



MEMORANDUM

TO: THE HONORABLE CHARLOTTESVILLE CITY COUNCIL

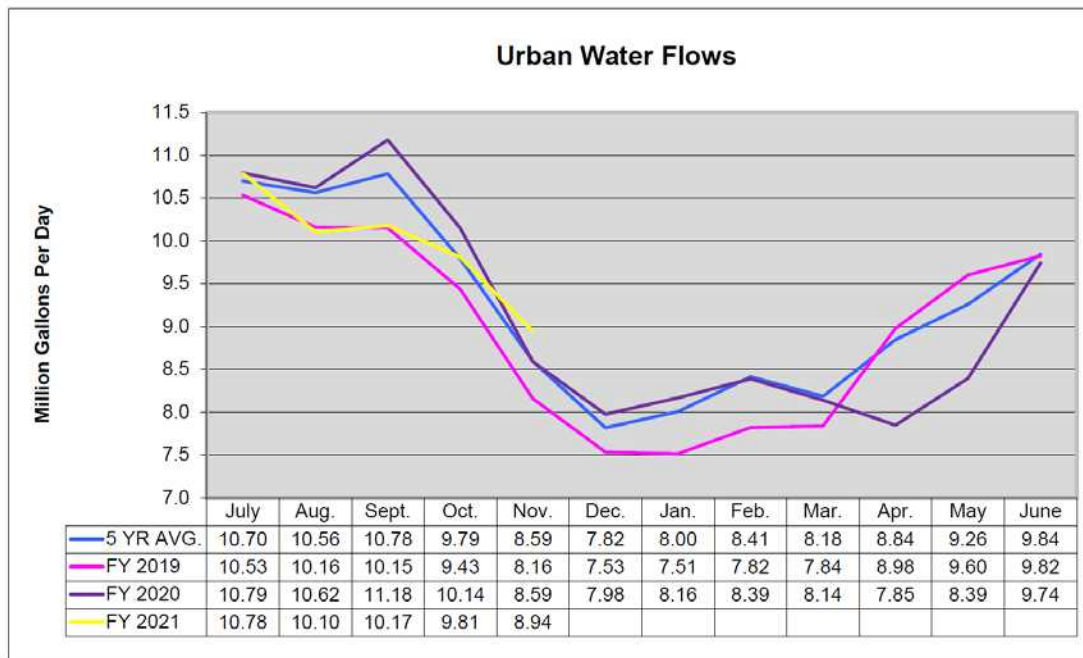
**FROM: BILL MAWYER, EXECUTIVE DIRECTOR
RIVANNA WATER & SEWER AUTHORITY
RIVANNA SOLID WASTE AUTHORITY**

SUBJECT: QUARTERLY UPDATE

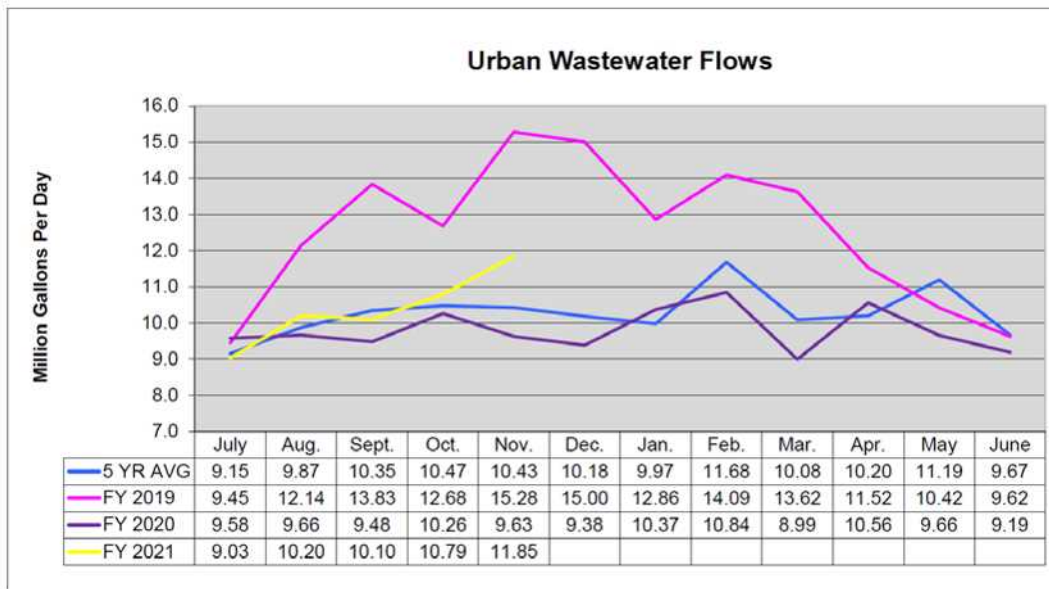
DATE: JANUARY 2021

This quarterly update is to provide general information on the drinking water, wastewater and solid waste programs managed by the Rivanna Authorities, as follows:

1. The production of drinking water for the Urban area (Charlottesville and adjacent developed areas of Albemarle) averaged 8.94 million gallons per day (mgd) in November 2020, which was slightly above the five-year average for November (8.59 mgd), as shown by the following graph:



2. Urban wastewater flow for November 2020 (11.85 mgd), including flows from Crozet, was above the five-year average for November (10.43 mgd), as shown by the following graph:



3. A general overview of significant current and upcoming Capital Improvement projects is provided below. Costs for these projects are typically shared between the City (48%) and the Albemarle County Service Authority (52%).

