



# Metropolitan Sewerage District

Update for Buncombe County Board of Commissioners

February 16, 2021



**BUNCOMBE COUNTY**





## MSD HISTORY

- MSD was formed in 1962 by State Statute as a Special District with the sole purpose to collect and treat wastewater and to eliminate the direct discharges to the surrounding rivers and streams.
- Between 1962 and 1989 MSD built over 100 miles of large interceptor lines and a 25 MGD treatment plant. The Treatment Plant was later upgraded to a 40 MGD Plant in the mid 1990's.
- In 1990 all the local governments and special districts gave all of their collection lines (720 miles) to MSD for ownership and maintenance in agreements we call "Sewer Consolidation."







# Consolidation of Fifteen Separate Sewer Systems in 1990

## Five Municipalities

- City of Asheville
- Town of Biltmore Forest
- Town of Black Mountain
- Town of Montreat
- Town Of Weaverville



**Over 170,000 people**

## Ten Special Districts

- Beaverdam Water and Sewer District
- Busbee Sanitary Sewer District
- Caney Valley Sanitary Sewer District
- Crescent Hill Sanitary Sewer District
- Enka-Candler Water and Sewer District
- Fairview Sanitary Sewer District
- Venable Sanitary District
- Skyland Sanitary Sewer District
- Swannanoa Water and Sewer District
- Woodfin Sanitary Water and Sewer District



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# METROPOLITAN SEWERAGE DISTRICT AND CANE CREEK WATER AND SEWER DISTRICT BOUNDARIES

EXHIBIT 2  
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## Cane Creek WSD Consolidation July, 2020

MSD Service Area  
= 215 sq. mi.

CCWSD Service  
Area = 49 sq. mi.

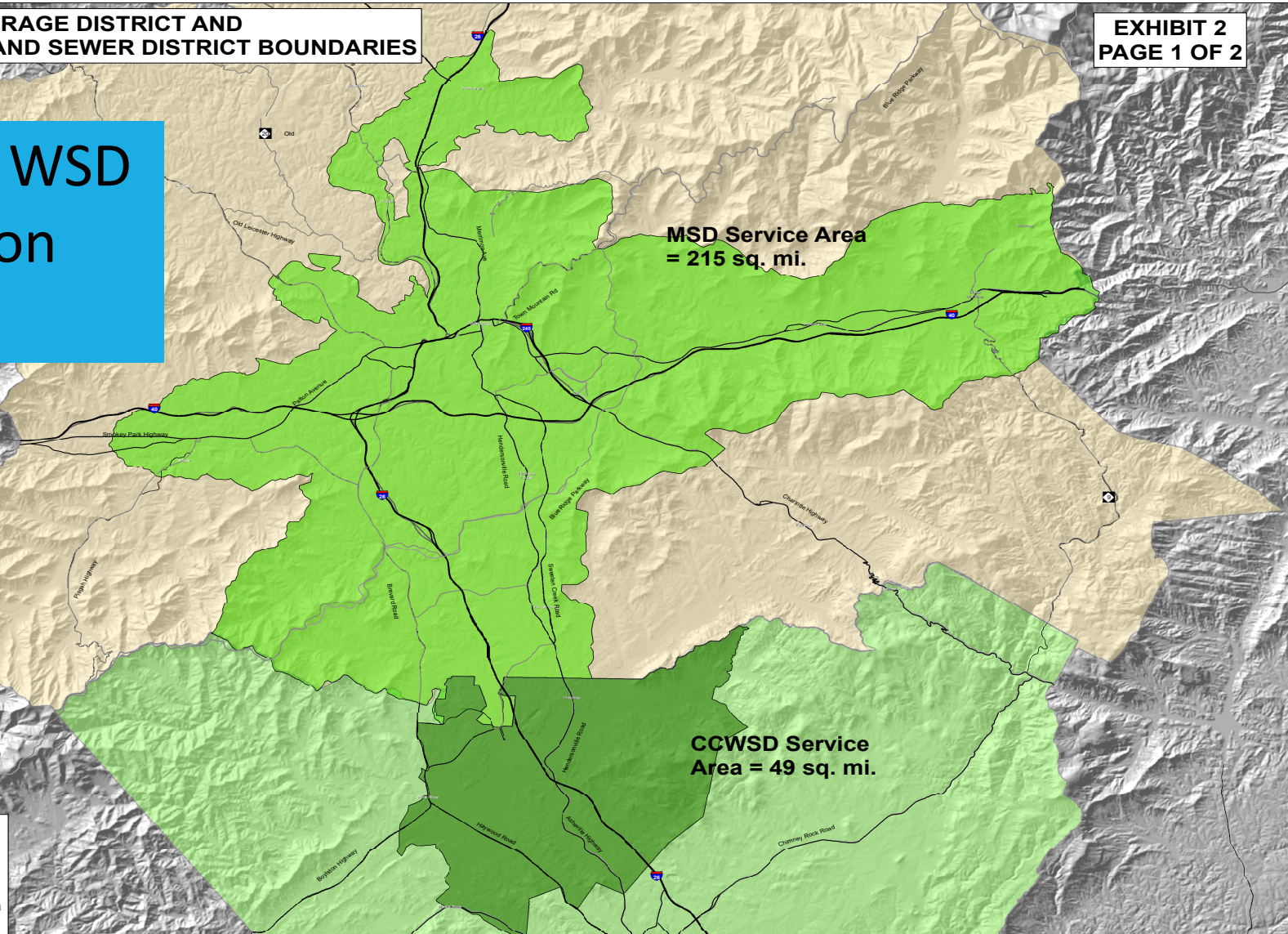
0 1 2 3 4  
Miles

Print Date: 10/9/2019



### Legend

- Buncombe County
- Henderson County
- Metropolitan Sewerage District Service Area
- CCWSD Service Area





## MSD Board of Directors

- Governed by a fourteen-member Board appointed by the following entities:

City of Asheville (3)	Black Mountain
Buncombe County (3)	Montreat
Henderson County (2)	Weaverville
Biltmore Forest	Woodfin Sanitary Water and Sewer District
	Town of Woodfin
- Chairman, Vice-chairman and Secretary-Treasurer are elected annually by the Board.
- Active subcommittees:

Capital Improvement Program	Personnel
Planning	Finance
Right of Way	
- The Board employs a General Manager, P.E., who is responsible for managing all District operations.





