

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	0.52	0.38	
2	TNT-02	Taunton R. Br, Plain St., Taunton	0.30	0.33	0.42	0.60	0.35	0.49	0.33	0.42	
3	BED-01/TNT-03	Taunton R., Rt 18, Bedford St., Bridgewater	0.30	0.31	0.53	0.85	1.33	0.64	0.39	0.67	
4	CHE-01/TNT-04	Taunton R. Br, Cherry St., Bridgewater	0.49	0.75	0.82	1.68	1.02	1.13	0.95	1.06	
5	ASO-01	Assonet R. Bridge, Rt 79	0.05	0.06	0.13	0.05	0.05	0.06	0.05	0.07	
6	SEG	Segregansett R. Br, Brook St. Dighton	0.18	0.21	0.22	0.10	0.09	0.10	0.05	0.13	
7	BER-01	Chuckamucksett Brk. Br, Berkley St.	0.62	0.87	0.57	0.44	0.42	0.91	1.00	0.70	
8	TMR-01	Three Mile R. Br, Rt 138, Somerset Ave.	0.31	0.37	0.40	0.54	0.33	0.36	0.38	0.39	
9	TMR-02	Three Mile R. Br, Rt 44, Cohannet St.	0.30	0.36	0.45	0.44	1.03	0.37	0.39	0.50	
10	TMR-03	Three Mile R. Br, Crane St., Norton	0.26	0.25	0.25	0.21	0.15	0.14	0.15	0.19	
11	MIL-01	Mill R., Ingell St., Taunton	0.20	0.17	0.15	0.50	0.31	0.15	0.17	0.24	
12	MIL-02	Mill R., Washington St., Taunton	0.20	0.15	0.18	0.37	0.42	0.13	0.16	0.23	
13	MIL-03	Mill R., Whittendon St., Taunton	0.18	0.12	0.15	0.22	0.26	0.08	0.10	0.15	
14	FORGE	Forge R. Br, Rt 44, Raynham	0.25	0.28	0.39	0.51	0.31	0.31	0.35	0.36	
15	COT-01	Cotley R., Middleboro Ave, Taunton	0.15	0.20	0.24	0.41	0.28	0.17	0.09	0.23	
16	FBR-01	Furnace Brk., River St., E. Taunton	0.94	0.38	0.33	0.42	0.58	0.29	0.26	0.38	
17	TBR-01	Tomson Brk., Highstone St., E. Taunton	0.21	0.10	0.26	0.10	0.05	0.06	0.14	0.12	
18	TWH-01	Town R., Br, Hayward St., Bridgewater	0.21	0.35	0.55	4.28	2.13	1.31	0.95	1.60	
19	MAT-01	Matfield R., Br, High St., Bridgewater	0.66	0.83	0.81	1.62	NR Dup 1.1	1.81	0.61	1.14	
20	NEM-01	Nemasket R., Murdock St., Middleboro	0.10	0.12	0.18	0.29	NR	0.43	0.35	0.27	
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	0.36	BL 1	<0.0500					
	TMR-02	Three Mile R. Br, Rt 44, Cohannet St.	DUP 2	0.38	BL 2	<0.0500					