A. Water Treatment Plant Improvements

Scope: Replace equipment which has reached end-of-service life at the South Rivanna and Observatory Water Treatment Plants. Increase water treatment capacity from 7.7 to 10 million gallons per day at the Observatory Water Treatment Plant.

Completion: 2020 - 2023

Cost: \$43 million

B. Sugar Hollow Dam – Gate Replacement and Intake Tower Repairs

Scope: Replace the inflatable rubber device that sits on top of the concrete dam and regulates the normal water level in the reservoir. The gate is over 20 years old, and has reached the end of its service life. Concrete repairs will be made on the intake tower.

Completion: October 2020 – September 2021

Cost: \$1.7 million

C. Exterior Lighting Improvements, Moores Creek AWRRF

Scope: Replace exterior lighting fixtures and poles on the 80 acre facility to improve safety and comply with Albemarle County lighting requirements.

Completion: December 2020 – February 2022

Cost: \$1.9 million

D. South Rivanna to Ragged Mountain Reservoir Pipeline

Scope: Determine alignment, acquire easements, and construct a pipeline to transfer raw (untreated) water between the South Rivanna Reservoir and the Ragged Mountain Reservoir, as required by the Community Water Supply plan. City Council approved easements on four properties located near Ragged Mtn reservoir in September 2020.

Completion: 2027 - 2033

Cost: \$80 million: 80% ACSA / 20% City

E. Ragged Mountain Reservoir to Observatory Water Treatment Plant Raw Water Pipeline and Pump Station

Scope: Replace two raw water pipelines which have been in service for more than 70 and 110 years, respectively. Replace the existing Stadium Road and Royal raw water pump stations, which have exceeded their service lives or will require significant upgrades, to support the Observatory Water Treatment Plant expansion.

Completion: 2023 - 2026

Cost: \$18 million

F. Urban Area “Central” Waterline

Scope: Water piping improvements to increase capacity and maintain pressure in the urban drinking water system.

Completion: 2022 - 2027

Cost: \$13 M

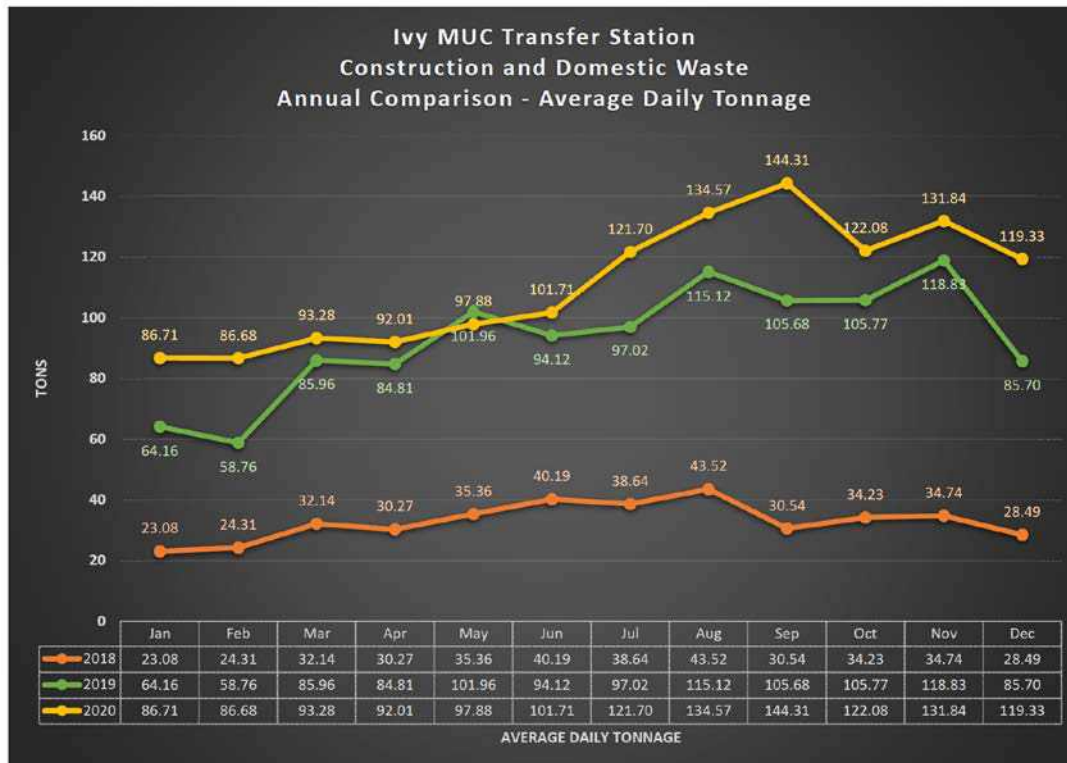
G. Upper Schenks Branch Wastewater Piping Replacement, Phase II

Scope: Replace sewer piping installed in the mid 1950’s in conjunction with the City’s sewer upgrade program to increase system capacity. The new underground piping would be located near McIntire Road.

