Connecticut River Conservancy

Clean water. Healthy habitat. Thriving communities.

15 Bank Row, Greenfield, MA 01301

Michele Duspiva
U.S. Environmental Protection Agency – Region 1
5 Post Office Square, Suite 100 (06-4)
Boston, MA 02109-3912
Telephone: (617) 918-1682
Email: Duspiva.Michele@epa.gov

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Subject: Amherst Wastewater Treatment Plant, Hadley, MA, MA0100218

Michele Duspiva,

I am submitting comments on the revised draft National Pollutant Discharge Elimination System (NPDES) permits for the Amherst Wastewater Treatment Plant (WWTP) on behalf of the Connecticut River Conservancy (CRC), formerly the Connecticut River Watershed Council. CRC is an environmental nonprofit dedicated to protecting the entire Connecticut River valley through initiatives that support clean waters, healthy habitats and thriving communities. The Amherst WWTP discharges into the Connecticut River, and so is of interest to us. We extend our gratitude to the staff at the Amherst WWTP for their work to protect and restore the Connecticut River, and we thank staff at DEP and EPA for their work to draft this permit as well as your consideration of our comments below. We had the chance to speak with staff at the Amherst WWTP prior to submitting these comments and appreciate the insights they provided. The Amherst WWTP has a unique and challenging role in maintaining water quality in the Connecticut River, as the fluctuating population (due to the arrival and departure of students at UMass Amherst) creates highly variable inflow throughout the year.

1. **E. coli (Escherichia coli) limitations and monitoring requirements**
   In the 2012 final permit for this facility, CRC (CRWC at the time) expressed concerns about the impact of continuing impairments for existing uses due to E. coli in this river segment, possibly compounded by the proximity of the Hatfield WWTP upriver of the Amherst outfall. This was of particular concern due to the high rate of both primary and secondary contact recreation in this area and the number of E coli. violations from the Amherst WWTP in the previous review period. EPA responded to these concerns with the following: "EPA believes that [bacteria] limits are protective of existing uses in the Connecticut River. The facility should make every effort to avoid further violations of their bacterial limits." In the most recent review period, the Amherst WWTP exceeded bacteria limits in QRT 2, 6, 7, 10 and 11 with violations ranging between 174% - 492%. These violations came at a time of year when the risk to recreationists on the river is highest. From our conversation with Amherst WWTP staff, we understand that these events may be due to unexpected and historically high rainfall events. It's our hope, moving forward, that the facility can work to better understand the specific causes of these exceedences and take appropraite steps to prevent further violations in the future. To that end, CRC requests that the facility and EPA consider an increase in monitoring frequency, which we think could provide insights into some of reasons for bacteria

exceedance. The NPDES Permit Writers' Manual states[1], "The monitoring frequency might need to be adjusted to reflect the compliance history of the facility. A facility with problems achieving compliance generally should be required to perform more frequent monitoring to characterize the source or cause of the problems or to detect noncompliance." Finally, we note that the Northampton WWTP, which discharges just downstream of the Amherst WWTP, has year-round effluent limitations for bacteria. Given the proximity of these facilities, as well as the year-round recreation that occurs in this segment of the Connecticut River, we believe it would likewise be reasonable to have year-round bacteria limitations at the Amherst WWTP.

2. **Chlorine**
   The Amherst WWTP recorded three violations of the chlorine limitations in the last review period. EPA's fact sheets on wastewater technology lay out the benefits and disadvantages of chlorination and ultraviolet disinfection systems at WWTPs. We understand that the facility may undergo some other upgrades in the near future and ask that EPA and Amherst WWTP consider a feasibility assessment to understand if a UV disinfection system may be suitable for the Amherst WWTP or could be paired with other facility upgrades.

3. **pH**
   CRC supports the requirement for the facility to submit a pH study in order to continue their expanded range with a minimum of 6.0 S.U.. The original request for this expanded range is now a quarter of a century old, and while we understand that this switch may require an in-depth review of pH data and the installation of a new system, we encourage EPA and the facility to transition to the MA WQS range of 6.5 - 8.3 S.U.

4. **Nitrogen**
   CRC supports the permit requirement to evaluate and implement alternatives to optimize nitrogen removal. While the annual report will provide information on optimization activities and relevant data, the requirement to minimize is not defined numerically. It would be useful to establish measurable benchmarks for the facility to minimize TN discharge over the life of the permit, which may result in a more substantial reduction in TN loading. We appreciate that Amherst has already undertaken significant investments to optimize nitrogen removal and has worked to meet the goals set by EPA in the last permit. For this and future permits, numeric benchmarks may reduce the opacity of this permit requirement and create measurable goals for the facility.

   CRC notes that it would be helpful if DEP and EPA could include in the fact sheet links to any annual reports that the facility submits regarding nitrogen optimization.