## Current MSD Board of Directors

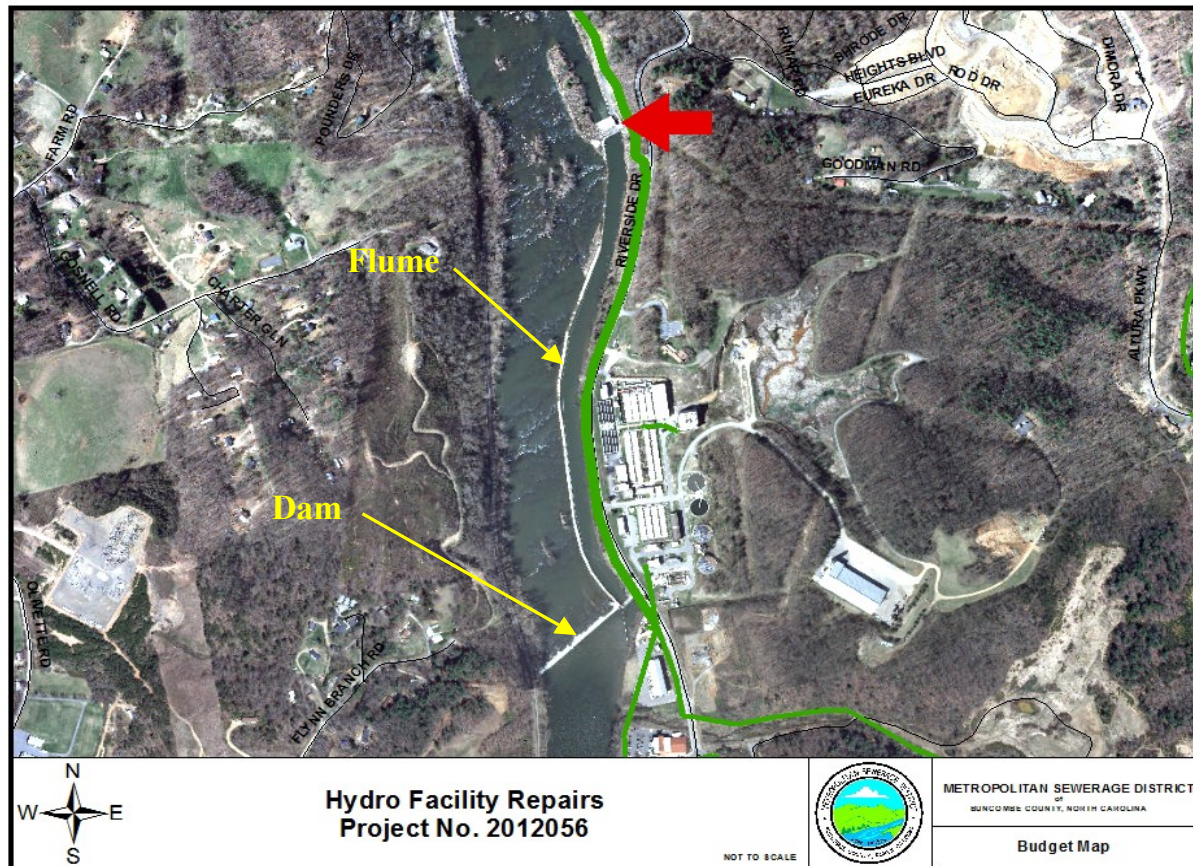
Matt Ashley, Jr.	Montreat	Nathan Pennington	Buncombe County
Jackie W. Bryson	Woodfin SWSD	Robert Pressley	Buncombe County
Sheila Franklin	Henderson County	Earl Valois	Weaverville
Glenn Kelly	Biltmore Forest	Jerry Vehaun	Woodfin
William Lapsley	Henderson County	Robert Watts	Black Mountain
Esther Manheimer	Asheville	Gwen Wisler	Asheville
Chris Pelly	Asheville	Al Whitesides	Buncombe County





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## Current Hydroelectric Production

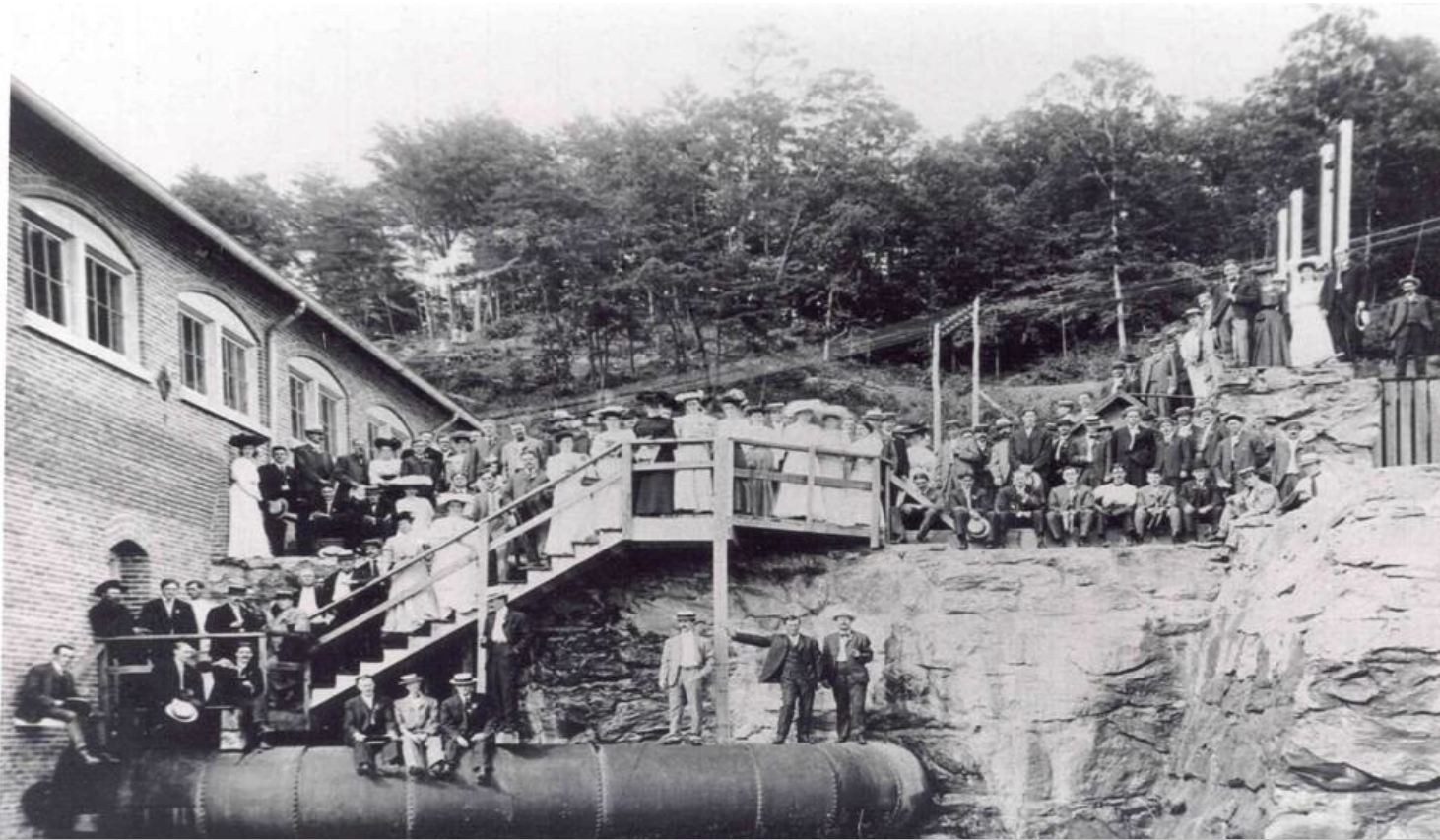


- Can Generate 2880 KW
- FY 2015 Avoided Power Cost \$435,000





## Hydroelectric Generation Facility



1986 Reconstructed Craggy Dam Hydro Plant (Originally Built 1903)



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## CAPITAL IMPROVEMENT PROGRAM FY20 through FY29 (10 years)

Interceptors/Wet Weather Rehab.	\$ 86.8 Million (26%)
Collection Rehabilitation	\$ 126.3 Million (38%)
Treatment Plant / P.S.	\$ 117.7 Million (35%)
Reimbursements	<u>\$ 1.6 Million ( &lt; 1%)</u>
<b>Total</b>	<b>\$ 332.4 Million</b>

Since Consolidation in 1990 the District has reinvested over \$397.4 million for Capital Improvements.



