

## South Rivanna Reservoir to Ragged Mountain Reservoir Water Line Summary

### History

Drought in Central Virginia in 2001 - 2002 sparked a ten-year long water supply planning process. The community evaluated many alternatives, including taking water from the James River, but decided to “drink local” and stay within our watershed. A Water Supply Plan was ultimately completed and approved in 2012, which required the Rivanna Water & Sewer Authority (RWSA) to construct and operate:

- a new earthen dam at the Ragged Mountain Reservoir (completed in 2014).
- a water line from the South Rivanna Reservoir to the Ragged Mountain Reservoir.
- modifications to raise the Ragged Mountain Reservoir water level an additional 12 feet.

### Details

The water line will be a 9-mile-long, 36-inch diameter pipe with the capacity to transfer 25 million gallons per day of untreated water from the South Rivanna Reservoir to the Ragged Mountain Reservoir, or transfer 16 million gallons per day of untreated water from the Ragged Mountain Reservoir to the South Rivanna Water Treatment Plant. In addition to the water line, the project will include an intake structure at the South Rivanna Reservoir and two raw water pump stations. This project is estimated to cost \$80 million.

### Benefits and Timing

- **Enhanced Dependability of Our Drinking Water System:** By connecting the South Rivanna Reservoir and the Ragged Mountain Reservoir, as well as the South Rivanna and Observatory Water Treatment Plants, our system will be capable of providing drinking water to the urban area from multiple facilities during periods of uncertain and changing climate conditions and extended droughts, or during incidents which may impact our water storage or treatment facilities. The new water line will replace the 100+ year old water line which currently supplies water to the Ragged Mountain Reservoir from the Sugar Hollow Reservoir.
- **Increased Water Supply:** Completion of the water line and raising the Ragged Mountain Reservoir water level an additional 12 feet (700 million gallons) will provide an adequate water supply in the urban area for at least 50 years.
- **Better for the Environment:** With the new, larger water line in place, we can provide more water for people, fish, and other wildlife, by rapidly filling the Ragged Mountain Reservoir during times of high rainfall and leaving water in the rivers during dry times/droughts.

### Schedule

- Phase 1 - Route Determination: *Completed in 2018*  
Phase 2 - Easement Acquisition: *Completed 2017 - 2023*  
Phase 3 – Construction: two segments

- Segment #1 (light blue in map below): includes water line construction between the Ragged Mountain Reservoir and the Observatory Water Treatment Plant, as well as a connection to the southern end of the previously completed water line adjacent to the Birdwood Golf Course. Segment #1 will also include construction of the new Ragged Mountain Raw Water Pump Station located off Reservoir Road, as well as clearing of vegetation around the Ragged Mountain Reservoir and modifications to the reservoir

intake structure. A separate contract will be issued for the vegetative clearing and intake structure construction.

- Segment #2 (gray in map below): includes water line construction between the South Rivanna Water Treatment Plant and the northern end of the previously completed water line adjacent to the Birdwood Golf Course. Segment #2 will also include construction of a new raw water intake and pump station at the South Rivanna Reservoir.
- Construction of segment #1 water line and pump station from Ragged Mountain Reservoir to the Observatory Water Treatment Plant will be completed between December 2024 and 2028. Reservoir clearing will be completed between the fall of 2025 and summer 2026.
- Construction of segment #2 water line, intake structure and pump station from South Rivanna Reservoir to Birdwood Golf Course will be completed between 2026 and 2030.