Completion: TBD

Cost: \$4 million: 100% City

4. By increasing the number of days/week the Transfer Station is open and lowering the disposal fee from \$66/ton to \$52/ton, refuse volume at the Ivy Transfer Station has increased from 28.49 tons per day in December 2018 to 119.33 tons per day in December 2020, as shown below:



Please let me know if you have any questions.

cc: RSWA Board of Directors
RWSA Board of Directors

Water, Sewer, Refuse and Recycling Programs Update



FOR THE CHARLOTTESVILLE CITY COUNCIL
BY BILL MAWYER, EXECUTIVE DIRECTOR
JANUARY 19, 2021



Rivanna Authorities

WATER AND SEWER AUTHORITY

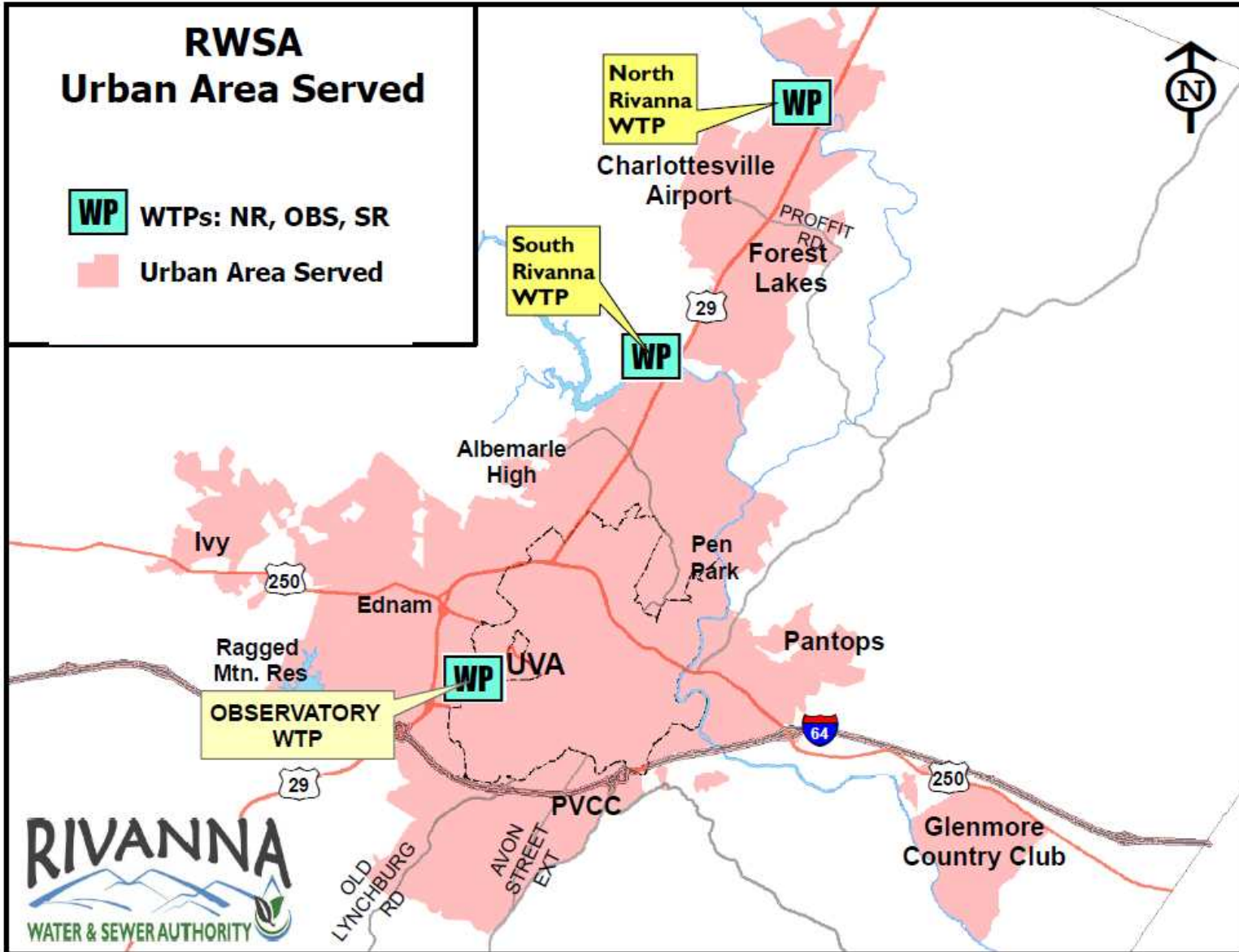
- Created in 1972 by City Council and Albemarle Co. Board of Supervisors
- Manage water supply reservoirs (5), water treatment plants (6) and wastewater treatment plants (4)
- FY 20-21 Operating Budget of \$37.1 M
- FY 21-25 CIP of \$132.5 M
- 93 Employees