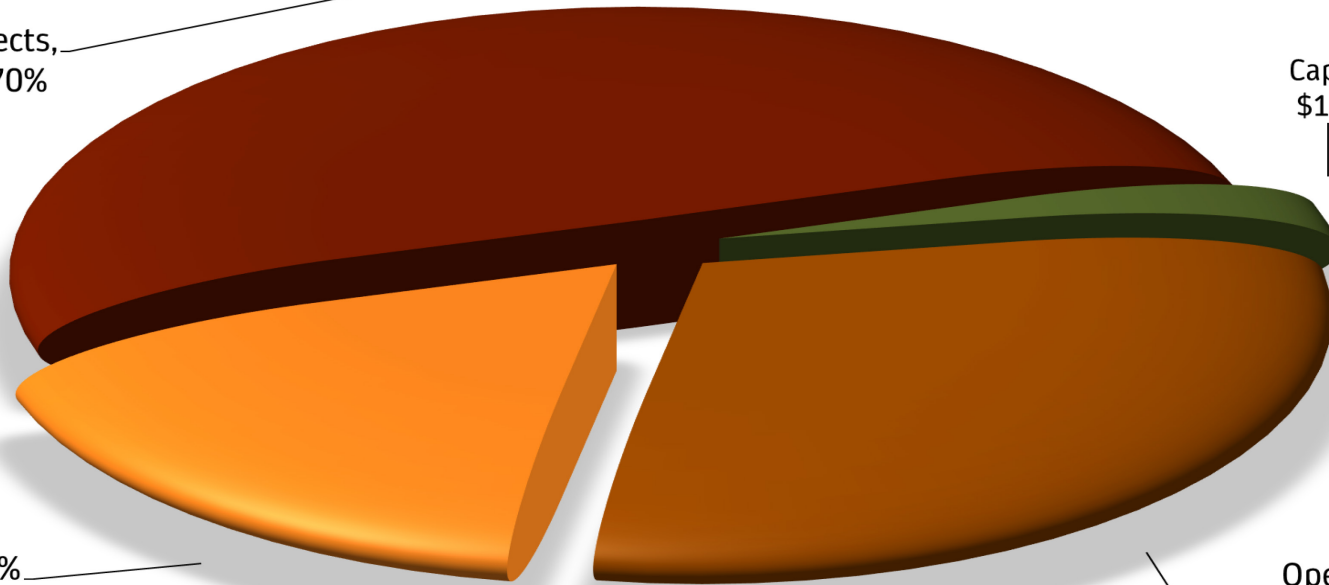
## FY21 Budget Expenditures \$56,600,826

Construction Projects,  
\$28,131,316, 49.70%

Capital Equipment,  
\$1,406,987, 2.49%

Debt Service,  
\$9,837,382, 17.38%

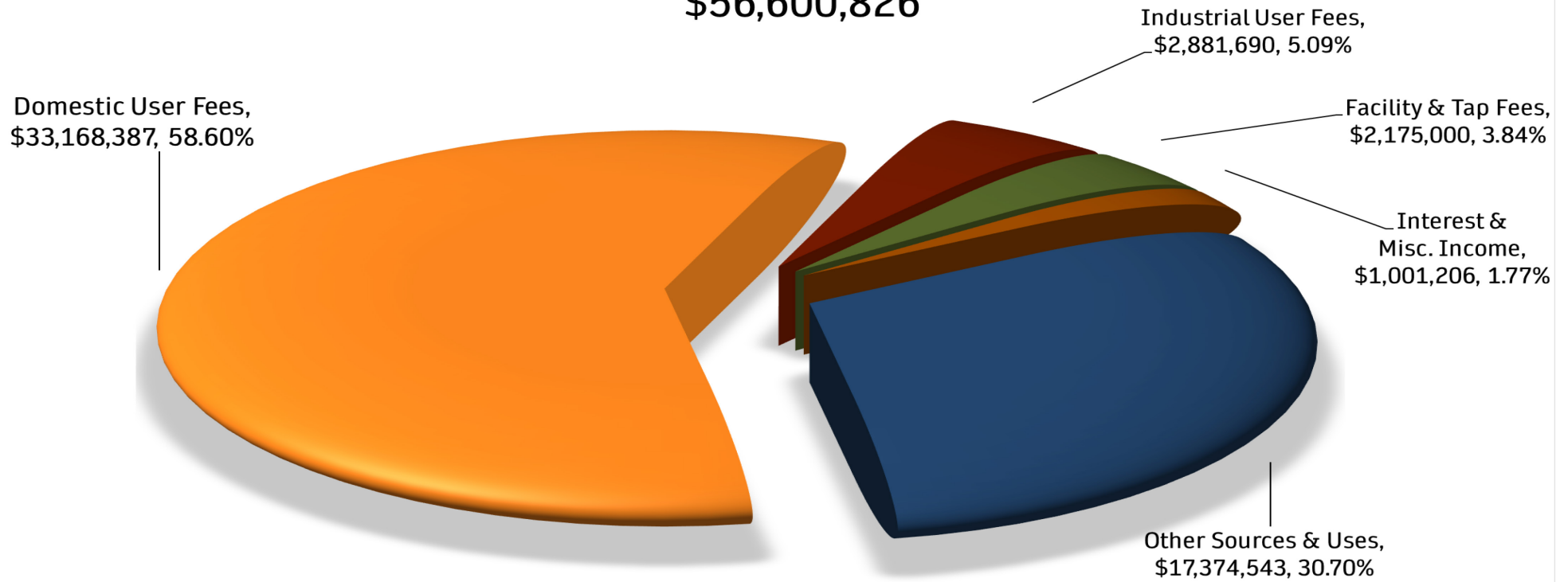
Operations &  
Maintenance,  
\$17,225,141, 30.43%

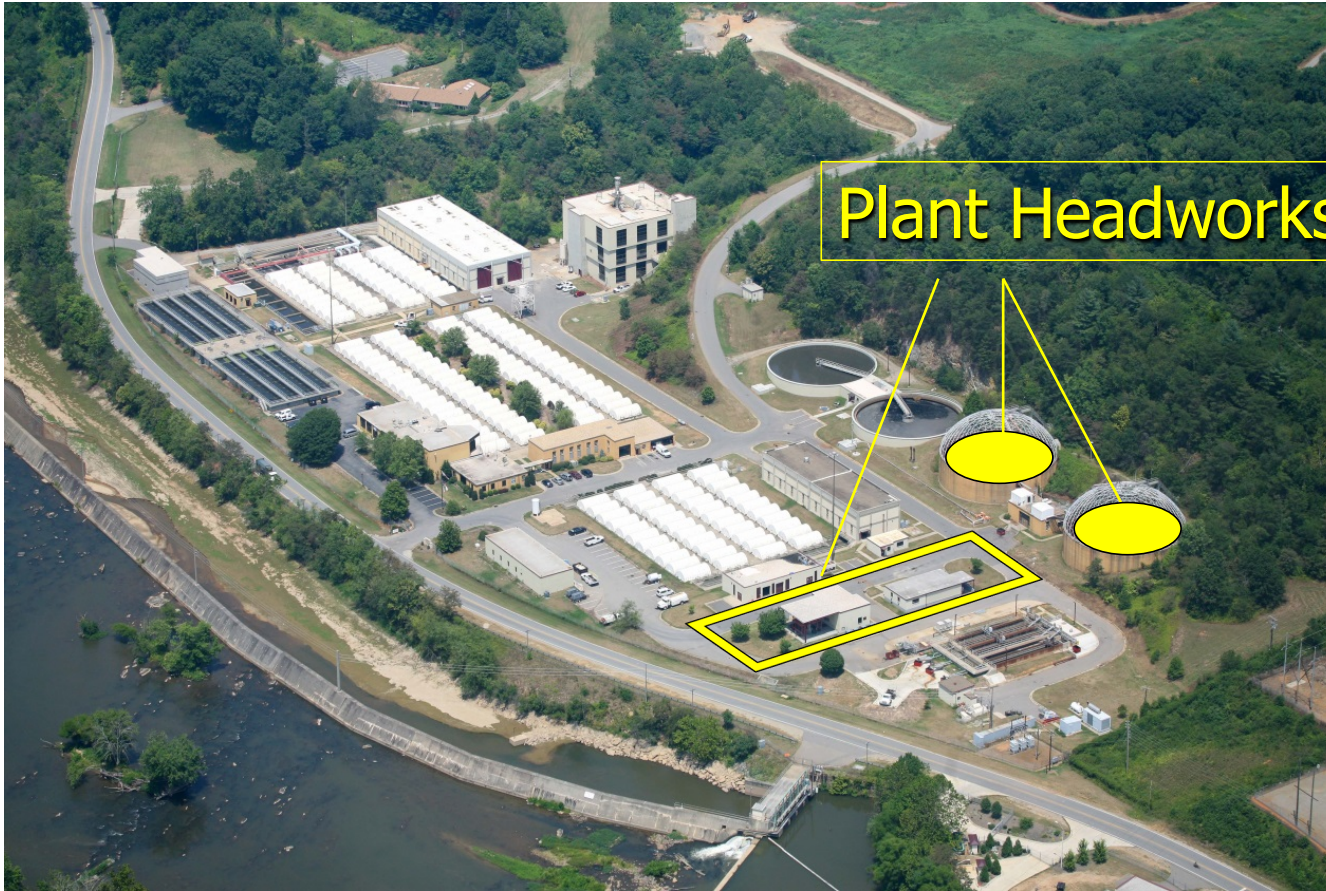


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## FY21 Budget Revenues \$56,600,826





