



RIVANNA SOLID WASTE AUTHORITY  
RIVANNA WATER & SEWER AUTHORITY

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October 6, 2023

The Honorable Albemarle County Board of Supervisors  
401 McIntire Road  
Charlottesville, VA 22902

Re: Quarterly Update – October 2023

Supervisors:

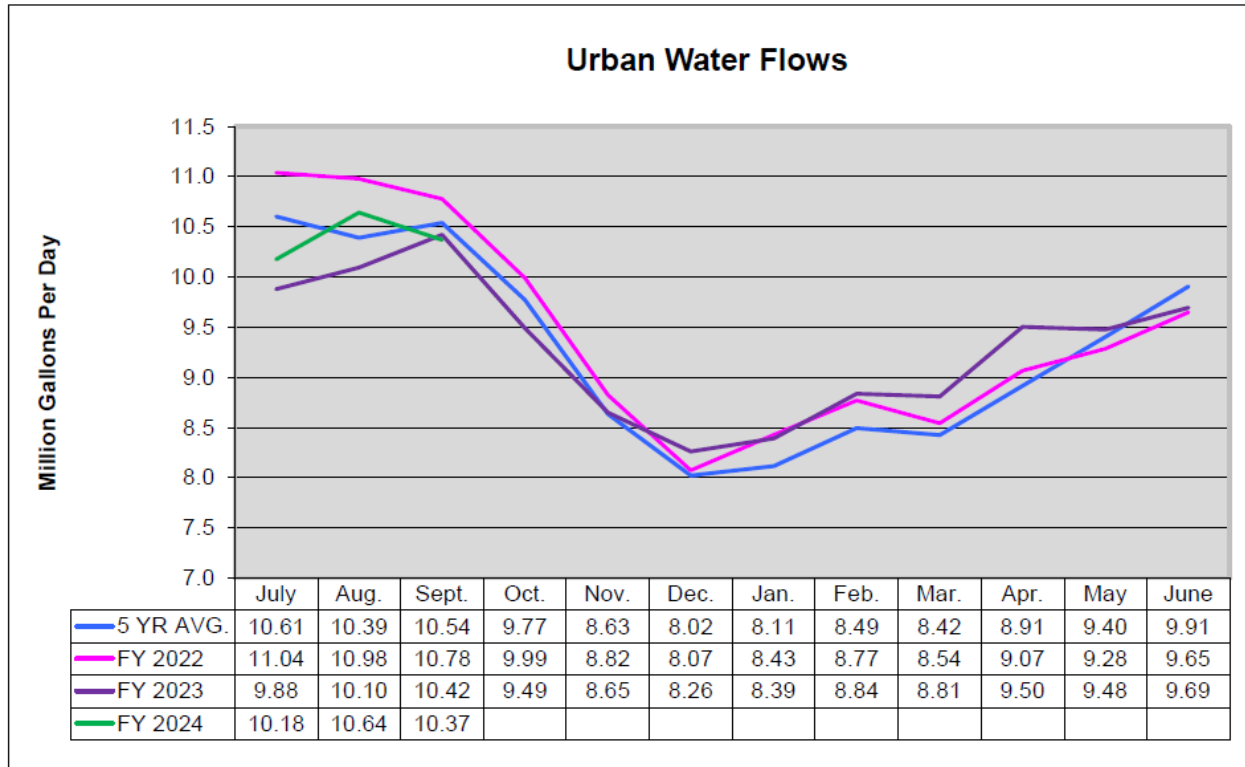
This quarterly update is to provide general information on the drinking water supply and treatment, wastewater collection and treatment, and refuse disposal and recycling programs managed by the Rivanna Authorities for the benefit of the Albemarle/Charlottesville community, as follows:

1. Drinking Water Supply as of October 6, 2023:
  - A. We have adequate water storage levels, as the Urban reservoirs (Sugar Hollow, South Rivanna, Ragged Mountain) are 92% full.
2. Drought Monitoring as of October 6, 2023:
  - A. U.S. Drought Monitoring Report:
    - Indicates Charlottesville and most of Albemarle County are experiencing “Abnormally Dry” to “Moderate” drought conditions.
  - B. VDEQ Drought Status Report:
    - Our region is in a “Watch” status for groundwater and reservoir levels. Levels of severity increase from “Watch” to “Warning” to “Emergency”. All other drought indicators are “Normal”.
  - C. As shown below, precipitation is 19.06 inches below normal over the past 33 months. We are expediting a major water supply piping project, and will propose an accelerated increase in the water storage volume at the Ragged Mtn Reservoir (700 million gallons), to best prepare for the next significant drought.

