



MARK A. YOUNG  
EXECUTIVE DIRECTOR

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Date: July 22, 2019

Subject: Renewal of Lowell Wastewater NPDES Permit No. MA0100633

Ms. Finegan:

On behalf of the City of Lowell, the Lowell Regional Wastewater Utility (Lowell) is submitting the attached comments regarding the referenced NPDES permit renewal. Although Lowell appreciates the opportunity to comment on our draft permit, we are reiterating our request for additional time to comment on this extraordinarily important document.

Our NPDES permit is the primary regulatory mechanism for the operation, maintenance, and management of Lowell's wastewater transport and treatment system, one of the largest systems in Massachusetts. The permit also regulates four surrounding towns (Chelmsford, Dracut, Tewksbury, and Tyngsborough) that are listed as co-permittees. This permit has profound implications for the communities that we serve, and the environment that we protect. To illustrate the consequences of an inadequate comment period, Lowell has not had an opportunity to consult with our co-permittees regarding this draft permit. As such, Lowell is requesting the permit comment period be extended for sixty days (until September 23, 2019).

In the meantime, we offer our comments on Lowell's draft permit, with the caveat that more time is needed in order to thoroughly review and thoughtfully comment on this permit. During our initial review of the draft permit, Lowell has identified several areas of concern, including: unnecessary and outdated requirements, inconsistencies with similar NPDES permits, the appropriateness of general water quality standards compliance language, certain permit limits that conflict or compete with Lowell's wet-weather flow treatment goals, the inclusion of a Phosphorous permit limit, and a lack of authorization for the permittee to implement CSO control policy.

Lowell believes that these issues have substantial interest to the public. Therefore, we are requesting a public hearing for this draft permit. Additionally, Lowell proposes a meeting with EPA and MassDEP to discuss our comments and identify a potential path for moving forward with this permit.

Exhibit 6

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TEWKSBURY TYNGSBORO

In the event that our concerns could be satisfactorily addressed through an agreement that might come out of such a meeting, followed by the issuance of a revised draft permit to reflect such revision, Lowell would likely waive its right to a public hearing.

Since our last NPDES permit was issued in 2005, Lowell has made considerable progress to improve the Duck Island wastewater treatment facility and the collection system that transports wastewater from the communities that we serve to the treatment facility. Currently, we are in the midst of a \$16M upgrade to the Duck Island Clean Water Facility. This upgrade, which will be completed in 2020, features improvements that optimize peak flow treatment, increase process reliability, and strengthen our ability to consistently meet permit limits.

These objectives will be achieved through major equipment replacement or repair, including an influent pumping upgrade, new clarifier mechanisms, new sludge pumps, a modified aeration process, enhanced chemical addition, and a revamped SCADA system that monitors and controls the facility's processes. In addition to these treatment facility upgrades, Lowell is also constructing a \$6M improvement project for our satellite facilities, both sewer pump stations and CSO diversion stations, that will improve the reliability of our wastewater transport system. Improvements consist of new back-up power generators, as well as various structural, mechanical, and electrical upgrades.

Lowell is also completing an updated Combined Sewer Overflow (CSO) Long-Term Control Plan, as part of an Integrated Plan that is one of the first to be developed under the newly enacted Clean Water Act Section 402(s). These projects and programs are worthwhile and challenging initiatives – especially for a mid-sized utility with limited financial resources. Since 2003, Lowell has invested nearly \$150 million in CSO control and other capital improvements that have enabled us to achieve an 80% reduction in typical year CSO discharge volumes.

This impressive progress is a source of great pride for Lowell. We understand our role in providing clean water as a precious resource, while minimizing the impact of our facilities on the communities that we serve and the environment that we protect. We acknowledge the need for additional CSO controls and even more reliable wastewater transport and treatment systems. Lowell is committed to continued improvement in all areas of its facility operations, system maintenance, and program management. With this in mind, we are pleased to share the news that Lowell's City Council recently authorized funding for a \$112M capital improvement program that will allow Lowell to meet these obligations moving forward.

Considering the passage of time and the many changes to our facilities since our last permit renewal, we have conducted a careful review of the draft permit, to the extent that the limited comment period permits, with substantial assistance from our consulting team. Our team believes that the draft permit contains legacy language that is obsolete, and requirements that are no longer warranted for a variety of reasons. Some provisions are no longer warranted because of changes in law, regulation, or due to errors in our 2005 permit. Other requirements are no longer necessary because of our consistent record of compliance. An example of the latter instance is a requirement for quarterly WET tests; instead, we propose a semi-annual requirement for this test.

Lowell believes that the draft permit also needs to be restructured to more effectively support maximization of wet weather flow treatment; this is an objective that we can all agree is preferable to discharging untreated volumes of CSOs. Two examples of provisions that we believe require restructuring, in order to facilitate maximization of wet-weather treatment, are the daily maximum TSS and CBOD limits, as well as the treatment plant flow limit. These limits conflict with our goal of maximizing peak flow treatment. Most NPDES permits for CSO facilities do not include daily maximum and flow limits for this very reason. To that point, we have experienced non-compliance with both the flow limit and daily maximum limits – due to our efforts (as EPA has acknowledged) to maximize flow through the treatment facility during wet weather.