## Plant Headworks Project

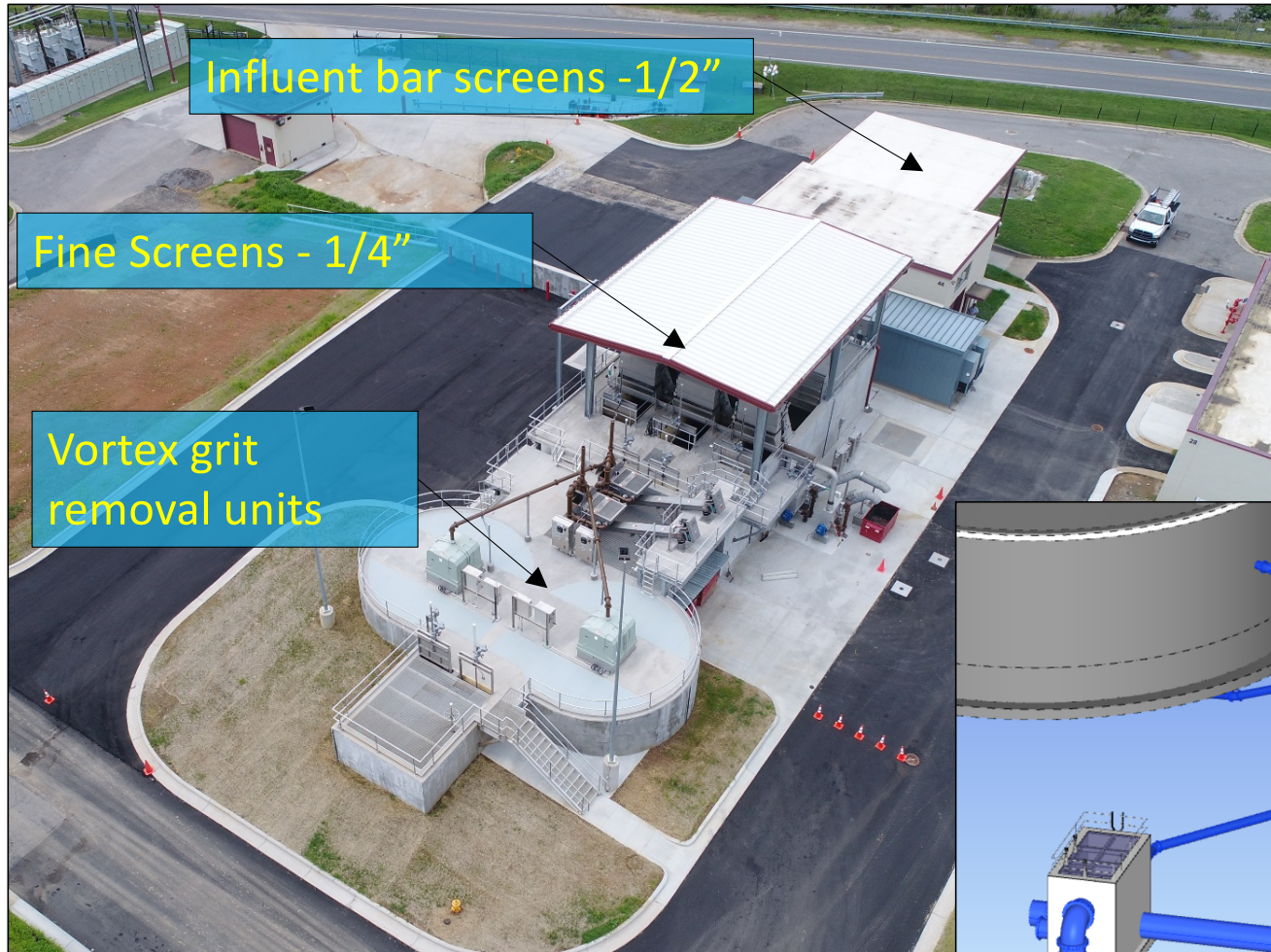
- New Bar Screens
- Improved Fine Screens
- Grit Removal
- Surge System for Peak Flows
- Construction complete
- Total Project cost approx. \$9.6 Million



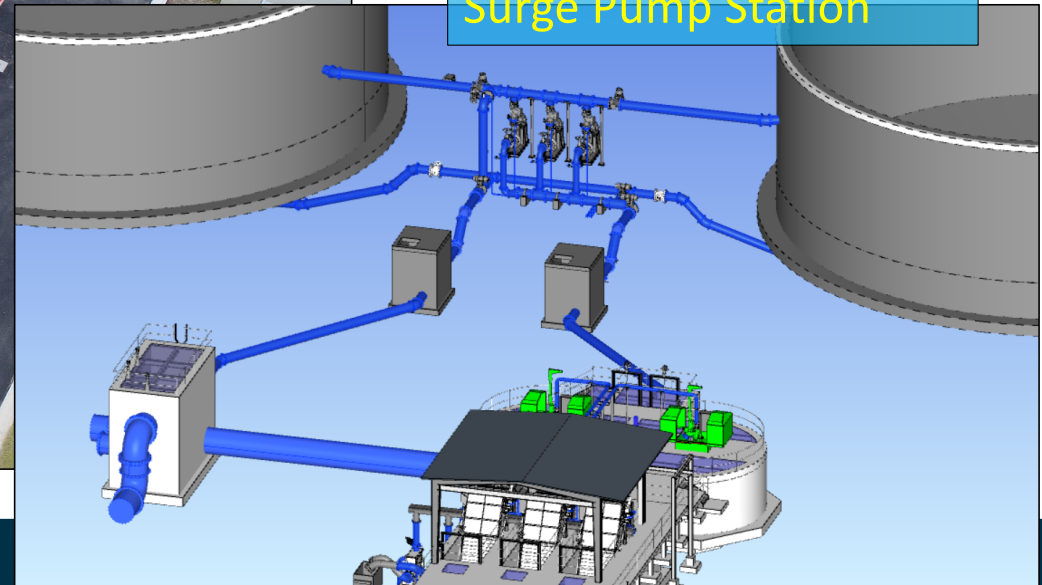
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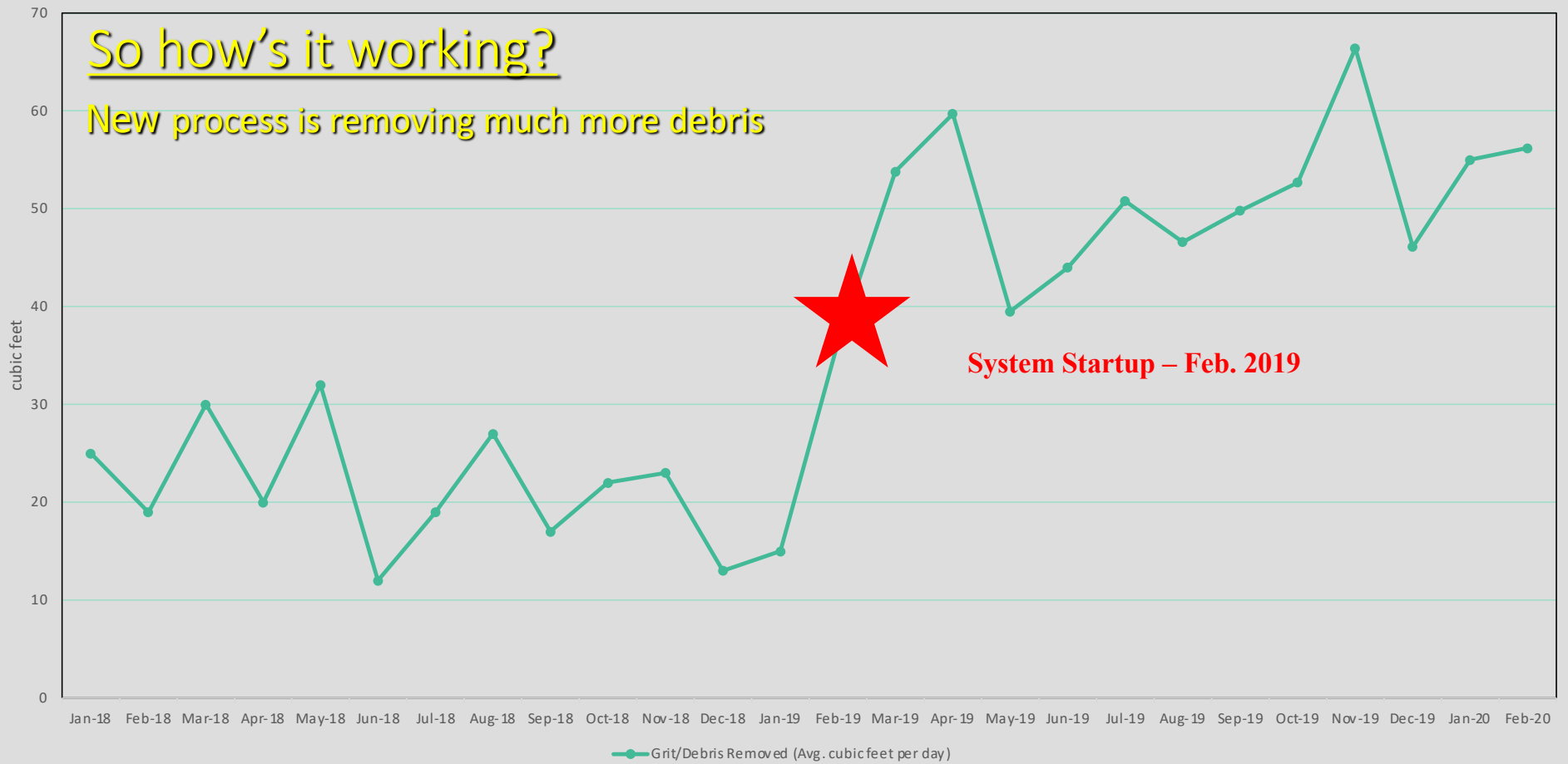


