

November 20, 2015

Via Electronic Mail (tedder.newton@epa.gov) and Hand-delivery

Mr. Newton Tedder
U.S. EPA, Region I
5 Post Office Square
Suite 100, Mail Code OEP 06-4
Boston, MA 02109-3912

Re: 2013 New Hampshire Small MS4 Draft General Permit

Dear Mr. Tedder:

Conservation Law Foundation (CLF) appreciates the opportunity to further comment on proposed modifications to the above-referenced draft general permit, pertaining to small municipal separate storm sewer systems (MS4s) in New Hampshire, as publicly noticed in the Federal Register on September 1, 2015. CLF submitted comments on prior iterations of this draft permit by letters dated February 20, 2009, July 27, 2010, and August 12, 2013, as well as comments on the proposed modifications by letter dated November 1, 2015. CLF incorporates its prior comments, including all attachments submitted therewith, as if fully set forth herein.

CLF provides the following brief comments, targeted to various comments and arguments raised in joint comments submitted by various MS4 communities (the Town of Amherst, *et al.*) under cover of correspondence dated November 2, 2015.

In its Statement of Basis for Proposed Modifications (“Statement of Basis”), EPA states:

Pollution from urban stormwater runoff is well documented as a leading cause of impairment of freshwater lakes, rivers, and estuaries (US EPA, 2009); (National Research Council, 2008). A number of harmful pollutants are contained in urban stormwater runoff, including the following major constituents: Nutrients (nitrogen and phosphorus), Bacteria/Pathogens, Chloride, Solids, Oil & Grease (Hydrocarbons), and Metals (Center For Watershed Protection, 2003); (US EPA, 1999); (Shaver, et al., 2007); (Lin, 2004); (Schueler, 2011); (Pitt, et al., 2004) (Clark & Pitt, 2012); (National Research Council, 2008). Literature review and analysis of National Stormwater Quality Dataset (NSQD) data of urban stormwater constituents indicates that it can be reasonably assumed that stormwater discharges from urban areas in New England contain bacteria/pathogens, nutrients, chloride, sediments, metals, and oil and grease (hydrocarbons). This is not to say that every grab sample of stormwater will always contain each of the aforementioned stormwater constituents, however, if sufficient data is available for any single urban

stormwater discharge, the average concentrations of bacteria/pathogens, nutrients, chloride, sediments, zinc (metals), and oil and grease (hydrocarbons) will likely be present. When a waterbody is found to be impaired pursuant to Clean Water Act (CWA) Section 303(d) or 305(b) for a particular pollutant, or the receiving water is experiencing an excursion above water quality standards due to the presence of a particular pollutant, it indicates that the waterbody has no assimilative capacity for the pollutant in question. EPA reasonably assumes that urban stormwater discharges from urbanized areas in New England contain bacteria/pathogens, nutrients, chloride, sediments, metals, and oil and grease (hydrocarbons) and finds that MS4 discharges are likely causing or contributing to the excursion above water quality standards when the receiving waterbody impairment is caused by bacteria/pathogens, nutrients, chloride, metals, sediments or oil and grease (hydrocarbons). EPA has determined that it is appropriate to require additional controls on such discharges to protect water quality.

See Statement of Basis at 2-3. CLF agrees that there is ample and robust evidence, based on substantial data and studies, to support EPA's conclusions relative to (1) the pollutants contained in stormwater from urbanized areas, (2) the likelihood of MS4 discharges causing or contributing to waterbody impairments for the above-stated pollutants, and (3) the determination that "it is appropriate to require additional controls on such discharges to protect water quality." *Id.* at 3.

In their joint comments, the Town of Amherst *et al.* ("join commenters") contend that EPA's approach in the draft permit is unlawful on the grounds that it is somehow inconsistent with EPA's response to the July 10, 2013 petition by CLF, Natural Resources Defense Council (NRDC), and American Rivers (AR) seeking regulatory coverage under the Clean Water Act for non-permitted discharges of stormwater from commercial, industrial and institutional sites in New England.¹ Their argument is without merit. In the first instance, the joint commenters mischaracterize EPA's response to the CLF / NRDC / AR petition as a *rejection* when, in fact, EPA concluded that it was neither granting *nor denying* the petition. More importantly, the manner in which EPA addressed the petition is simply inapposite to the manner in which it administers the Small MS4 permit program. Quite to the contrary, whereas there are no jurisdictional determinations at issue in the draft Small MS4 permit program, the CLF / NRDC / AR petition pertained solely to stormwater discharges *not subject to* any NPDES permit program and sought an affirmative determination by EPA to regulate those unregulated discharges through the exercise of its residual designation authority. Attempts to wield EPA's petition determination as a sword in this wholly unrelated matter rings hollow at best.

