

Great Bay Total Nitrogen General Permit (GBTN GP) Presentation

March 11, 2021

Introduction To Topic

- National Pollutant Discharge Elimination System Permits
 - Regulate pollutants discharged to public waterways
 - Pipes (points sources) and from land (non-point sources)
- Great Bay Total Nitrogen General Permit
 - Regulates discharge of nitrogen



GBTN GP History

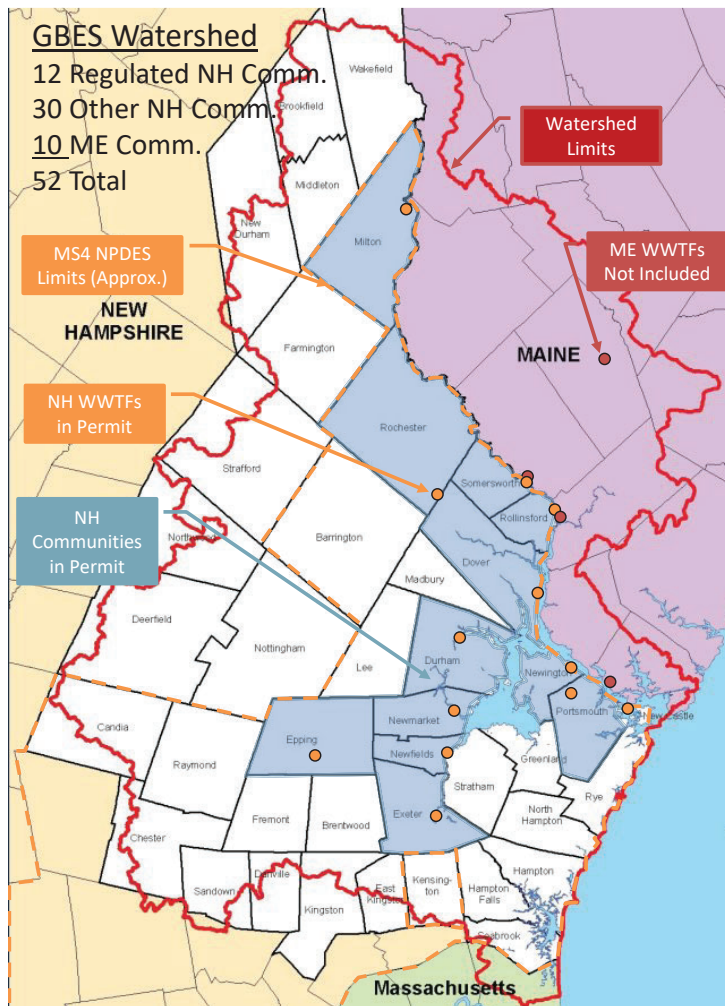
- Working On Regulatory Challenges Since 2007
- Innovative Regulatory Framework Presented by EPA
- Draft GBTN GP Issued January 2020
- Comments Submitted May 2020
- Final GBTN GP Issued November 2020



GBTN GP Overview

- Part 1: Area of Coverage Under Permit
- Part 2: WWTF Effluent Load Limits
- Part 3: Adaptive Management Framework
 - Intermunicipal Agreement
- Part 4: Opt-in By April 1, 2021





Part 1: Area of Coverage Under Permit

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Part 2: WWTF Effluent Load Limits

- Seasonal Rolling Average April Through October (7 month average)
- Portsmouth “Bubble” 341 lb/d For Both WWTFs

