

2023 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	0.45								
2	TNT-02	Taunton R. Br, Plain St., Taunton	0.31								
3	BED-01/TNT-03	Taunton R., Rt 18, Bedford St., Bridgewater	0.30								
4	CHE-01/TNT-04	Taunton R. Br, Cherry St., Bridgewater	0.76								
5	ASO-01	Assonet R. Bridge, Rt 79	0.06								
6	SEG	Segregansett R. Br, Brook St. Dighton	0.27								
7	BER-01	Chuckamucksett Brk. Br, Berkley St.	0.86								
8	TMR-01	Three Mile R. Br, Rt 138, Somerset Ave.	0.43								
9	TMR-02	Three Mile R. Br, Rt 44, Cohannet St.	0.39								
10	TMR-03	Three Mile R. Br, Crane St., Norton	0.33								
11	MIL-01	Mill R., Ingell St., Taunton	0.23								
12	MIL-02	Mill R., Washington St., Taunton	0.23								
13	MIL-03	Mill R., Whittendon St., Taunton	0.19								
14	FORGE	Forge R. Br, Rt 44, Raynham	0.31								
15	COT-01	Cotley R., Middleboro Ave, Taunton	0.21								
16	FBR-01	Furnace Brk., River St., E. Taunton	0.22								
17	CHU-01	Taunton River Br, Church St., Raynham	0.36								
18	TWH-01	Town R., Br, Hayward St., Bridgewater	0.32								
19	MAT-01	Matfield R., Br, High St., Bridgewater	0.79								
20	NEM-01	Nemasket R., Murdock St., Middleboro	0.09								
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	0.21	BL 1	<0.05	of May through October used in NPDES permit TN limitation averaging.				
	BER-01	Chuckamucksett Brk. Br, Berkley St.	DUP 2	0.87	BL 2	<0.05					
May	FBR-01	Furnace Brk., River St., E. Taunton	DUP 1		BL 1		NR = no report				
	TMR-02	Three Mile R. Br, Rt 44, Cohannet St.	DUP 2		BL 2						
June	TNT-02	Taunton R. Br, Plain St., Taunton	DUP 1		BL 1						
	ASO-01	Assonet R. Bridge, Rt 79	DUP 2		BL 2						
July	BED-01/TNT-03	Taunton R., Rt 18, Bedford St., Bridgewater	DUP 1		BL 1						
	SEG	Segregansett R. Br, Brook St. Dighton	DUP 2		BL 2						
August	TNT-02	Taunton R. Br, Plain St., Taunton	DUP 1		BL 1						
	MAT-01	Matfield R., Br, High St., Bridgewater	DUP 2		BL 2						
Sept.	COT-01	Cotley R., Middleboro Ave, Taunton	DUP 1		BL 1						
	MIL-01	Mill R., Ingell St., Taunton	DUP 2		BL 2						
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						

