

| 2022 TRWA Sampling Results for Nitrate (mg/l) | | | TARGET FOR CONCERN - GREATER THAN 0.4 MG/L | | | | | | | |
|---|---------------|---|--|-------------------|------|---------------|---|-------|------|-------|
| Sample | Site No. | River & Location Description | April | May | June | July | August | Sept. | Oct. | AVG** |
| 1 | TNT-01 | Taunton R. Br, Center St., Berkley | 0.34 | 0.33 | 0.57 | 0.15 | 0.16 | 0.53 | | 0.35 |
| 2 | TNT-02 | Taunton R. Br, Plain St., Taunton | 0.30 | 0.33 | 0.42 | 0.60 | 0.35 | 0.49 | | 0.44 |
| 3 | BED-01/TNT-03 | Taunton R., Rt 18, Bedford St., Bridgewater | 0.30 | 0.31 | 0.53 | 0.85 | 1.33 | 0.64 | | 0.73 |
| 4 | CHE-01/TNT-04 | Taunton R. Br, Cherry St., Bridgewater | 0.49 | 0.75 | 0.82 | 1.68 | 1.02 | 1.13 | | 1.08 |
| 5 | ASO-01 | Assonet R. Bridge, Rt 79 | 0.05 | 0.06 | 0.13 | 0.05 | 0.05 | 0.06 | | 0.07 |
| 6 | SEG | Segregansett R. Br, Brook St. Dighton | 0.18 | 0.21 | 0.22 | 0.10 | 0.09 | 0.10 | | 0.14 |
| 7 | BER-01 | Chuckamucksett Brk. Br, Berkley St. | 0.62 | 0.87 | 0.57 | 0.44 | 0.42 | 0.91 | | 0.64 |
| 8 | TMR-01 | Three Mile R. Br, Rt 138, Somerset Ave. | 0.31 | 0.37 | 0.40 | 0.54 | 0.33 | 0.36 | | 0.40 |
| 9 | TMR-02 | Three Mile R. Br, Rt 44, Cohannet St. | 0.30 | 0.36 | 0.45 | 0.44 | 1.03 | 0.37 | | 0.53 |
| 10 | TMR-03 | Three Mile R. Br, Crane St., Norton | 0.26 | 0.25 | 0.25 | 0.21 | 0.15 | 0.14 | | 0.20 |
| 11 | MIL-01 | Mill R., Ingell St., Taunton | 0.20 | 0.17 | 0.15 | 0.50 | 0.31 | 0.15 | | 0.26 |
| 12 | MIL-02 | Mill R., Washington St., Taunton | 0.20 | 0.15 | 0.18 | 0.37 | 0.42 | 0.13 | | 0.25 |
| 13 | MIL-03 | Mill R., Whittendon St., Taunton | 0.18 | 0.12 | 0.15 | 0.22 | 0.26 | 0.08 | | 0.16 |
| 14 | FORGE | Forge R. Br, Rt 44, Raynham | 0.25 | 0.28 | 0.39 | 0.51 | 0.31 | 0.31 | | 0.36 |
| 15 | COT-01 | Cotley R., Middleboro Ave, Taunton | 0.15 | 0.20 | 0.24 | 0.41 | 0.28 | 0.17 | | 0.26 |
| 16 | FBR-01 | Furnace Brk., River St., E. Taunton | 0.94 | 0.38 | 0.33 | 0.42 | 0.58 | 0.29 | | 0.40 |
| 17 | TBR-01 | Tomson Brk., Highstone St., E. Taunton | 0.21 | 0.10 | 0.26 | 0.10 | 0.05 | 0.06 | | 0.11 |
| 18 | TWH-01 | Town R., Br, Hayward St., Bridgewater | 0.21 | 0.35 | 0.55 | 4.28 | 2.13 | 1.31 | | 1.73 |
| 19 | MAT-01 | Matfield R., Br, High St., Bridgewater | 0.66 | 0.83 | 0.81 | 1.62 | NR Dup 1.1 | 1.81 | | 1.27 |
| 20 | NEM-01 | Nemasket R., Murdock St., Middleboro | 0.10 | 0.12 | 0.18 | 0.29 | NR | 0.43 | | 0.25 |
| | | | | | | | | | | |
| Month | Site No. | Duplicate and Blank Locations by Month | DUP # | Duplicate Results | BL # | Blank Results | ** Avg is for the water quality months of May through October used in NPDES permit TN limitation averaging. | | | |
| April | COT-01 | Cotley R., Middleboro Ave, Taunton | DUP 1 | 0.15 | BL 1 | <0.0500 | | | | |
| | BER-01 | Chuckamucksett Brk. Br, Berkley St. | DUP 2 | 0.61 | BL 2 | <0.0500 | | | | |
| May | FBR-01 | Furnace Brk., River St., E. Taunton | DUP 1 | 0.39 | BL 1 | <0.0500 | | | | |
| | TMR-02 | Three Mile R. Br, Rt 44, Cohannet St. | DUP 2 | 0.34 | BL 2 | <0.0500 | NR = no report | | | |