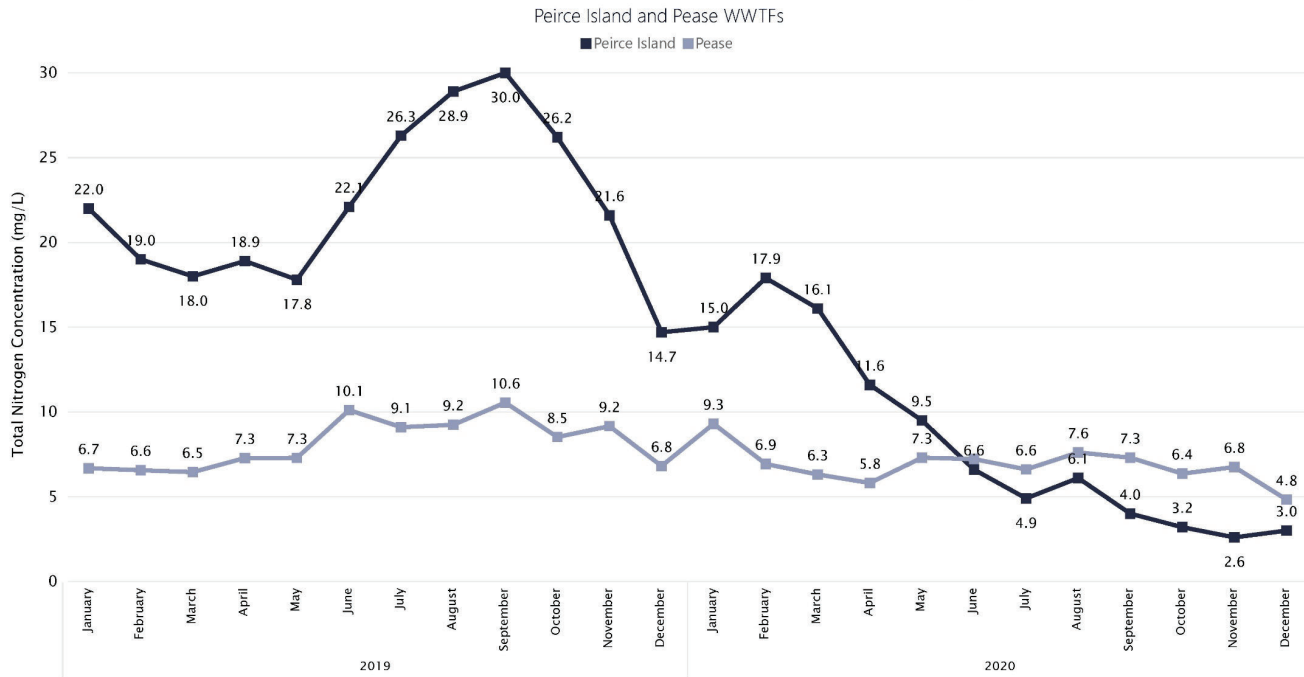
Excerpts from NPDES Permit No. NHG58A000, Page 5 of 10

7. The City of Portsmouth is the operator for both the Portsmouth and Pease ITP wastewater treatment facilities. The City shall report the rolling annual average load from each facility and compliance will be based on the sum of the discharges compared to the total load allocation of 341 lb/day (*i.e.*, 248 lb/day for Portsmouth plus 93 lb/day for Pease ITP).
3. The limit is a seasonal load limit (in units of average pounds per day) and shall be reported as a rolling average. The value will be calculated as the arithmetic mean of the monthly average load (in lb/day) for the reporting month and the monthly average loads (in lb/day) of the previous six months from April 1st through October 31st of each year (*i.e.*, rolling 7-month average). For example, the rolling average load for April 2022 will be the average of the monthly average loads for April 2022 and May through October of 2021.