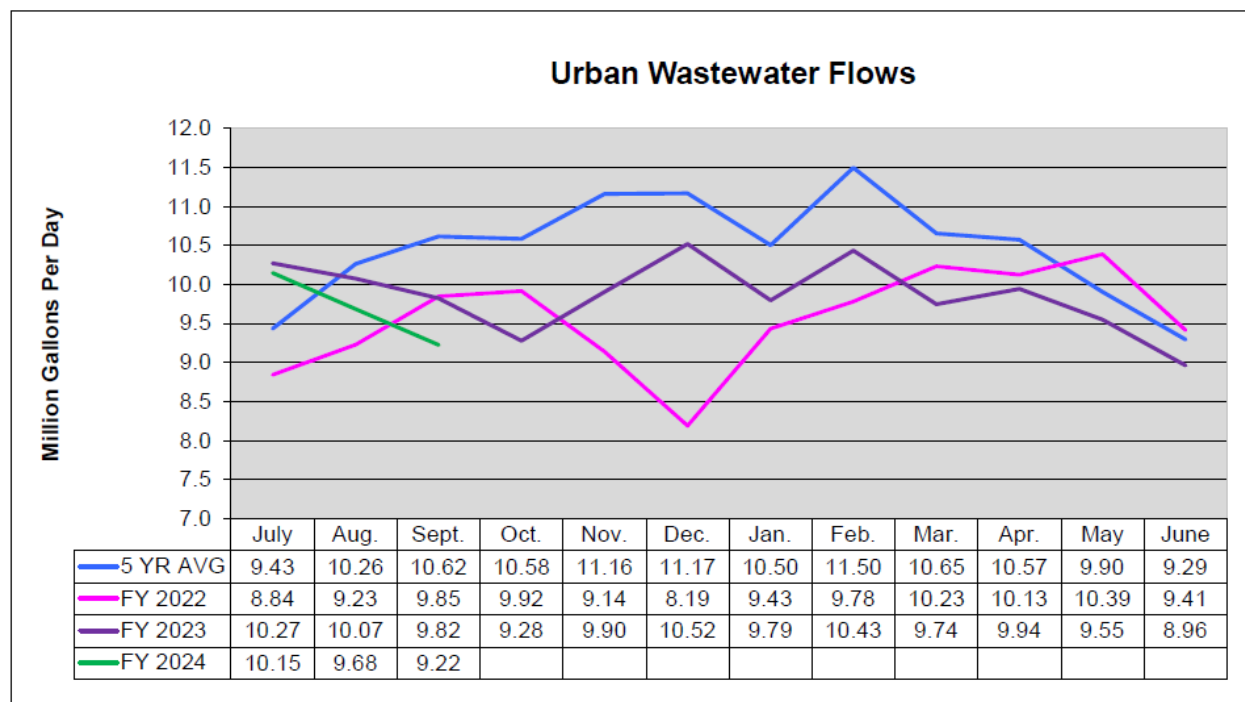
Charlottesville Precipitation				
Year	Month	Observed (in)	Normal (in)	Departure (in)
2021	Total: Jan-Dec	33.82	41.61	-7.79
2022	Total: Jan - Dec	43.53	41.61	+1.92
2023	Total: Jan-Sept	18.83	32.02	-13.19

Source: National Weather Service, National Climatic Data Center.

3. The production of drinking water for the Urban area (Charlottesville and adjacent developed areas of Albemarle, not including Crozet or Scottsville) averaged 10.37 million gallons per day (MGD) in September 2023 (FY 2024), which was below the five-year average for September (10.54 MGD), as shown by the following graph:



4. Urban wastewater flow for September 2023 (9.22 MGD), including flows from Crozet but not from Scottsville, was below the five-year average for September (10.62 MGD), as shown by the graph below. A decrease in wastewater flows is typical during periods of low precipitation as ground and surface water levels decline and less water infiltrates the wastewater piping system.



5. A general overview of significant current and future drinking water, wastewater and solid waste Capital Improvement Projects is provided below. Cost allocations between the Charlottesville Department of Utilities (City; non-general funds) and the Albemarle County Service Authority (ACSA), are identified for each project.

A. Water Treatment Plant Renovations

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: May 2020 – March 2024

Cost: \$43 million: 52% ACSA / 48% City

B. Airport Road Water Pumping Station and Piping

Scope: Provide a drinking water pumping station and piping to improve reliability in the northern area of the Urban Water System.