   When considering the tiered structure for TN allocations, EPA notes the decision is based on technical and environmental factors as well as equitable considerations. Can EPA expand on what were considered in terms of "equitable considerations?" The three largest facilities in the Connecticut River watershed (Springfield, Holyoke and Chicopee) are in communities with lower median household incomes than the next two largest facilities in the watershed, Northampton and Amherst.

[1] https://www.epa.gov/npdes/npdes-permit-writers-manual

How did EPA go about calculating the relative ability of larger communities with lower median household incomes to pay for facility upgrades?

Given that the CCMP goal is to reduce nitrogen pollution from out of basin sources, such as MA WWTPs, it seems logical that future permits for the Amherst WWTP should work towards this stated goal. While CRC understands the optimization will do this to some extent, because the Amherst WWTP is already well within compliance of its TN limit of 474 lb/day, a slight reduction in this limit will work to further achieve the goals of the CCMP by ensuring that the TN limit remains closer to the 266-383 lb/day limit, rather than increasing to the full extent of the discharge allowance. EPA stated in the act sheet, "In order to ensure that water quality standards are met, EPA has determined that, at most, TN should be no greater than that resulting from nitrogen currently being discharged from all sources." We understand this approach and appreciate the work done at the Amherst WWTP to reduce nitrogen loading from this facility; however, the full realization of their TN limitation will represent an increase in nitrogen currently being discharged and, again, it would be helpful to provide the facility with benchmarks to achieve via optimization.

5. **Phosphorus**

EPA is proposing to eliminate phosphorus monitoring given the facilities compliance history and the downstream concentration falls below the target limit. The NPDES Permit Writers' Manual indicates that a host of criteria are to be used to make this decision, such as the effect of the pollutant on the receiving water and characteristics of the pollutant discharged. EPA establishes in the fact sheet that phosphorus can prevent attainment of designated uses and adopts a preventative approach to nutrient loading because of the cyclical nature of eutrophication. CRC understands the decision to not propose a phosphorus limit, but requests that the monthly phosphorus monitoring requirement of the 2012 permit be carried forward as a preventative measure, in line with EPA's protective approach.

CRC notes that the data used to determine reasonable potential for phosphorus is 15 years old. This highlights the need for DEP to expand nutrient monitoring to provide recent data to inform these permits. Given that phosphorus monitoring will be required in the following permit, it does not seem logical to forgo monitoring for the life of this permit. As WWTPs work to reduce nutrient loading, having a continuous dataset for nutrients is critical to understand the role these facilities play in improving the health of the Connecticut River and LIS. Data from 2008 is not recent enough to reliably inform these permits. Accordingly, we request that EPA continue the monitoring requirement for phosphorus under this permit.

6. **Whole Effluent Toxicity**

The 2008 permit reduced WET testing to just two times per year on July 31 and November 30. At the time, CRWC opposed this reduction and requested testing 4 times per year. Given the size of this facility and the nature of the discharge, we believe WET testing four times per year is a reasonable frequency and will not impose an undue burden on the WWTP.

7. **Endangered Species Act**

EPA identified only two federally endangered species in their review, including the northern long-

eared bat and the shortnose sturgeon (SNS). The threatened Puritan tiger beetle (*Ellipsoptera puritana*)[2] and the endangered Dwarf wedgemussel (*Alasmidonta heterodon*)[3] are found in the area either directly adjacent to, or downstream of, the Amherst WWTP outfall, yet these species are not mentioned in the permit. In response to CRC's comments on the 2012 draft permit, EPA indicated that because the Puritan tiger beetle is a terrestrial species, a consultation with the appropriate federal agency was not warranted; yet the 2023 draft permit includes discussion of a terrestrial species, and we welcome this addition. We request that EPA undergo biological assessments or consultations with the appropriate federal agencies to determine the impact of this facility on Dwarf wedgemussels and Puritan tiger beetles.

CRC appreciates EPA's undertaking of a biological assessment (BA) regarding how SNS may be impacted by this discharge. It is unfortunate that the BA is being sent to NOAA during the public comment period, preventing the public from commenting on the results of the BA and the determination.

8. **PFAS**
   CRC supports the efforts of EPA and DEP to characterize PFAS inputs to river systems. We support the quarterly influent, effluent, and sludge testing requirement. We understand that WWTPs are not yet equipped to limit or treat PFAS and support EPA's intent to use these data to ensure the future permits will continue to protect designated uses.

9. CRC is supportive of the requirement to create an operation and maintenance plan to account for major flood and storm events. In the context of a rapidly changing climate, this requirement seems reasonable for WWTPs to be best prepared for a potential increase in the severity and/or frequency of major storm events. We appreciate WWTP staff providing us with more information on what work, particular to I/I, took place over the life of the previous permit. It would be useful if these annual reports were more easily accessible through the fact sheet in the future.

CRC appreciates the opportunity to provide comments on the draft permit. I can be reached at kwentling@ctriver.org or (413) 834-9777.

Kelsey J Wentling

[2] https://ecos.fws.gov/ecp/species/6073
[3] https://ecos.fws.gov/ecp/species/784