SOLID WASTE AUTHORITY

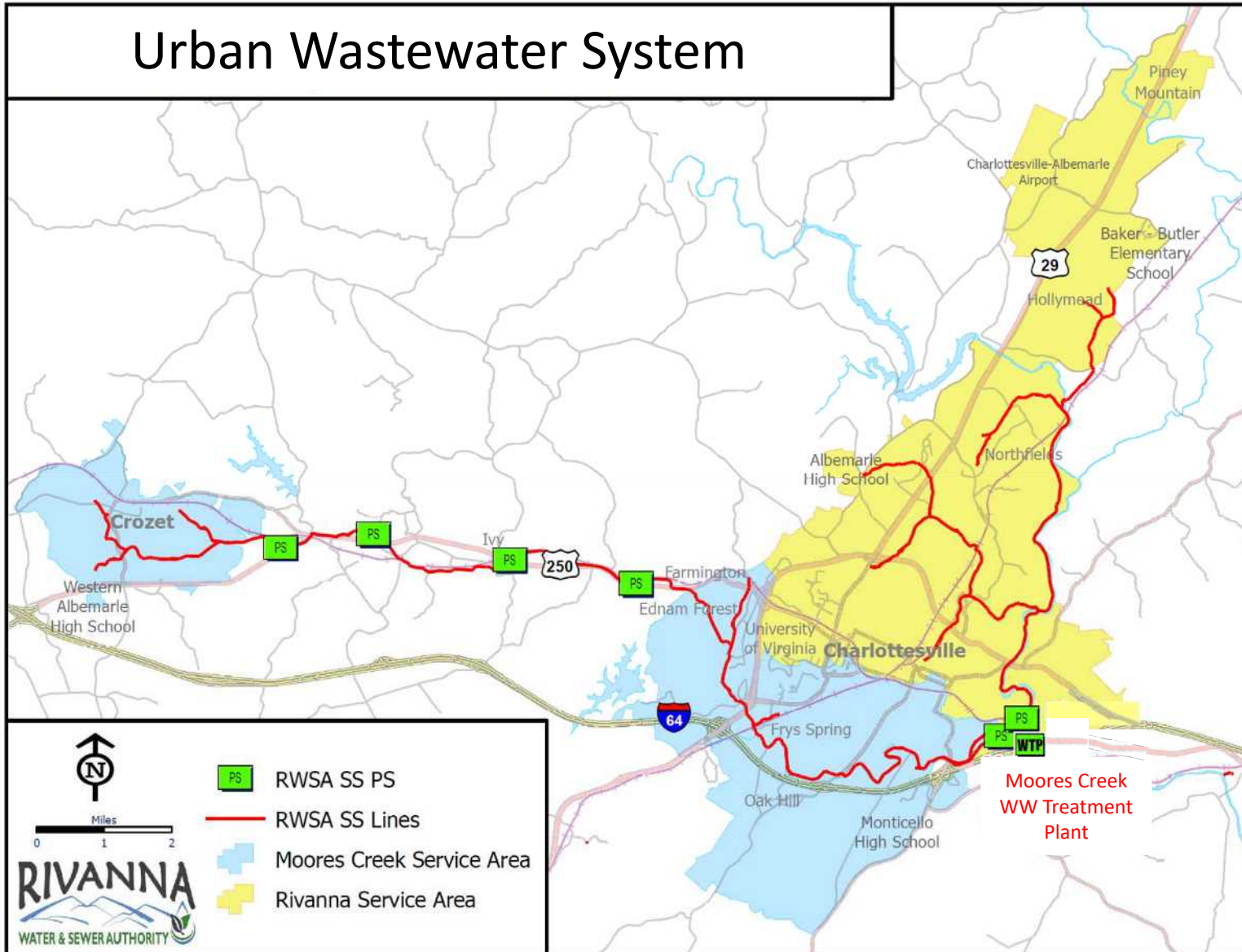
- Created in 1990 by City Council and Albemarle Co. Board of Supervisors
- Manage refuse disposal and recycling at the Ivy MUC, and recycling at the McIntire Recycling Center and the Paper Sort Facility on Meade Ave.
- FY 20-21 Operating Budget of \$5.1 M
- 19 Employees