The joint commenters further suggest that EPA is acting unlawfully through the development and imposition of requirements designed to prevent discharges that cause or contribute to the violation of water quality standards.² This argument, as well, is entirely without merit. The

¹ The CLF / NRDC / AR petition sought the exercise, by EPA, of its so-called residual designation authority, pursuant to which EPA can regulate a discharge of stormwater that is not otherwise regulated under an existing NPDES program if it determine the discharge "contributes to or is a significant contributor of pollutants to waters of the United States." *See* 33 U.S.C. § 1342(p)(2)(E); 40 C.F.R. § 122.26(a)(1)(v).

² The City of Rochester, NH objects to the draft permit's use of the phrase "cause or contribute," as well as to various other provisions, claiming they exceed the "maximum extent practicable" standard and applicable law. *See* Comments of City of Rochester (Nov. 2, 2015) at 3-4, 7-8. As discussed below, EPA is not limited to the maximum

Clean Water Act could not be more explicit in the authority it provides EPA in the permitting process relative to municipal stormwater discharges, stating that “[p]ermits for discharges from municipal storm sewers . . . shall require controls to reduce the discharge of pollutants to the maximum extent practicable, including management practices, control techniques and system, design and engineering methods, *and such other provisions as the Administrator or the State determines appropriate for the control of such pollutants.*” See 33 U.S.C. § 1342(p)(3)(B)(iii). (emphasis added). This statutory language, as well as the overarching goals and policy of the Clean Water Act as enumerated by Congress,³ is entirely consistent with, and supportive of, EPA’s development of a permit that requires Small MS4s discharging pollutants of concern to impaired waters to implement more stringent BMPs to protect water quality and ensure the attainment of water quality standards. Indeed, since issuance of the Phase II regulations in 1999, EPA has interpreted the above-quoted statutory language as applying to all MS4s, including Small MS4s,⁴ and has viewed the Small MS4 permitting program as an iterative one designed to attain and maintain water quality standards.⁵ See also *Defenders of Wildlife v. Browner*, 191 F.3d 1159, 1166-1167 (9th Cir. 1999) (affirming ability of EPA to require

extent practicable standard and can impose additional requirements to control pollutants and to attain and maintain water quality standards.

³ See, e.g., 33 U.S.C. § 1251(a) (objective is “to *restore and maintain* the chemical, physical, and biological integrity of the Nation’s waters” (emphasis added); “it is the national goal that the discharge of pollutants into the navigable water be *eliminated* by 1985” (emphasis added); “it is the national goal that wherever attainable, an interim goal of water quality which provides for the protection and propagation of fish, shellfish, and wildlife and provides for recreation in and on the water be achieved by July 1, 1983 . . .”).

⁴ See 64 Fed. Reg. 68722, 68754 (Dec. 8, 1999) (“This section [*i.e.*, 33 U.S.C. § 1342(p)(3)(B)(iii)], also calls for ‘such other provision as the [EPA] Administrator or the State determines appropriate for the control of such pollutants.’ EPA interprets this standard to apply to all MS4s, including both existing regulated (large and medium) MS4s, as well as the small MS4s regulated under today’s rule.”).

⁵ See *id.* at 68753 (“If the program is inadequate to protect water quality, including water quality standards, then the permit will need to be modified to include any more stringent limitations necessary to protect water quality.”). See also *id.* at 68753 - 68754, stating:

As noted, the 1996 Policy describes how permits would implement an iterative process using BMPs, assessment, and refocused BMPs, leading toward attainment of water quality standards. The ultimate goal of the iteration would be for water bodies to support their designated uses. EPA believes this iterative approach is consistent with and implements section 301(b)(1)(C) [of the Clean Water Act], notwithstanding the Ninth Circuit’s interpretation. As an alternative to basing these water quality-based requirements on section 301(b)(1)(C), however, EPA also believes the iterative approach toward attainment of water quality standards represents a reasonable interpretation of CWA section 402(p)(3)(B)(iii). For this reason, today’s rule specifies that the “compliance target” for the design and implementation of municipal storm water control programs is “to reduce pollutants to the maximum extent practicable (MEP), to protect water quality, and to satisfy the appropriate water quality requirements of the CWA.” The first component, reductions to the MEP, would be realized through implementation of the six minimum measures. The second component, to protect water quality, reflects the overall design objective for municipal programs based on CWA section 402(p)(6). The third component, to implement other applicable water quality requirements of the CWA, recognizes the Agency’s specific determination under CWA section 402(p)(3)(B)(iii) of the need to achieve reasonable further progress toward attainment of water quality standards according to the iterative BMP process, as well as the determination that State or EPA officials who establish TMDLs could allocate waste loads to MS4s, as they would to other point sources.

