



Metropolitan Sewerage District

Update for Buncombe County Board of Commissioners

August 2, 2022





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

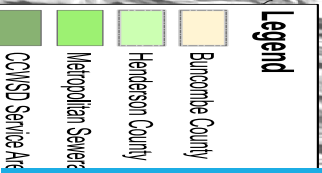


Over 170,000 people

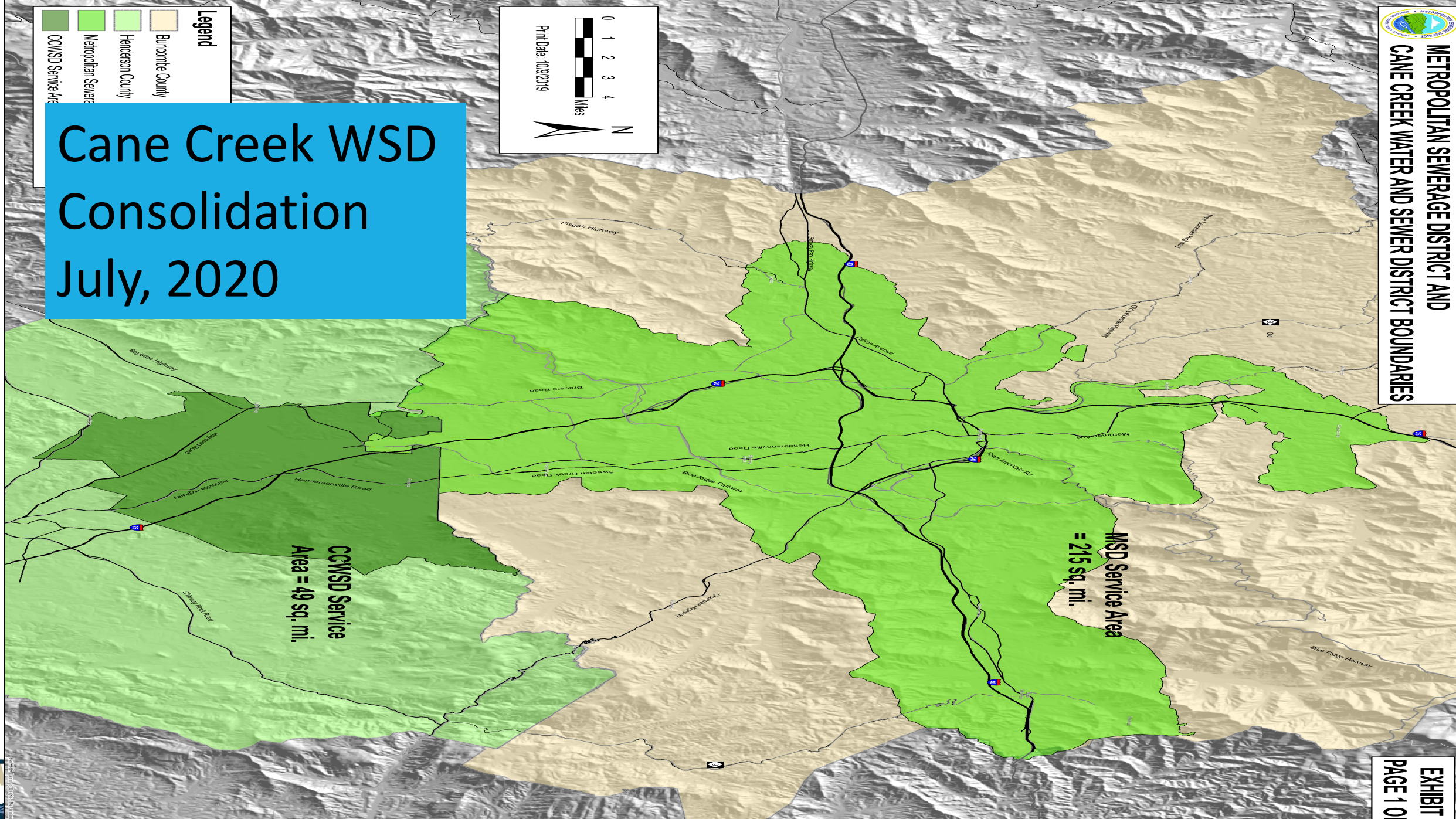
Ten Special Districts

- 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





Cane Creek WSD Consolidation July, 2020



CCWSD Service Area = 49 sq. mi.

MSD Service Area = 215 sq. mi.



Current MSD Board of Directors

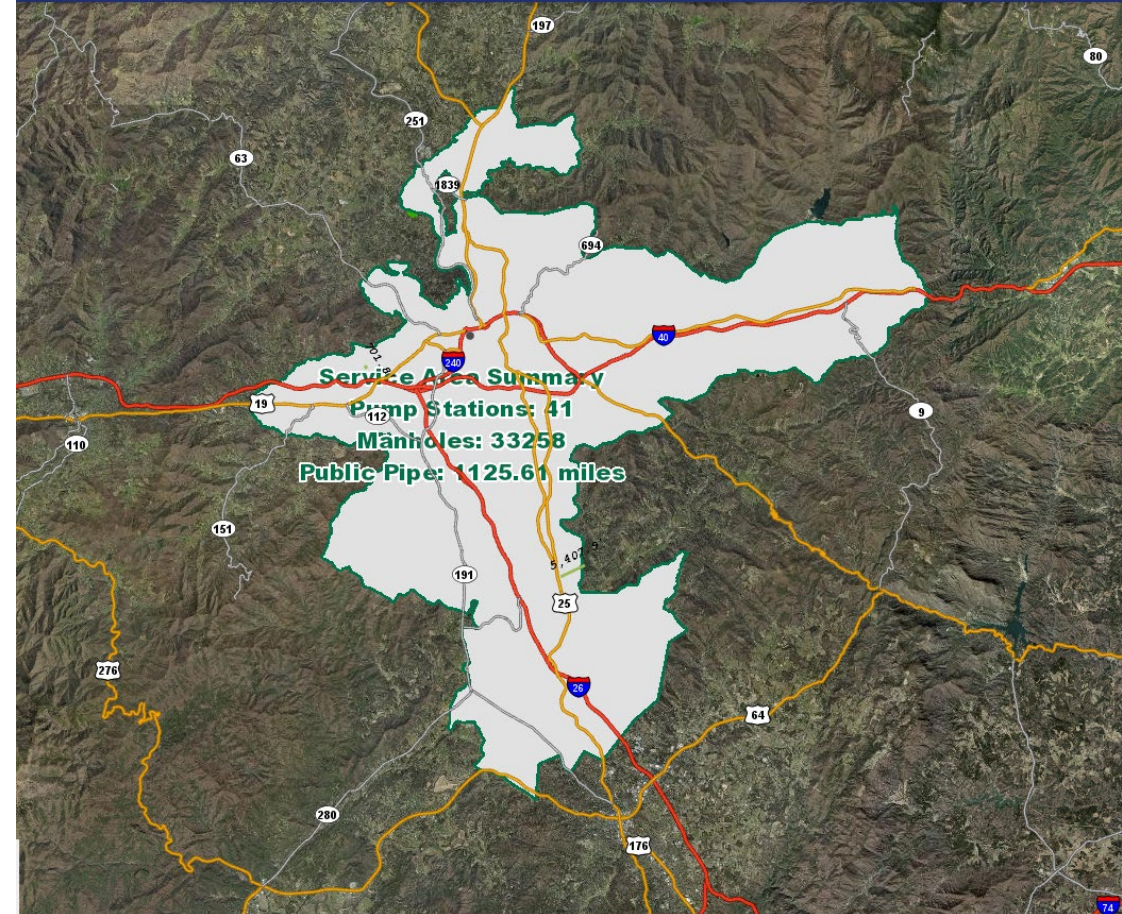
Matt Ashley, Jr.	Montreat
Jackie W. Bryson	Woodfin SWSD
Sheila Franklin	Henderson County
Glenn Kelly	Biltmore Forest
William Lapsley	Henderson County
Esther Manheimer	Asheville
Chris Pelly	Asheville