Surge Pump Station



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Headworks Grit/Debris Removal per day







## High Rate Primary Clarification

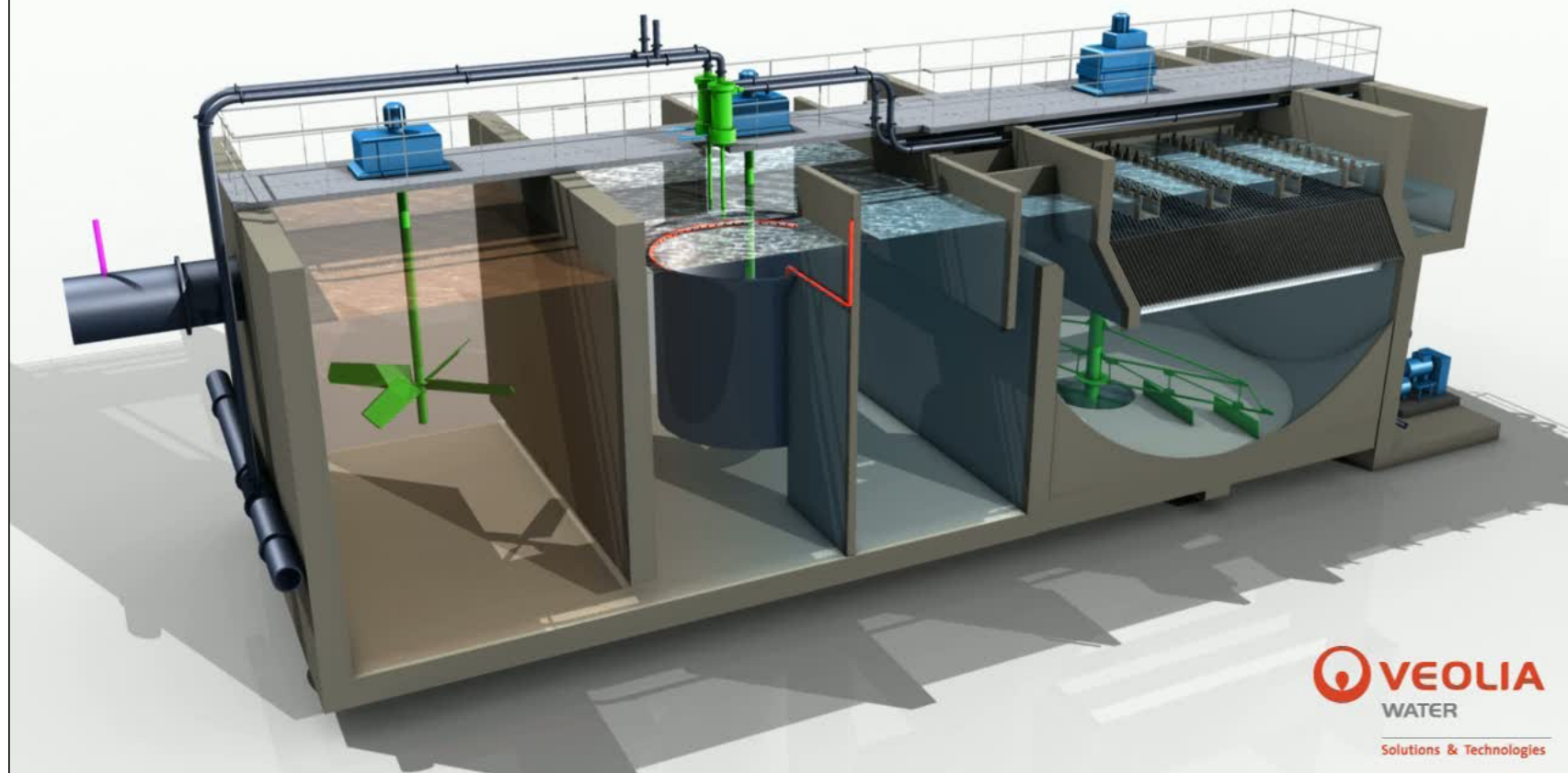
- New technology
- Will significantly improve treatment
- Under Construction
- Total Project Cost \$17 Million



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## Ballasted Flocculation Process