| June | TNT-02 | Taunton R. Br, Plain St., Taunton | DUP 1 | 0.41 | BL 1 | <0.0500 | | | | |
| | ASO-01 | Assonet R. Bridge, Rt 79 | DUP 2 | 0.07 | BL 2 | <0.0500 | | | | |
| July | BED-01/TNT-03 | Taunton R., Rt 18, Bedford St., Bridgewater | DUP 1 | 0.87 | BL 1 | <0.0500 | | | | |
| | SEG | Segregansett R. Br, Brook St. Dighton | DUP 2 | 0.08 | BL 2 | <0.0500 | | | | |
| August | TNT-02 | Taunton R. Br, Plain St., Taunton | DUP 1 | 0.35 | BL 1 | <0.0500 | | | | |
| | MAT-01 | Matfield R., Br, High St., Bridgewater | DUP 2 | 1.10 | BL 2 | <0.0500 | | | | |
| Sept. | COT-01 | Cotley R., Middleboro Ave, Taunton | DUP 1 | 0.16 | BL 1 | <0.0500 | | | | |
| | MIL-01 | Mill R., Ingell St., Taunton | DUP 2 | 0.16 | BL 2 | <0.0500 | | | | |
| Oct. | NEM-01 | Nemasket R., Murdock St., Middleboro | DUP 1 | | BL 1 | | | | | |
| | TMR-02 | Three Mile R. Br, Rt 44, Cohannet St. | DUP 2 | | BL 2 | | | | | |

| 2022 TRWA Sampling Results for Total Phosphorus (mg/l) | | | TARGET FOR CONCERN - GREATER THAN 0.100 mg/l | | | | | | | | |
|--|---------------|---|--|--------------------------|----------------------|---------|---|-------|------|-------|--|
| Sample | Site No. | River & Location Description | April | May | June | July | August | Sept. | Oct. | AVG** | |
| 1 | TNT-01 | Taunton R. Br, Center St., Berkley | 0.052 | 0.053 | 0.134 | 0.142 | 0.126 | 0.133 | | 0.118 | |
| 2 | TNT-02 | Taunton R. Br, Plain St., Taunton | 0.034 | 0.039 | 0.081 | 0.199 | 0.187 | 0.058 | | 0.113 | |
| 3 | BED-01/TNT-03 | Taunton R., Rt 18, Bedford St., Bridgewater | 0.040 | 0.041 | 0.112 | 0.071 | 0.071 | 0.056 | | 0.070 | |
| 4 | CHE-01/TNT-04 | Taunton R. Br, Cherry St., Bridgewater | 0.051 | 0.053 | 0.115 | 0.082 | 0.106 | 0.082 | | 0.088 | |
| 5 | ASO-01 | Assonet R. Bridge, Rt 79 | 0.019 | 0.019 | 0.050 | 0.120 | 0.052 | 0.062 | | 0.061 | |
| 6 | SEG | Segregansett R. Br, Brook St. Dighton | 0.022 | 0.030 | 0.049 | 0.058 | 0.063 | 0.018 | | 0.044 | |
| 7 | BER-01 | Chuckamucksett Brk. Br, Berkley St. | 0.022 | 0.016 | 0.145 | 0.125 | 0.104 | 0.028 | | 0.084 | |
| 8 | TMR-01 | Three Mile R. Br, Rt 138, Somerset Ave. | 0.023 | 0.023 | 0.038 | 0.183 | 0.107 | 0.029 | | 0.076 | |
| 9 | TMR-02 | Three Mile R. Br, Rt 44, Cohannet St. | 0.024 | 0.028 | 0.044 | 0.040 | 0.032 | 0.035 | | 0.036 | |
| 10 | TMR-03 | Three Mile R. Br, Crane St., Norton | 0.023 | 0.023 | 0.037 | 0.055 | 0.034 | 0.039 | | 0.038 | |
| 11 | MIL-01 | Mill R., Ingell St., Taunton | 0.023 | 0.030 | 0.033 | 0.130 | 0.125 | 0.023 | | 0.068 | |
| 12 | MIL-02 | Mill R., Washington St., Taunton | 0.015 | 0.021 | 0.030 | 0.038 | 0.030 | 0.024 | | 0.029 | |
| 13 | MIL-03 | Mill R., Whittendon St., Taunton | 0.018 | 0.030 | 0.021 | 0.028 | 0.022 | 0.018 | | 0.024 | |
| 14 | FORGE | Forge R. Br, Rt 44, Raynham | 0.031 | 0.036 | 0.090 | 0.078 | 0.070 | 0.041 | | 0.063 | |
| 15 | COT-01 | Cotley R., Middleboro Ave, Taunton | 0.015 | 0.014 | 0.028 | 0.023 | 0.039 | 0.016 | | 0.024 | |