See also *id.* at 68754 (“Successive iterations of the mix of BMPs and measurable goals will be driven by the objective of assuring maintenance of water quality standards. If, after implementing the six minimum control measures there is still water quality impairment associated with discharges from the MS4, after successive permit terms the permittee will need to expand or better tailor its BMPs within the scope of the six minimum control measures for each subsequent permit. EPA envisions that this process may take two to three permit terms. . . . The iterative process described above is intended to be sensitive to water quality concerns.”).

MS4s to control pollutants to ensure strict compliance with state water quality standards MS4s); 40 C.F.R. §§ 122.4(d), 122.34, 122.44(d).

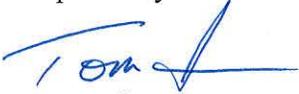
In addition to the above, it is important to note that the current general permit for New Hampshire Small MS4s, issued in 2003, explicitly does not authorize the following discharges: “[d]ischarges prohibited under 40 CFR 122.4,” “[d]ischarges that would cause or contribute to instream exceedance of water quality standards,” and “[d]ischarges of any pollutant into any water for which a Total Maximum Daily Load (TMDL) has been established or approved by the EPA unless the discharge is consistent with the TMDL.” See NPDES General Permit for Storm Water Discharges from Small Municipal Storm Sewer Systems (April, 18 2003), Part I.B.2.(i), (j), (k). It also contains provisions requiring permittees to develop stormwater management programs that address pollutants of concern and “ensure that the discharges will not cause an instream exceedance of the water quality standards.” *Id.* Part I.C.⁶ While apparently objecting to the more prescriptive nature of the draft Small MS4 permit (a prescriptive nature entirely consistent with and justified by the iterative approach identified by EPA as early as the late 1990s), it appears the joint commenters would have EPA strip the Small MS4 general permit of essential requirements intended to ensure attainment of water quality standards and to not authorize discharges that cause or contribute to exceedances of water quality standards. In addition to violating statutory and regulatory provisions pertaining to stormwater management as well as to the overarching objectives of the Clean Water Act and NPDES programs, *see supra*, any such change would violate the Clean Water Act’s anti-backsliding requirements. See 33 U.S.C. §§ 1313(d)(4), 1342(o).

Finally, the joint commenters, as well as the Cities of Rochester and Portsmouth in comments submitted by them individually, contend that New Hampshire’s recently approved 2012 Section 303(d) list of impaired waters is out of date with respect to nitrogen-related impairments for certain waters in the Great Bay estuary. In support of this contention, they reference the proposed de-listing of certain nitrogen-related impairments in the New Hampshire Department of Environmental Services’ (NHDES) draft 2014 Section 303(d) list. Of critical importance, the draft 2014 Section 303(d) list is in the earliest stages of public process and has not been approved by EPA. More importantly, the proposed nitrogen-related de-listings are the product of a settlement agreement resolving litigation between NHDES and certain municipalities, in no way involving EPA, and in no way requiring EPA to approve the proposed de-listings. Quite to the contrary, as part of EPA’s September 24, 2015 approval of NHDES’s 2012 Section 303(d) list, EPA prepared a Technical Support Document assessing in great detail the various total nitrogen-related impairment listings in the Great Bay estuary and concluding – with full knowledge of the above-mentioned settlement agreement, as well as a February 2014 peer review of NHDES’s 2009 numeric nutrient criteria analysis – that “there is substantial information in the record to support the listing of the Great Bay Estuary as not meeting applicable water quality standards and that excess nitrogen concentrations are at least a cause of the State’s aquatic life use impairments in the estuary.” See EPA Review of New Hampshire’s 2012 Section 303(d) List, Attachment A, EPA Technical Support Document at 6-7. As EPA concluded in its Technical Support Document, there is ample evidence of cultural eutrophication in the Great Bay estuary, and of total nitrogen contributing to that adverse condition. See also State of Our Estuaries 2013, Piscataqua Region Estuaries Partnership; Barker, Seth, Eelgrass Distribution in the Great Bay Estuary and Piscataqua River for 2013; Short, Frederick T., Eelgrass Distribution in the Great Bay Estuary for 2013.