**VEOLIA**  
WATER  
Solutions & Technologies



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Spring of 2020



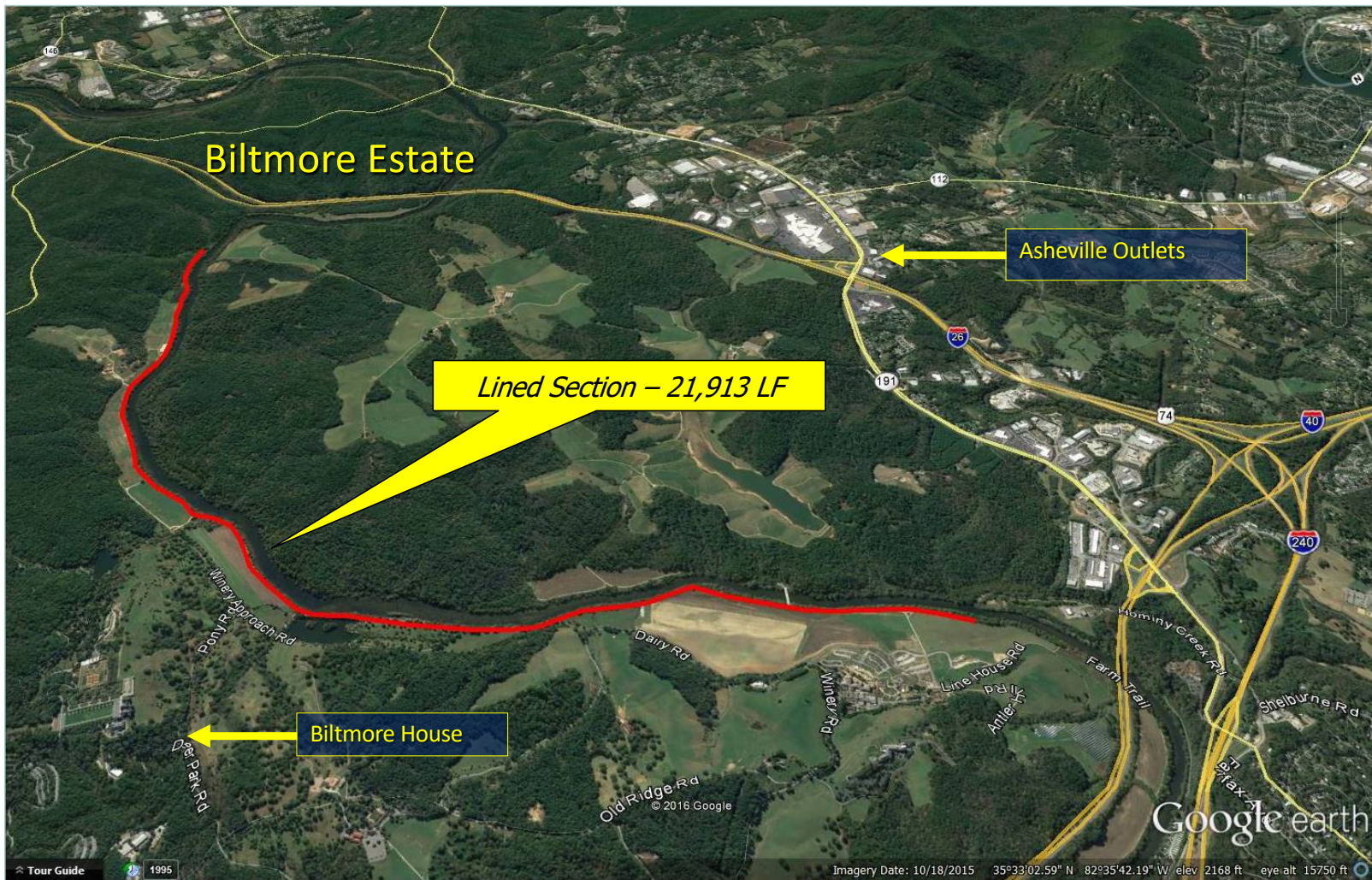
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Fall of 2020



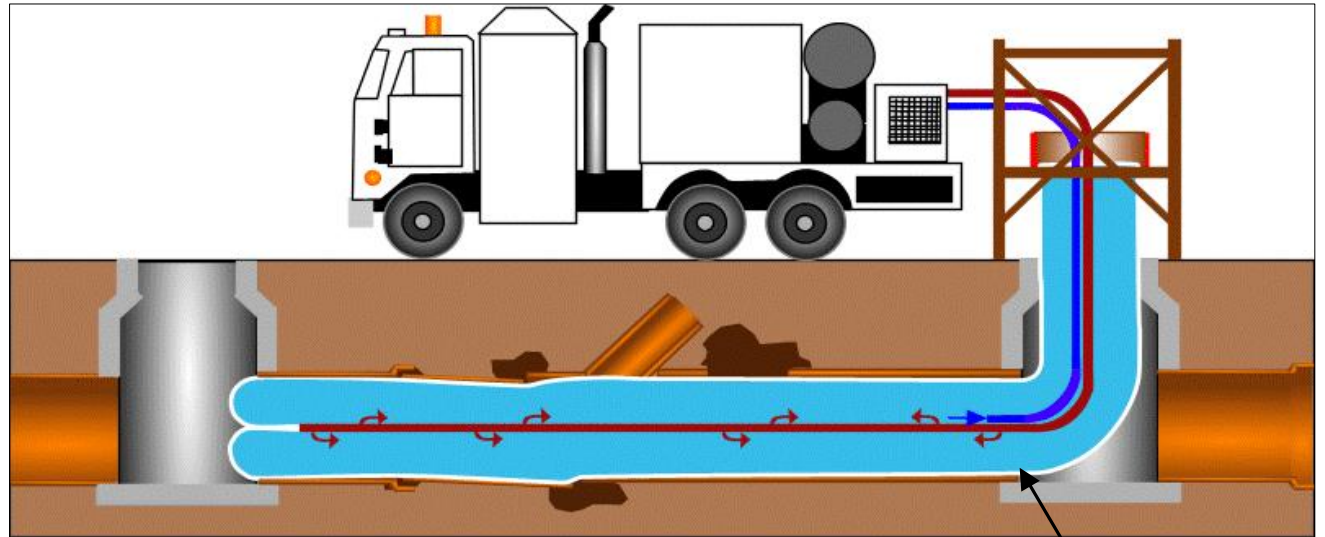
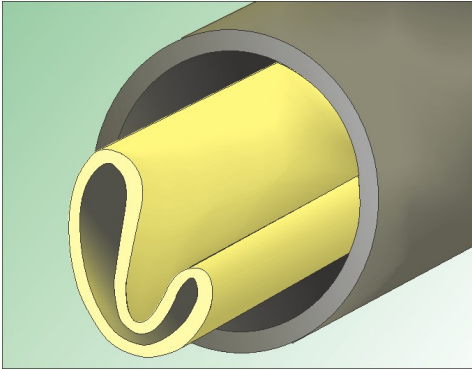




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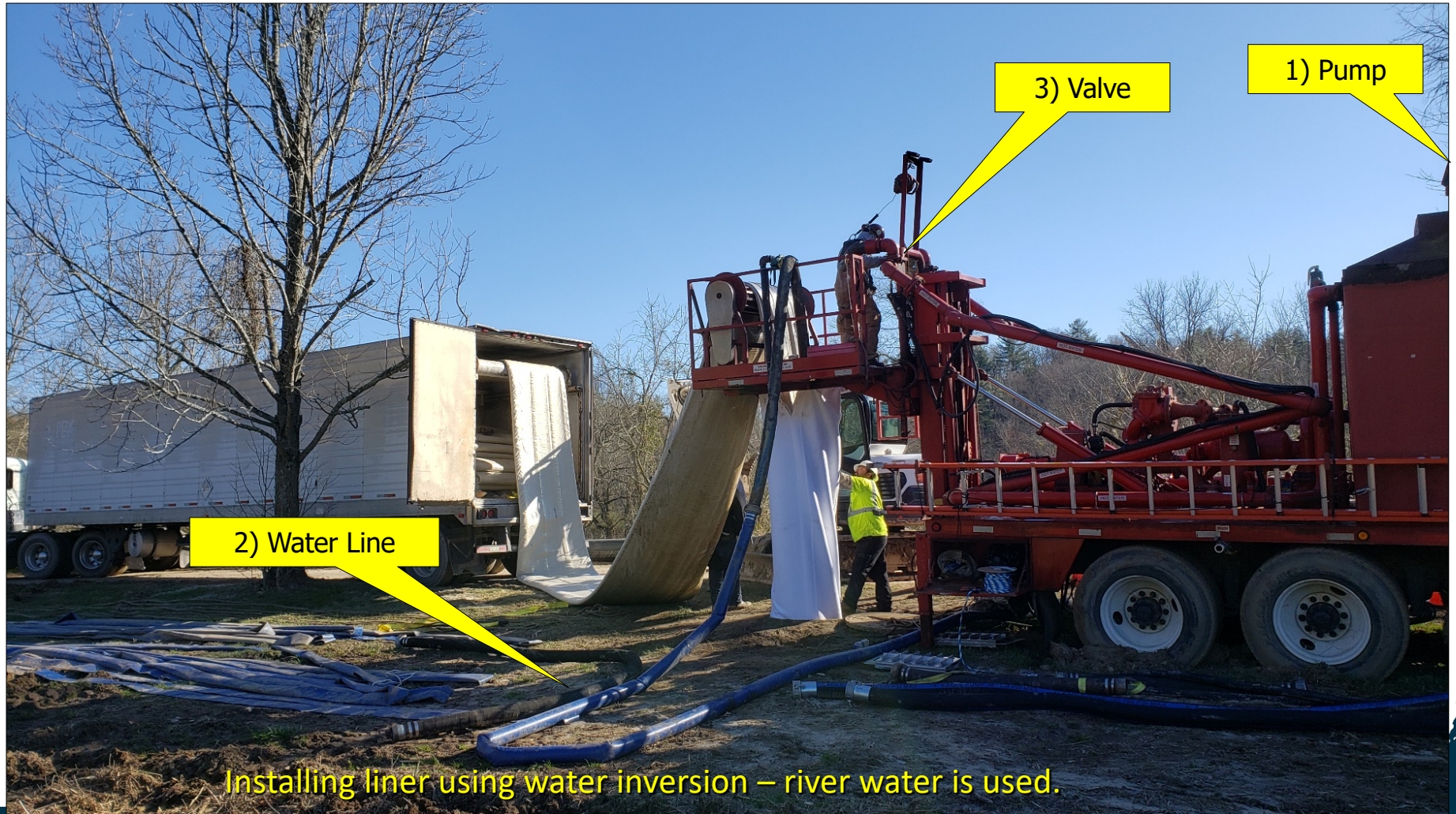
## How does lining work?



