



RIVANNA SOLID WASTE AUTHORITY  
RIVANNA WATER & SEWER AUTHORITY

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January 5, 2024

The Honorable Charlottesville City Council  
P.O. Box 911  
Charlottesville, VA 22902

Re: Quarterly Update – January 2024

Councilors:

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 Charlottesville/Albemarle community, as follows:

1. Drinking Water Supply as January 3, 2024:

- A. Our Urban reservoirs (Sugar Hollow, South Rivanna, Ragged Mountain) are 94% full. Beaver Creek Reservoir (Crozet) and Totier Creek Reservoir (Scottsville) are 100% full.

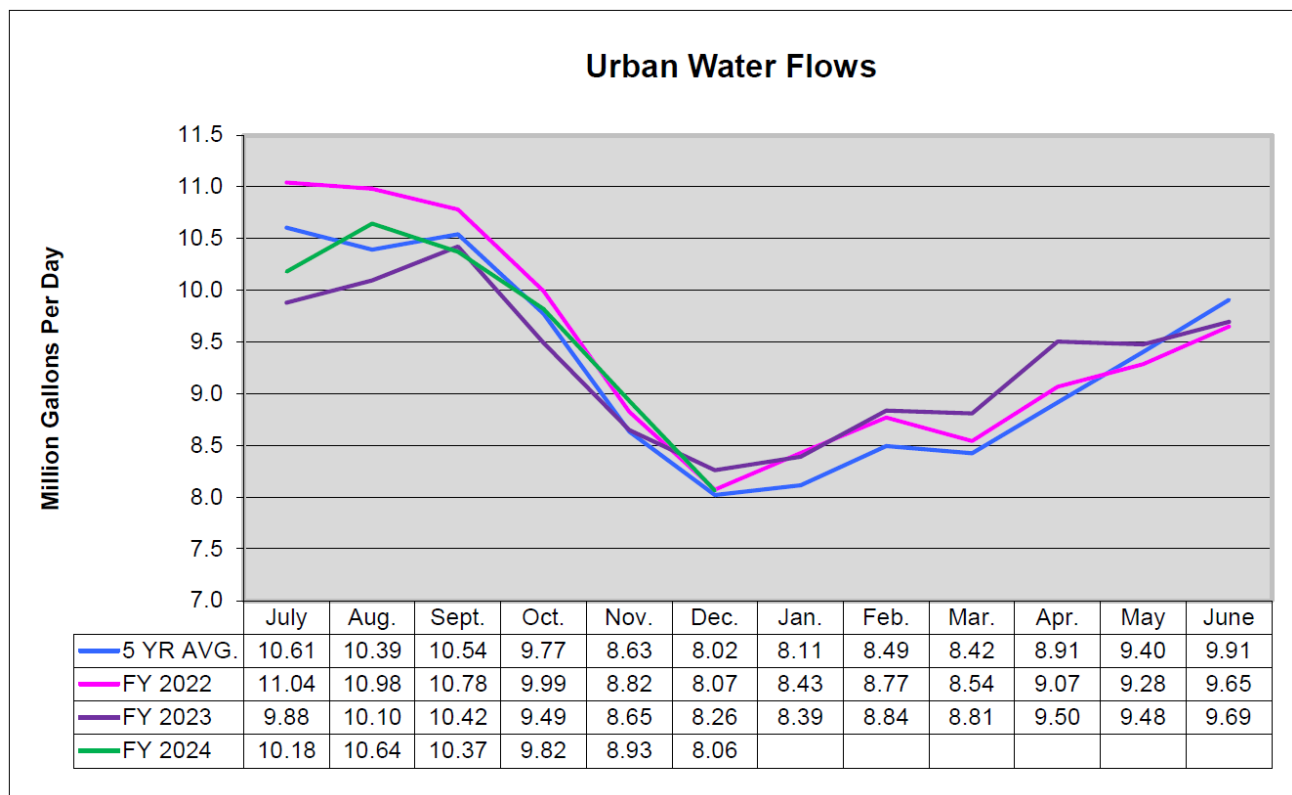
2. Drought Monitoring as of January 1, 2024:

- A. As shown below, we were 14.66 inches, or 35%, below normal precipitation in 2023, and 20.5 inches, or 16%, below normal over the last three years.