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	0.122	0.118	
2	TNT-02	Taunton R. Br, Plain St., Taunton	0.034	0.039	0.081	0.199	0.187	0.058	0.049	0.102	
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	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	0.054	0.082	
5	ASO-01	Assonet R. Bridge, Rt 79	0.019	0.019	0.050	0.120	0.052	0.062	0.105	0.068	
6	SEG	Segregansett R. Br, Brook St. Dighton	0.022	0.030	0.049	0.058	0.063	0.018	0.022	0.040	
7	BER-01	Chuckamucksett Brk. Br, Berkley St.	0.022	0.016	0.145	0.125	0.104	0.028	0.011	0.071	
8	TMR-01	Three Mile R. Br, Rt 138, Somerset Ave.	0.023	0.023	0.038	0.183	0.107	0.029	0.016	0.066	
9	TMR-02	Three Mile R. Br, Rt 44, Cohannet St.	0.024	0.028	0.044	0.040	0.032	0.035	0.020	0.033	
10	TMR-03	Three Mile R. Br, Crane St., Norton	0.023	0.023	0.037	0.055	0.034	0.039	0.017	0.034	
11	MIL-01	Mill R., Ingell St., Taunton	0.023	0.030	0.033	0.130	0.125	0.023	0.014	0.059	
12	MIL-02	Mill R., Washington St., Taunton	0.015	0.021	0.030	0.038	0.030	0.024	0.014	0.026	
13	MIL-03	Mill R., Whittendon St., Taunton	0.018	0.030	0.021	0.028	0.022	0.018	0.017	0.023	
14	FORGE	Forge R. Br, Rt 44, Raynham	0.031	0.036	0.090	0.078	0.070	0.041	0.040	0.059	
15	COT-01	Cotley R., Middleboro Ave, Taunton	0.015	0.014	0.028	0.023	0.039	0.016	0.011	0.022	
16	FBR-01	Furnace Brk., River St., E. Taunton	0.027	0.015	0.035	0.046	0.033	0.048	0.014	0.032	
17	TBR-01	Tomson Brk., Highstone St., E. Taunton	0.020	0.028	0.049	0.052	0.097	0.067	0.063	0.059	
18	TWH-01	Town R., Br, Hayward St., Bridgewater	0.041	0.056	0.107	0.157	0.115	0.133	0.080	0.108	
19	MAT-01	Matfield R., Br, High St., Bridgewater	0.045	0.061	0.105	0.072	0.079	0.065	0.051	0.072	
20	NEM-01	Nemasket R., Murdock St., Middleboro	0.033	0.032	0.052	0.037	0.038	0.028	0.031	0.036	
		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	0.0329	BL 1	<0.0106					
	TMR-02	Three Mile R. Br, Rt 44, Cohannet St.	DUP 2	0.0191	BL 2	<0.0106					

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	50	59
2	TNT-02	Taunton R. Br, Plain St., Taunton (SB CR. 104)	20	20	160	10	60	90	10	35
3	BED-01/TNT-03	Taunton R., Rt 18, Bedford St., Bridgewater	10	10	30	10	10	10	40	15
4	CHE-01/TNT-04	Taunton R. Br, Cherry St., Bridgewater	-	20	150	20	70	100	40	51
5	ASO-01	Assonet R. Bridge, Rt 79	10	10	100	10	350	240	290	79
6	SEG	Segregansett R. Br, Brook St. Dighton	10	10	540	10	10	20	10	22
7	BER-01	Chuckamucksett Brk. Br, Berkley St.	10	10	650	10	230	150	130	81
8	TMR-01	Three Mile R. Br, Rt 138, Somerset Ave.	20	10	160	10	10	390	10	29
9	TMR-02	Three Mile R. Br, Rt 44, Cohannet St.	10	40	120	10	90	30	10	33
10	TMR-03	Three Mile R. Br, Crane St., Norton	10	20	160	90	200	90	10	61
11	MIL-01	Mill R., Ingell St., Taunton	20	30	360	30	30	100	70	64
12	MIL-02	Mill R., Washington St., Taunton	10	10	350	230	310	90	90	112
13	MIL-03	Mill R., Whittendon St., Taunton	20	40	120	210	320	40	10	71
14	FORGE	Forge R. Br, Rt 44, Raynham	30	1270	210	50	400	110	50	176
15	COT-01	Cotley R., Middleboro Ave, Taunton	10	30	230	10	90	50	30	46
16	FBR-01	Furnace Brk., River St., E. Taunton	10	30	90	10	190	10	10	28
17	TBR-01	Tomson Brk., Highstone St., E. Taunton	40	10	160	40	150	60	110	63
18	TWH-01	Town R., Br, Hayward St., Bridgewater	80	30	NR	20	170	140	70	63
19	MAT-01	Matfield R., Br, High St., Bridgewater	30	10	220	40	60	60	60	52
20	NEM-01	Nemasket R., Murdock St., Middleboro	10	10	140	10	60	10	20	23
		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	<10	BL 1	<10				
	TMR-02	Three Mile R. Br, Rt 44, Cohannet St.	DUP 2	20	BL 2	<10				

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.									