

Wastewater Management Capital Improvement Program

Fairfax County Planning Commission CIP Workshop FY 2023 – FY 2027

Department of Public Works and Environmental Services
Working for You!



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Development of CIP for Wastewater System

- Annually review asset management program
- Identify facilities in need of capacity expansion based on flow projections
- Identify projects to meet regulatory requirements
- Identify projects based on condition assessments of aging infrastructure
- Determine criticality of the infrastructure
- Identify consequences of failure of an asset
- Minimize business risk exposure
- Use weighted numerical rankings to prioritize projects
- Develop project cost estimates
- Use financial model to determine revenue requirements and impact on sewer rates
- Collaborate with DMB in developing a 10-year CIP program

Pages 208 – 214 of the FY 2023-FY 2027 Advertised CIP

- **Locations of CIP Projects**

- County's Noman M. Cole, Jr. Treatment Plant,
- County's Wastewater Collection System, and
- Neighboring Jurisdictions Serving the County

- **Noman M. Cole Plant**

- General Rehabilitation and Replacement \$343.6M
 - Biosolids facilities, Pumps, valves, HVAC, disinfection, electrical systems and other facilities

— TOTAL \$343.6M

- **Wastewater Collection System**

- Extension and Improvements \$4.0M
 - Place holder to extend sewers to areas with failing septic systems
- Gravity Sewer Capacity Improvements \$115.4M
 - Increase size of sewers to accommodate increased flows
- Gravity Sewer Conditional Improvements \$77.6M
 - Inspect, repair and replace large diameter pipes
- Sewer Metering Projects \$1.0M
 - Rehabilitate metering stations for billing wholesale customers and conduct infiltration and inflow studies
- Pumping Station Rehabilitation \$100.2M
 - Improve aging pumping stations and provide odor control
- TOTAL \$298.2M

- **Neighboring Jurisdictions Serving the County**

– Alexandria Renew Enterprises (ARenew)	\$101.7M
• Repair, rehabilitation and wet weather flow mitigation projects	
– Arlington Plant Upgrade	\$14.1M
• Technology enhancement, clarifier upgrade, biosolids master plan, and relining a pipe	
– DC Water (Blue Plains Treatment Plant)	\$118.4M
• Repair, replacement, upgrade, and wet weather mitigation projects	
– Upper Occoquan Service Authority (UOSA)	\$105.3M
• Nutrient removal, filter replacement, and clarifier improvement projects	
• TOTAL	\$339.5M

Capacity Related Projects

- **Projects in Planning:**

- | | |
|--|-------------|
| 1. Evaluation of DC Water's Potomac Interceptor | \$30/\$347K |
| 2. New Sugarland Pump Station and Force Main | \$40.0M |
| 3. New Tysons East Pump Station and Force Main | \$102.2M |
| 4. Modify & Increase Difficult Run Pump Station capacity | \$5.4M |

- **Projects in Design:**

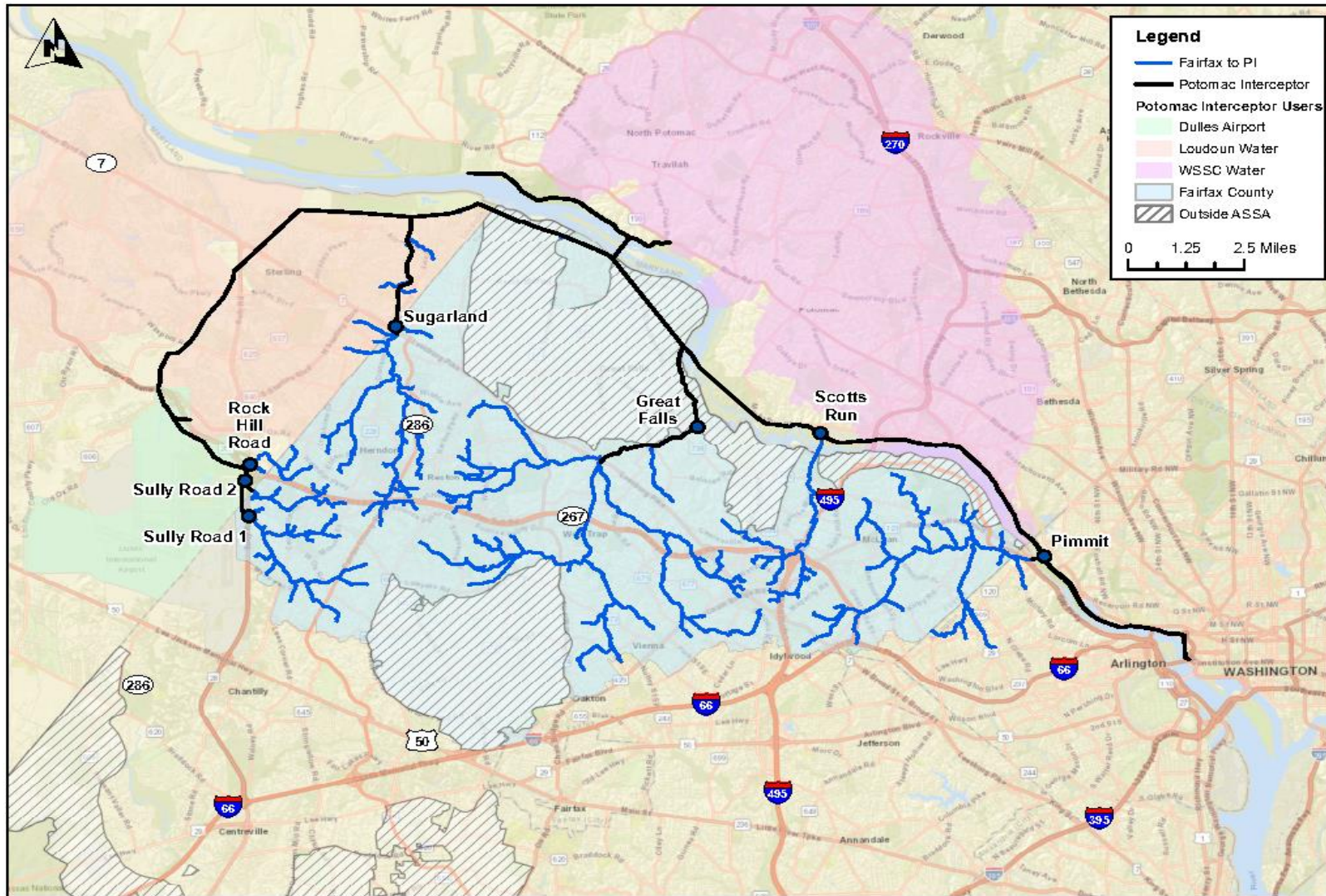
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|--|----------|
| 1. Wastewater Utility Management Plan | \$3.7M |
| 2. Tysons West Pump Station, Force Main, and gravity sewer | \$115.4M |
| 3. Enlarge Accotink Interceptor from 30" sewer to 42" | \$33.0M |
| 4. Lakevale sewer project | \$2.2M |
| 5. Enlarge 12" sewer to 18" sewer in Merrifield | \$2.3M |
| 6. Enlarge and relocate gravity sewers along Route 1 BRT | \$29.5M |