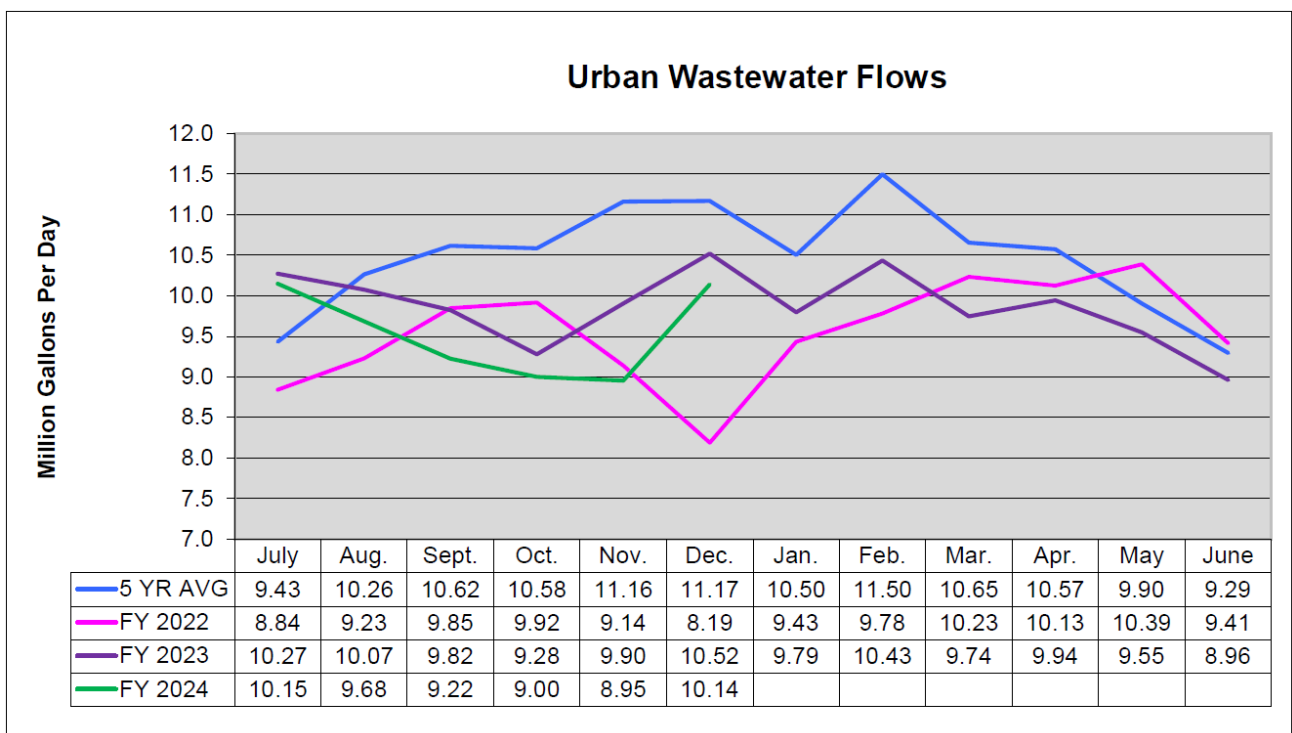
Charlottesville Precipitation				
Year	Month	Observed (in)	Normal (in)	Departure (in)
2021	Total: Jan - Dec	33.82	41.61	-7.79
2022	Total: Jan - Dec	43.53	41.61	+1.92
2023	Total: Jan - Dec	26.95	41.61	-14.66

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 8.06 million gallons per day (MGD) in December 2023 (FY 2024), which was slightly above the five-year average for December (8.02 MGD), as shown by the following graph:



4. Urban wastewater flow for December 2023 (10.14 MGD), including flows from Crozet but not from Scottsville, was below the five-year average for December (11.17 MGD), as shown by the graph below.



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 utility funds) and the Albemarle County Service Authority (ACSA), are identified for each project.

- A. 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
- B. 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
- C. Red Hill Water Treatment Plant Upgrade  
Scope: Provide additional space to house water treatment equipment including a granular activated carbon filter.  
Completion: June 2024 – December 2025  
Cost: \$2 million: 100% ACSA, with partial grant from County
- D. South Rivanna River Crossing  
Scope: Provide a second pipe (24” diameter) using trenchless technology to convey treated drinking water under the river. The second pipe will provide a redundant water supply and increase capacity to serve the northern area of the Urban Water System.  
Completion: August 2024 – June 2026  
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 City and County residents and businesses. 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: \$47 million: 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 and reliably support the upgraded Observatory WTP.  
Completion: September 2024 – December 2028  
Cost: \$46 million: 52% ACSA / 48% City
- G. Moores Creek Administration Building Renovation and Addition  
Scope: Renovate the existing administration building constructed in the 1980’s, including improvements to the Laboratory and Information Technology spaces. The project will also include a building addition to provide spaces for a community education area, staff currently housed in temporary trailers, as well as future staffing.  
Completion: September 2024 – May 2027

Cost: \$20 million: 52% ACSA / 48% City

H. Crozet Water Treatment Plant GAC Expansion

Scope: Provide additional facilities and equipment to increase the water treatment capacity of the granular activated carbon filters from 1 to 2 million gallons per day.