Liner is “inverted” when installed, water is used to insert liner and keep it in place until curing.







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Bypass pumping setup (two pumps for redundancy, second is visible downstream).



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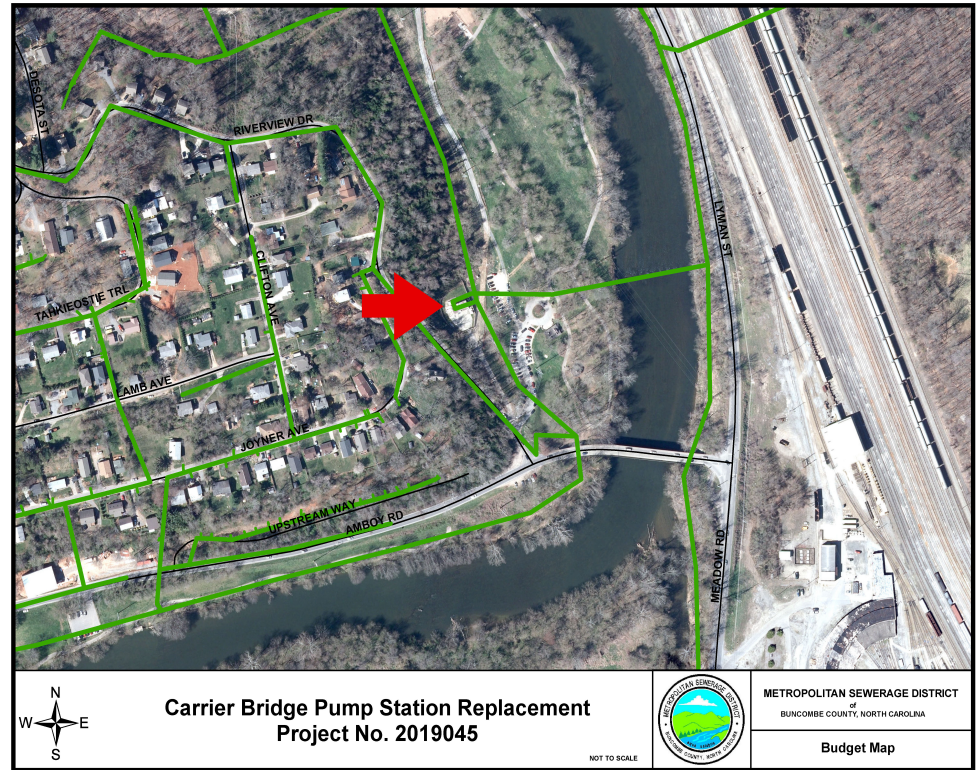
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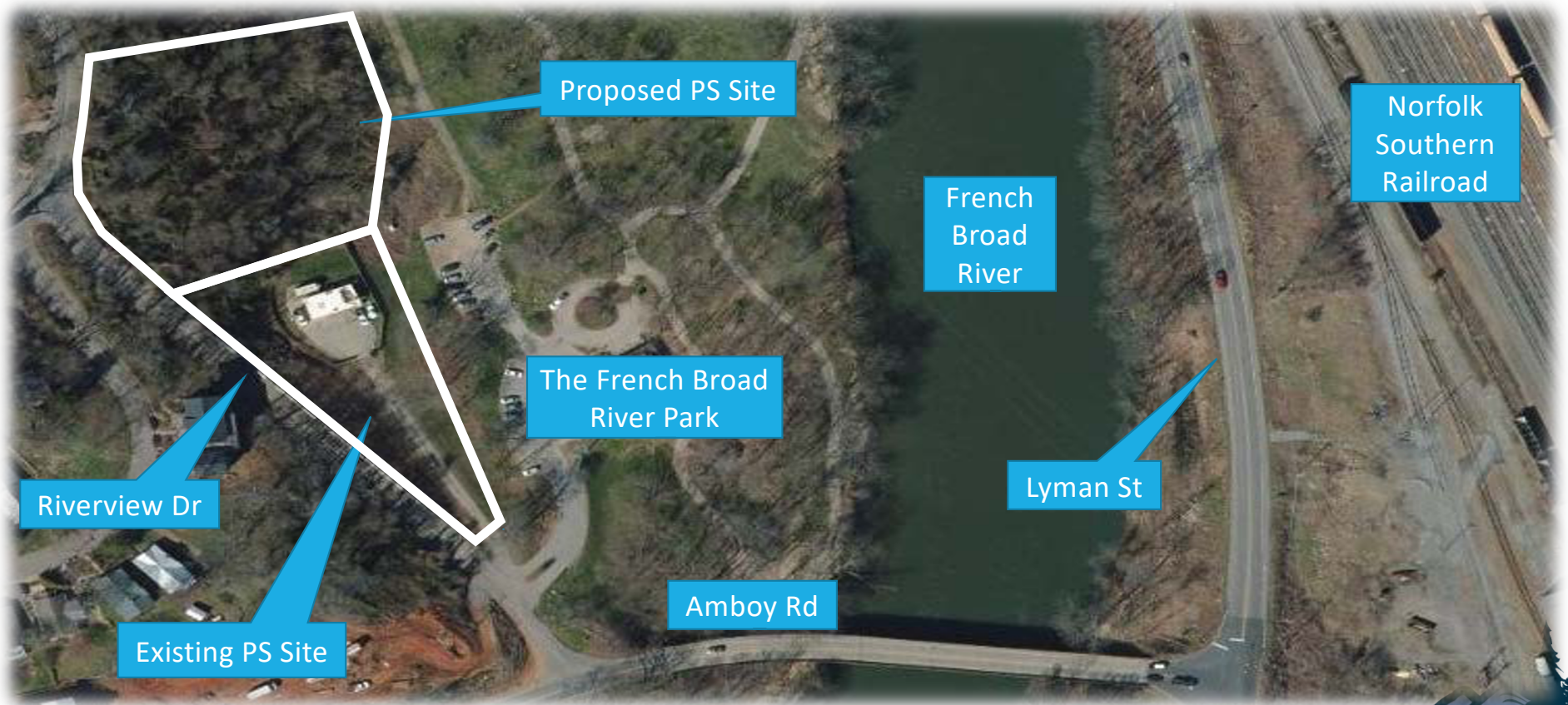
# Carrier Bridge Pump Station

- Serves large areas of Asheville, Southern and Western Buncombe County, and CCWSD.
- Original station constructed in 1960's and upgraded multiple times.
- Capacity increased utilizing 50-year growth projections, to 34 mgd.
- \$30 M Construction Cost
- Design underway, construction to begin in FY21-22.