Nathan Pennington	Buncombe County
Robert Pressley	Buncombe County
Doug Dearth	Weaverville
Jerry Vehaun	Woodfin
Robert Watts	Black Mountain
Gwen Wisler	Asheville
Al Whitesides	Buncombe County



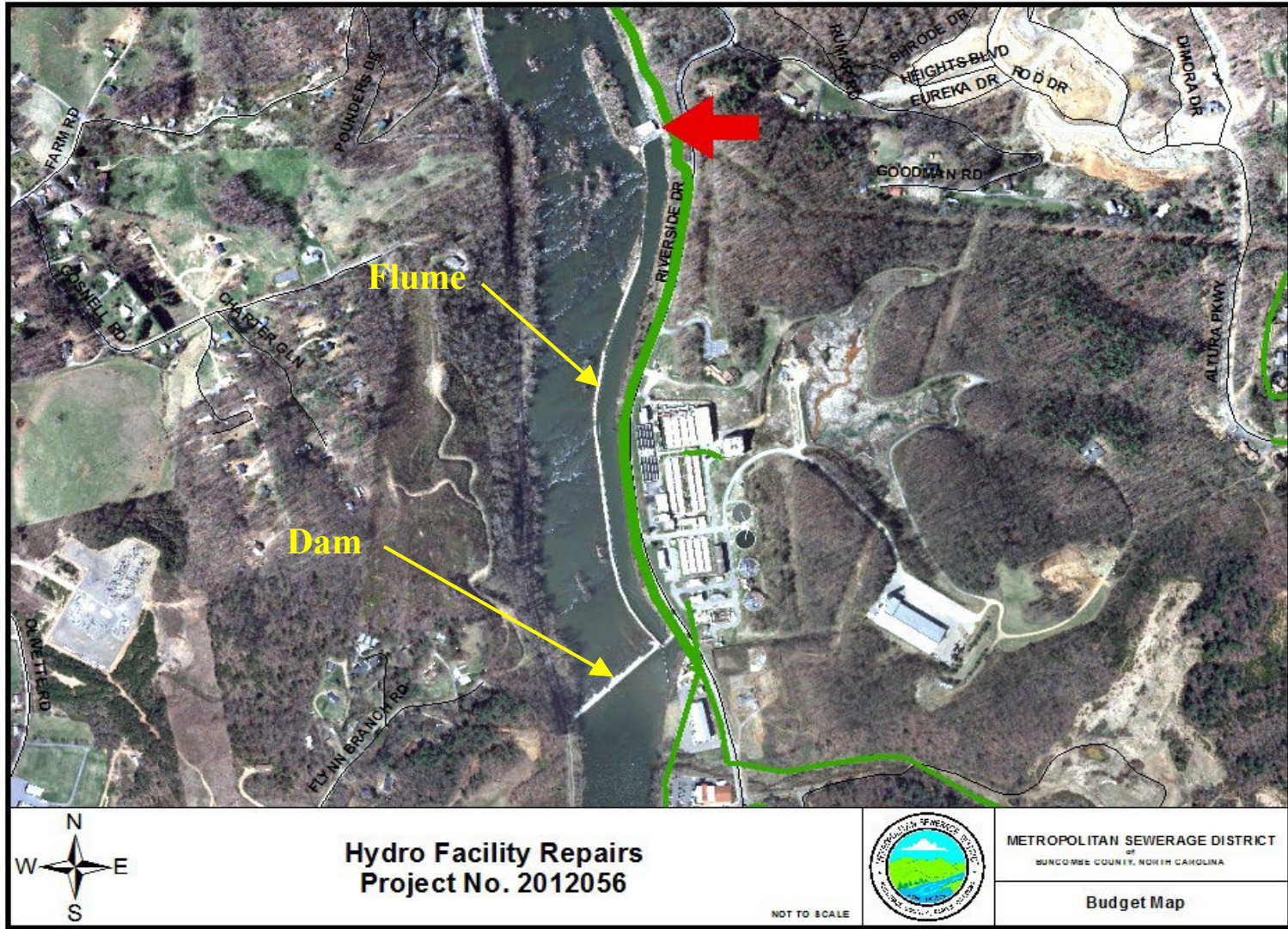
MSD Collection System Overview

- MSD serves ~201,000 people via 57,000 customer accounts
- Service District spans 263 square miles
- MSD currently owns and maintains:
 - 1,133 miles of sewer lines
 - 33,581 manholes
 - 40 pump stations



- Built in 1960's
- Upgraded to 40 MGD in mid 1990's
- Rated at 40 MGD
- Currently at 23.9 MGD







Current Hydroelectric Production



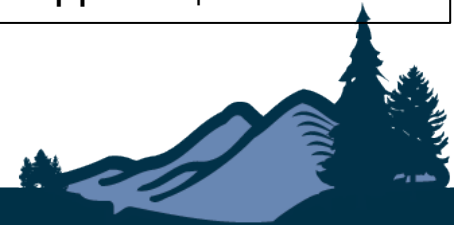
- Can Generate 2880 KW
- FY 2021 Avoided Power Cost \$483,824

