

2017 TRWA Sampling Results for Total Phosphorus (mg/l)				TARGET FOR CONCERN - GREATER THAN 0.100 mg/l (IN FRESHWATERS)									
Sample	Site No.	River & Location Description	March*	April	May	June	July	August	Sept.	Oct.	Nov.	AVG**	
1	TNT-01	Taunton R. Br, Center St., Berkley*	snow	0.048	0.063	0.085	0.170	0.179	0.197	0.287	0.098	0.163	
2	TNT-02	Taunton R. Br, Plain St., Taunton*	cancelled	0.035	0.049	0.066	0.069	0.123	0.055	0.081	0.117	0.074	
3	BED-01/TNT-03	Taunton R., Rt 18, Bedford St., Bridgewater	cancelled	0.039	0.058	0.091	0.084	0.049	0.056	0.055	0.084	0.066	
4	CHE-01/TNT-04	Taunton R. Br, Cherry St., Bridgewater	cancelled	0.043	0.063	0.140	0.094	0.063	0.065	0.080	0.086	0.084	
5	ASO-01	Assonet R. Bridge, Rt 79	cancelled	0.012	0.029	0.040	0.043	0.116	0.063	0.420	0.051	0.118	
6	SEG	Segregansett R. Br, Brook St. Dighton	cancelled	0.019	0.023	0.040	missing	0.039	note 2	0.038	0.022	0.035	
7	BER-01	Chuckamucksett Brk. Br, Berkley St.	cancelled	0.019	0.041	0.035	0.028	0.820	0.279	0.065	0.048	0.211	
8	TMR-01	Three Mile R. Br, Rt 138, Somerset Ave.	cancelled	0.016	0.028	0.036	0.031	0.028	0.021	0.032	0.033	0.029	
9	TMR-02	Three Mile R. Br, Rt 44, Cohannet St.	cancelled	0.021	0.029	0.043	0.043	0.030	0.027	0.031	0.029	0.033	
10	TMR-03	Three Mile R. Br, Crane St., Norton	cancelled	0.026	0.030	0.056	0.043	0.022	0.020	0.030	0.026	0.033	
11	MIL-01	Mill R., Ingell St., Taunton	cancelled	0.030	0.039	0.044	note 1	0.026	0.033	0.039	0.031	0.036	
12	MIL-02	Mill R., Washington St., Taunton	cancelled	0.026	0.028	0.036	0.052	0.020	0.021	0.020	0.028	0.030	
13	MIL-03	Mill R., Whittendon St., Taunton	cancelled	0.023	0.024	0.030	0.058	0.017	0.024	0.024	0.026	0.030	
14	FORGE	Forge R. Br, Rt 44, Raynham	cancelled	0.024	0.052	0.070	0.122	0.071	0.028	0.030	0.051	0.062	
15	COT-01	Cotley R., Middleboro Ave, Taunton	cancelled	0.011	0.019	0.034	0.033	0.028	0.035	0.035	0.023	0.031	
16	FBR-01	Furnace Brk., River St., E. Taunton	cancelled	0.020	0.033	0.033	0.024	0.018	0.012	0.020	0.016	0.023	
17	TBR-01	Tomson Brk., Highstone St., E. Taunton	cancelled	0.021	0.023	0.037	0.067	0.039	0.041	0.066	0.015	0.046	
18	TWH-01	Town R., Br, Hayward St., Bridgewater	cancelled	0.026	0.050	0.081	0.101	0.107	0.139	0.113	0.091	0.098	
19	MAT-01	Matfield R., Br, High St., Bridgewater	cancelled	0.041	0.072	0.089	0.085	0.055	0.056	0.057	0.049	0.069	
20	NEM-01	Nemasket R., Murdock St., Middleboro***		New Location				0.063	0.028	0.022	0.028	missing	0.035
		*** Sampling July to October for NO3, TP, and FC		**AVG is for the water quality months of May through October (season AVG)									
		* Tidal Class SB		NPDES permits use TP monthly average not seasonal average for compliance.									
				Based on observation and photos TRWA considers season AVG ≥ 0.05 a concern.									
				Note 1 - Heavy rain and steep river bank made sampling unsafe.									
21	Duplicate Samples			Note 2 - Stream flow too low for sample collection.									
March	BER-01	Chuckamucksett Brk. Br, Berkley St.	cancelled										
April	ASO-01	Assonet R. Bridge, Rt 79		0.014									
May	FORGE	Forge R. Br, Rt 44, Raynham			0.049								
June	TNT-02	Taunton R. Br, Plain St., Taunton				0.070							
July	TNT-01	Taunton R. Br, Center St., Berkley					0.166						
August	CHE-01/TNT-04	Taunton R. Br, Cherry St., Bridgewater						0.061					
Sept.	BED-01/TNT-03	Taunton R., Rt 18, Bedford St., Bridgewater							0.050				
Oct.	MAT-01	Matfield R., Br, High St., Bridgewater								0.057			
Nov.	TWH-01	Town R., Br, Hayward St., Bridgewater									0.094		

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:									
http://savethetaunton.org/wp/wp-content/uploads/2016/04/TRWA-Sampling-SOP-1-30-2017.pdf									
Sampling Locations Map May Be Found At:									
https://www.google.com/maps/d/edit?mid=zhnldTn8bGeU.kyo7mqZ3YFQ&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 obseration 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.									
Feca Coliform									
The Water Quality Target Value used for Fecal Coliform is 400 colonies/100 ml (the former MA Water Quality Standard).									
Fecal Coliform is an indicator of potential presence of disease causing organisms present in a waterbody.									