- **Project in Construction:** Upsize Alexandria Renew line \$58/615M

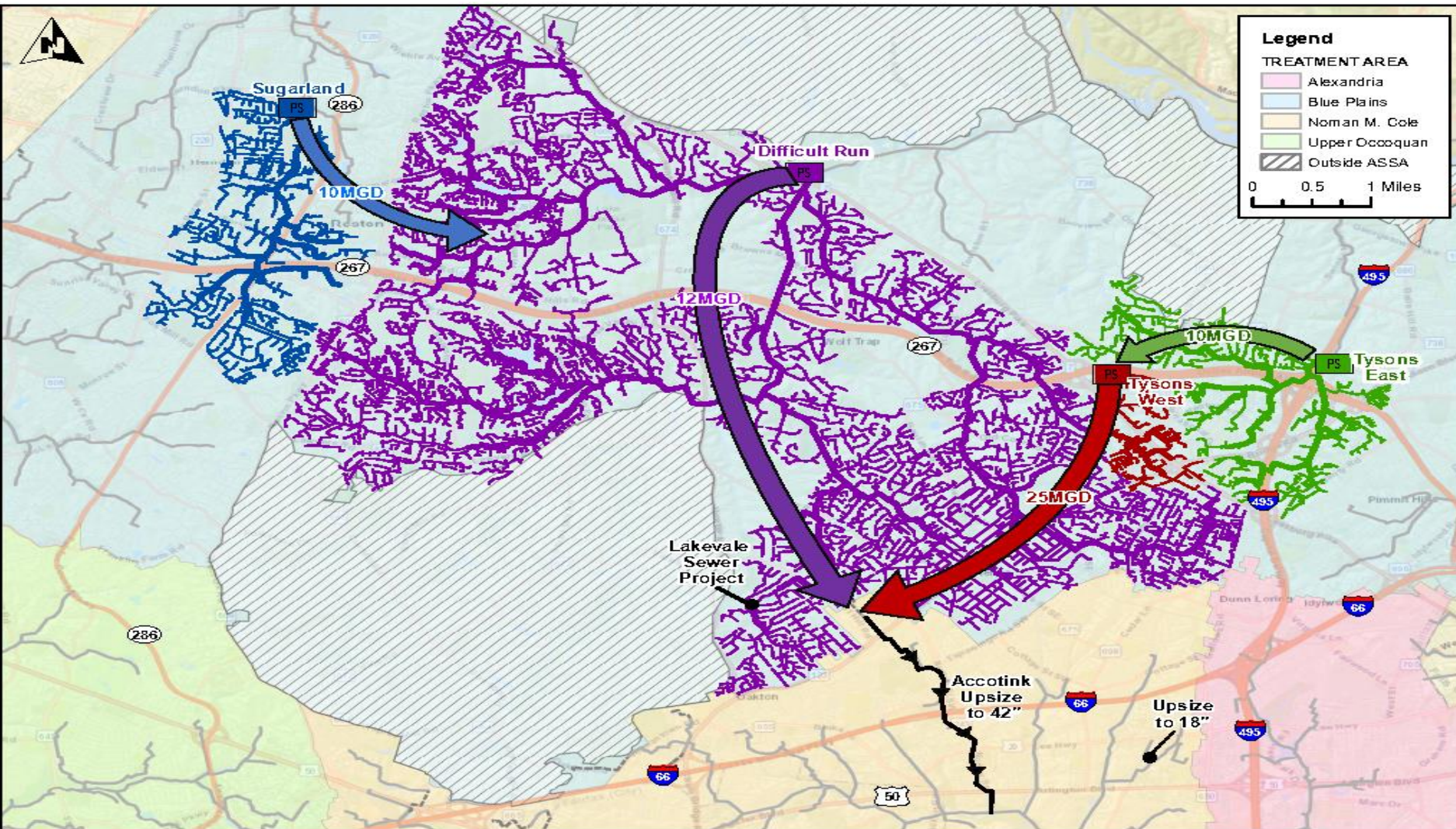
- **Total** \$391.73M



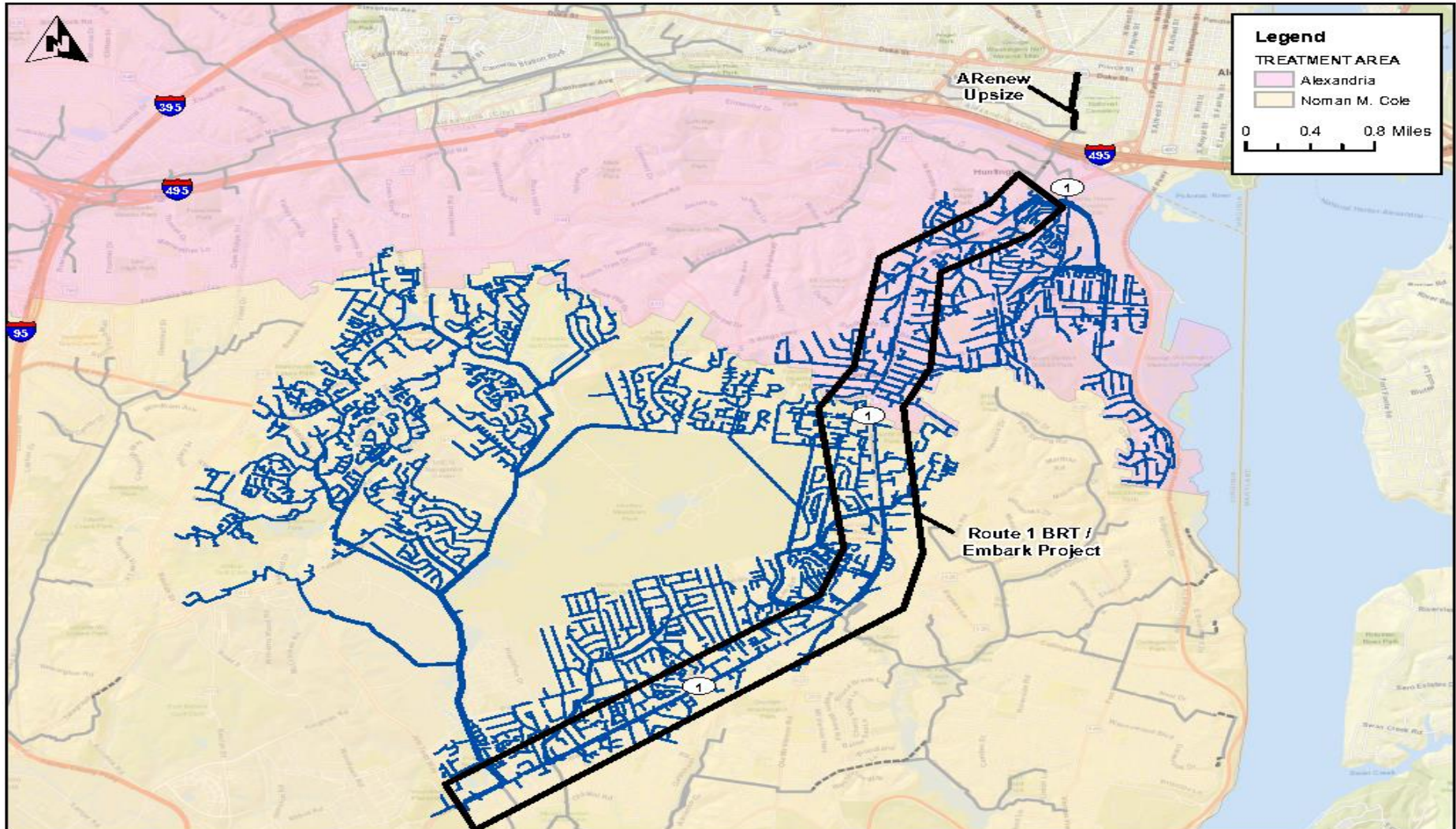
Potomac Interceptor Service Area



Sugarland Run, Difficult Run and Tysons Pump Stations



Route 1 Corridor Alex Renew Service Area



Additional Information

For additional information, please contact

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