⁶ In its Response to Comments on the current Small MS4 General Permit, EPA stated with respect to Part I.C.2: “Part I.C.2 is intended to address the situation where waters have been identified as being impaired by a pollutant which the MS4 will discharge. In such situations, more aggressive storm water strategies would likely be necessary than in the situation where the waters are not impaired.” See EPA Response to Comments at 6.

CLF appreciates the opportunity to submit these comments. And again, we urge EPA to address the matters addressed by CLF in these and prior comments and to proceed expeditiously to the issuance of a final permit.

Respectfully submitted,



Tom Irwin
V.P. and CLF New Hampshire Director

Attachments (hand-delivered):

EPA Technical Support Document (Attachment A) to EPA Review of New Hampshire's 2012 Section 303(d) List

State of Our Estuaries 2013, Piscataqua Region Estuaries Partnership

Barker, Seth, Eelgrass Distribution in the Great Bay Estuary and Piscataqua River for 2013

Short, Frederick T., Eelgrass Distribution in the Great Bay Estuary for 2013

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November 20, 2015

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Boston, MA 02109-3912

Re: **New Hampshire MS4 Communities' Proposed Draft General Permits
for Stormwater Discharges from Small Municipal Separate Storm
Sewer Systems, NPDES Permit Nos. NHR041000, NHR042000 and
NHR043000**

Dear Mr. Tedder:

Sheehan Phinney Bass + Green, PA and Hall & Associates, on behalf of
the following New Hampshire MS4 Communities that comprise the New
Hampshire Stormwater Coalition:

Town of Amherst
Town of Bedford
Town of Danville
City of Dover
Town of Hampton
Town of Londonderry
City of Manchester
Town of Merrimack
City of Portsmouth
Town of Raymond
City of Rochester
Town of Rollinsford
Town of Salem
Town of Stratham

submit pursuant to the Notice of Reopening of the Public Comment Period on
Select Sections of the Draft Small Municipal Separate Storm Sewer System
(MS4) NPDES General Permit – New Hampshire, the following

observations/objections to comments submitted by the Conservation Law Foundation (CLF) submitted on November 1, 2015 (CLF Comment):

- Assertions that compliance schedules must be limited to the 5 year permit term (CLF comment at 2) is in error and contrary to the Environmental Appeals Board (E.A.B.) decision regarding the allowable NPDES program for the District of Columbia. *In re District of Columbia Water and Sewer Authority*, _____ E.A.D. _____, NPDES Appeal Nos. 05-02, 07-10, 07-11, and 07-12 (E.A.B. March 19, 2008).
- Virtually all of the New Hampshire water quality standards were adopted or amended by rule after July 1, 1977. Thus, EPA's presumption that schedules of compliance are allowed is well placed. EPA has reasonably satisfied the requirements necessary to allow schedules of compliance in the proposed permit, absent a demonstration that a standard at issue has remained unmodified, in any manner, since July 1, 1977. CLF, it should be noted, does not identify a single New Hampshire standard that would fit this description.
- A permit may not be unilaterally modified during its term, as recommended by CLF (Comment at 3). Modification provisions of 40 CFR 122.62, including the related public notice requirements, apply to any such actions.
- Any major substantive changes, such as mandating low impact development (LID) or green infrastructure as a mandatory component of the "MEP" standard as suggested by CLF (Comment at 4) would be a major revision requiring republication of this proposed permit and a complete regulatory analysis justifying statewide implementation of the requirement. No such analyses are presently contained in the record, nor are they provided by the CLF comments.

Very truly yours,

A handwritten signature in blue ink, appearing to read 'R. Lucie', written over a horizontal line.