Evidently, EPA recognized this conflict when it modified Lowell's flow limit in an administrative order dated September 30, 2010 (Paragraph IV.5). This paragraph states that "... *the limitation for Annual Average Flow through the WWTF shall be monitor only*", and further states that "*the Permittee shall continue to maximize flow to the WWTF in accordance with the requirements of Part I.F of the NPDES Permit*".

Maximizing wet weather flow through the treatment facility makes obvious sense because such flows receive treatment (especially disinfection); whereas, if we do not maximize flows, those volumes would be released as untreated CSO discharges. This reality is undoubtedly the reason that maximizing peak flow through the treatment facility is one of the Nine Minimum Controls in the CSO policy. Thus, we ask that EPA remove or revise permit requirements that function as obstacles to our ability to maximize wet weather flows through the Duck Island treatment facility. In our comments on the draft permit, we have identified several specific obstacles, along with suggestions for addressing these obstacles.

Similarly, the permit should also address Lowell's peak flow treatment facilities and programs, and incorporate by reference our current high flow management plan. This plan details how we are optimizing flows through inline storage and secondary bypass in response to wet weather flows. Notably, we have identified several critical inconsistencies between the Lowell draft permit and other recent NPDES permits for similar utilities. We believe these inconsistencies should be addressed and resolved in revised draft permits, including ours. It is also important to mention Lowell's objection to the inclusion of a Phosphorous limit in the draft permit. In our comments below, we describe in detail our concerns with this permit limit, in terms of timing, derivation, and appropriateness.

As previously mentioned, because several of the issues that we raise have a significant degree of public interest, we also request that EPA hold a public hearing on this draft permit. Lowell firmly believes that the fundamental issues described in our comments warrant a public hearing. The inconsistencies among the pending draft renewal permits also support the need for a public hearing.

Other issues that warrant a public hearing include the need to ensure that our permit and those for other CSO communities are consistent with CWA Section 402(q), the incorporation of high flow management plans to enable maximization of peak flow treatment, the appropriateness of general water quality standards compliance language, as well as daily maximum limits for treatment facilities serving combined sewer systems. Please note that to the extent a meeting with EPA and MassDEP results in an agreement to revise our draft permit, Lowell would likely withdraw this hearing request.

Lowell appreciates your consideration of the attached comments and we look forward to the opportunity to discuss our comments with EPA and MassDEP. Please let me know if you have any questions or need any additional information.

Sincerely,



Mark A. Young  
Executive Director  
Lowell Wastewater Utility  
978-674-1675

Enclosures:

Lowell NPDES Draft Permit Comments

Copy:

Ellen Weitzler, EPA Region 1

Claire Golden, MassDEP Northeast Section

Mike Stuer, Lowell Wastewater Utility

Co-Permittees (Chelmsford, Dracut, Tewksbury, and Tyngsborough)

Paul Calamita, AquaLaw

Saya Qualls, Hazen & Sawyer

**City of Lowell Comments on Draft NPDES Permit No: MA0100633**

**Total Phosphorous Limit (Page 3)**

We support protecting the Merrimack River from excessive phosphorous loadings and are taking a proactive approach to accomplish this objective – such as our ongoing facility upgrade that will improve our ability to reduce phosphorous loadings – as well as additional future improvements that may be warranted. However, we have concerns about the phosphorous limit proposed in our permit.

First, we don't understand why EPA has not adopted its "Gold Book" value through notice and comment rulemaking. We believe it is both necessary and appropriate for EPA to provide the public with the safeguards of rulemaking to evaluate the appropriateness of the Gold Book limits along with how those criteria will be implemented.

Rulemaking is particularly warranted given that EPA is imposing the same Gold Book limit on all of the dischargers to the Merrimack River. It is clearly being applied as a binding norm and, therefore, meets the definition of a rule. We also note that in addition to the opportunity for stakeholders to evaluate the appropriateness of the Gold Book criteria in notice and comment rulemaking, such rulemaking brings additional safeguards such as compliance with various Executive Orders and financial impact analyses.

We note that EPA's 2010 Permit Writers' Manual, in Section 6.4, provides guidance on assessing reasonable potential using water quality models. For conservative pollutants, EPA recommends the use of steady-state dilution models; however, for nutrients, EPA instead recommends, "modeling that accounts for biological activity or reaction chemistry."

EPA's dilution-based approach for nutrients, as described in Lowell's draft permit, is inconsistent with EPA's own permitting guidance. Oftentimes, a more appropriate water quality model that considers reactivity is not available; however, Lowell is currently developing a Qual2K reactive model for the Lowell reach of the Merrimack River. Once calibrated, the model's output could be used to predict instream conditions for response variables associated with nutrients, such as dissolved oxygen and algal growth, thus supporting a more accurate evaluation of reasonable potential for the Duck Island discharge to cause or contribute to impairment associated with nutrients.

Accordingly, EPA should:

- As an interim measure, EPA should impose a Total Phosphorous loading limit for Lowell that is based upon our 2.24 mg/L multi-year annual average concentration (from EPA's Fact Sheet) times our 32 MGD design flow.
- Require Lowell to optimize our ongoing Duck Island treatment facility upgrade, and then report to EPA on our facility's phosphorous removal capability. A two-year timeframe is necessary in order for Lowell to complete its current phosphorous reduction improvements, and optimize this system.
- Include a reopener in the permit that would incorporate any new limit based upon site-specific data acquired from Qual2K modeling.
- Impose a compliance schedule for any limit based upon the water quality model, consistent with the schedule for same in Lowell's approved CWA Section 402(s) Integrated Plan.