# Carrier Bridge Pump Station



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New station will be 70-75 feet deep

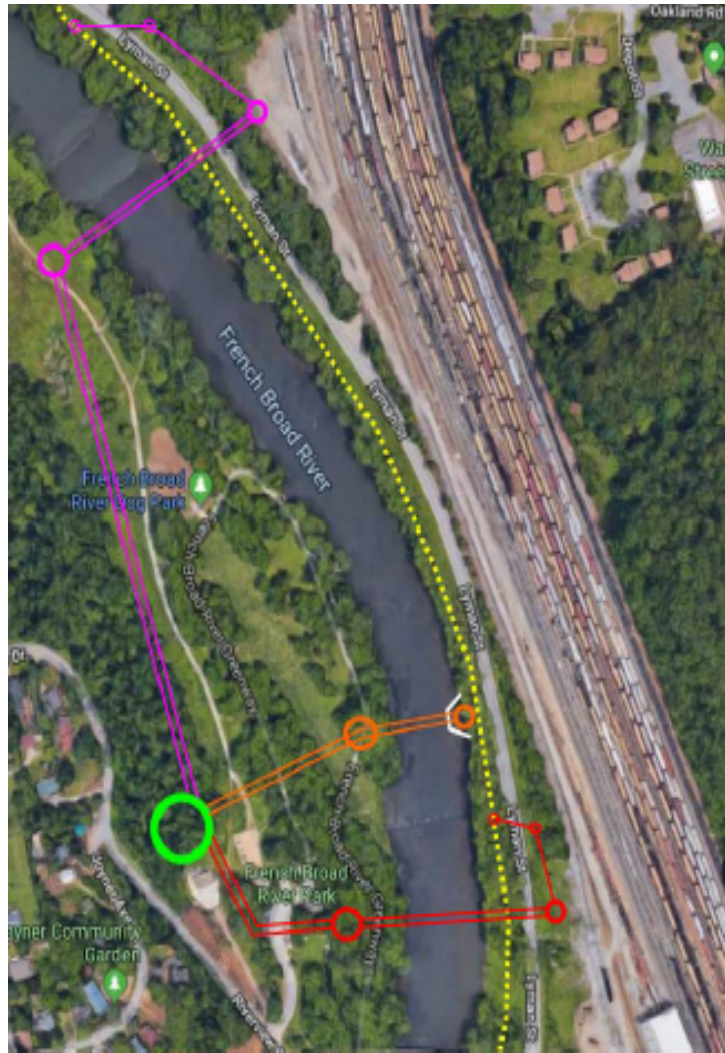


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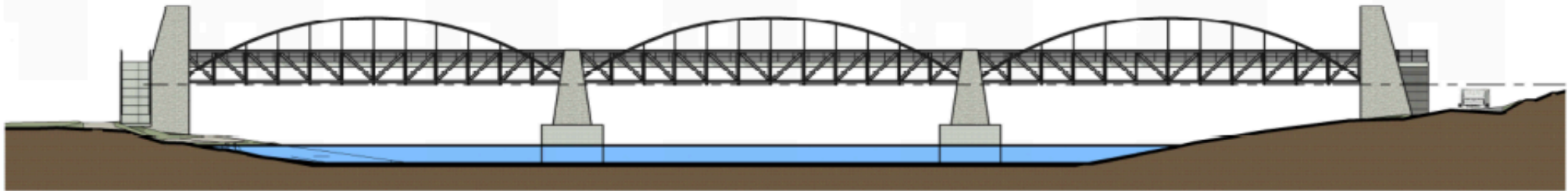
# River Crossing





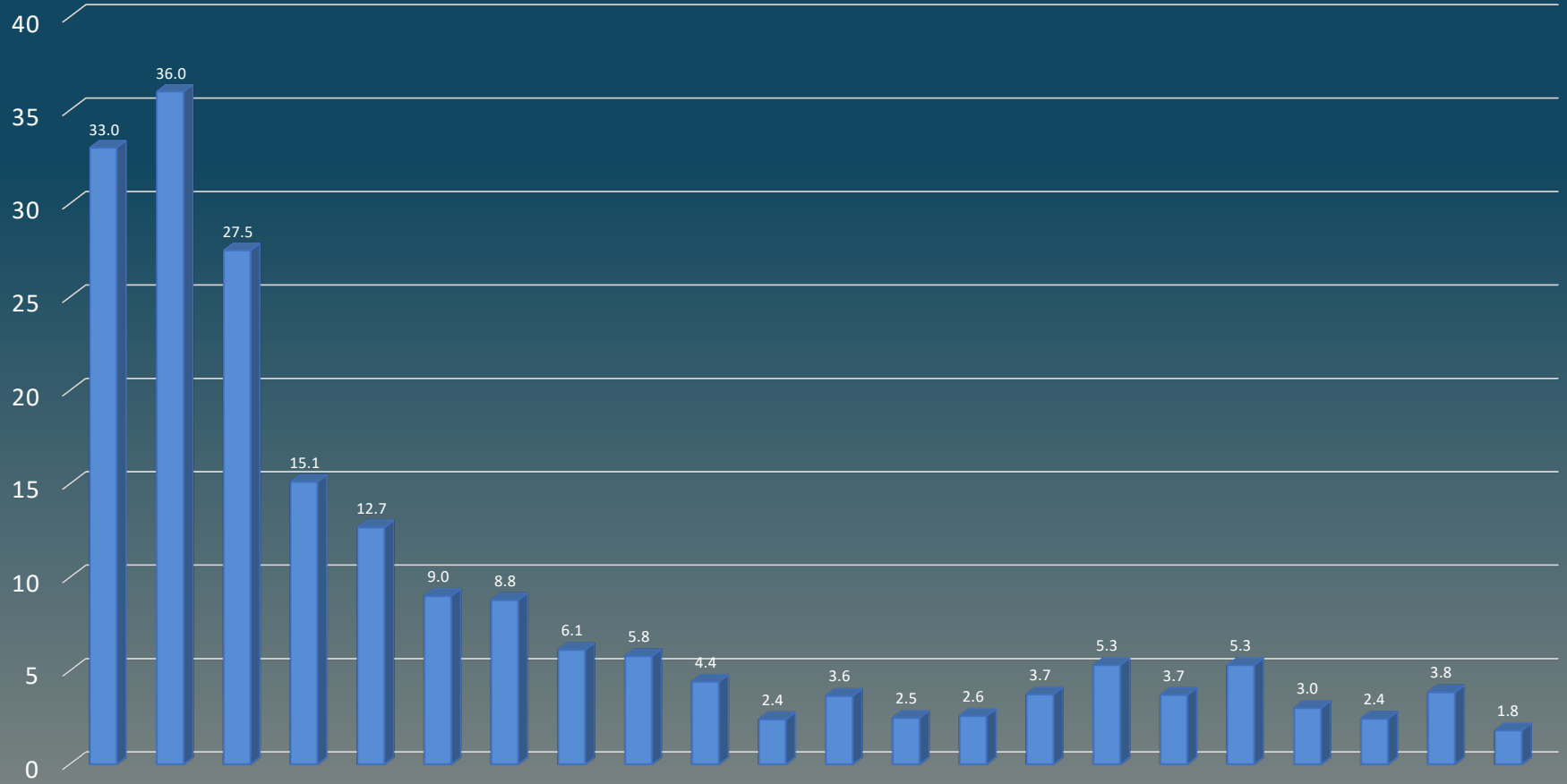


Sewer crossing/Pedestrian Bridge for Wilma Dykeman Greenway – COA Partnership



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SSO's/100 Miles of Sewer per year



Our End Product



Questions ?



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