Completion: December 2021 – September 2024

Cost: \$10 million: 100% ACSA

C. Electrical System Replacement, Moores Creek Wastewater Treatment Facility

Scope: Replace major electrical cabling and equipment installed around 1980 which have reached the end of their service lives.

Completion: May 2022 – December 2024

Cost: \$5 million: 52% ACSA / 48% City

D. South Rivanna River Crossing

Scope: Install a second pipe (24" diameter) to convey treated drinking water under the river using trenchless technology. The second pipe will provide a redundant water supply and increase capacity to serve the northern area of the Urban Water System.

Completion: May 2024 – December 2025

Cost: \$7 million: 100% ACSA

E. Urban Area "Central Water Line"

Scope: Provide large diameter piping (24" and 36") to more efficiently convey drinking water and strengthen the Urban Area drinking water system for the benefit of the City and the County. This five-mile-long piping project will extend from the Stadium Road area to the Long Street / E. High Street bridge and follow a route which includes: Stadium Road, Piedmont Avenue, Price Avenue, Lewis Street, Jefferson Park Avenue, Cleveland Avenue, Cherry Avenue, Elliott Avenue, 6<sup>th</sup> Street SE, South Street, Avon Street, 10<sup>th</sup> Street NE, Little High Street, 11<sup>th</sup> Street NE, E. High Street, and a connection near Roosevelt Brown Boulevard.

Completion: December 2024 – December 2028

Cost: \$41 M: 52% ACSA / 48% City

F. Water Pipe and Pump Stations Replacement, Ragged Mountain Reservoir to Observatory Water Treatment Plant

Scope: Replace water pipes and pump stations which convey untreated water from the Ragged Mtn Reservoir to the Observatory WTP. These facilities have reached the end of their service lives and require replacement to adequately support the increased treatment capacity (from 7.7 to 10 million gallons per day) of the upgraded Observatory WTP.

