

JAMES RIVER WATCH



2024
RECAP

PROGRAM OVERVIEW



Volunteers are trained to gather water quality samples, and also to record valuable data such as air and water temperature, conductivity, salinity, and turbidity. Water samples are analyzed through several different methods depending on where in the watershed the sample was taken to determine if bacteria levels exceed thresholds established by the Virginia Department of Environmental Quality (DEQ).

If bacteria levels exceed these thresholds, the River Watch map is updated before the weekend, when river use is at its peak, to inform the public which recreational sites could be considered unsafe and which ones are safe for recreation. At its core, River Watch is about empowering people to engage safely with the James River and its tributaries and promoting an interest in river recreation and issues impacting the watershed.

The 2024 River Watch season was one that was both eventful and promising. The River Watch program engages citizen scientists in water quality monitoring with the dual benefits of fostering interest in river stewardship, recreation, and advocacy and providing critical data to inform the public of the safety and health of waters throughout the entire watershed.

Over the course of the summer, 82 volunteers visited 33 monitoring locations each Thursday from Memorial Day through Labor Day, collecting 439 water samples from sites across the entire watershed from the Allegheny Highlands to the Chesapeake Bay. This program is one of many James River Association programs that focuses on a community-driven approach that can help shape a future in which river access is both safe and inviting, ensuring that more people can safely swim, paddle, fish, or simply relax along the banks or on the rocks.

2024 PROGRAM RECAP



38

MONITORING STATIONS



439

WATER SAMPLES
COLLECTED



82

VOLUNTEERS ENGAGED

KEY TAKEAWAYS

FROM MEMORIAL DAY THROUGH LABOR DAY, DATA SHOWS THE JAMES WAS SAFE FOR SWIMMING & RECREATING **85% OF THE TIME**.

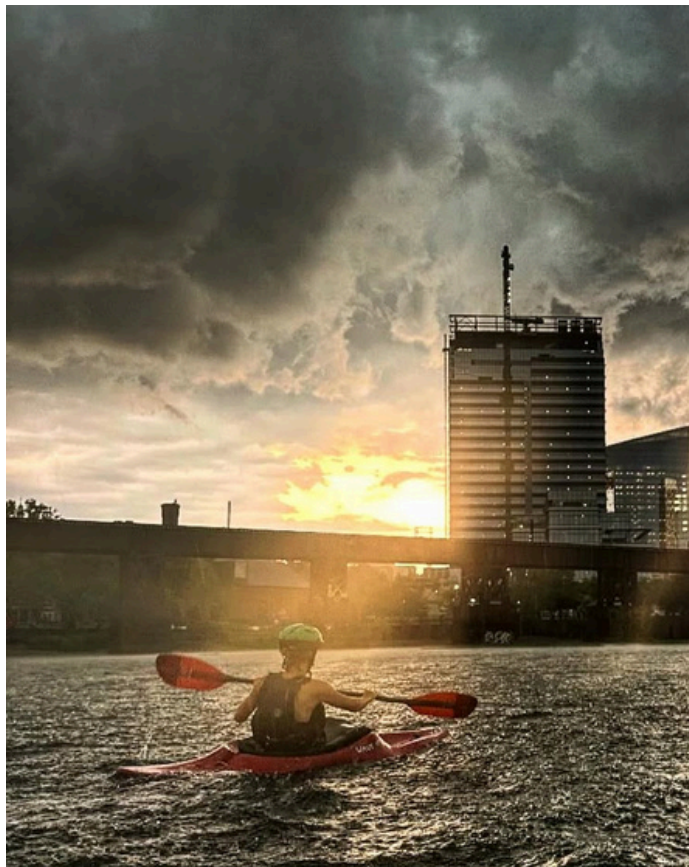


Photo Credit: Michael Stratton

The 2024 River Watch data is encouraging in that the results show steady overall improvement. The 2024 season resulted in an overall passing rate of 85% for the watershed, surpassing previous years' results of 82% in 2023 and 80% in 2022, even with several major precipitation events and the sewage leak at "The Pipeline" which led to recreational advisories for a 12-mile stretch of river from Pipeline Trail to Osborne Landing in eastern Henrico for several weeks.