We disagree with the dilution-based approach that EPA utilizes to justify the inclusion of a phosphorous limit in Lowell's draft permit. In addition, Lowell has several other concerns with the phosphorous limit in our draft permit, as follows:

- Most permitting agencies base loading limits for conservative pollutants, such as metals, on the facility's design flow. EPA's approach, which uses the lowest monthly average, is overly conservative, given that nutrient impacts tend to be long-term, as opposed to the potentially acute impacts associated with conservative (metal) pollutants.
- EPA's approach of developing limits based upon the plants' lowest monthly average flows is grossly unfair to CSO systems because it discounts the wet weather flows that we must treat.
- CSO systems like Lowell's should be given an additional loading based on the phosphorous loadings in their CSO discharges. As CSOs are reduced, these loadings should be shifted to the POTW. Another approach would be to exclude from the annual average calculation our concentration/loadings on any day when our treatment facility flows exceed 32 MGD. This is particularly appropriate given that EPA is using the 7Q10 rather than a longer term flow value to establish this twelve month rolling average limit.
- For these reasons, we believe that the mass calculation for a phosphorous loading limit in the permit is incorrect. The permit would give us 276 pounds of phosphorous per day using the lowest monthly average effluent flow. We think the correct approach is to base our loading on our design flow (32 MGD). That approach would give us 288 pounds per day.
- We also believe that EPA should give us a revised allocation that reflects the anticipated instream reductions that will result from the upstream facilities' reducing their phosphorous loadings.
- It is clearly erroneous to base our annual average total phosphorous limit on a 7Q10 river flow value. The 7Q10 condition occurs 1-3 percent of the time, so it is logically untenable to apply that flow as the basis for an annual average limit. While acknowledging MassDEP's regulations specify the use of the 7Q10 for aquatic life criteria, the narrative criteria for nutrients are related to "nuisance conditions", as opposed to acute impacts on fish and aquatic life. Therefore, within the existing regulations, there is flexibility in determining appropriate hydrologic conditions for establishing nutrient limits. We also note that the Permit Writers' Manual, in Section 6.1, suggests that states adopt seasonal or annual averaging periods for nutrients, as opposed to conditions set out for toxic pollutants. For these reasons, we believe that the harmonic mean or annual average flow is a more appropriate basis for characterizing stream flow in a reasonable potential analysis.

### **Effluent Flow Limit (Page 3)**

The effluent flow limit must be removed from the permit. It is completely unnecessary to protect public health or the environment. The concentration and/or mass limits do that. There is no circumstance where a flow limit is necessary. Because of this reality, most states (and their EPA Regional Offices) do not impose flow limits (certainly not on CSO facilities). We note that EPA Headquarters and Region 3 do not impose a flow limit for the District of Columbia's Blue Plains treatment facility. Thus, it is clear that NPDES permits can legally and technically be issued without flow limits.

Moreover, flow limits are counterproductive for CSO facilities because such limits conflict with the technology-based requirement of the Nine Minimum Controls to maximize flow (not comply with an unnecessary flow limit) through the treatment facility. Why would we ever impose a restriction on how much flow we can take through the treatment facility? Accordingly, a flow limit will cause us to reduce wet weather flows to the Duck Island facility so that we don't exceed a permitted flow limit. This is not a hypothetical concern – we have exceeded the flow limit in two of last five years.

We thought EPA understood this reality and the unintended consequences from our flow limit when EPA agreed to impose interim “monitor only” limits for flow in our 2010 administrative order (Order Docket 010-026; 9/30/10). We anticipated that the “monitor only” approach would be carried over into this draft permit. We continue to believe that is the correct approach. This is not an issue involving faulty operation of our facility, but rather of conflicting permitting provisions that must be resolved.

We also note that concerns about inflow and infiltration are misplaced in terms of an attempt to justify inclusion of a flow limit. As a CSO community, Lowell's long-term control plan will address any cost-effective opportunities to remove excessive inflow and infiltration. A flow limit is far too removed from that planning and will, in effect, limit Lowell's ability to cost-effectively comply with the CSO Policy because such a limit restricts Lowell's use of its treatment facility capacity to manage peak wet weather flows. This will make Lowell's CSO control program unnecessarily more expensive and will result in greater untreated sewer overflows.

We also question EPA's legal authority to limit the flow that can be discharged from a POTW. In one of the most significant Clean Water Act decisions in the last thirty years, the U.S. District Court for the Eastern District of Virginia issued an opinion holding that EPA lacks authority under the Clean Water Act to regulate flow in a TMDL. Fairfax County and the Virginia Department of Transportation (VDOT) appealed a TMDL issued by EPA establishing flow limits for Accotink Creek in Northern Virginia. The flow limits were intended to reduce the amount of sediment in the creek. Fairfax and VDOT successfully argued that the Clean Water Act clearly denies EPA the authority to regulate flow, even as a surrogate for a pollutant such as sediment.

