# Taunton River Estuary TN Loading, TN and TP Limits, and Permit Reissuance Status

2/28/2022

| WWTF | Design Q (MGD) | TN Limit lbs/d (mg/L) | Est. Load lbs/day** | Expiration Prev. Per. | End of Public Notice | Reissuance Date | Time Reisssuance Overdue | Months Since Pub. Not. End | TP Limit mg/L**** |
|---|---|---|---|---|---|---|---|---|---|
| Brockton | 18 | 450 (3)*** | 361 | 5/11/2010 | 4/20/2015 | **1/11/2017** | 6 years, 8 months | 1 year, 8 months | 0.101 |
| Taunton | 8.4 | 210 (3) | 189 | 3/27/2006 | 6/17/2013 | **4/10/2015** | 9 years (appealed*) | 1 year, 9 months | none |
| Somerset | 4.2 | 130 (3.7) | 117 | 9/30/2008 | | | **13 years, 5 month** | | none |
| Mansfield/Norton/Foxboro | 3.14 | 131 (5) | 98 | 9/30/2008 | 3/29/2013 | **9/11/2014** | 6 years | 1 year, 6 months | 0.17 |
| Middleborough | 2.16 | 90 (5) | 74 | 11/3/2008 | 11/16/2013 | **5/5/2014** | 5 years, 6 months | 6 months | 0.15 |
| Bridgewater | 1.44 | 60 (5) | 52 | 12/30/2008 | 9/8/2014 | **9/30/2016** | 7 years, 9 months** | 2 years | 0.2 |
| Smaller Facilities * | | | 46 | | | | | | |
| (at current loads) | | | | | | | | | |
| Total | | | 937 | | | | | | |
| Fall River***** | 30.9 | 2062 (8) | | 12/7/2005 | | | **16 years, 3 months** | | none |

* Taunton lost EAB appeal 5/3/2016 on all grounds requirements of permit are in effect as of 7/01/2016.

** Bridgewater appealed 11/17/2016 (10 days late). Appeal voluntarily dismissed 4/07/2017. Bridgewater and EPA reached a settlement. Permit in effect on 5/1/2017.

* Taunton lost First Circuit Court appeal 7/09/2018.

TP - Somerset and Fall River located in the lower higher salinity portion of the estuary will likely only have TN limits and not have TP limitations.

* Smaller Facilities Include - MCI Bridgewater 0.55 MGD (TN - 33 lb/d); Oak Point 0.18 MGD (8 lb/d); Wheaton College has tied into MFN; Dighton Rehobeth Scholls and East Bridgewater H.S. are now using groundwater discharge systems

** Estuary Load based on plants discharging at 90% of flow limit during summer and an attenuation factor from 83 to 96% for all plants except Taunton and Somerset which discharge directly to the estuary with no attenuation reduction.

***Nominal concentrations (3, 3.7, 5, and 8 mg/L) were used to calculate mass (lbs/day) limit at design flow. The permits have a mass lbs/day limit only.

At the projected 0.9% of design summer flow the concentration limits are: 3.33 mg/L, 4.12mg/L, 5.55, and 8.89 mg/L.

At typical summer seasonal low flows of 70% of design flow the concentration limits are: 4.28 mg/L, 5.30 mg/L, 7.14 mg/L, and 11.43 mg/L

****EPA Gold Book Total Phosphorus freshwater instream criterion is 0.100 mg/L. No TP Limit for Taunton because TRWA sampling indicated instream TP levels up and downstream of WWTP in 2010 and 2011 were close to the criterion of 0.100 mg/L and tidal influence.

*****Fall River being lower in the estuary and having greater dilution has less nitrogen loading impact than the upstream WWTPs despite its larger flow. The city is still abating CSOs in the Northern part of the city and completing integrated facilities planning which will include phased nitrogen removal based on doing the most environmentally beneficial work first. After completion of a facilities plan that considers all options a schedule for needed plant upgrades/repairs, CSO abatement, and phased nitrogen removal should be included in a phased permit . An initial mass TN target based on 8 mg/l (2062 lbs/day limit) at a minimum, should be required with with a provision for upgrading if found necessary.