Completion: April 2025 - October 2026

Budget: \$6.5 million: 100% ACSA with partial VDH grant

I. 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: October 2024 – October 2026

Cost: \$3 million: 52% ACSA / 48% City

J. Moores Creek Structural and Concrete Rehabilitation

Scope: Complete repairs to concrete basins and wastewater treatment facilities constructed in the late 1970's.

Completion: September 2024 – December 2026

Cost: \$13.5 million: 52% ACSA / 48% City

K. 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 Moores Creek Treatment Plant.

Completion: January 2025 - December 2026

Cost: \$11 million: 52% ACSA / 48% City

L. North Rivanna Water Treatment Plant Decommissioning

Scope: Demolish this small plant constructed in the 1970's, and the low head dam in the N. Fork Rivanna River, to utilize capital and operating investments more effectively in the larger water treatment plants, South Rivanna and Observatory.

Completion: 2026 - 2027

Cost: \$3 million: 52% ACSA / 48% 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, as required by the community's drinking water supply plan. This infrastructure will increase the water storage capacity of the Ragged Mtn Reservoir by 700 million gallons. Complete intake tower and perimeter grading modifications at the Ragged Mtn Reservoir.

Completion: 2025 - 2030

Cost: \$84 million: 80% ACSA / 20% City

N. 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: \$47 million: 100% ACSA with partial federal NRCS grant

O. 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.

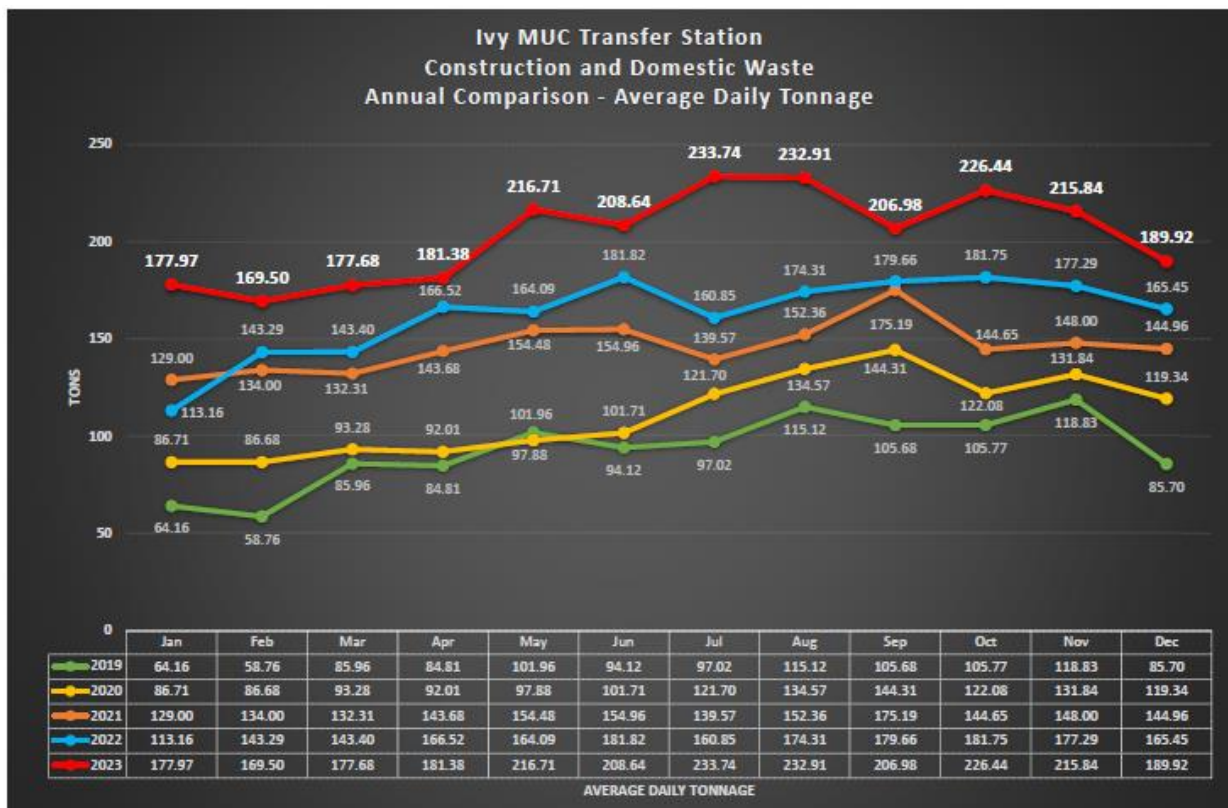
Completion: TBD  
 Cost: \$5.5 million: 100% City

P. 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 86 tons per day in December 2019 to 190 tons per day in December 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  
 RWSA Board of Directors