United States District Court Judge Liam O'Grady conducted an analysis under *Chevron* Step 1, concluding that, under the plain language of the statute, EPA unambiguously does not have authority to establish TMDLs for non-pollutants, such as flow, as surrogates for pollutants. The court invalidated any interpretation of EPA's regulations that would allow the agency to regulate non-pollutants such as flow. The decision went on to find that, even with the deference that would be accorded to EPA in a *Chevron* Step 2 analysis, EPA's interpretation of the Clean Water Act to allow the regulation of flow would be an impermissible construction of the statute [*Virginia Department of Transportation et al v. United States Environmental Protection Agency et al.*, case number 1:12-cv-00775].

While we feel strongly that there should be no flow limit whatsoever – because it provides no environmental protection (keep in mind that the vast majority of POTW permits in the country do not include flow limits) – if EPA were to insist on a flow limit, it should at least be set at a level that won't prevent our maximization of wet weather flows.

For example, rather than using our long-term average flow of 32 MGD, the permit limit could be based on a higher, peak flow value or simply allow us to exclude from the calculation any flows greater than 32 MGD that occur in response to wet weather events. Nevertheless, Lowell retains the right to challenge the inclusion of even such modified flow limits.

Unless the flow limits are removed, Lowell will either have to challenge the permit in order to be able to continue to maximize wet weather flow through the treatment facility, or we will have to modify our high flow management plan to ensure that we throttle back flows at the treatment facility in order to ensure compliance with the flow limit.

Finally, we note that flow is not a pollutant under Massachusetts law either [*see 314 CMR 3.19*].

### **Daily Maximum Limits for CBOD and TSS (Page 3)**

The daily maximum limits for CBOD and TSS are technology-based limits. They are legally inconsistent with EPA's regulations, which require monthly and weekly average limits, unless impracticable [*40 CFR § 122.45(d)(2)*]. The development of average monthly and weekly permit limits is clearly not impracticable, because EPA has, in fact, imposed them in the permit as well. We also note that the vast majority of POTW permits in the country have monthly/weekly only limits for CBOD and TSS – including facilities such as the District of Columbia's Blue Plains treatment plant (permit issued by EPA Headquarters/Region III).

As with the flow limits addressed above, the daily maximum CBOD/TSS limits are also counter-productive environmentally because they are a de facto limit on how much peak wet weather flow we can take through the Duck Island treatment facility. Specifically, we have exceeded the TSS daily maximum limits on a number of occasions. It makes no sense to restrict flows into the treatment facility (which flows would then receive treatment - including disinfection) as opposed to discharging those same volumes as untreated combined sewage from our CSO outfalls.

We also note that the expression of the daily maximum TSS limit appears to be incorrect. We assume EPA is working from the construct of taking the monthly average (30 mg/L) and multiplying it by 1.5 to get the weekly average (45 mg/L) found in the secondary treatment regulation and then multiplying the monthly average value times "2" to get the daily maximum value of "60". However, the permit includes a highly unusual value of "50" for TSS.

Finally, we note that these limits are neither necessary nor appropriate, as they were not included in the recent draft permits for Springfield and Haverhill. EPA has provided no explanation as to why such limits are necessary and appropriate for Lowell (and Lawrence), but not for the other two communities. As with the flow limits, our exceedance of these inappropriate limits is not due to our faulty operation of our treatment facility. Instead, it is due to conflicting and inappropriate permitting requirements for our facility.

### **CBOD/TSS Percent Removal (Page 3)**

Lowell objects to the 85 percent removal requirement for CBOD and TSS in the permit. There is no need for this limit. Percent removal provides no environmental protection whatsoever – that is done by the mass/concentration limits for both CBOD and TSS. Accordingly, we ask that the percent removal requirement be removed.

If the percent removal limit is to remain – over our objection and without waiving our right to challenge its retention – EPA should specify that the percent removal requirement only applies during dry weather days. This is the approach EPA took in Springfield’s permit and is appropriate for all CSO systems.

### **E. Coli Daily Maximum Limit (Page 3)**

First, we note that the daily maximum limit should be deleted because it is based on EPA’s criteria Statistical Threshold Value (STV) (410 colonies per 100 mL), which is derived from the same statistical distribution as the geometric mean-based average value, both derived to protect the defined intestinal illness rate. As such, protection of the average is also protection of the STV (particularly given the high monitoring frequency), and it is unnecessary to impose a daily limit for protection of the criteria and the designated use.

We also note that there is no reason that EPA could not calculate monthly and weekly average bacteria limits for our facility, in lieu of monthly and daily limits. After all, several states calculate weekly bacteria limits (such as North Carolina, Kentucky, and Missouri while other States such as Virginia, Maryland, and the District of Columbia use monthly geometric mean limits only.

Moreover, for the same reasons noted above for the daily maximum limits for CBOD and TSS, we urge EPA to provide some flexibility with the daily maximum E. coli limit. Most POTWs across the country have either monthly geometric mean limits or monthly and weekly average/geo-mean limits. Unless some flexibility is provided on this daily maximum E. coli limit, it could cause Lowell to have to restrict its wet weather treatment capacity.

Also, we note EPA Region III’s response to public comments urging EPA to impose a daily maximum bacteria limit on the District of Columbia’s Blue Plains treatment facility. In rejecting the inclusion of a daily maximum E. coli permit limit for Blue Plains, EPA stated: “Single sample maximums are not normally taken to evaluate continuous municipal discharges.”