RWSA Urban Area Served

- WP** WTPs: NR, OBS, SR
- Urban Area Served

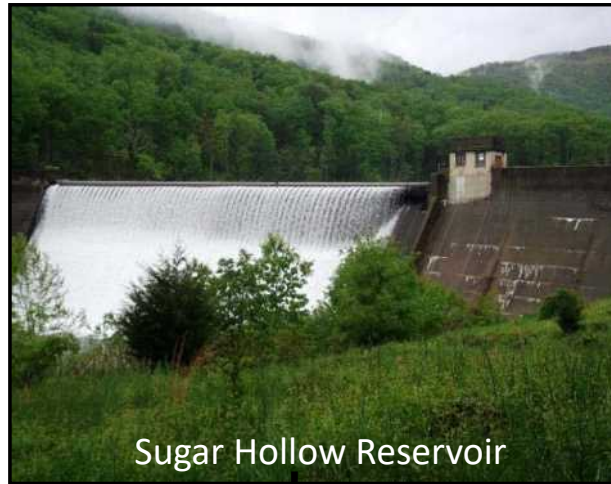


Urban Wastewater System





South Fork Rivanna Reservoir



Sugar Hollow Reservoir



Ragged Mountain Reservoir

Urban
Area

2.6 Billion Gallons

Water Supply Reservoirs

Water Treatment Plants



South Rivanna WTP
12 MGD



North Rivanna WTP
2 MGD

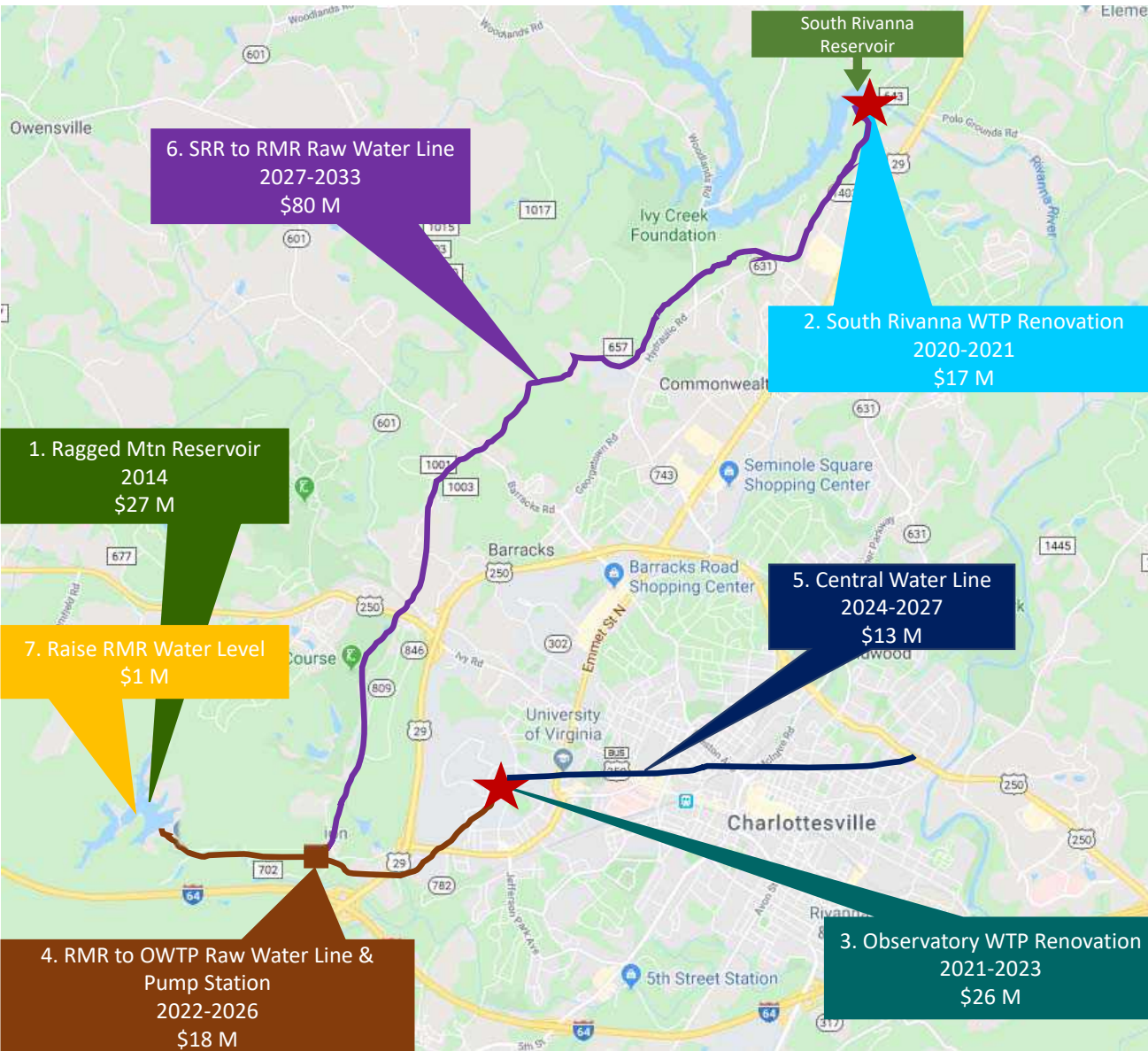


Observatory WTP
7.7 MGD

Wastewater Treatment Facilities



Moores Creek WWTP
15 MGD



Community Water Supply Plan Projects

1. RMR Dam Completed in 2014	\$27 M
2. SR WTP Renovation 2020-2021	\$17 M
3. OB WTP Renovation 2021-2023	\$26 M
4. RMR to OB WTP Raw Water Line & Pump Station 2023-2026	\$18 M
5. Central Water Line 2022-2027	\$13 M
6. SRR to RMR Raw Water Line 2027-2033	\$80 M
7. Raise RMR Water Level 2032 - 2033	\$1 M
	\$182 M