Compared to the ten-year average of 83% from 2013 to 2023, this year's passing rate shows a promising trend – but it's important to stay informed of river conditions in your area before you recreate on the James!

WE ENCOURAGE ANYONE FISHING, SWIMMING, PADDLING, OR RECREATING ON THE JAMES THIS SUMMER TO CHECK OUR JAMES RIVER WATCH MAP AND **"KNOW BEFORE YOU GO."**

WATERSHED-WIDE RESULTS

2024 OVERALL
PASSING RATE

85% 

2023 OVERALL
PASSING RATE

82%

10-YEAR AVERAGE
PASSING RATE

83%

KEY RESULTS

Results indicate steadily improving water quality, surpassing the 2022 passing rate of 80% and the 2023 passing rate of 82%.

The entire watershed saw an overall passing rate of 85% in spite of continually concerning conditions at Powhatan Creek and College Landing just outside of Williamsburg and a sewage leak in downtown Richmond.

Below are key results from hubs across the watershed!

LYNCHBURG

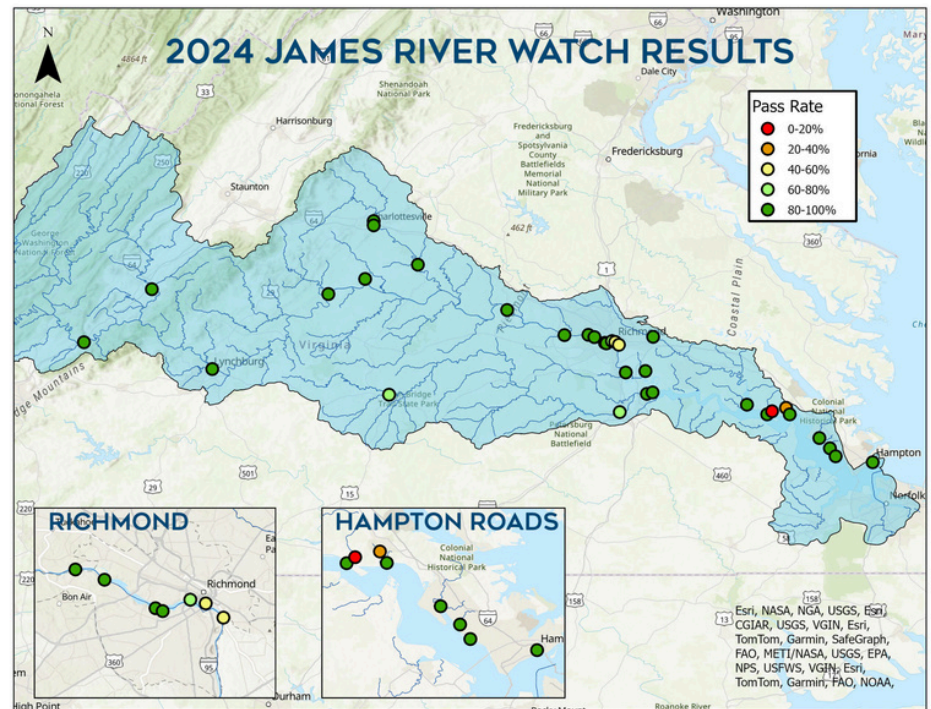
Our Riveredge Park monitoring site had safe levels of bacteria for 100% of samples taken.

CHARLOTTESVILLE & SCOTTSVILLE

There are five sites in this region, three of which are monitored by Rivanna Conservation Alliance. The overall passing rate for the five sites was 94%.