We also note that because the water quality standard for E. coli is applied to Lowell at the end-of-pipe, we should be given some compliance flexibility. Lowell benefits from an 18:1 dilution during 7Q10 flows (which occur 1-3 percent of the time) and significantly higher dilution during all other periods. We suggest that Lowell is allowed to exceed the daily maximum permit limit one percent of the number of annual samples that we take. This is the approach that West Virginia DEP has taken – particularly to accommodate CSO programs. During wet weather, when CSOs (and urban runoff) discharges are active, holding the treatment facility to a daily maximum limit does not make sense.

Under our one percent proposal, if we sample five times per week, that equates to 256 samples per year – resulting in an allowable 3 exceedances of the daily maximum limit over those 256 samples. Given the dilution available to us, that would ensure year-round compliance with the instream bacteria standard. Accordingly, we ask that EPA add the following footnote to the E. coli limit: “The permittee shall not exceed this daily maximum limit in more than one percent of the samples taken each year. For this permit cycle, the permittee will sample 256 times per year, so the daily maximum limit may not be exceeded in more than three samples in any calendar year.”

There are many approaches that EPA could take in order to provide some appropriate flexibility while still meeting the instream bacteria standard (to the extent it is even attainable during wet weather events). Another approach could be a higher bacteria limit when treatment facility flows exceed our 32 MGD design capacity. We only exceed that capacity during wet weather events. In such circumstances, a higher limit – say 2040 counts (five times higher than dry weather yet only occurring when we get enormous dilutions) would be appropriate and fully protective of instream water quality. By way of example, even in 7Q10 conditions, a treatment facility discharge of 2040 counts, diluted 18 times would equate to a concentration of approximately 200 counts at the edge of our mixing zone. This assumes a background concentration of 100 counts. During wet weather, the dilution factor would increase dramatically and the bacteria concentration at the edge of the mixing zone would drop essentially to the river background level.

#### **Whole Effluent Toxicity (Page 4)**

We object to the permit requirement to continue performing whole effluent toxicity testing on a quarterly basis. We have been doing so since 2005. This quarterly testing is in addition to the four two-species tests we performed for our permit renewal. Associated with this WET testing is additional testing for metals and other parameters which EPA has required. This unnecessary testing costs Lowell thousands of dollars over a five year permit term.

After 14 years of quarterly WET testing, our effluent is well characterized as being non-toxic. We have passed all of our quarterly tests as well as the four, two-species tests we performed for the application for renewal. This comes as no surprise, given that our instream waste concentration is approximately five percent. After more than 56 straight passes, our effluent is beyond being well-characterized as non-toxic.

Moreover, as EPA's reasonable potential spreadsheet reveals, our effluent is nowhere close to having reasonable potential for the common municipal toxicants (e.g., copper, lead, ammonia). Thus, the quarterly WET testing is simply a waste of time and public resources. We ask that it be removed from the permit. We do agree, however, with a requirement to perform the four two-species tests required for each future permit renewal.

#### **Sampling for Metals (Page 4)**

As noted above, we are nowhere close to having reasonable potential for any of the metals we test for. Accordingly, we object to the continued quarterly sampling requirement for AL, CD, CU, NI, PB, and ZN. Instead, we propose to continue to sample for these pollutants as part of the three priority pollutant scans that we conduct each permit term.

#### **Mandating Sampling Day and Time (Page 6)**

We object to Footnote 1 on page 6 which requires that we sample on the same days of the month at the same times. This is micromanaging the operation of our facility and program. There is no legal (or practical) basis for such a requirement. EPA's regulation (and the permit) already requires representative sampling. That is the applicable legal requirement. We do not believe that sampling requirement is imposed on other permittees.

We similarly object to Footnote 13 on Page 8, which requires that WET testing be done during the same week in the months of January, April, July, and October. As noted above, the quarterly WET testing should be removed from the permit. In addition, there is no legal or technical basis to mandate a particular week within a particular month in the quarter.

Numerous other NPDES permits around the country simply specify “quarterly” sampling for parameters without mandating the month, and certainly not the week. We note that EPA’s permit renewal regulation specifies four WET tests for major dischargers as part of applications for renewal without specifying a particular month or week.

#### **Additional Monitoring by Permittee (Page 6)**

We request a clarification of the following requirement of Footnote 1 as follows:

The Permittee shall report the results to the USEPA Region 1 and the State of Massachusetts any additional testing of finished effluent for any pollutant required to be tested by this permit above the frequency that required herein, if testing is in accordance with 40 C.F.R. Section 136.

This comment is intended to clarify that only testing for pollutants required to be analyzed, using finished effluent (as opposed to process control testing) must be submitted to EPA. Please confirm this interpretation.

Finally, while still objecting to EPA’s authority to impose this prescriptive sampling regimen at all, we note that EPA allowed Springfield flexibility should there be deviations from the date and time of sampling but did not afford that option to Lowell (along with other permittees).

#### **Assigning Half the MDL to Non-Detected Data (Page 6)**

Footnote 4 requires that we assign one-half the minimum detection limit (MDL) to non-detected values, if we have any detectable result for the pollutant in question during the prior twelve months. This is both legally and technically wrong.

If a pollutant is not detected in the effluent, it is legally not there. EPA cannot require the permittee to assign an arbitrary number to that non-detect and then certify the arbitrary number (which was really non-detected) as being “true, accurate, and complete.” No other State or EPA region takes this approach to our knowledge. Instead, non-detected data should be reported as “0” and assigned “0” in the calculation of any multi-day averages.