Completion: September 2024 – December 2028

Cost: \$44 million: 52% ACSA / 48% City

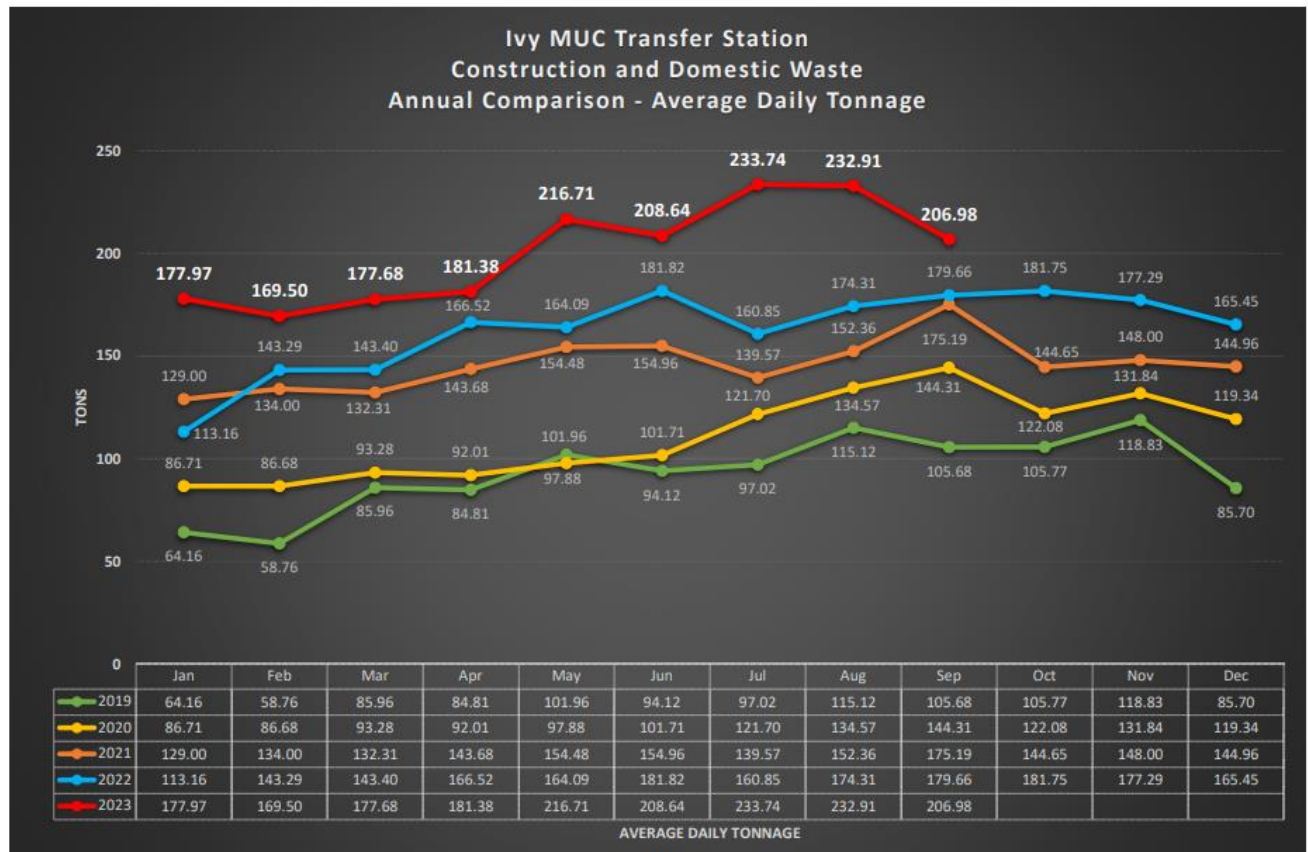
- G. Moore's Creek Administration Building Renovation and Addition  
 Scope: Renovate the existing administration building built in the 1980's, including improvements to the Laboratory and Information Technology spaces. The project will also include a building addition to provide space for staff currently housed in temporary trailers, as well as for future staffing.  
 Completion: June 2024 – December 2026  
 Cost: \$17 million: 52% ACSA / 48% City
- H. Emmet Street Water Line Betterment  
 Scope: RWSA is coordinating with the City to construct a 24 - 30" water main in Emmet Street from Ivy Road to Arlington Boulevard as part of the City's Emmet Streetscape Phase I project.  
 Completion: July 2024 - July 2026  
 Cost: \$3 million: 52% ACSA / 48% City
- I. Moore's Creek Structural and Concrete Rehabilitation  
 Scope: Complete repairs to concrete basins and wastewater treatment facilities constructed in the late 1970's.  
 Completion: June 2024 - June 2026  
 Cost: \$13.5 million: 52% ACSA / 48% City
- J. Crozet Wastewater Pump Stations Rehabilitation  
 Scope: Replace pumps, valves and electrical gear in four pump stations constructed in the 1980's which convey wastewater from Crozet to the Moore's Creek Treatment Plant.  
 Completion: January 2025 - December 2026  
 Cost: \$10.3 million: 52% ACSA / 48% City
- K. Beaver Creek Dam, Pump Station and Piping Improvements  
 Scope: Replace the spillway, which protects the reservoir dam, along with the water pump station and piping which convey untreated water to the Crozet Water Treatment Plant.  
 Completion: 2026 - 2029  
 Cost: \$43 million: 100% ACSA
- L. 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 piping will be located along McIntire Road between the McIntire Recycling Center and Preston Avenue.  
 Completion: TBD  
 Cost: \$5.5 million: 100% City
- M. South Rivanna Reservoir to Ragged Mountain Reservoir Pipe and Pump Station  
 Scope: Construct an 8 mile long, large diameter pipe (36") and pump station to transfer untreated water between the South Rivanna and Ragged Mtn Reservoirs. This infrastructure will increase the volume of water in the Ragged Mtn Reservoir by 700 million gallons, as required by the community's drinking water supply plan. Complete intake tower and perimeter grading modifications at the Ragged Mtn Reservoir.  
 Completion: 2025 - 2030  
 Cost: \$85 million: 80% ACSA / 20% City
- N. Recycling Baling Facility, Ivy Material Utilization Center  
 Scope: Replace the existing recycling materials baling facility which is located on leased property and has exceeded its service life. A new facility is essential to have an effective

recycling program. The new facility will include equipment to compress cardboard, mixed paper, and plastic products into separate bales before shipment to a receiving vendor.

Completion: June 2024 - December 2025

Cost: \$6.4 million: 70% Albemarle County / 30% City

6. Average daily refuse volume at the Ivy Transfer Station has increased from 106 tons per day in September 2019 to 207 tons per day in September 2023, as shown below. Our contract hauler is driving about 14 trailer loads of refuse to Henrico County for disposal each day, Monday – Friday. A planning study to review future expansion alternatives for the refuse transfer program is underway.



Please let me know if you have any questions.

Sincerely,

William I. Mawyer, Jr., P.E.  
Executive Director

cc: RSWA Board of Directors  
RSWA Board of Directors