| 16 | FBR-01 | Furnace Brk., River St., E. Taunton | 0.027 | 0.015 | 0.035 | 0.046 | 0.033 | 0.048 | | 0.035 | |
| 17 | TBR-01 | Tomson Brk., Highstone St., E. Taunton | 0.020 | 0.028 | 0.049 | 0.052 | 0.097 | 0.067 | | 0.058 | |
| 18 | TWH-01 | Town R., Br, Hayward St., Bridgewater | 0.041 | 0.056 | 0.107 | 0.157 | 0.115 | 0.133 | | 0.114 | |
| 19 | MAT-01 | Matfield R., Br, High St., Bridgewater | 0.045 | 0.061 | 0.105 | 0.072 | 0.079 | 0.065 | | 0.076 | |
| 20 | NEM-01 | Nemasket R., Murdock St., Middleboro | 0.033 | 0.032 | 0.052 | 0.037 | 0.038 | 0.028 | | 0.037 | |
| | | | | | | | | | | | |
| | | Duplicate and Blank Locations by Month | | Duplicate Results | Blank Results | | ** Avg is for the water quality months | | | | |
| April | COT-01 | Cotley R., Middleboro Ave, Taunton | DUP 1 | 0.013 | BL 1 | <0.0106 | of May through October (season AVG). | | | | |
| | BER-01 | Chuckamucksett Brk. Br, Berkley St. | DUP 2 | 0.022 | BL 2 | <0.0106 | NPDES permits use TP mo. avg. limits. | | | | |
| May | FBR-01 | Furnace Brk., River St., E. Taunton | DUP 1 | 0.021 | BL 1 | <0.0106 | Based on observations TRWA considers | | | | |
| | TMR-02 | Three Mile R. Br, Rt 44, Cohannet St. | DUP 2 | 0.028 | BL 2 | <0.0106 | a season AVG ≥ 0.05 mg/l is concern. | | | | |
| June | TNT-02 | Taunton R. Br, Plain St., Taunton | DUP 1 | 0.077 | BL 1 | 0.0223 | | | | | |
| | ASO-01 | Assonet R. Bridge, Rt 79 | DUP 2 | 0.046 | BL 2 | <0.0106 | | | | | |
| July | BED-01/TNT-03 | Taunton R., Rt 18, Bedford St., Bridgewater | DUP 1 | 0.0733 | BL 1 | 0.0469 | | | | | |
| | SEG | Segregansett R. Br, Brook St. Dighton | DUP 2 | 0.0627 | BL 2 | <0.0106 | | | | | |
| August | TNT-02 | Taunton R. Br, Plain St., Taunton | DUP 1 | 0.188 | BL 1 | <0.0106 | | | | | |
| | MAT-01 | Matfield R., Br, High St., Bridgewater | DUP 2 | 0.078 | BL 2 | <0.0106 | | | | | |
| Sept. | COT-01 | Cotley R., Middleboro Ave, Taunton | DUP 1 | 0.015 | BL 1 | <0.0106 | | | | | |
| | MIL-01 | Mill R., Ingell St., Taunton | DUP 2 | 0.028 | BL 2 | <0.0106 | | | | | |
| Oct. | NEM-01 | Nemasket R., Murdock St., Middleboro | DUP 1 | | BL 1 | | | | | | |
| | TMR-02 | Three Mile R. Br, Rt 44, Cohannet St. | DUP 2 | | BL 2 | | | | | | |

| 2022 TRWA Sampling Results for Enterococci (colonies/100 ml) | | | TARGET FOR CONCERN - GREATER THAN 61 COLONIES/100 ML | | | | | | | |
|--|---------------|---|--|--------------------------|----------------------|------|--------------------------------------|-------|------|----------------------|
| Sample | Site No. | River & Location Description | April | May | June | July | August | Sept. | Oct. | GEO MEAN May to Oct. |
| 1 | TNT-01 | Taunton R. Br, Center St., Berkley (SB Cr. 104) | 10 | 10 | 560 | 10 | 180 | 80 | | 60 |
| 2 | TNT-02 | Taunton R. Br, Plain St., Taunton (SB CR. 104) | 20 | 20 | 160 | 10 | 60 | 90 | | 44 |
| 3 | BED-01/TNT-03 | Taunton R., Rt 18, Bedford St., Bridgewater | 10 | 10 | 30 | 10 | 10 | 10 | | 12 |
| 4 | CHE-01/TNT-04 | Taunton R. Br, Cherry St., Bridgewater | - | 20 | 150 | 20 | 70 | 100 | | 53 |