Water Treatment Plant Renovations & Upgrades

- Cost: \$43 M
- Completion: 2020 - 2023



South Rivanna WTP

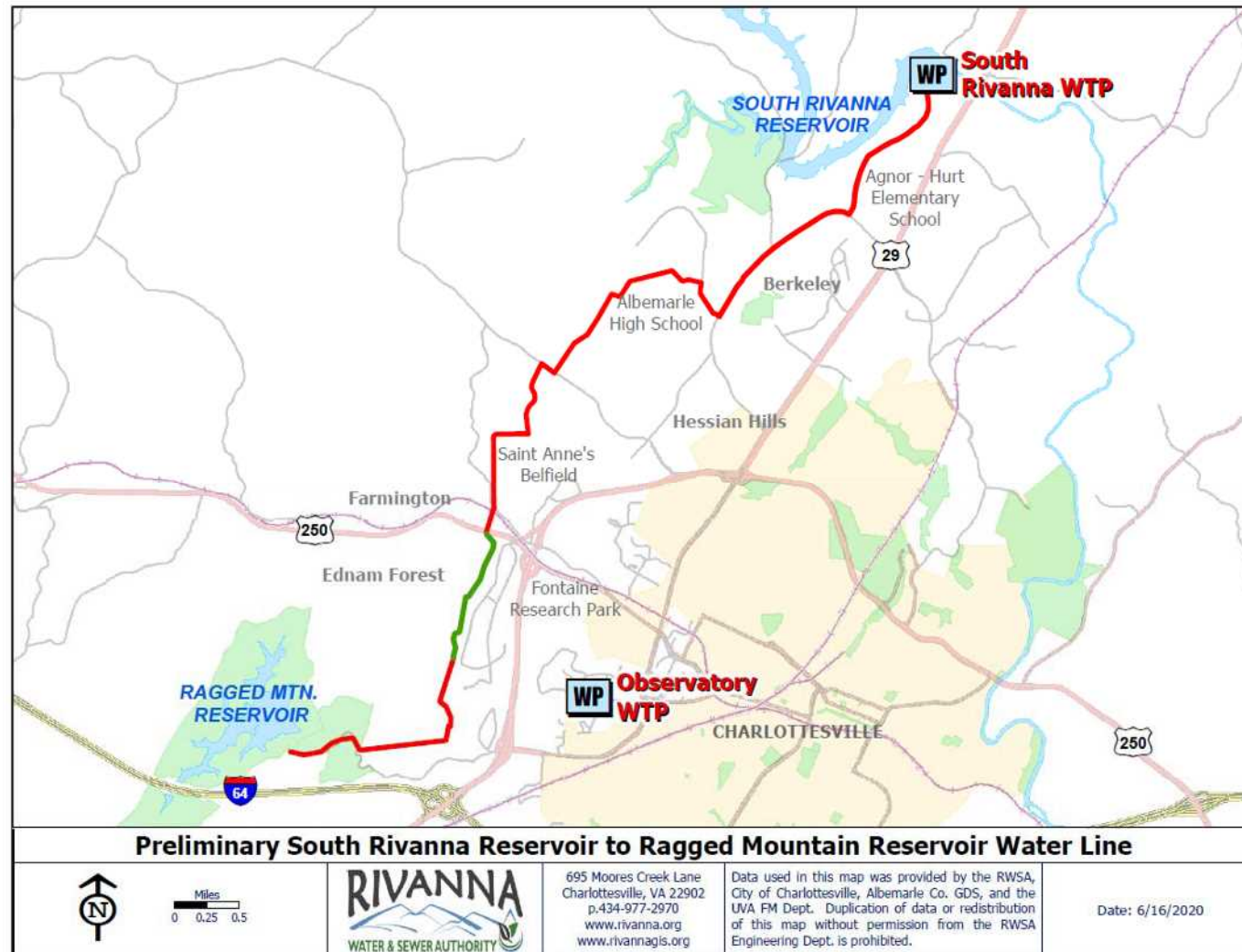


Observatory WTP

SRR-RMR Pipeline Project

Design and Construct:

- 36-inch raw water line, 9 miles long, 25 MGD capacity (1 mile has been completed)
- Intake structure in the SRR
- Two raw water pump stations
- Pretreatment facility
- \$80 M: 80% ACSA / 20% City
- Completion: 2027 - 2033
- Close SHR water line



