

EPA RESPONSE TO COMMENTS NPDES PERMIT NO. MA0100633
LOWELL REGIONAL WASTEWATER UTILITY
LOWELL, MASSACHUSETTS
SEE COMMENT AND RESPONSE 62 BELOW

Comment 62

We ask that the LRWF take steps to reduce the amount of Per- and polyfluoroalkyl substances (PFAS) discharged from the facility. Significant amounts of landfill leachate from the Turnkey landfill in Rochester, NH that contains PFAS are discharged to the Merrimack River at the Lowell Wastewater Treatment Plant (Lowell Regional Wastewater Utility). Waste Management, Inc., the owner of the Turnkey landfill, has an Industrial Discharge Permit with Lowell to accept the leachate from its Turnkey landfill, which allows Waste Management to truck up to 100,000 gallons per day to the Lowell WWTP. Leachate from Turnkey has been tested for PFAS at very high levels, including: PFOA 8200 ppt, PFOS 430 ppt, PFNA 330 ppt, and PFHxS 810 ppt. The waste trucked

from Turnkey to Lowell includes leachate collected from water permeating the landfill and other liquid and solid wastes produced at the landfill. Turnkey has a reverse osmosis system to remove PFAS from its leachate, but has historically sent untreated wastes to Lowell. Some of these wastes sent to Lowell contain very high amounts of PFAS because they include “reject” water that does not go through Turnkey’s reverse osmosis system, as well as the solids that are trapped by the reverse osmosis system. These liquid and solid wastes are not tested for PFAS before being trucked to Lowell.

Response 62

EPA encourages LRWU to take steps to reduce per and polyfluoroalkyl substances from industrial users that are discharging directly to the treatment plant and monitor these compounds in their effluent. There are no specific water quality criteria for the perfluorinated compounds; however, EPA reserves broad discretion to ask for additional information pursuant to Section 308 of the CWA and may utilize this authority during the permit term if facts are brought to its attention that would warrant that course of action, including work on the development of per and polyfluoroalkyl criteria.

In February 2019, EPA published an action plan, “EPA’s Per-and Polyfluoroalkyl Substances (“PFAS”) Action Plan (the Action Plan)”¹⁴. The PFAS Action Plan identifies EPA short-term actions, longer-term research, and potential regulatory approaches designed to reduce the risks associated with PFAS in the environment¹⁵. The EPA Action Plan identifies wastewater effluent as a common source of PFAS and drinking water as a common source of exposure to the population.

As part of the EPA’s statutorily-required Effluent Guidelines planning process, the EPA has reviewed readily-available information about PFAS surface water discharges to identify industrial sources that may warrant further study for potential regulation through national Effluent Limitation Guidelines and Standards (“ELGs”).

In 2016, EPA issued a drinking water health advisory of 70 part per trillion (0.070 µg/L) for PFOA and PFAS. The 1996 Safe Drinking Water Act amendments requires EPA to sample up to 30 unregulated contaminants in public water systems once every five years. The Third Unregulated Contaminant Monitoring Requirement (“UCMR 3”) rule for Public Water Systems required public water supply systems to submit data on 6 perfluorinated compounds (PFOS, PFOA, PFNA, PFHxS, PFHpA and PFBS) from 2013 to 2015. PWS were required to sample at the entry point to the distribution system and at a frequency of 4 consecutive quarters for surface water systems or groundwater under the direct influence of surface water. The minimum reporting levels range for these compounds were from 0.01 µg/L to 0.090 µg/L. The perfluorinated compounds were not detected in any of the water treatment plants downstream of the LRWU.

In light of the above data, the Final Permit does not require monitoring for these pollutants during this permit cycle but EPA may require monitoring in a subsequent permit.

¹⁴https://www.epa.gov/sites/production/files/2019-02/documents/pfas_action_plan_021319_508compliant_1.pdf

¹⁵ EPA’s Per-and Polyfluoroalkyl Substances (PFAS) Action Plan, page 8.

EPA recommends the LRWU work with dischargers in their industrial pretreatment program to reduce per-polyfluorinated compounds in process wastewater discharged to the treatment plant.

G. Comments from Julia Blatt, Executive Director, Massachusetts Rivers Alliance and Caitlin Peale Sloan, Senior Attorney, Conservation Law Foundation on July 23, 2019:

Comment 63

We strongly support the inclusion of a total phosphorous average monthly limit of 1.08 mg/L. The MassDEP's Massachusetts Year 2014 Integrated List of Waters (2014 Integrated List), the 303(d) list, includes the Merrimack River, Segment MA84A-04 and the Spicket River, Segment MA84A-10 as Massachusetts Category 5 Waters, with the Merrimack River impaired for total phosphorous. Given these significant impairments, we were pleased to see the inclusion of a total phosphorous limit in this permit.

Response 63

Comment noted.

Comment 64

We support the addition of total Kjeldahl nitrogen, total nitrate/nitrite, and total nitrogen weekly (April - October) and monthly (November - March) monitoring and reporting, but we recommend that EPA proposes a total nitrogen average monthly limit for the permit. As noted in the Fact Sheet, nitrogen levels in the Merrimack River estuary are higher than is acceptable for a healthy nearshore coastal system. Recent nitrogen data collected by CDM Smith in 2014 and 2016 in the estuarine portions of the Merrimack River indicates elevated total nitrogen and chlorophyll 'a' levels. In addition, in 2012, the Gulf of Maine Council on the Marine Environment reported that the Merrimack was the second greatest contributor of nitrogen and phosphorus to the Gulf of Maine. We disagree that any additional reasonable potential analyses need to be conducted for this criterion. Delaying reductions in nutrients is not a viable strategy as noted by the EAB: "Due to the tendency of nutrients to recycle once released into the system and contribute to future impairment, delay in addressing point source nutrient contributions will only compound the challenges in restoring receiving waters" (Upper Blackstone Water Pollution Abatement District, Determination on Remand, EAB, 7/7/2010, p. 3). EPA should move forward with establishing a total nitrogen limit. In addition, as EPA moves forward with other CSO NPDES permits on the Merrimack, we remind EPA that discharge permitting on the Merrimack River in both Massachusetts and New Hampshire should be consistent and ensure that the concentrations and loads of nutrients discharged in the river system as whole will prevent the creation of eutrophic conditions both in the river and in the lower Merrimack estuary.

Response 64

As EPA evaluated both phosphorus and nitrogen impacts from this discharge, it notes that there is an inherent distinction in the approach to ensure the attainment of water quality standards and evaluate eutrophic impacts from each nutrient. Typically, phosphorus is the limiting nutrient in freshwaters, such as the Merrimack River immediately downstream of this discharge. Nitrogen is the limiting nutrient in downstream estuarine segments, such