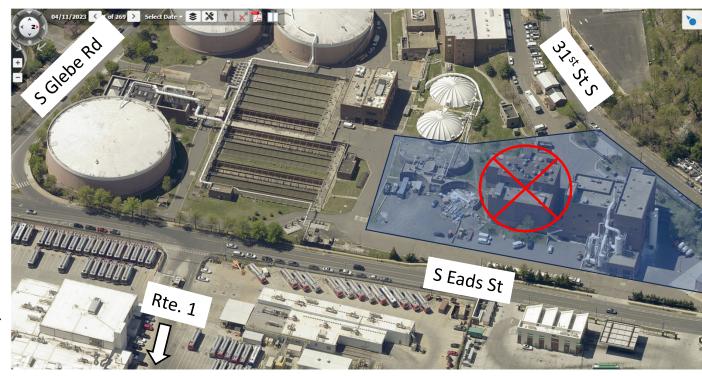


Re-Gen Timeline



What Will Happen in 2025-26 on Re-Gen?

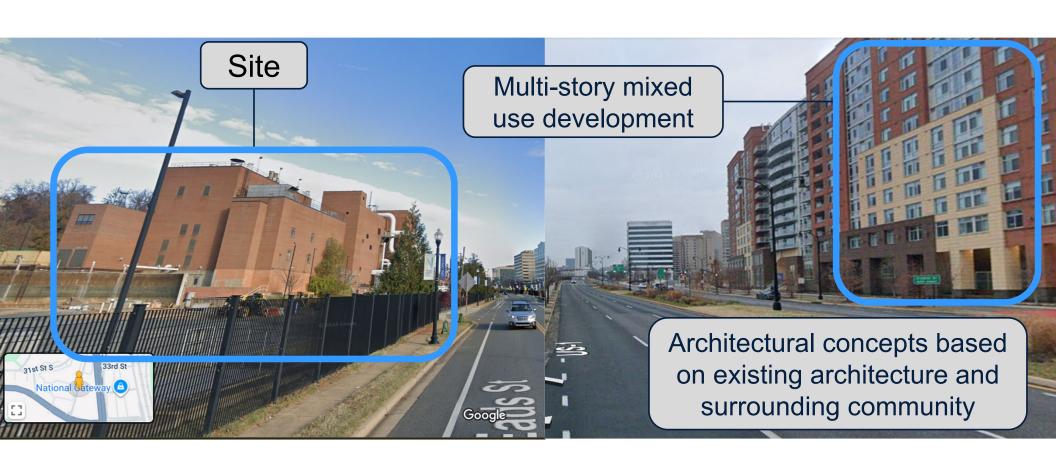
- Permitting underway
- Construction expected to begin in early November:
 - Minor site work and utility relocations
 - Installation of new piping to reroute flows
- Significant demolition activities will not occur until 2026:
 - Demolition of old incinerator building



Reducing Construction Impacts of Re-Gen

- Noise
 - Strategy: alternatives to pile driving
- Dust and trash
 - Strategy: daily housekeeping inspections
 - Strategy: air quality monitoring during demolition activities
- Traffic
 - Strategy: only brief road closures on S. Eads St. and 31st St. S. anticipated

Architectural Basis



Current Architectural Concepts







View looking northwest from Eads



View looking northwest from Eads

Current Architectural Concepts





View looking southeast from 31st St S



View looking southeast from 31st St S

Current Architectural Concepts



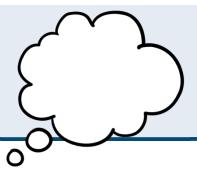
Future Processes and Buildings – View from West



Future Processes and Buildings – View from Northwest



What's That Smell??



- Odorous areas are mostly located on the north side of Glebe
- Odor control systems in place to collect and treat odors
- Short-term odors can occur (hauling trucks, process upset) in the area around the WPCP
- We are monitoring our housekeeping to ensure off-site odors are minimized
 - The Shift Supervisor phone is monitored 24/7: 703-585-6851
- Further away, rotten-egg smells can be caused by low flows in sanitary sewer in the street
 - Sink drains can also release sulfurous odors

More Info

- Project website: <u>www.arlingtonregen.com</u>
- Website will contain regular project status updates once construction starts



- Visit <u>www.arlingtonva.us</u> and search "water pollution" for more information
- Plant tours available through end of October; no tours during construction