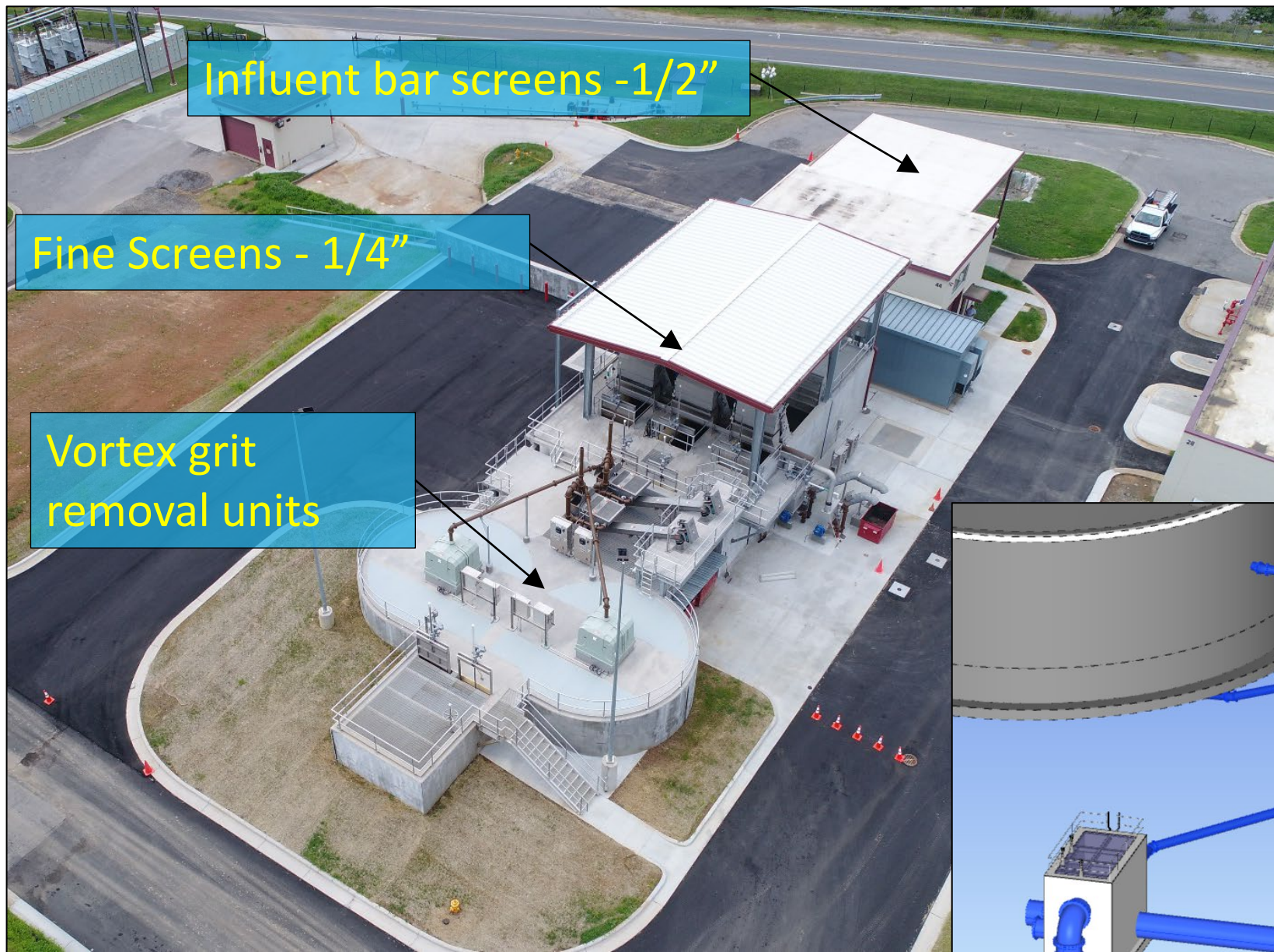




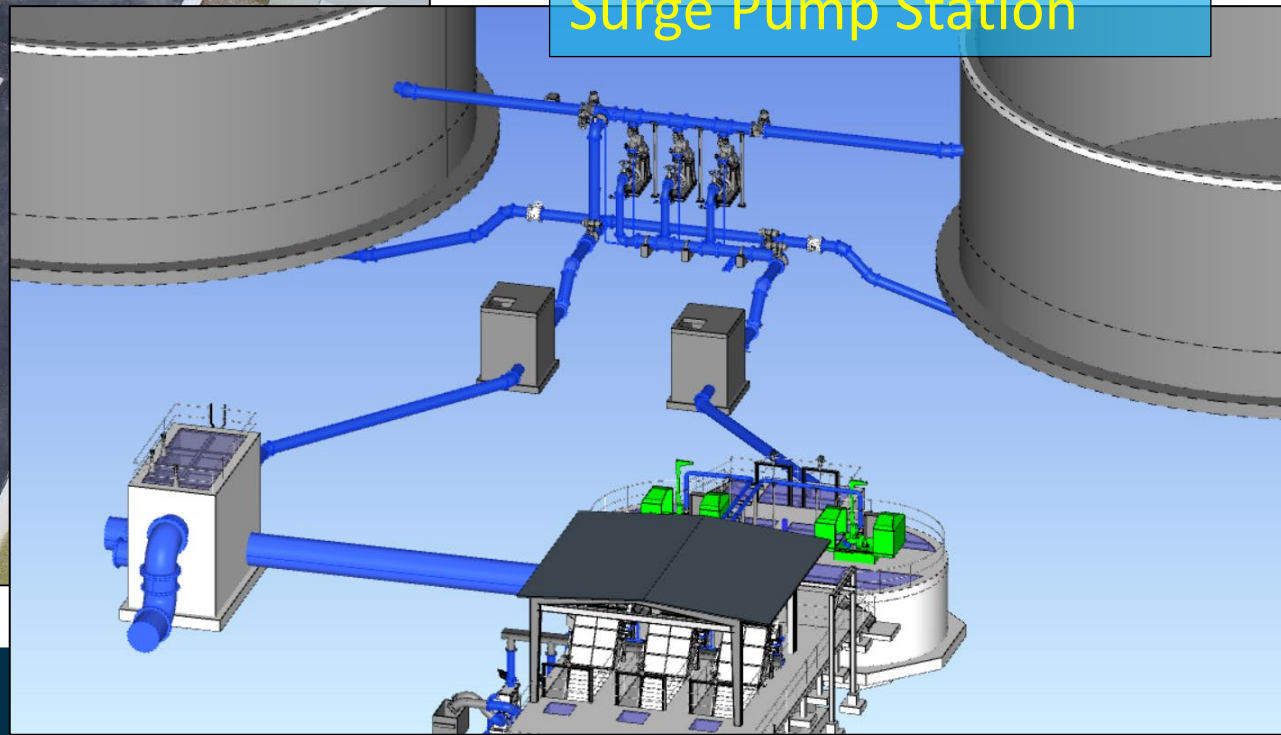
Plant Headworks Project

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





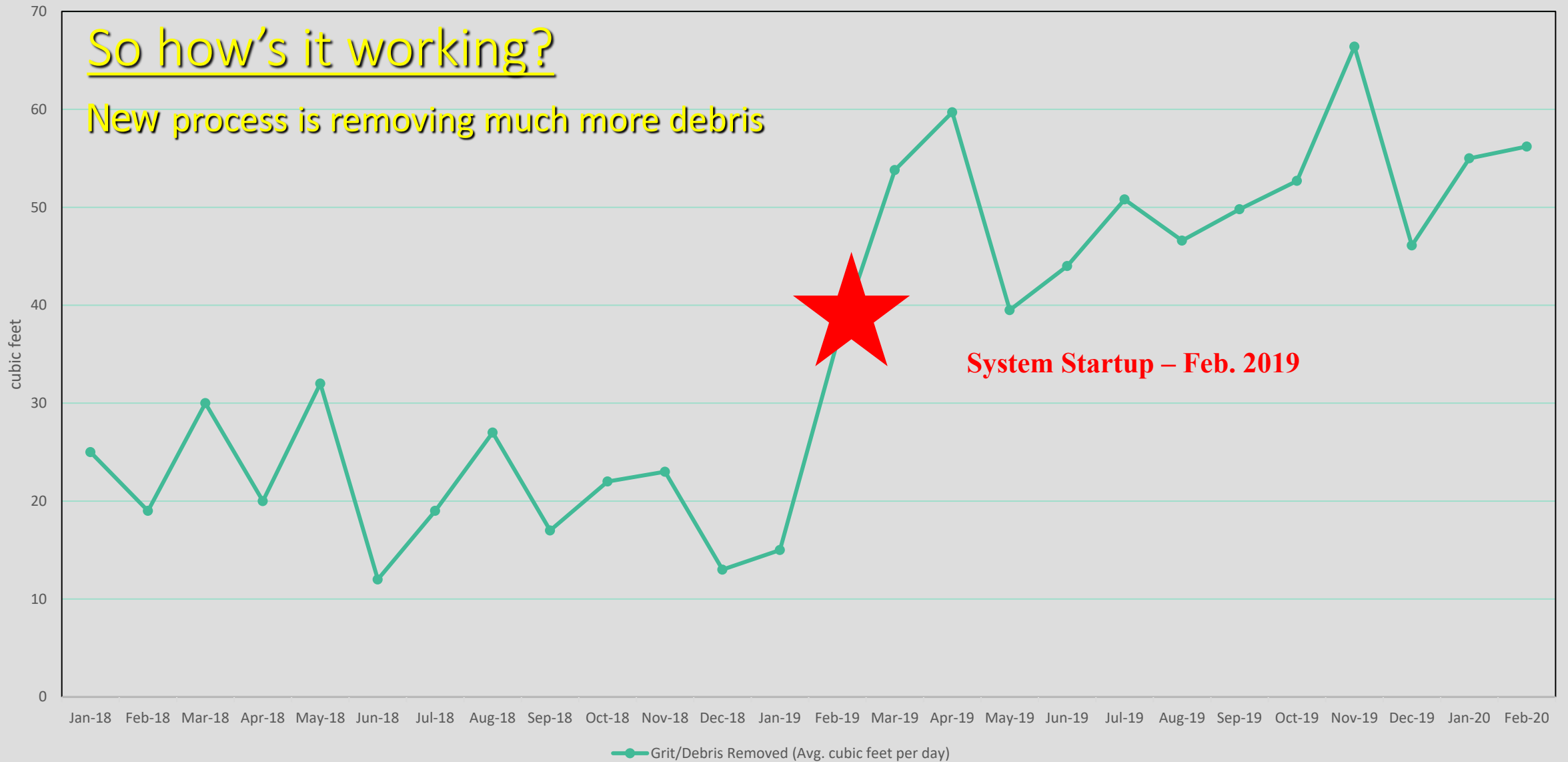
Surge Pump Station



Headworks Grit/Debris Removal per day

So how's it working?

New process is removing much more debris