RICHMOND

We monitor seven sites in Richmond, beginning upstream to the west at Huguenot Flatwater, and stretching to Rockets Landing just east of the City. The combined passing rate of all seven sites was 81% -- an encouraging statistic considering that two sites were impacted heavily by the sewage leak that occurred at the Pipeline.



WILLIAMSBURG

The five Williamsburg area monitoring sites saw an overall passing rate of 61%, which is significantly weighed down due to persistent issues at Powhatan Creek and College Landing. Not including those two sites, the other three Williamsburg area sites had a combined passing rate of 90%.

NEWPORT NEWS & HAMPTON

Four sites are monitored by Peninsula Master Naturalists every other week. Three sites are on tributaries that are at or near where they empty into the James River, and one is directly on the James River at Riverside Beach. All four sites had safe levels of bacteria for 100% of samples taken.

ANALYSIS

POSITIVE RESULTS DESPITE PRECIPITATION

The 2024 River Watch data is encouraging in that the results show steady overall improvement. The 2024 season resulted in an overall passing rate of 85% for the watershed, surpassing previous years' results of 82% in 2023 and 80% in 2022, even with several major precipitation events and the sewage leak at "The Pipeline" which led to recreational advisories for a 12-mile stretch of river from Pipeline Trail to Osborne Landing in eastern Henrico for several weeks.

Compared to the ten-year average of 83% from 2013 to 2023, this year's passing rate shows a promising trend. The fact that these improvements come despite a few notable setbacks offers hope for continued improvement in future years. For instance, the monitoring sites at College Landing and Powhatan Creek just outside of Williamsburg have historically shown high failure rates since and continued to struggle in 2024 with passing rates of only 21% and 14% respectively. In partnership with the Hampton Roads Sanitation District, it was determined that the bacteria at Powhatan Creek is of human origin. Identifying the source is the first step in taking targeted, corrective action that will hopefully lead to better results in coming seasons.

CONTINUED ADVOCACY

Additionally, a pump failure in July allowed sewage to flow into the area known as Pipeline Trail in downtown Richmond, resulting in highly elevated bacteria levels for two Richmond sites downstream of the leak. Although this incident led to a 50% passing rate for those two sites over the course of the sampling season, the City of Richmond was able to remedy the situation, and by August, these two sites improved enough that bacteria levels were below the threshold for safety three out of four times to close out the summer.

This event, along with recurrent issues of sewage releases during heavy rain events highlight the ongoing need for infrastructure investments and funding from the state, including support for combined sewer overflow (CSO) improvements to prevent future degradation of older infrastructure and to ensure that no community has to weigh their enjoyment of the river against concerns about water quality and safety. If nothing else, these challenges emphasize the importance of continued vigilance, community engagement, and targeted advocacy.

THE FUTURE

Looking ahead, the future of River Watch appears bright and full of opportunities for growth. Public interest remains strong, as evidenced by the consistent popularity of the River Watch webpage and map, which rank among the most viewed features of JRA's website.

With volunteers showing sustained commitment, new partnerships emerging, and the promise of expanding the number of monitoring sites, there is every reason to believe that the program will continue to yield valuable data and strengthen the relationship between the public and the waters that run through their communities. In addition to sampling more widely, there may be opportunities to broaden the scope of data collected, providing even more insights into the river's condition and offering a more comprehensive picture for future decision-making.

RIVER WATCH PARTNERS

A crucial element of the program's reach and impact is the network of partner organizations and businesses that contribute time, expertise, and logistical support. Virginia State University, Peninsula Master Naturalists, Rivanna Conservation Alliance, American Water, Twin River Outfitters, and Appomattox River Company have all played vital roles in supporting data collection and volunteer engagement.

These collaborations allow JRA to have a wider and more meaningful presence across the watershed, making the data more representative of conditions across the entirety of the river and allowing swimmers, fishers, and kayakers in more remote areas of the watershed to remain informed of river conditions throughout the summer.



AMERICAN WATER