Robert R. Lucie

Kevin A. Sheppard, P.E.
Public Works Director

Timothy J. Clougherty
Deputy Public Works Director

Frederick J. McNeill, P.E.
Chief Engineer



Commission
Raymond Hebert
Hal Sullivan
Rick Rothwell
Bill Skouteris
Toni Pappas

CITY OF MANCHESTER
Department of Public Works
Environmental Protection Division

November 20, 2015

Mr. Newton W. Tedder
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Mail Code: OES06-4
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Subject: **City of Manchester – “Comments on Comments”**
2015 Draft New Hampshire Small MS4 General Permit

Dear Mr. Tedder,

The City of Manchester is pleased to submit “comments on the comments” posted for the 2015 Draft New Hampshire Small MS4 General Permit. The City appreciated the opportunity to review and comment on the recently submitted comments by the MS4 communities and other interested parties as we work together to develop rational, reasonable, and cost effective regulations based upon sound science.

Below are our comments that pertain to comments that were submitted by the November 2nd deadline on sections 2.11, 2.2, 2.3.6, Appendix F, and Appendix H.

CLF Comments – CLF points out the need to clarify the language, “*EPA has not identified what, if any, new, newly interpreted, or revised water quality standard is being relied upon as the basis for EPA’s decision for EPA’s proposed modifications.*” This is a theme throughout many of the comments as clarity is paramount in implementation of the program.

CLF indicates a strong support for clear deadlines by which permittees must complete specified actions and opposes striking the §2.2.1(h). Deadlines need to be flexible as early permit holders are finding that there are many obstacles in locating structures. Easements need to be obtained to site baffle tanks, storm treatment systems and wet ponds when municipal lands are not always available. A few years of analysis of pond/lake data may be interpreted differently by stakeholders with competing interests, necessitating a third and fourth year study to verify or refute early weak trends. Then there are always the potential of legal battles where part of planned projects can come to a standstill until the dispute is resolved through the court process. It makes sense from a municipal standpoint to allow as much flexibility as possible to assure the project is done right rather than half-heartedly in a rush to meet a deadline.

CLF states, “*under no circumstances should deadlines extend beyond the five-year term of the permit*” with a footnote outlining that the 15 years is unacceptable. As outlined in Manchester’s previous comments, real-world application indicates that 15 years may not be enough time. Nutt Pond is a prime example how the best laid plans, implementation schedules, bidding, construction and maintenance extend well beyond five years.

Nutt Pond is the most accessible of Manchester’s TMDL ponds on a smaller scale than most. Manchester was required under a 1999 Consent Decree to begin a Supplemental, Environmental Pollution Projects (SEPP). This program required a formation of a committee of stakeholders, a review of the worse environmental conditions within the Manchester Community (riverbank erosion, delta sediments within ponds, nutrient pollutants within water bodies, classification of water bodies, impact by urban areas, type of recreational use for that specific water body, etc.).

It took two years to classify and prioritize the projects, and then the higher priority project went into design, bidding, and construction. In Manchester the highest priority projects (Crystal Lake, Dorrs Pond, and the Piscataquog River bank erosion) projects began in 2003 (about 2 and ½ years after the order was given). The Phase I SEPP program was under a 10-year compliance program associated with the CSO, Long Term Control Program (LTCP).

Nutt Pond Projects were being designed and bid during the construction outlined in the paragraph above. Nutt Pond projects began in 2005 with forebays, reconfiguration and restoration of wetlands, inlet gates and structures and sediment removal. These projects were finished by the end of 2007. In the subsequent two-year review of the pond analytical data and the NHDES dropping the phosphorus compliance target from 15 ug/l to 12 ug/l, it was determined that Nutt Pond still did not meet the State’s Phosphorus TMDL.

A gravel wetland was the chosen response to move in the direction of phosphorus compliance. The design took a year and the project was ready for bidding and construction in 2011. An easement had to be obtained to site the wetland. It took three years to negotiate with the NHDOT to obtain this easement. The bidding and construction will happen over 2016. This is a full 17 years after the SEPP program began and the belief is that the pond will still not meet the water quality criteria for phosphorus.

More studies and easements will need to be obtained to construct additional treatment systems to assure a final compliance with the water quality limitations. When all is said and done this project will exceed a 20 year time table and will cost in excess of \$3 million dollars.

The new small MS4s will need to go through the same process Manchester has done over the past 17 years. As you can see it isn’t easy with one pond, let alone several ponds, streams and rivers. The implementation of the MS4 program will take several decades due primarily to funding, but most of all to conditions that are outlined above.