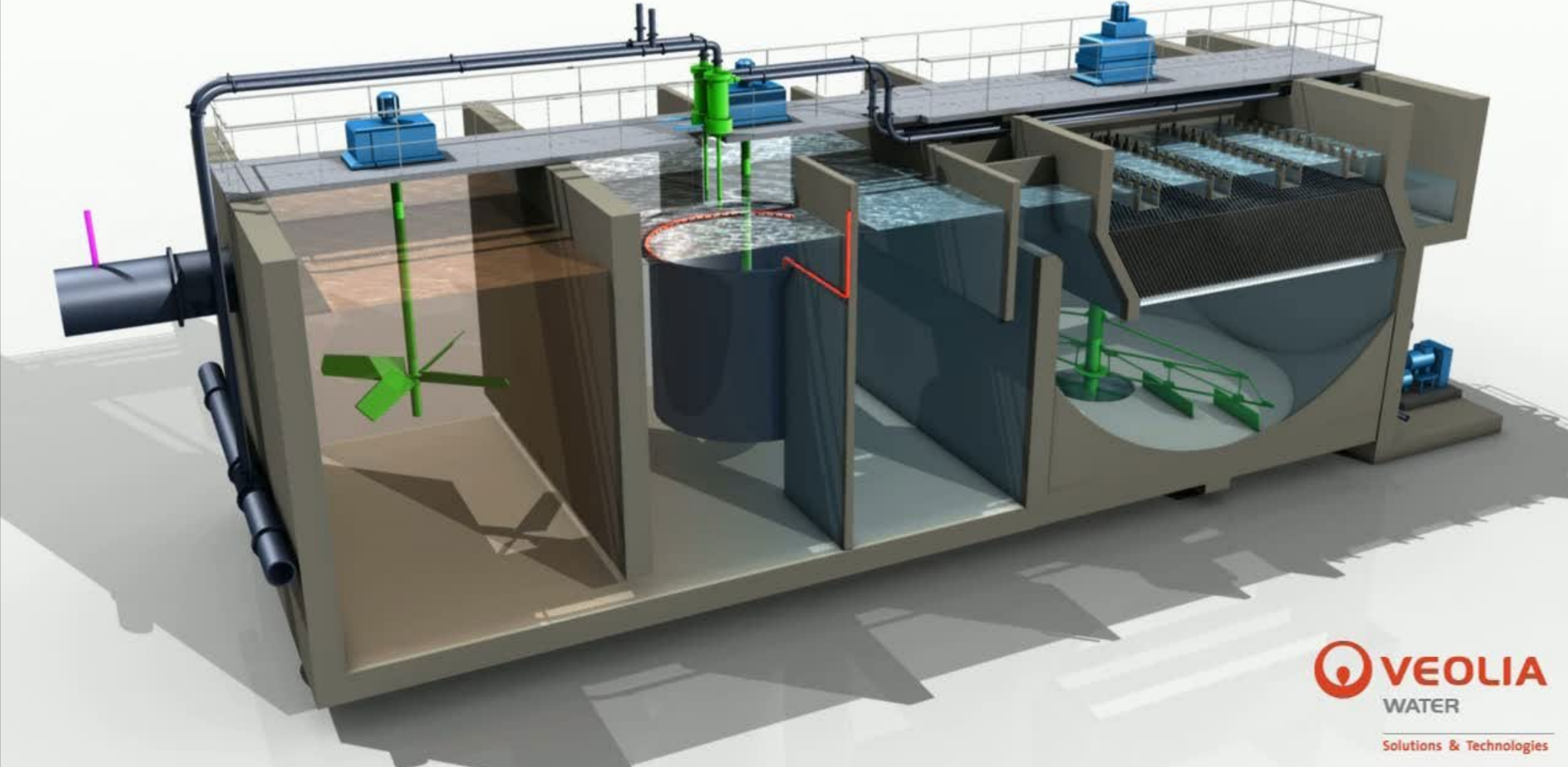


High Rate Primary Clarification

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



Ballasted Flocculation Process









COLLECTION SYSTEM

LAST 12 MONTHS

- PREVENTATIVE MAINTENANCE CLEANING OF 874,899 FEET OF SEWER MAIN.
- CONSTRUCTED 21,000 FEET OF NEW SEWER LINES TO REPLACE AGING SYSTEM.





