TAUNTON RIVER WATERSHED ALLIANCE

A VOICE FOR THE RIVER SINCE 1988

Water Quality Monitoring Program

The Primary water quality problems in the Taunton River Watershed are driven by excess nutrients (nitrogen and phosphorus), bacteria, stormwater runoff, droughts, and floods.

Steve Silva Coordinator

To gauge the health of our water- ways, a dedicated crew of 30 volunteers work in 9 teams performing monthly testing at twenty sites on the Taunton River and tributaries, measuring levels of nitrate, total phosphorus, bacteria, dissolved oxygen, pH and temperature.

Annette Murphy documents her samples

Global warming is causing more extreme weather. Larger winter/spring floods along with sea level rise followed by more severe summer heat waves and droughts punctuated by short high intensity rainstorms which add pulses of polluted stormwater to our rivers but do little to restore river flow or recharge groundwater supplies.

Working to improve water quality the five upriver wastewater treatment plants (Brockton, Mansfield, Middleborough, Bridgewater and Taunton) have upgraded to reduce nitrogen

The four plants that discharge to the freshwater portion of the watershed upstream of Taunton except Bridgewater (scheduled for 5/01/2027) also remove phosphorus. EPA recently reissued the Somerset permit with a schedule to remove nitrogen by 6/01/2030 and has a similar permit for Fall River off public notice awaiting reissuance.

One of the biggest TRWA monitored problem pollutants in the watershed is excess nitrogen loading which is improving with the wastewater treatment plants upgrades. Other sources of nitrogen include stormwater run-off, excess lawn/turf/crop fertilization (especially application of fertilizer, on sidewalks, roads and driveways), pet wastes, failing septic systems, stream bank erosion, stream buffer loss, and poor manure management from farming. Now that the upriver plants are removing phosphorus, we more clearly see the serious remaining problems from stormwater runoff contributing both phosphorus and bacteria after the high intensity short duration rainstorms occurring in summer with global warming.

Are You Interested in Becoming a Volunteer?

Trained volunteers sample five locations on the main stem of the Taunton River and 15 tributary locations in the morning on the second Tuesday of each month from April to October. Samples are delivered to the lab before 8:30 AM.

- **Teams of 2 or 3 people sample 1 to 3 sites each so each sampler and sampling location has back up(s) for vacations, etc.**
- **Samples are usually taken from bridge location sidewalks using a rope and plastic bucket. Filled sample bottles are put in a plastic cooler and transported to the lab for analysis or pick up. The TRWA website has one page instructions for all aspects of sampling.**
- **It takes about 10 minutes at each site to fill lab-provided bottles for nitrate, total phosphorus, and enterococci bacteria (our most important samples), as well as a larger bottle for pH, and a special glass bottle for dissolved oxygen. Samplers also measure river temperature with a thermometer and note the sampling time on the sample bottles and our chain of custody form.**

- **If samplers see a problem such as algae bloom, they are encouraged to take a picture with their smartphone.**
- **Nitrate, total phosphorus, and enterococci bacteria are analyzed by a MassDEP certified contract lab (Microbac in Dayville, CT), dissolved oxygen, and pH are analyzed by Veolia North America at the Taunton WWTP lab.**

Thank you Carly Brady, Veolia Taunton Lab Manager for all of the help you provide TRWA's Water Quality Monitoring Program.

Training for volunteers is generally held the last Saturday morning in March from 9:30 AM – Noon (watch our website for details).

We want new volunteers to increase the size of our teams. The folks who do the sampling find it fun and educational to get out on the river to see what is happening in the early morning hours from 5:30 to 8:00 AM (sample drop off time is by 8:30 AM). It is a good way to learn how the rivers in our watershed are doing, what needs to be done to improve them and meet some really nice people.

Current and historic test results are found on our website at:
https://savethetaunton.org/water-quality-monitoring/water-quality-results/
For information on watershed water quality issues and their solutions visit:
savethetaunton.org/water-quality-monitoring/