The CLF’s comments on New Development and Redevelopment take a stand on requiring the adoption and implementation of LID/green infrastructure. These are good avenues to initially control pollutants, but if not properly maintained, they return the pollutant back to the environment as vegetation and plants roots, and base-load groundwater increases in metals that were initially up taken by the vegetation. It will take years to turn resident and municipal mindsets around to look at capture of all their leaves and grass clippings, then finding a place for disposal.

To be fully effective the composting of leaves, grass clippings and plants will need to be in a controlled, covered environment with no chance for rain and runoff impacts. This will require large amounts of space for these types of operations and several hundreds of thousands of dollars to prepare the infrastructure. A yard with three mature oak trees that measures 70 ft. by 100 ft. generates upwards of 350 pounds of leaves (measured experiment done over the weekend of 11/07/2015). There has been no long term study of the fate of the nutrients and pollutants taken up by these methods.

In Manchester’s initial comments to the MS4 permit there is a discussion of metals captured by green roofs. If these roofs are not taken care of on an annual basis, the pollutants return back to the environment in a more concentrated manner due to vegetative degradation.

CLF also looks at application of this rule to areas as little as ½ acre. This can more than double the effort needed to cover 1 acre application. Again due to the lack of data associated with the fate of the vegetative nutrient transport it is too early to determine if this practice will have the long-term success that is attributed to it.

The CLF posts a foot note for continuous monitoring and adaptive controls (CMAC). CLF takes the position that the conversion of dry ponds to wet ponds must play a critical role in the reduction of stormwater and associated pollutants. As part of the CLF submittal, they include a paper by Quigley and Lefkowitz along with a power point presentation indicating this is the end all to stormwater pollution. The data indicates that these retrofits benefit nitrogen removal the most. Total Suspended Solids (TSS) reduction is more easily managed by forebays and Total Phosphorous (TP) removal is dismal at 14%.

The dry pond retrofit requires an actuated valve and level sensor built into the dry storage ponds. It requires a Wi-Fi type set-up to send real-time information.

Manchester has 17 flow measuring devices within the CSO structures along with three city-wide rain gages. It costs \$200,000 a year to maintain these structures and retrieve reports for the CSO LTCP. There are also numerous issues with these systems in cold weather.

Dry ponds converted to wet ponds will have similar issues, from poor to no operation of the actuated valves, problems with reporting of the actual volume treated due to the poor performance of the flow sensor. Exposure to sub-zero temperatures will play havoc with these systems unless they are completely removed after the growing season (November). This creates a maintenance nightmare with installation and removal for each system each year.

Dry ponds are installed to assure no water remains after 72 hours (the time it takes mosquito larvae to hatch). The retrofit example indicates that there are 270 hours of average retention time of discharge water in a wet pond, which can contribute to increased EEE and West Nile virus infections.

Dry ponds are also much better for trapping the first flush from the empty to full capacity than within a wet pond that already has water within.

There is an insistence that credit can be given for additional treatment from wet ponds that are available in dry ponds. It is much easier, more cost effective and less mechanically problematic to place a multi-port weir gate in a dry pond effluent end. This would be sized to the pond capacity where the lowest circular opening in the gate would be the smallest with the next being a little larger all the way to the top where the largest circular opening would be. This would allow the water to be retained longer in the pond, allow for more settling, have no mechanical parts and could be modeled dependent on system total rainfall and intensity. These are easily maintained and would serve as a restricted water discharge apparatus as the actuated gate does. It is way too early in the BMP process to tout these retrofitted wet ponds as the answer to stormwater pollution.

City of Dover, NH Comments – The City of Dover does make a good point about the methodology calculations outlined in Appendix H being consistent with those developed by the Seacoast PTAP group. It is important that consistency be carried through in all documents. As Manchester has witnessed, the CEI Watershed Restoration Plan for Nutt Pond, is significantly different from the AECOM TMDL development due to the different models used. This is confusing at best for the permittee.

Sheehan, Phinney, Bass & Green Comments – There were numerous legal comments submitted by this Law Firm on behalf of the MS4 communities. One of the main objections was the probabilistic analytical approach presuming all stormwater sources have the reasonable potential to violate water quality.

There is currently ‘clean metals’ analytical data for Manchester and Nashua, NH. Shortly there will be available data available from Lowell. The concentrations measured during sampling were between three and eight times less than

what was measured under non-clean conditions. The probabilistic approach needs to be reviewed using these higher accurate measurements to determine true WQ metals impairment.