Ductile Iron wye fitting



Last Fiscal Year ('20/'21), MSD spent \$1.57M on asphalt paving



Installing temporary driving surface with ABC



Installing 6" asphalt binder course per COA street standards

New surface course – April 19, 2022



Pipe bursting bore pit (top left); bursting head and HDPE pipe (top right); winch machine (lower left); bursting head entering old manhole (lower right)





24" jack and bore auger inside steel casing pipe



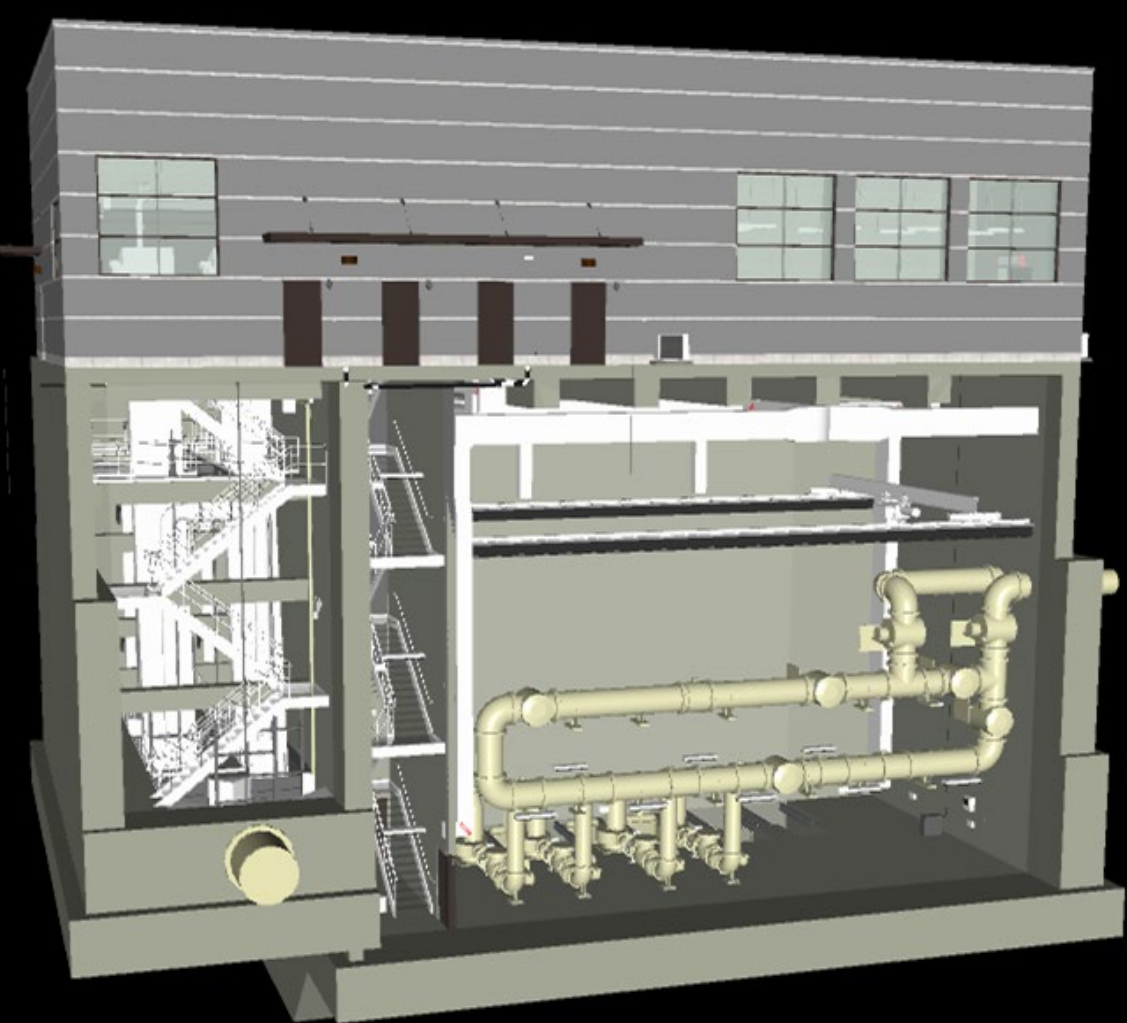
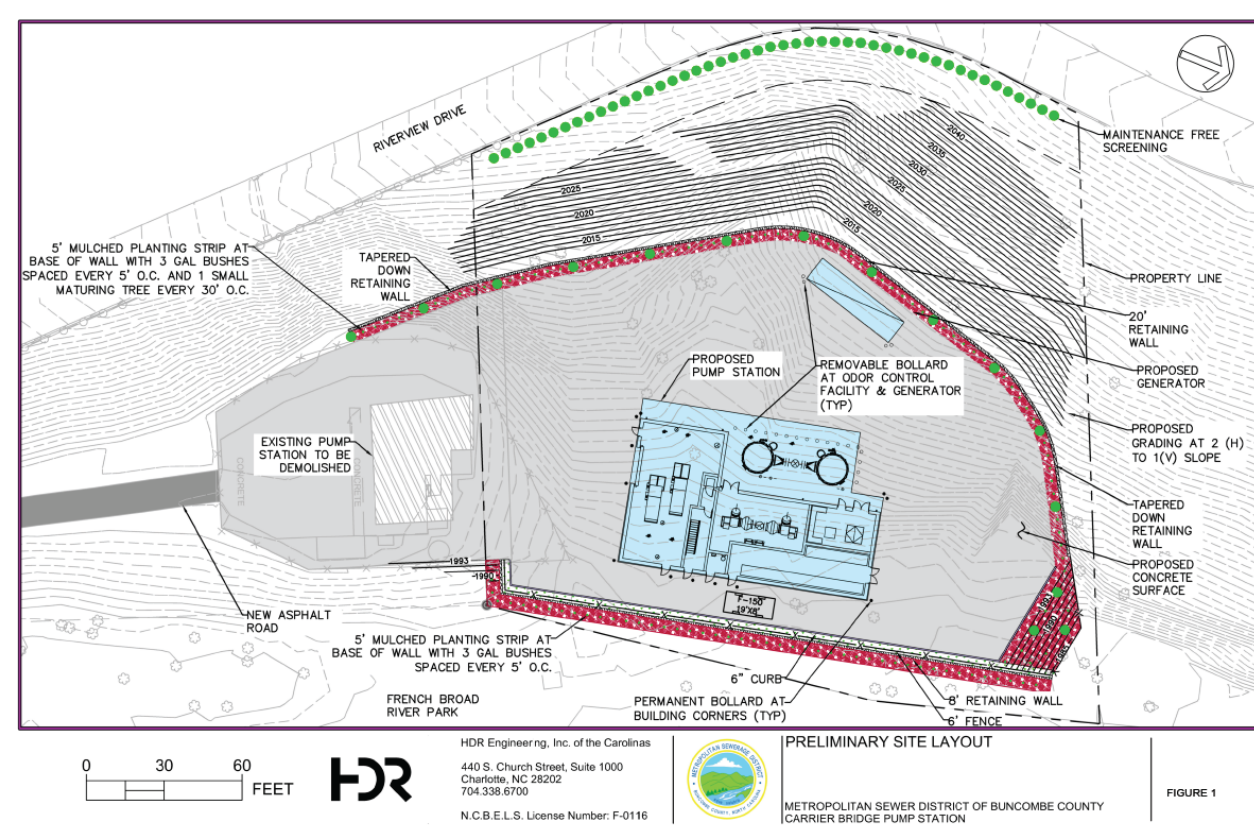
Bore pit in parking lot of Eurosport Asheville (top & bottom photos)