| 5 | ASO-01 | Assonet R. Bridge, Rt 79 | 10 | 10 | 100 | 10 | 350 | 240 | | 61 |
| 6 | SEG | Segregansett R. Br, Brook St. Dighton | 10 | 10 | 540 | 10 | 10 | 20 | | 26 |
| 7 | BER-01 | Chuckamucksett Brk. Br, Berkley St. | 10 | 10 | 650 | 10 | 230 | 150 | | 74 |
| 8 | TMR-01 | Three Mile R. Br, Rt 138, Somerset Ave. | 20 | 10 | 160 | 10 | 10 | 390 | | 36 |
| 9 | TMR-02 | Three Mile R. Br, Rt 44, Cohannet St. | 10 | 40 | 120 | 10 | 90 | 30 | | 42 |
| 10 | TMR-03 | Three Mile R. Br, Crane St., Norton | 10 | 20 | 160 | 90 | 200 | 90 | | 88 |
| 11 | MIL-01 | Mill R., Ingell St., Taunton | 20 | 30 | 360 | 30 | 30 | 100 | | 63 |
| 12 | MIL-02 | Mill R., Washington St., Taunton | 10 | 10 | 350 | 230 | 310 | 90 | | 118 |
| 13 | MIL-03 | Mill R., Whittendon St., Taunton | 20 | 40 | 120 | 210 | 320 | 40 | | 105 |
| 14 | FORGE | Forge R. Br, Rt 44, Raynham | 30 | 1270 | 210 | 50 | 400 | 110 | | 226 |
| 15 | COT-01 | Cotley R., Middleboro Ave, Taunton | 10 | 30 | 230 | 10 | 90 | 50 | | 50 |
| 16 | FBR-01 | Furnace Brk., River St., E. Taunton | 10 | 30 | 90 | 10 | 190 | 10 | | 35 |
| 17 | TBR-01 | Tomson Brk., Highstone St., E. Taunton | 40 | 10 | 160 | 40 | 150 | 60 | | 57 |
| 18 | TWH-01 | Town R., Br, Hayward St., Bridgewater | 80 | 30 | | 20 | 170 | 140 | | 61 |
| 19 | MAT-01 | Matfield R., Br, High St., Bridgewater | 30 | 10 | 220 | 40 | 60 | 60 | | 50 |
| 20 | NEM-01 | Nemasket R., Murdock St., Middleboro | 10 | 10 | 140 | 10 | 60 | 10 | | 24 |
| | | | | | | | | | | |
| | | Duplicate and Blank Locations by Month | | Duplicate Results | Blank Results | | ** Geometric Mean for the six months | | | |
| April | COT-01 | Cotley R., Middleboro Ave, Taunton | DUP 1 | <10 | BL 1 | <10 | from May to Oct. should not exceed | | | |
| | BER-01 | Chuckamucksett Brk. Br, Berkley St. | DUP 2 | <10 | BL 2 | <10 | 33 colonies per 100 ml. | | | |
| May | FBR-01 | Furnace Brk., River St., E. Taunton | DUP 1 | 30 | BL 1 | <10 | | | | |
| | TMR-02 | Three Mile R. Br, Rt 44, Cohannet St. | DUP 2 | 40 | BL 2 | <10 | | | | |
| June | TNT-02 | Taunton R. Br, Plain St., Taunton | DUP 1 | 180 | BL 1 | <10 | | | | |
| | ASO-01 | Assonet R. Bridge, Rt 79 | DUP 2 | 240 | BL 2 | <10 | | | | |
| July | BED-01/TNT-03 | Taunton R., Rt 18, Bedford St., Bridgewater | DUP 1 | 10 | BL 1 | <10 | | | | |
| | SEG | Segregansett R. Br, Brook St. Dighton | DUP 2 | 10 | BL 2 | <10 | | | | |
| August | TNT-02 | Taunton R. Br, Plain St., Taunton | DUP 1 | 40 | BL 1 | <10 | | | | |
| | MAT-01 | Matfield R., Br, High St., Bridgewater | DUP 2 | 50 | BL 2 | <10 | | | | |
| Sept. | COT-01 | Cotley R., Middleboro Ave, Taunton | DUP 1 | 70 | BL 1 | <10 | | | | |
| | MIL-01 | Mill R., Ingell St., Taunton | DUP 2 | 80 | BL 2 | <10 | | | | |
| Oct. | NEM-01 | Nemasket R., Murdock St., Middleboro | DUP 1 | | BL 1 | | | | | |
| | TMR-02 | Three Mile R. Br, Rt 44, Cohannet St. | DUP 2 | | BL 2 | | | | | |

| Sample Analysis, Collection Method - Standard Operating Procedures (SOP) and Instream Target Values | | | | | | | | | |
|---|--|--|--|--|--------------------------------|--|--|--|--|