While not a major issue for our facility given the level of our limits and the dilution in our receiving instream, it is still inappropriate to require that 11 non-detected results be assigned one-half the detection level because one sample out of twelve is above the detection level. Such an approach clearly biases the pollutant data on the high end and then puts the permittee in the untenable position of having to then certify the ½ MDL value is a true, accurate, and complete result.

We ask that EPA provide us with any statutory or regulatory reference which supports the requirement to assign and then certify and report one-half the MDL to non-detected data. Finally, we note that this condition is not included in the Springfield draft permit. EPA should remove it from Lowell’s permit as well.

### **CSO Bypass (Page 7)**

Footnote 6 explains that the flow limit is an annual average flow for the current and prior eleven months. This footnote then goes on to prohibit secondary bypasses which don't qualify as allowable bypasses (Standard Conditions Part II.B.4.c and 24-hour reporting (Part II.D.1.e)).

Lowell has a secondary bypass which allows us to treat significant peak wet weather flows as part of our efforts to maximize flows at the treatment facility (Nine Minimum Controls - Part I.F.2.a.4). Such bypasses are to maximize the treatment of wet weather flows and not for essential maintenance as contemplated by Part II.B.4.c. Accordingly, the reference to Part II.B.4.c should be removed.

We note that Springfield's permit explicitly authorizes their secondary bypass. Lowell's secondary bypass should be authorized as well.

Moreover, the permit should:

- Identify and authorize our high flow management facilities and
- Incorporate by reference our High Flow Management Plan. This plan was submitted to EPA and DEP in 2011 in accordance with our 2010 Administrative Order. While we did our part to develop and submit the plan, EPA has yet to issue the plan approval expressly contemplated by the 2010 order. Because our plan is a living document, it makes the most sense to us to incorporate by reference an updated High Flow Management Plan, with a requirement to submit annual updates as appropriate. For example, we are working on a major facility upgrade. Once that project is complete and we have completed an optimization period, we will need to submit an updated High Flow Management Plan.

### **Prohibition on Septage During Wet Weather (Page 7)**

Lowell intends to continue to accept septage and hauled wastes, with the understanding that we will manage acceptance of these wastes in accordance with a hauled waste management plan. The plan will ensure that we optimize treatment of such wastes to the extent practicable. We are not aware of any plant or instream impacts from our acceptance of such wastes and our hauled waste management plan will be focused on continuing that successful program. In addition to providing the appropriate facilities to process such wastes, our processing of these wastes generates critical revenues for our utility that are being used for our current facility upgrade and future treatment facility and CSO-related controls. A critical part of our septage receiving facility is an equalization tank that we use to store wastes for subsequent introduction into our facility's treatment process at a controlled rate.

We object to the prohibition on our acceptance of septage at the treatment facility on any day when a bypass of secondary treatment is anticipated. This prohibition is environmentally unnecessary, as the volumes are relatively small and our facility has the capacity to handle the pollutant loadings. On wet-weather days, the plant meets 7Q10-based limits when instream flows are significantly higher, allowing for greater dilution. There is simply no environmental problem with our acceptance of such waste streams. Notably, our quarterly WET testing has included two tests each year when our treatment facility is bypassing. We have passed each of those tests.

This prohibition is also counterproductive financially for Lowell. Hauled waste fees are critical in funding the highest practical level of CSO control, along with other facility improvements such as phosphorous control.

Finally, we note that this prohibition on accepting septage at the treatment facility is contradicted on Page 16 – which only prohibits acceptance of septage (to the collection system) if certain instream impacts are expected to result – such as an oil sheen.”

### **20 ug/L MDL for Residual Chlorine (Page 7)**

The permit imposes an MDL of 20 ug/L for residual chlorine when our permit limit is 338 ug/L (daily max) and 196 ug/L (monthly average). Given the magnitude of our permit limits, there is no need to impose a 20 ug/L MDL. Instead, we request it be set at 100 ug/L or, at worst, 50 ug/L. Many states use 100 ug/L or 50 ug/L as their MDLs. We think these are more appropriate levels in light of analytical issues and the magnitude of the limits that we must meet.

### **General Water Quality Standards Compliance Language (Page 9)**

It appears that the sections/numbering is off from page 8 to page 9. At the top of page 9, the following prohibition is imposed:

“2. The discharge shall not cause a violation of water quality standards of the receiving water.”

This language is legally incorrect and fundamentally unfair. Legally, this provision deprives Lowell of its Clean Water Act permit shield in that Lowell will never know what it can or can't discharge at any given time. The provision deprives Lowell of its right to fair notice of what it must do to comply. More importantly, there is no opportunity for due process. In this context, due process is Lowell's (and all stakeholders') right to know what limits EPA/DEP believe are warranted, an opportunity to comment on the correctness of such limits and the right to appeal such determinations. Moreover, for a public body, the provision deprives us of a compliance schedule to come into compliance with a new or more stringent requirement.

There has been significant litigation over similar provisions in recent years and Lowell will be compelled to file a challenge should this language be retained. We note that the State of West Virginia recently removed similar language from its NPDES permits. EPA Region 3 treated that action as a change to WV's NPDES permit program which triggered EPA review and approval. EPA approved the change by letter dated March 27, 2019 (incorporated herein by reference). EPA concluded that such language is not a requirement of the NPDES Permit program.