Part 2: WWTF Effluent Load Limits

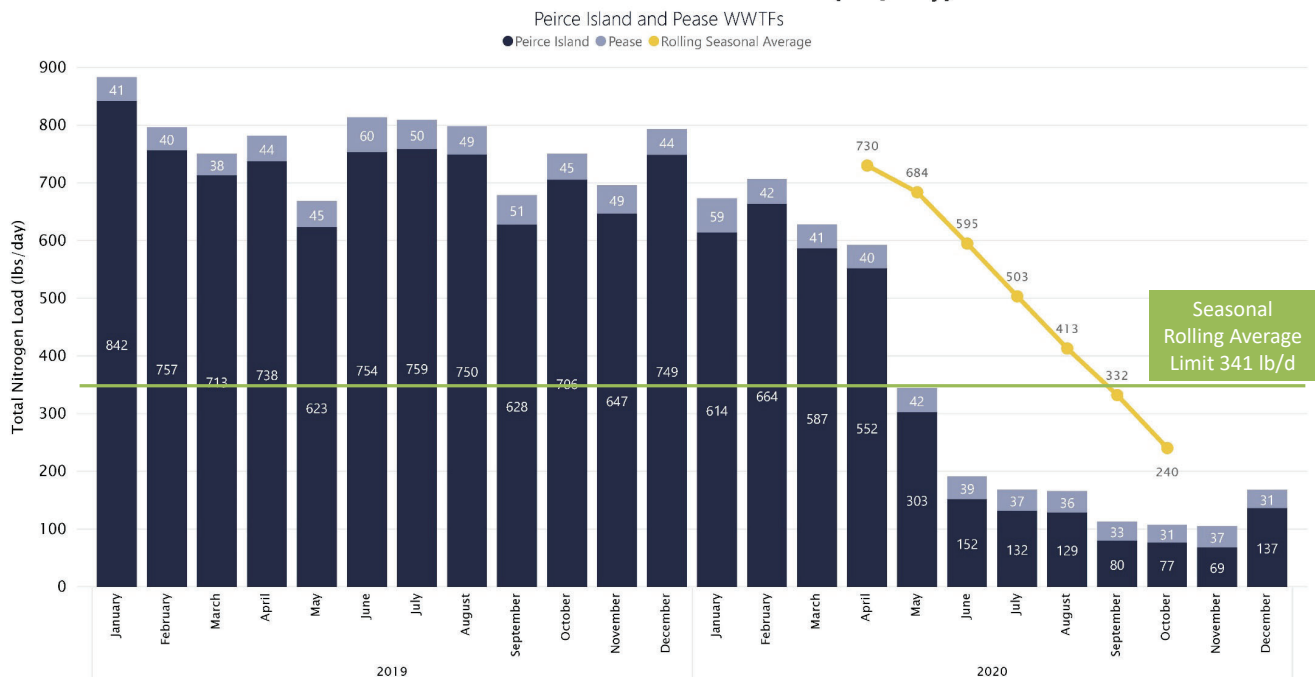
TOTAL NITROGEN EFFLUENT CONCENTRATION (mg/L)



Part 2: WWTF Effluent Load Limits

Total Nitrogen (lb/day) = avg monthly total nitrogen conc (mg/L) * avg monthly flow (MGD) * 8.345

TOTAL NITROGEN EFFLUENT LOAD (lbs/day)



Permit Compliance

- Opt-in
 - City will be in compliance with permit limit
- Do Not Opt-in
 - City will be in non-compliance with individual permits



Part 3: Adaptive Management Framework

- Estuary Water Quality Monitoring and Evaluation
- Pollution Tracking Using PTAP
- Nitrogen Reduction Planning and Implementation
- Review of Nitrogen End Point and TMDL



Adaptive Management Process

Adaptive management is an approach to natural resource management that emphasizes learning through management where knowledge is incomplete, and when, despite inherent uncertainty, managers and policymakers must act.

(Allen, C. and A. Garmestani. Adaptive Management. Chapter 1, Craig R. Allen, Ahjond Garmestani (ed.), Adaptive Management of Social-Ecological Systems. Springer Netherlands, Dordrecht, Netherlands, , 01-10, (2015)



Slide from EPA/DES presentation 3/8/19

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Adaptive Management And IMA

- GBTN GP Encourages Collaboration
 - Combined efforts
 - Combined resources
- Agreement Useful For Collaboration
 - Intermunicipal Agreement (IMA)



Intermunicipal Agreement (IMA)

- Permittees Who Opt-in Are Members
- Annual Meetings Are Held With All Members
 - Adopt a recommended annual financial contribution
 - Members contribute proportional to WWTF flow
- Executive Board
 - Point of communication amongst stakeholders
 - Administers and recommends annual efforts
 - Develop common documents
 - Portsmouth, Rochester, Dover, other communities

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Benefits Of Collaborating

- Intermunicipal Agreement Facilitates Collaboration
- Creates Efficiencies
- Signals To Regulators And CLF Collective Commitment

Staff Recommends City Enter Into Intermunicipal Agreement



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Reasons To Opt-in To GBTN GP

- EPA and DES Strongly Encouraging This Permit Structure
- Allows the City To Be In Compliance
- Adaptive Management Framework More Flexible
- Benefits City of Portsmouth Operations

Staff Recommends City Opt-in To The Great Bay Total Nitrogen General Permit



Questions