# Wastewater Management Capital Improvement Program

Fairfax County Planning Commission CIP Workshop FY 2020 – FY 2024

Department of Public Works and Environmental Services Working for You!



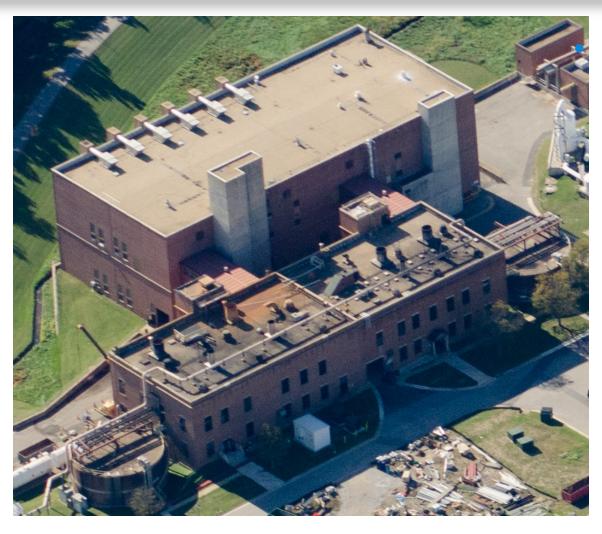


### CIP Priority Treatment Projects

# The Sanitary Sewers CIP program is on pages 180 – 186 of the FY 2020-FY 2024 Advertised CIP

- Regulatory Upgrades
  - Bio-Solids Program: The rehabilitation of the multiple hearth furnaces, additional air pollution control
    equipment.
- Reinvestments Infrastructure Improvements
  - Filter facilities rehabilitation
  - Disinfection facilities replacement
  - Raw Pump Station rehabilitation
  - Primary and Secondary facilities rehabilitation

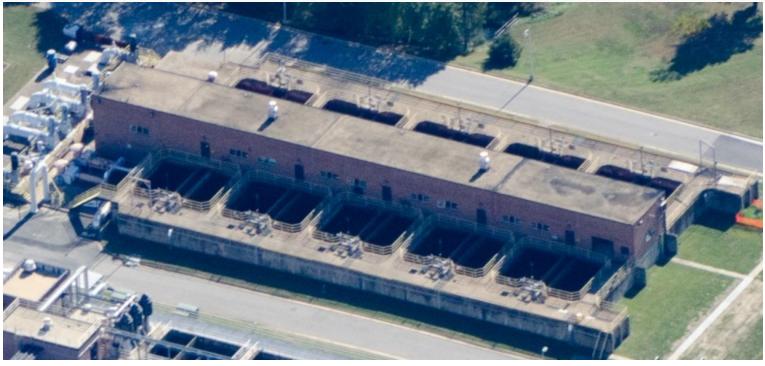
### Bio-Solids Program



# Facility: Bio Solids Processing Building

- Upgrade facility to meet new AirQuality Regulations
- Rehabilitate multiple hearth furnaces in order to extend useful life
- Last rehabilitation was in the 1990s
- Built in the 1970s
- TPE \$157.8 million

### Filter Facility

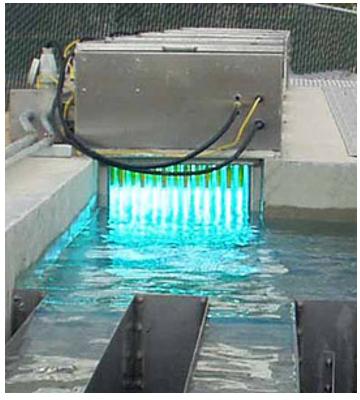


#### • Facility: Filter Facility Building

- Upgrade facility with improved, safer, and ease of operation technology
- Built in the 1970s
- TPE \$130 million

### Disinfection facility - example





- Replacing existing chlorination/de-chlorination system with UV disinfection system
- •TPE \$100 million

### Pump Station Rehabilitation (Treatment)





# Facility: Raw Wastewater Pumping Rehabilitation

- Rehabilitation of the B and B2
   raw wastewater pumping facility
- Replace, refurbish, and rehab the2 pump stations and relatedinfrastructure.
- Built in the 1970s
- TPE \$106 million

### Primary and Secondary Process Facilities



#### • Facility: Primary and Secondary Process Facilities

- Rehabilitation of the primary clarifiers, secondary clarifiers, other related infrastructure
- Built in the 1970s and 1980s
- TPE \$516 million



### Sewer Line Replacement and Rehabilitation (Collection)



Lake Thoreau floated sewer line FY 2016

- Replacement and Rehabilitation of the County's 3,200 miles of sewer lines, built between 1940's
  - Focus on Large Diameter (>15")
     for Replacement
  - Cured In Place Piping (CIPP) –
     average of 25 miles per year
- Built as early as the 1940s
- TPE \$30 million (annual)

### Pump Station Rehabilitation (Collection)



- Rehabilitation of the County's pump stations to include the pumps, structures, piping, control centers, HVAC systems, and various other associated components
- Continuous funding for rehabilitating 4-5 pump stations per year
  - Pump Stations in Providence and Dranesville Districts as examples. Daily capacity is .4 to .6 million gallons (\$3.25M TPE)
- \$148 M over 10 years

## Treatment by Contract (TbC)

Partners	FY2020-FY 2024 (\$000's)
Alexandria Renew Enterprises (ARenew)	100,830
DC Water (Blue Plains)	58,663
Arlington Treatment Plant	7,503
Upper Occoquan Service Authority (UOSA)	49,269

#### Additional Information

### For additional information, please contact

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