Carrier bridge pump station replacement

- MSD's largest pump station, constructed in 1966
- Serves large portions of South & West Buncombe, North Henderson
- Capacity increase from 22mgd to 40mgd (2070 flow projection)

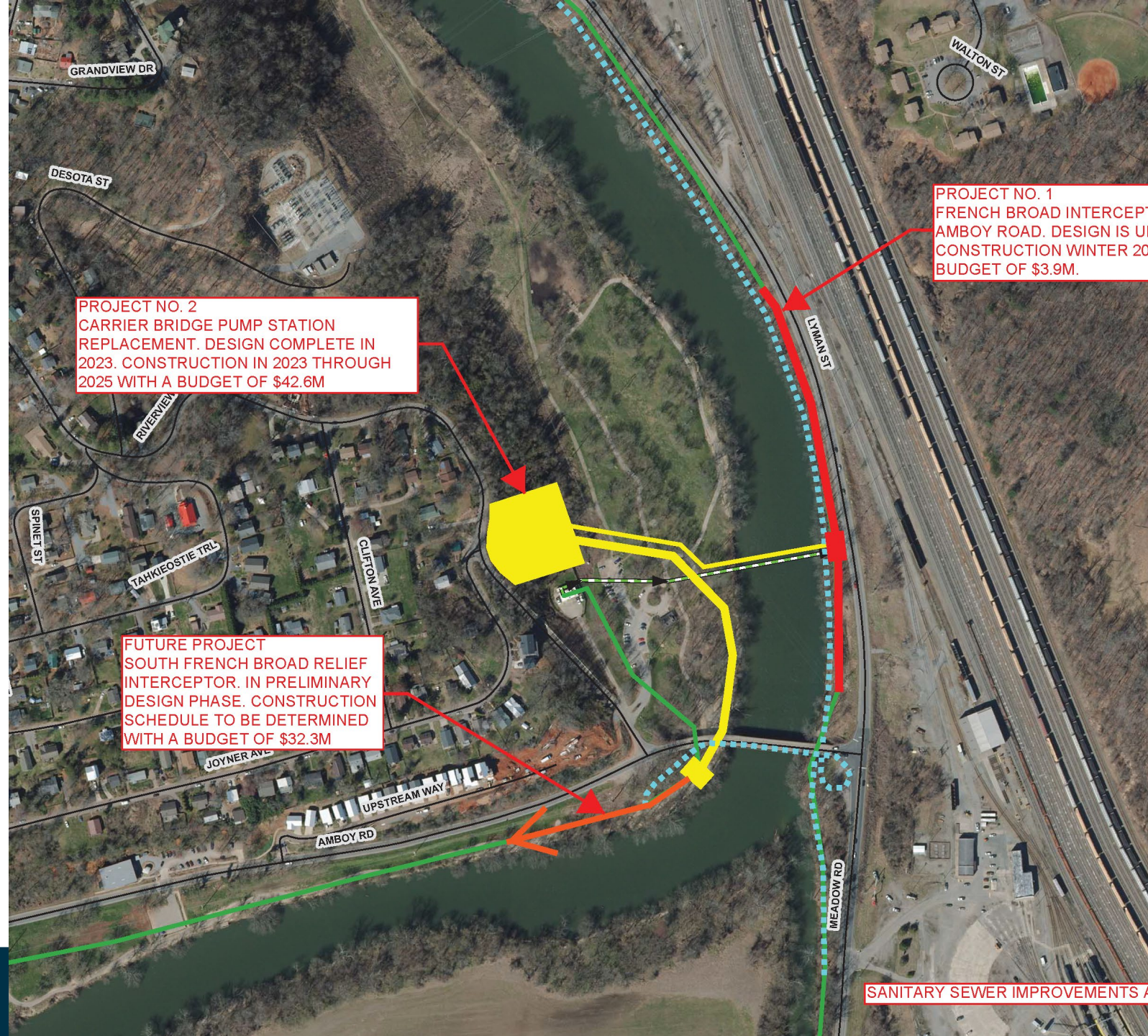


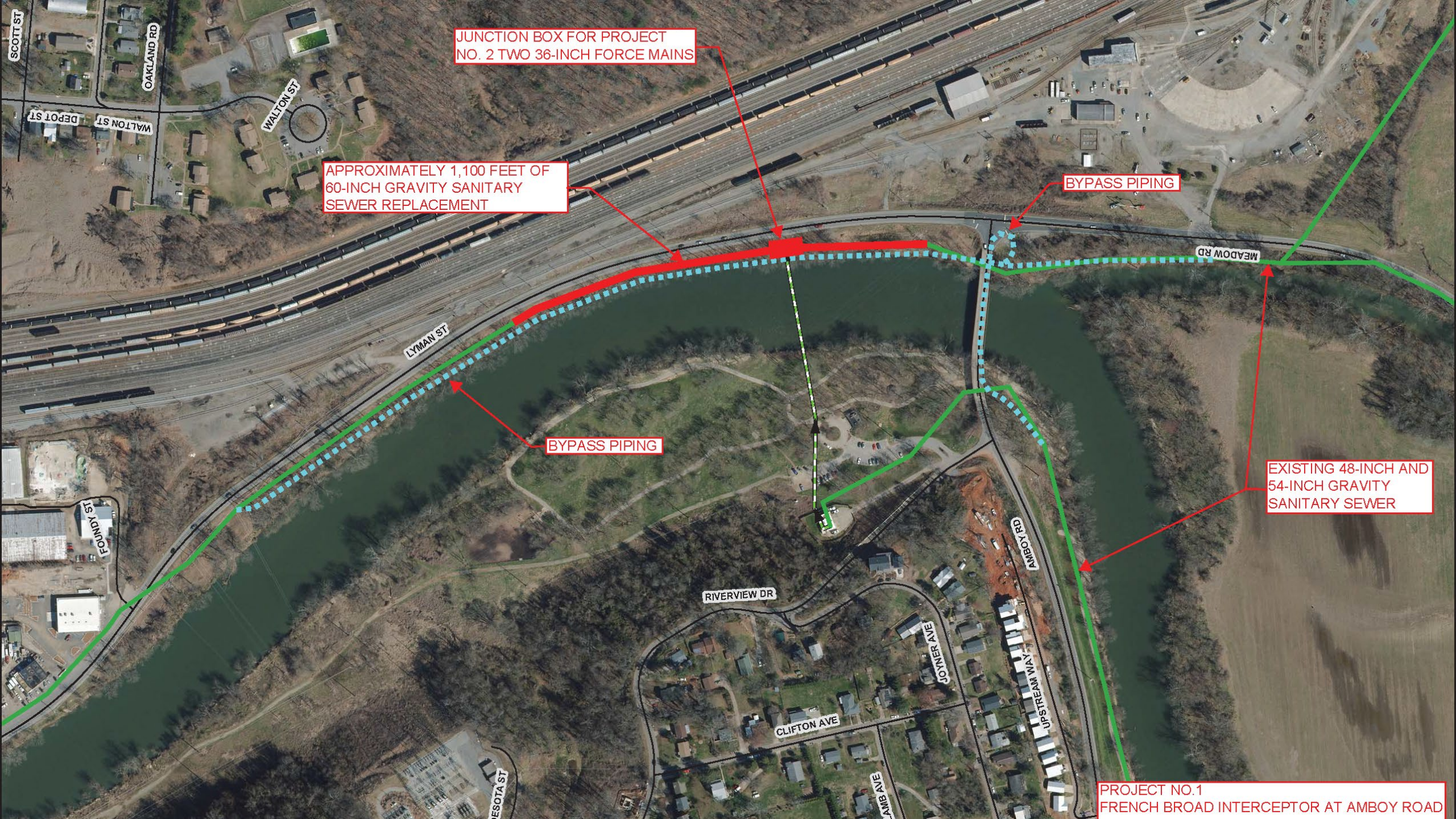


- Design by HDR 90% Complete
- Permitting phase
- Construction anticipated to begin Fall 2023
- \$50M price tag

Project details

- Located next to existing PS
- 800 LF of new 60-inch inlet piping
- Two (2) 36-inch discharge force mains
 - Exploring “open-cut” option
- Enclosed PS with odor control
- Project Cost \$50 million