2023 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	0.079								
2	TNT-02	Taunton R. Br, Plain St., Taunton	0.030								
3	BED-01/TNT-03	Taunton R., Rt 18, Bedford St., Bridgewater	0.030								
4	CHE-01/TNT-04	Taunton R. Br, Cherry St., Bridgewater	0.044								
5	ASO-01	Assonet R. Bridge, Rt 79	0.014								
6	SEG	Segregansett R. Br, Brook St. Dighton	0.019								
7	BER-01	Chuckamucksett Brk. Br, Berkley St.	0.014								
8	TMR-01	Three Mile R. Br, Rt 138, Somerset Ave.	0.018								
9	TMR-02	Three Mile R. Br, Rt 44, Cohannet St.	0.021								
10	TMR-03	Three Mile R. Br, Crane St., Norton	0.016								
11	MIL-01	Mill R., Ingell St., Taunton	0.028								
12	MIL-02	Mill R., Washington St., Taunton	0.019								
13	MIL-03	Mill R., Whittendon St., Taunton	0.018								
14	FORGE	Forge R. Br, Rt 44, Raynham	0.032								
15	COT-01	Cotley R., Middleboro Ave, Taunton	0.013								
16	FBR-01	Furnace Brk., River St., E. Taunton	0.024								
17	CHU-01	Taunton River Br, Church St., Raynham	0.031								
18	TWH-01	Town R., Br, Hayward St., Bridgewater	0.057								
19	MAT-01	Matfield R., Br, High St., Bridgewater	0.039								
20	NEM-01	Nemasket R., Murdock St., Middleboro	0.130								
		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	0.012		BL 1	<0.0106		of May through October (season AVG).		
	BER-01	Chuckamucksett Brk. Br, Berkley St.	DUP 2	<0.0106		BL 2	<0.0106		NPDES permits use TP mo. avg. limits.		
May	FBR-01	Furnace Brk., River St., E. Taunton	DUP 1			BL 1			Based on observations TRWA considers		
	TMR-02	Three Mile R. Br, Rt 44, Cohannet St.	DUP 2			BL 2			a season AVG ≥ 0.05 mg/l is concern.		
June	TNT-02	Taunton R. Br, Plain St., Taunton	DUP 1			BL 1					
	ASO-01	Assonet R. Bridge, Rt 79	DUP 2			BL 2					
July	BED-01/TNT-03	Taunton R., Rt 18, Bedford St., Bridgewater	DUP 1			BL 1					
	SEG	Segregansett R. Br, Brook St. Dighton	DUP 2			BL 2					
August	TNT-02	Taunton R. Br, Plain St., Taunton	DUP 1			BL 1					
	MAT-01	Matfield R., Br, High St., Bridgewater	DUP 2			BL 2					
Sept.	COT-01	Cotley R., Middleboro Ave, Taunton	DUP 1			BL 1					
	MIL-01	Mill R., Ingell St., Taunton	DUP 2			BL 2					
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					

2023 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							
2	TNT-02	Taunton R. Br, Plain St., Taunton (SB CR. 104)	10							
3	BED-01/TNT-03	Taunton R., Rt 18, Bedford St., Bridgewater	10							
4	CHE-01/TNT-04	Taunton R. Br, Cherry St., Bridgewater	10							
5	ASO-01	Assonet R. Bridge, Rt 79	10							
6	SEG	Segregansett R. Br, Brook St. Dighton	10							
7	BER-01	Chuckamucksett Brk. Br, Berkley St.	50							
8	TMR-01	Three Mile R. Br, Rt 138, Somerset Ave.	10							
9	TMR-02	Three Mile R. Br, Rt 44, Cohannet St.	10							
10	TMR-03	Three Mile R. Br, Crane St., Norton	10							
11	MIL-01	Mill R., Ingell St., Taunton	10							
12	MIL-02	Mill R., Washington St., Taunton	10							
13	MIL-03	Mill R., Whittendon St., Taunton	20							
14	FORGE	Forge R. Br, Rt 44, Raynham	20							
15	COT-01	Cotley R., Middleboro Ave, Taunton	50							
16	FBR-01	Furnace Brk., River St., E. Taunton	10							
17	CHU-01	Taunton River Br, Church St., Raynham	10							
18	TWH-01	Town R., Br, Hayward St., Bridgewater	20							
19	MAT-01	Matfield R., Br, High St., Bridgewater	10							
20	NEM-01	Nemasket R., Murdock St., Middleboro	10							
		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	30	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		BL 1					
	TMR-02	Three Mile R. Br, Rt 44, Cohannet St.	DUP 2		BL 2					
June	TNT-02	Taunton R. Br, Plain St., Taunton	DUP 1		BL 1					
	ASO-01	Assonet R. Bridge, Rt 79	DUP 2		BL 2					
July	BED-01/TNT-03	Taunton R., Rt 18, Bedford St., Bridgewater	DUP 1		BL 1					
	SEG	Segregansett R. Br, Brook St. Dighton	DUP 2		BL 2					
August	TNT-02	Taunton R. Br, Plain St., Taunton	DUP 1		BL 1					
	MAT-01	Matfield R., Br, High St., Bridgewater	DUP 2		BL 2					
Sept.	COT-01	Cotley R., Middleboro Ave, Taunton	DUP 1		BL 1					
	MIL-01	Mill R., Ingell St., Taunton	DUP 2		BL 2					
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.									