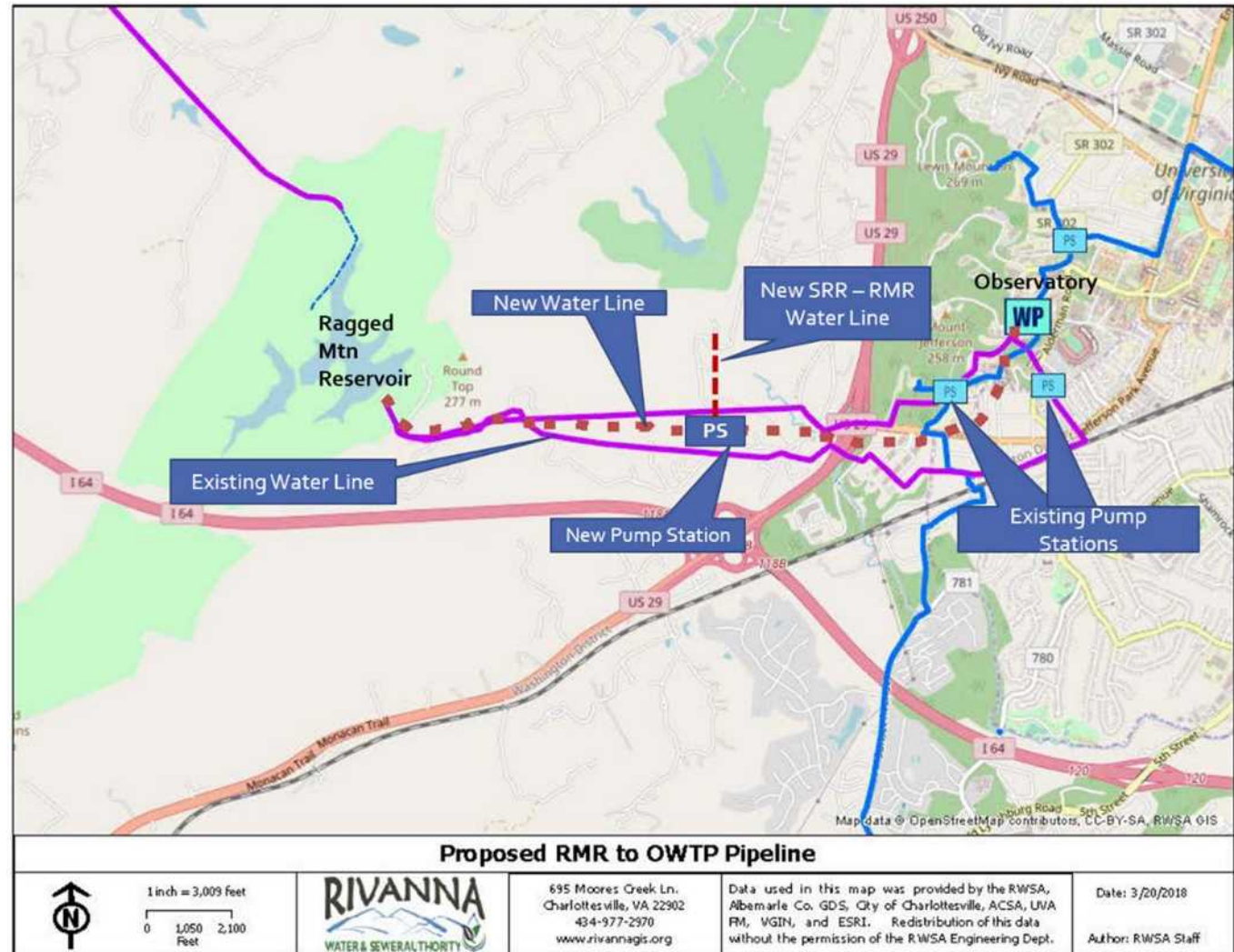
Ragged Mtn Reservoir to OB WTP Projects

Water Line Replacement

- Replace 3 miles of raw water piping
- 2023 – 2026
- \$13 M

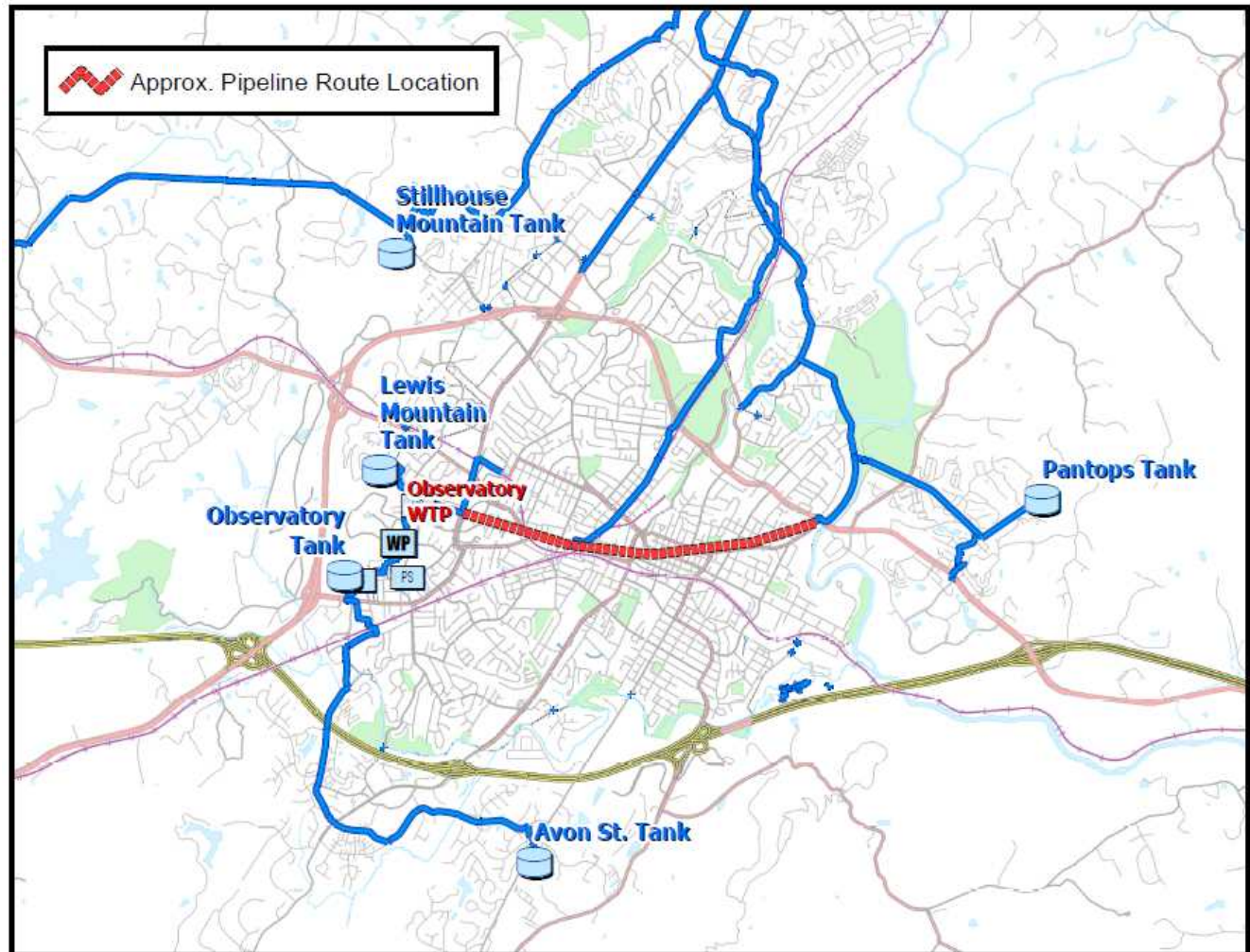
Pump Station Replacements

- Replaces Stadium and Royal RWPS
- Provides pumping from RMR to Ob WTP and to SRR
- 2023 – 2026
- \$5 M



Central Water Line

- Improve water flow, pressure, redundancy in Urban System
- Cost: \$13 M
- Completion: 2022-2027
- Coordinating with City Utilities Department



Sugar Hollow Rubber Crest Gate Replacement

- Replacement of rubber gate, and electrical and mechanical components
