EXETER PUBLIC WORKS DEPARTMENT

13 NEWFIELDS ROAD • EXETER, NH • 03833-4540 • (603) 773-6157 •FAX (603) 772-1355
www.exeternh.gov

MEMO

DATE: February 14, 2020

TO: Russell Dean, Town Manager

FROM: Jennifer R. Perry, P.E., Public Works Director

RE: Draft Great Bay Total Nitrogen Permit

EPA Region I issued the Draft Great Bay Total Nitrogen Permit on January 7, 2020, for 13 New Hampshire wastewater treatment facilities that discharge treated wastewater containing nitrogen within the Great Bay watershed. The 60 day public comment period ends March 9, 2020; a public hearing is scheduled for Wednesday, February 19 at 6 pm at the NHDES Pease Office, 222 International Drive, Suite 175, Portsmouth. The draft permit, appendices and fact sheet are available at https://www.epa.gov/npdes-permits/draft-great-bay-total-nitrogen-general-permit.

The 13 wastewater treatment facilities (WWTF) subject to the draft nitrogen permit are Exeter, Rochester, Portsmouth, Dover, Durham, Somersworth, Pease ITP, Newmarket, Epping, Newington, Rollinsford, Newfields, and Milton. The discharge of all pollutants other than nitrogen shall continue to be covered under each WWTF's individual NPDES permit. The towns of Exeter and Newmarket already have effluent limits for total nitrogen in their individual permits which are both expired; both Towns have submitted timely applications for permit renewal. The Great Bay TN general permit represents the reissuance of the authorization to discharge for nitrogen only.

The permit uses a total nitrogen load threshold of 100 kg/hectare/year to the Great Bay estuary and includes WWTF limits and optional measures to reduce non-point source and stormwater point source loads. The 100 kg ha^{-1} yr^{-1} does not account for reductions in atmospheric deposition of nitrogen.

The permit establishes an annual nitrogen load allocation for the Exeter WWTF of 108 pound/day. This load allocation is based upon the 2012 – 2016 average flow of 1.61 MGD at 8 mg/L, which is essentially a "hold the load" calculation.

Non-point source and stormwater point source load reduction targeted at 45% over 23 years:

Years	Reduction	Annual Cost	Notes
3 – 8	11%	$1.8 M	Fertilizer program, adv septic
8 – 13	22%	>$5 M	Likely upgrade WWTF
13 – 18	33%	not possible	Upgrade WWTF
18 – 23	45%	not possible	Upgrade WWTF