JUNCTION BOX FOR PROJECT
NO. 2 TWO 36-INCH FORCE MAINS

APPROXIMATELY 1,100 FEET OF
60-INCH GRAVITY SANITARY
SEWER REPLACEMENT

BYPASS PIPING

BYPASS PIPING

EXISTING 48-INCH AND
54-INCH GRAVITY
SANITARY SEWER

PROJECT NO.1
FRENCH BROAD INTERCEPTOR AT AMBOY ROAD

SCOTT ST
OAKLAND RD
WALTON ST
DEPOT ST

LYMAN ST

MEADOW RD

RIVERVIEW DR

CLIFTON AVE

WINTER AVE

AMBOY RD

UPSTREAM WAY

ESOTA ST

AMB AVE

CAPITAL IMPROVEMENT PROGRAM

FY23 through FY32 (10 years)

- Total Estimated Expenditures over 10-yr CIP

\$389.3M

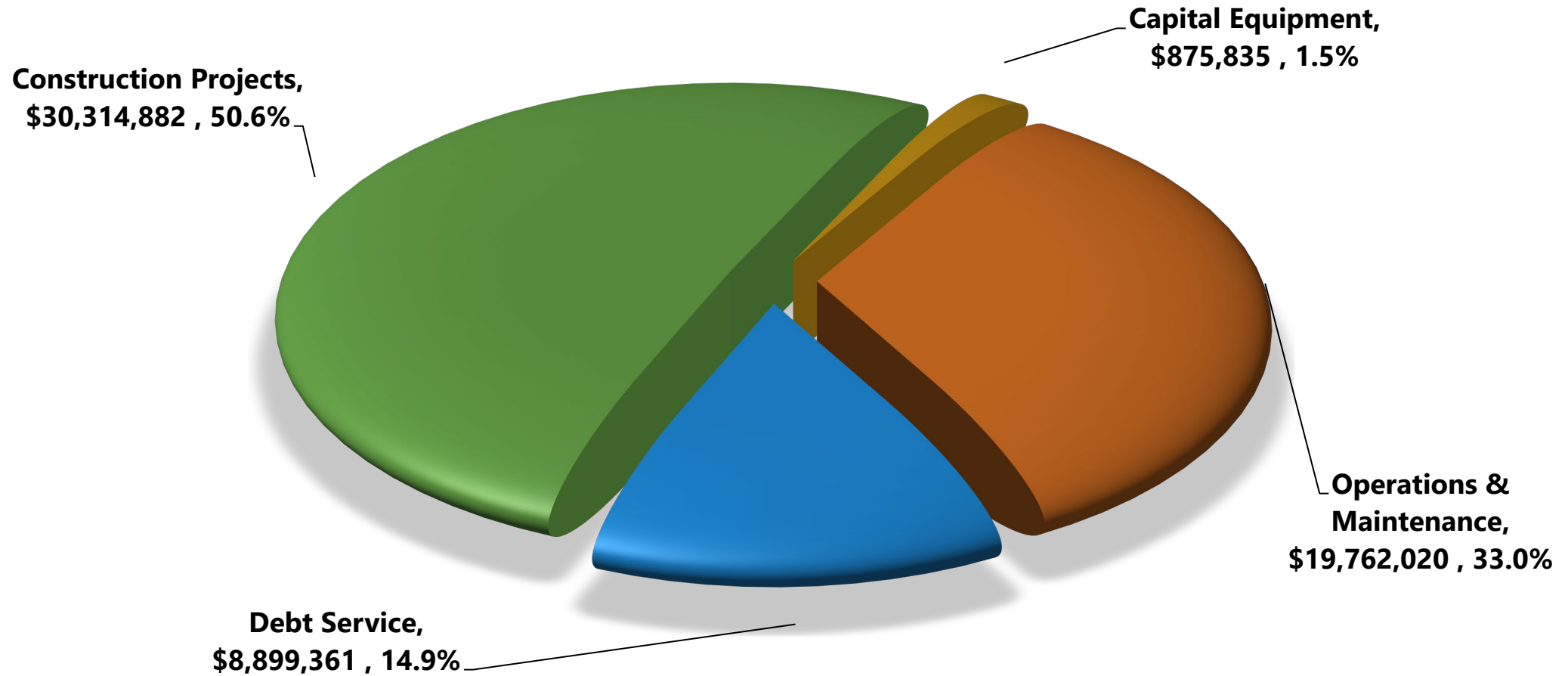
- Consolidation thru end of FY21 Capital Expenditures total \$461.1 million.