Further the restrictions imposed in Paragraphs 3- 7 are more than broad enough to protect the general standard.

For these reasons, Paragraph 2 language must be removed from Lowell's permit. It impermissibly undermines the CWA permit shield, deprives dischargers of fair notice of what they can discharge and due process (to comment on, seek compliance schedules, and appeal effluent limits). It is inconsistent with other EPA Regions as demonstrated by the EPA Region 3 March 27, 2019 formal finding that such a permit condition is not required under the CWA.

### **Pass Through and Interference (Page 9)**

We ask that Part I.A.9 (Page 9) be removed because it is unnecessary and duplicative to suggest that it could be a violation of the permit for a non-domestic user to cause pass-through, when by definition pass-through already is predicated on a permit exceedance. See 40 C.F.R. §403.3(p) (pass-through is “a discharge that exits the POTW into waters of the United States in quantities or concentrations which, alone or in conjunction with a discharge or discharges from other sources, is a cause of a violation of any requirement of the POTW's NPDES permit”) (emphasis added). Similarly, interference with plant operation or performance is an event that the owner must remedy, but such interference should not by itself constitute a permit violation.

### **Requirement to Identify All Potential and Actual Unauthorized Discharges (Page 10)**

Part I.C.2 requires the permittee to develop a preventive maintenance program that includes a system-wide inspection program designed “to identify all potential and actual unauthorized indirect discharges.” This requirement should be restated, because no inspection program will identify all *potential* or even actual unauthorized discharges. For example, local residents may report unauthorized discharges to Lowell’s collection system. The premise that Lowell staff should be responsible for identifying all potential and actual unauthorized indirect discharges is impracticable. The requirement should be modified to require an inspection program designed:

“To the extent practicable, to identify actual or potential collection system releases.”

### **Collection System Inflow/Infiltration Requirements Should be Limited to Co-Permittees (Page 11)**

Part I.C.3 requires the Permittee and co-permittees to address I/I into the sewer system to prevent high flow releases from the collection system and high-flow-related violations at the Permittee’s treatment facility. The Permittee already address I/I as part of our NMC and CSO LTCP requirements. Accordingly, the reference to “Permittee” should be removed such that this section is limited to the Co-permittees.

Furthermore, Lowell’s I/I control program, which is part of its LTCP, should be referenced within the permit. Lowell’s implementation of I/I and CSO control should be guided by our written control plans, which should be incorporated by reference in the permit.

### **Collection System Mapping (Page 11)**

Part I.C.4 requires extensive collection system mapping work to be completed within 30 months of the permit effective date. Some of the mandated information is unlikely to be available. For example, we won’t know with certainty where every sewer pipe in our system is, what it is made of, the diameter, date of installation, distance between manholes, etc. We are particularly concerned with the breadth and scope of Subsections 4.a, 4.c, and 4.k.

Accordingly, the requirement in this part should be qualified “to the extent practicable” by the Permittee. Also, a requirement to update the mapping each permit term to reflect new infrastructure or newly characterized infrastructure would be acceptable.

### **Preventing Unauthorized Discharges (Page 12)**

All collection systems will experience releases from time-to-time due a wide range of operational and capacity-related issues. Consistent with this reality, please revise Part I.C.5.b(6) to require and I/I program for “minimizing” and not (the impossible of) “preventing” unauthorized discharges. Otherwise, we have double jeopardy for having an unauthorized discharge and then a separate violation for not preventing it pursuant to this requirement. Neither EPA nor the permittees can guarantee no overflows.

### **Imposing Local Limits Guidance (Page 13)**

We object to EPA requiring that we comply with EPA’s Local Limit Development Guidance (July 2004). We are agreeable with a requirement that we use such guidance in developing local limits, but this guidance is not law and, accordingly, cannot be imposed as a mandatory requirement. The provision should require the Permittee to review its local limits in consultation with EPA’s Local Limit Development Guidance (2004).

### **Assuring Significant Industrial User Compliance (Page 14)**

Part I.E.5 requires the Permittee to “assure” that applicable pretreatment standards are met by all categorical industrial users of the POTW. The Permittee is not a guarantor of SIU performance. This must be changed to require that the Permittee require that SIUs meet applicable categorical standards through the issuance of appropriate permits to such users. Otherwise, if an SIU violates a categorical standard – through no fault of the Permittee – the Permittee will be in non-compliance. That is a legally incorrect and unfair requirement.

### **CSO Authorization (Page 15)**

Part I.F.1 should be revised as follows:

During wet weather and/or periods of snow melt, the Permittee is authorized to discharge wastewater from the CSO outfalls listed below:

This change is a common and necessary approach for CSO permits in the northern half of the country where sewer overflows can be triggered by both rainfall and/or snow melt.

### **CSO Long-Term Control Plan Development Language (Page 15)**

The permit is inconsistent with CWA Section 402(q), because it fails to address the development of our CSO Long-Term Control Plan (LTCP). We are still at the stage of a Phase 1 permit under EPA’s CSO Policy. The Policy requires that a deadline for submittal of our CSO LTCP update be included in the permit. We request the opportunity to discuss the appropriate deadline with EPA.