| Samples Are Analyzed by: | | | | | | | | | |
| Microbac, Dayville, CT | | | | | A MassDEP Certified Laboratory | | | | |
| https://www.microbac.com/our-laboratories/dayville-connecticut/#services | | | | | | | | | |
| Samples Are Collected by Trained TRWA Volunteers Using An SOP Jointly Developed by TRWA and Veolia North America: | | | | | | | | | |
| https://savethetaunton.org/wp-content/uploads/2021/06/TRWA-Sampling-SOP-6-14-2021.pdf | | | | | | | | | |
| Sampling Locations Map May Be Found At: | | | | | | | | | |
| https://www.google.com/maps/d/edit?mid=zhnldTn8bGeU.kyo7mqjZ3YFQ&usp=sharing | | | | | | | | | |
| Water Quality Protection Instream Target Values: | | | | | | | | | |
| Nitrate | | | | | | | | | |
| Water Quality Target Values for Nitrogen are expressed as <u>Total</u> Nitrogen = Nitrate + Organic Nitrogen + Ammonia + Nitrite | | | | | | | | | |
| Like most environmental groups TRWA measures only Nitrate because of its low cost (\$12 / sample) and low reporting level (0.05 mg/l). The MassDEP in a large number of TMDLs for estuaries has recommended <u>TN</u> values between 0.39 to 0.5 mg/l for estuaries <u>without eel grass</u> in good to fair condition. The Cape Cod Commission recommends values 0.34 to 0.39 while the Buzzards Bay Project/ Massachusetts Coastal Zone Management recommends 0.39 to 0.44 mg/l. After consultation with MassDEP and Rhode Island DEM (downstream state) EPA selected a TN target estuary value of 0.45 mg/l as a medium target for the Taunton River. | | | | | | | | | |
| Because Nitrate is <u>only a portion of Total Nitrogen</u> we consider Nitrate values > 0.4 mg/l high for both the tidal portion of the estuary below Route 24 at the Raynham/Taunton Bridge and above because of transport concerns to the salt waters of the estuary. | | | | | | | | | |
| Total Phosphorus | | | | | | | | | |
| The Water Quality Target Values for Total Phosphorus are 0.100 mg/l for freshwaters in free flowing streams and 0.050 mg/l in lakes, ponds, impoundments and streams tributary to them. These Targets are from the EPA Suggested Criteria for Water sometimes called the Gold Book. | | | | | | | | | |
| Based on observation and photos of the shallow effluent dominated freshwaters of the watershed TRWA considers average TP greater than 0.05 mg/l a value for concern in addition to single month samples > 0.100 mg/l. | | | | | | | | | |
| Bacteria - Enterococci | | | | | | | | | |
| The Water Quality Target Value used for enterococci is 61 colonies per 100 ml as a single sample maximum (SSM) and 33 colonies as geometric mean of all samples taken in the most recent six months. These targets are from the MA Water Quality Standards 314 CMR for Class B waters. | | | | | | | | | |
| For Class SB waters the criteria are: SSM - 104 colonies/100 ml and Geo Mean for the last 6 months of samples - 35 colonies/100 ml. | | | | | | | | | |
| TRWA sampling locations TNT-01 and TNT-02 are in SB waters all others are in Class B waters. | | | | | | | | | |