Description	Proposed Expenditures
Interceptors/Wet Weather Rehab	\$86.8M
Collection System Rehabilitation	\$110.9M
Treatment Plant & PS	\$153.7M
Reimbursement Projects	\$1.5M
Design/ROW/Const. Mgmt. Expenses	\$35.4M





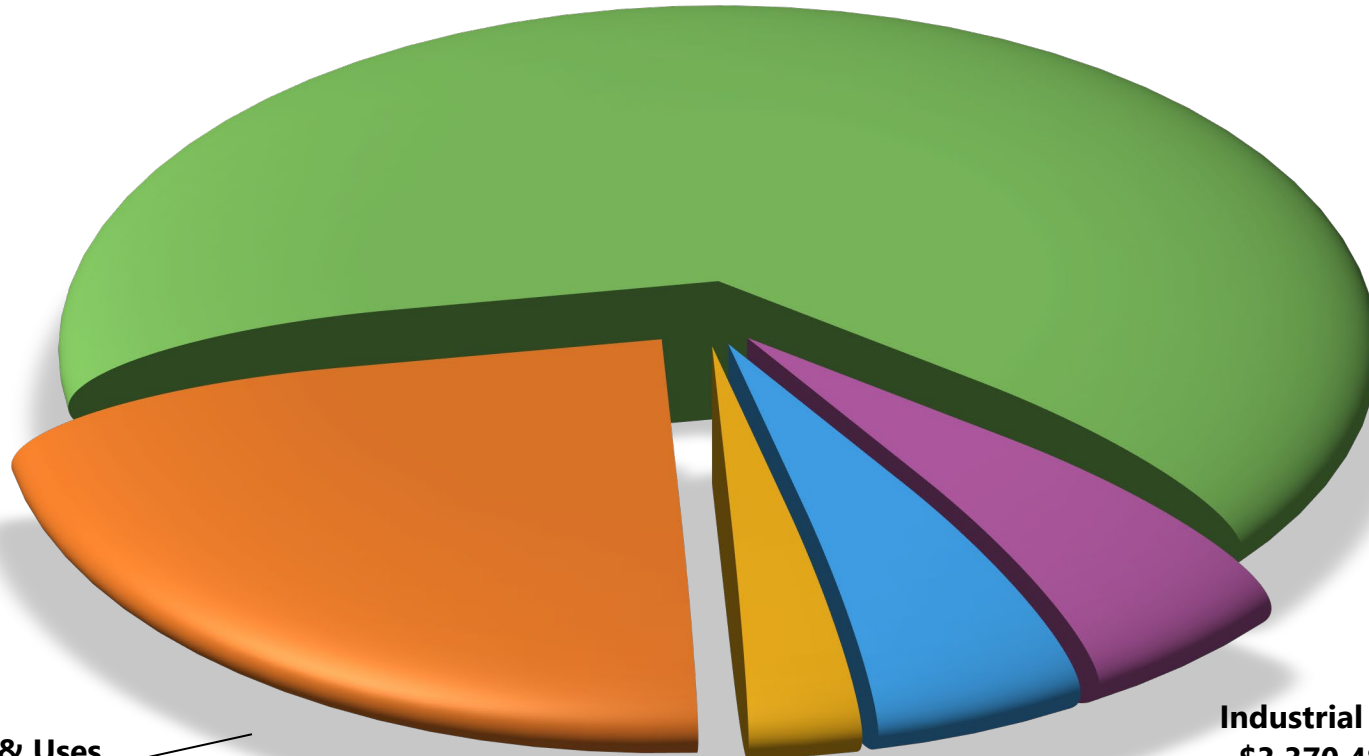
FY 23 Budgeted Expenditures





FY 23 Budgeted Revenues

Domestic User Fees,
\$37,820,971 , 63.2%



Other Sources & Uses,
\$13,829,434 , 23.1%

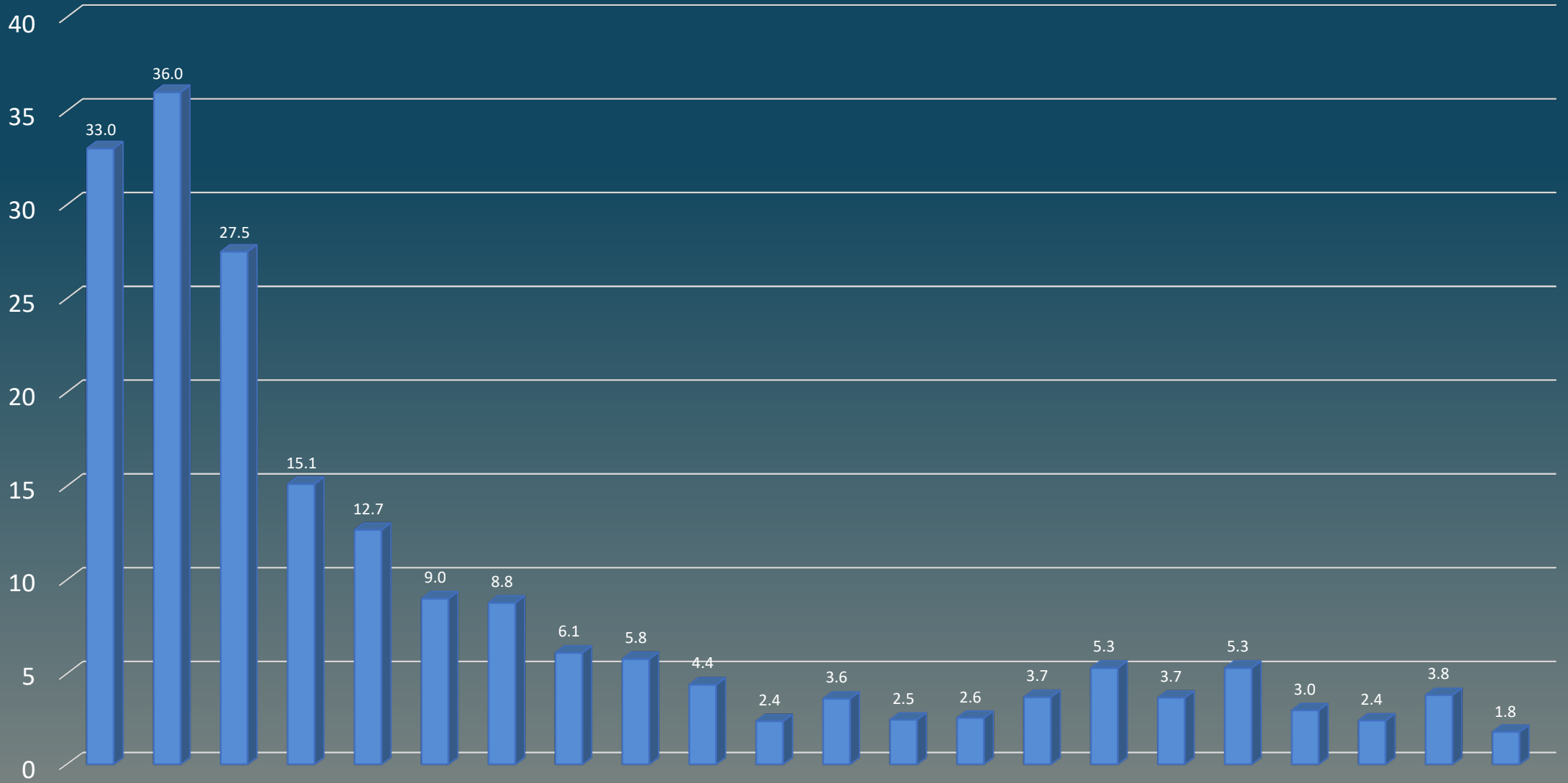
Interest & Misc. Income,
\$1,656,205 , 2.8%

Industrial User Fees,
\$3,370,488 , 5.6%

Facility & Tap Fees,
\$3,175,000 , 5.3%



SSO's/100 Miles of Sewer per year



Our End Product



Questions ?

