

Taunton River Watershed Alliance – 2017 Water Quality Report Card

River	Site Location	Town	Nitrogen	Phosphorus	Temperature	Dissolved Oxygen	Bacteria
Taunton River	Center Street	Berkley	Red	Red	Green	Green	Orange
Taunton River	Plain Street	Taunton	Red	Orange	Green	Green	Green
Taunton River	Route 18	Bridgewater	Red	Orange	Green	Green	Green
Taunton River	Cherry Street	Bridgewater	Red	Red	Green	Green	Red
Assonet River	Rt. 79 Bridge	Assonet	Green	Red	Green	Green	Green
Segregansett River	Brook Street	Dighton	Green	Yellow	Green	Green	Green
Chuckamucksett Brook	Berkley Street	Berkley	Red	Red	Green	Green	Green
Three Mile River	Somerset Ave.	Dighton	Red	Yellow	Green	Green	Green
Three Mile River	Cohannet Street	Taunton	Red	Yellow	Green	Green	Green
Three Mile River	Crane Street	Norton	Green	Yellow	Green	Green	Green
Mill River	Ingell Street	Taunton	Green	Yellow	Green	Green	Red
Mill River	Washington Street	Taunton	Green	Yellow	Green	Green	Red
Mill River	Whittenton Street	Taunton	Green	Yellow	Green	Green	Red
Forge River	Route 44	Raynham	Red	Orange	Green	Green	Red
Cotley River	Middleboro Ave.	Taunton	Green	Yellow	Green	Yellow	Red
Furnace Brook	River Street	Taunton	Yellow	Green	Green	Green	Green
Tompson Brook	Highstone Street	Taunton	Green	Yellow	Green	Red	Orange
Town River	Haywood Street	Bridgewater	Red	Orange	Green	Green	Red
Matfield River	High Street	Bridgewater	Red	Orange	Green	Green	Red
Nemasket River	Murdock Street	Middleboro	Red	Yellow	Green	Green	Green

Indicator	Excellent	Good	Fair	Poor
Nitrate as N	<.25 mg/l	.25-.34	.34-.45	>.45
Total P	<.025 mg/l	.025-<.05	.05-.1	>.1
Temperature	<24° C	24°-<27°C	27°-28°C	>28°C
Dissolved Oxygen	≥6 mg/l	>5-6 mg/l	4-5 mg/l	<4 mg/l
Bacteria (fecal)			>400 colonies/100ml	

Nitrate - annual average May through October
Total Phosphorus - annual average May through October
Temperature - determined by the highest temperature record during the season
Dissolved oxygen - determined by the lowest oxygen record during the season
Bacteria - determined by the number of exceedances.
 One exceedance = fair, two or more exceedances = poor

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The Taunton River watershed covers 562 square miles and represents about 30% of the Narragansett Bay watershed. The Taunton River Watershed Association for many years monitored 19 sites along the Taunton River and its tributaries. This year the Nemasket River was added, bringing the total to 20 sites. Parameters measured include nitrate, total phosphorus, fecal coliform bacteria, total suspended solids, dissolved oxygen, pH, and temperature. A major concern for the watershed is nutrient pollution from nitrogen. Nitrogen levels in the mainstem of the Taunton River are often 2-5 times the recommended background level. Currently about 66% of the nitrogen load comes from wastewater treatment plants and 34% from non-point sources including excessive fertilizing, careless fertilizer application to sidewalks, roads and driveways, poor manure management, pet waste, and stream bank erosion.

Nitrate - 2017 monitoring results show that nitrogen problems persist within the Taunton River mainstem and tributaries. The Taunton River is formed by the confluence of the Matfield and Town Rivers in Bridgewater. During 2017, the levels of nitrate in the Town River below the Bridgewater wastewater treatment plant averaged 5 times higher than the recommended background level. Levels in the Matfield River were more than three times higher. Lower down in the watershed, the Three Mile River below the Mansfield wastewater treatment plant and John F. Parker Municipal Golf Course had nitrate levels that were also about 5 times higher than recommended. This results in high nitrate levels in the mainstem Taunton River averaging over 2 ½ times higher than recommended levels below the Taunton wastewater treatment plant making the Taunton a major source of nitrogen to Narragansett Bay.

Nitrogen is a concern for estuarine waters of Mount Hope Bay and Narragansett Bay because it causes algae blooms and contributes to low oxygen levels in the water. The low oxygen levels, high algae concentrations, reduced water clarity, and nitrogen toxicity have caused the loss of eelgrass and healthy fish habitat in the Bay.

Phosphorus - Phosphorus levels in the Taunton River tributaries were generally in the fair to good range during 2017 for individual samples, but the Taunton River continues to see high levels compared to our lower average TP instream target of 0.05 mg/l. Phosphorus is a limiting nutrient in fresh water, and is a concern in lakes, ponds and shallow rivers. Photographic evidence shows that heavy algae growth in the upper tributaries indicates high nutrient levels. Measured levels may be depressed by this heavy algae growth which uses up the nutrients.

Temperature and Dissolved Oxygen - Temperatures in the watershed are generally at acceptable levels for warm water fisheries. Low dissolved oxygen is sometimes recorded when algae growth is high and there is heavy decay.

Fecal Coliform – Bacteria issues were seen across the watershed and were more prevalent during 2017 than in past years. Issues on the Mill River are ongoing and are also related to the City of Taunton's outdated separate sewer system which sometimes has Separate Sewer System Overflows (SSOs) at combined manholes or from leaking pipes under the Mill River. The city has been doing repair and replacement work in this area to address the problem the last few years. We also saw some high bacteria levels in the Town River at Haywood St. in Bridgewater.