### **High Flow Management/Secondary Bypass Authorization (Page 15)**

As noted above, Part I.F should incorporate our current High Flow Management Procedures. These procedures ensure that we maximize flow at the treatment plant to the maximum extent practicable.

### **General Water Quality Standards Compliance Language for CSOs (Page 16)**

Part I.F.2.b imposes the same WQS compliance language that we objected to above in relation to the POTW discharge. It is legally and factually wrong to apply these standards to the POTW discharge, and particularly egregious to apply the WQS to our CSO discharges – which are untreated. EPA cannot logically on one hand authorize our CSO discharges and then on the other hand require compliance with water quality standards at all times. It is physically impossible and legally inconsistent with CWA 402(q), which specifies the conditions for Phase I and Phase 2 CSO NPDES permits.

### **CSO Structures Set to Minimize Overflows (Page 16)**

Part I.F.3.b should be revised as follows:

Each CSO structure/regulator, pumping station and/or tide gate shall be routinely inspected, at a minimum of once per month, to ensure that they are in good working condition and adjusted to minimize combined sewer discharges consistent with system operation (not causing upstream surcharges nor plant operational problems) and compliance with all effluent limitations and conditions in this permit (NMC #1, 2, and 4).

### **Prohibition on Acceptance of Septage into the Collection System During CSO Events (Page16)**

Lowell agrees with Part I.F.3.c, which prohibits the acceptance of septage discharges into the collection system (as compared with the treatment facility prohibition on Page 7, which we objected to above). We think this prohibition makes sense.

### **Requiring Direct Measurement of CSO Discharge Information (Page 16)**

Part I.F.3.e requires the “direct measurement” of duration and volume for each of the nine CSO outfalls. Lowell already complies with this requirement by calculating flow over a weir or flow through an orifice. In addition to actual weirs, Lowell uses the weir calculation for its downward-opening diversion gates, and the orifice calculation for its upward-opening diversion gates. Please confirm that our existing approach satisfies this requirement. If for any reason it does not, we ask that the requirement be refined to match our operational practice (which has been effective).

### **Requiring Record Retention for 6 Instead of 3 Years (Page 17)**

Part I.F.3.e requires that Lowell retain records of CSO discharges for six years instead of the three years specified in EPA’s regulations. This should be changed to three years from the creation of the record.

### **Total Phosphorous Compliance Schedule (Page 21)**

Lowell objects to the one-year compliance schedule for Total Phosphorous (Part I.H.1) for several reasons. First, we are still completing a major treatment facility upgrade that won’t be fully in service for another 12 months. Second, we have not yet determined how we will comply with the total phosphorous limit. One year is indisputably inadequate for us to plan, design, permit, fund, and construct such an upgrade. Last, but by no means least, we are due to submit our integrated plan (pursuant to CWA 402(s)) to EPA by December 31, 2019. That plan will specifically balance a number of CWA and related capital needs and programs.

The compliance schedule for our new TP limit will be identified in that CWA 402(s) integrated plan. Upon EPA's approval of that plan, the compliance schedule associated with the total phosphorous limit should become a part of this permit. Accordingly, we request the following compliance schedule language for the new Total Phosphorous limit:

The Permittee is required to submit an integrated plan to EPA in accordance with CWA-AO-RO1—FY17-016 (October 2, 2017) on December 31, 2019. The plan will include a compliance schedule for Lowell to meet the new total phosphorous limit. Upon EPA's approval of the plan, the compliance schedule therein for Lowell to comply with the total phosphorous limit shall be incorporated into this permit as if set forth herein.

### **Notice to Downstream Community Water Systems (Page 21)**

Lowell objects to the wording of the requirement to notify downstream community water systems. Of course, virtually every water system is downstream of some upstream community. Accordingly, these facility operators make investments in their water systems that assume challenging source water conditions (not necessarily dumping of unusual chemicals in large quantities, but certainly upstream sources such as CSOs, urban stormwater, and background pollution). Accordingly, we believe Part I.H.2 is overly broad. Read literally, it would require us to notify downstream water systems about each and every SSO we have, regardless of volume. That serves no real purpose. We believe the provision should be replaced with the following:

“The Permittee shall notify the downstream community water systems listed below of any emergency condition, plant upset or bypass, collection system release into surface waters, or permit noncompliance, which could potentially adversely affect their ability to adequately treat drinking water. The Permittee may consult with such community water systems for the purpose of developing written agreements as to the type of events/releases by the Permittee that they want notice of. A copy of any such agreement shall be provided to EPA and DEP.”

### **Notification to Massachusetts Division of Marine Fisheries (Page 21)**

We object to Part I.H.3, which requires us to notify Mass Department of Marine Fisheries (DMF) within 4 hours of “any emergency condition, plant upset, bypass, CSO discharges, SSO discharges or other system failure that has the potential to violate bacteria permit limits.” This needs to be revised. This notification requirement is far too broad. Also, why are we notifying DMF rather than DEP regarding bacteria-related issues? We think this notice requirement should be deleted or revised to target meaningful events that warrant notice to DMF.

### **Definition of Waters of the United States (Page 19 of the Standard Conditions)**

We question whether this definition needs to be in the permit. The vast majority of NPDES permits do not include this definition. Given the uncertainty and controversy over defining WOTUS, we ask that EPA remove this definition.