- Completion: October 2020 – September 2021
- Budget \$2 M



MC Lighting Improvements

- Updating site lighting to improve safety and meet Albemarle County requirements
- Completion: December 2020 – February 2022
- Budget \$1.9 M

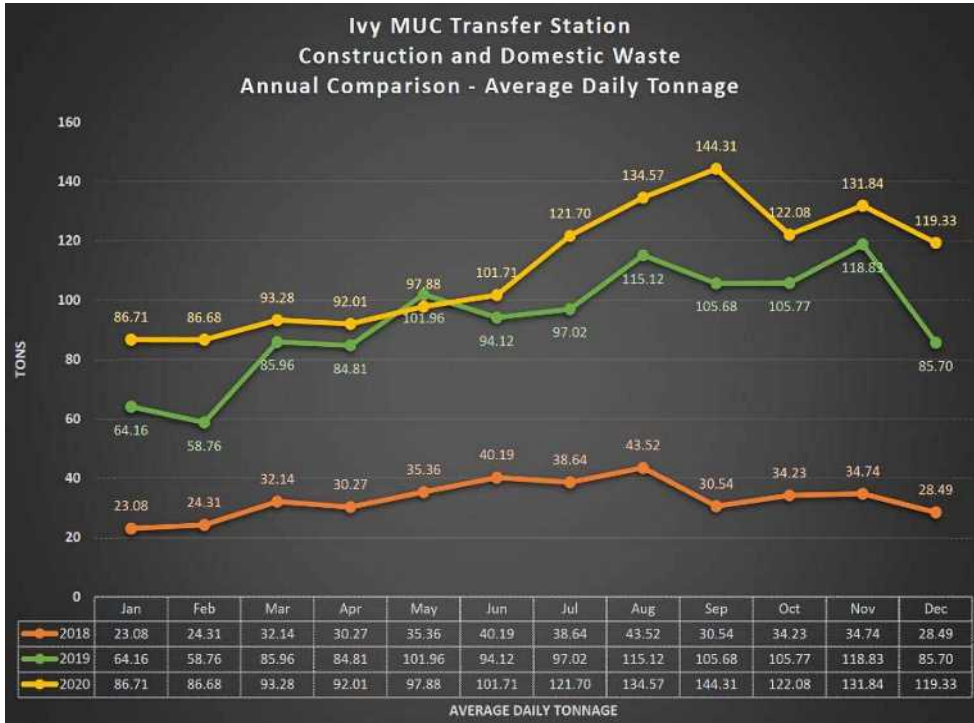


Figure 3-1 Atlas WLM Full Cutoff Visor



Figure 3-3 Leotek GreenCobra streetlight

Transferred 30,000 tons of municipal refuse and construction debris in FY 19-20.
 Recycled 2,180 tons of paper, cardboard, glass, metal and plastic products in FY 19-20.



Ivy Material Utilization Center & McIntire Recycling Center

Questions?