Another avenue of exploration is the method to determine MS4 compliance with stormwater criteria. The same criteria is applied for MS4 permits (a dynamic condition) as is applied to NPDES permits (static condition). The maximum design flow from wastewater plants is calculated against the minimum weekly flow in the receiving body over a 10-year period. This gives you a straight forward calculation. With MS4 you have runoff only triggered by a rain event. It may be a minimum rainfall, a 2 year storm, 10 year, 25 year or even a 100 year event. Each storm moves through the pond or out to the river at a different rate.

The chronic criteria for copper is 2.9 ug/l. There are river gages along the major rivers that one can correlate rainfall to water level. If the river is at five times the 7Q10 why wouldn't the discharge from a culvert, swale or other direct discharge to that receiving body also receive a multiple of five for compliance for a discharge of 14.5 ug/l? A dynamic condition requires dynamic compliance measures.

This could be the same for ponds, lakes or other types of impoundments. If the flush rate for a pond is set at 10 flushes a year. And a measurable storm comes along that would double the flush rate during that event to mimic 20 flushes per year, why wouldn't the contaminant parameters be doubled to reflect the increased flush rate?

A sustained rain would increase the amount of contaminant to the pond, and then flush it below its starting point should the rain remained sustained. The time and location of the pond analysis could cause higher or lower readings than are actually available over the long-term mean. Some consideration needs to be given to these conditions to determine real-time compliance rather than probabilistic occurrences.

City of Portsmouth, NH Comments – Under item 2 Portsmouth states that, *“there appears to be no corresponding method to relieve the municipalities from unnecessary controls when waterbodies are delisted, determined no longer to be impaired, or determined to have improved during the term of the permit”*. As Manchester had indicated in its previous comments, when the contaminant concentration trends determine the WQ has reached the lowest threshold for compliance, then all ongoing activities are halted, and any compliance time-table suspended, until enough measurements can be taken to assure continued compliance, or that compliance hasn't been consistently met requiring the need to resume the task.

Also Manchester agrees with Portsmouth assessment that WQ impairments for solids do not exist within the designation of impairments. This terminology, if it is to be used, needs to be well defined. Examples of solids impairments given to have any substance for active compliance.

City of Rochester, NH Comments – The City of Manchester agrees with Rochester that a public hearing should be held to review the changed sections of the NH MS4 Permit.

Manchester does agree with Rochester that significant costs burdens will be placed upon the citizens. In the original comments Manchester provided on the MS4 there was a spreadsheet for costs for the StormTreat system. This system is the only system that captures solids via baffle tanks, uptakes nutrients and metals from stormwater and attenuates part of the flow. In review of the four TMDLs issued to Manchester and the acreage of the watersheds that surround these ponds, it was determined that the cost for enough treatment units to assure all water quality parameters are met would be between \$550 million and over \$700 million dollars dependent on the phosphorus limit that had to be met (12 ug/l to 15 ug/l). The argument is that phosphorus can be treated with less expensive means, but when the water quality limit for lead is 0.54 ug/l and the only time this was measured in the Merrimack River under 'clean sampling' conditions were in fact during times of rain. If it collects in the urban streets it will eventually be evident in the ponds and lakes and StormTreat is a very effective system to remove this contaminant. StormTreat meets the clause “maximum extent practicable” and “maximum extent feasible.” This is why a dynamic contaminant determination,

as the example given above, is needed otherwise there will be runaway costs that no municipality will be able to afford.

Under the Phase II program Manchester became a regulated MS4. In this program Manchester did enjoy the flexibility of prioritizing projects and has performed a good amount of the work on Nutt Pond, a portion of the work at Dorrs Pond with Stevens and Pine Island Pond work pending. These ponds have been in the program for 13 years and it may take another 13 or more to complete projects around each pond. This is the iterative approach as outlined in the Preamble to Phase II Stormwater Regulations, but will change drastically with this newly proposed MS4 with the hardened time schedules.

As Manchester alluded to in its comments we agree with Rochester's comments regarding waiving out of the extensive sampling requirement. Manchester looked at the amount of samples and the time that demonstrated compliance as excessive. However, the term "no measurable amount of nitrogen/phosphorus" in discharges is well beyond any expectation. If it meets the water quality standard it should be considered in compliance. There should also be consideration for dilution and flush rates as rainfall is a dynamic component.

Manchester agrees with Rochester's comments that *"Unlike Appendix H, Appendix F does not provide a mechanism to demonstrate that the MS4 discharges are not impacting receiving waters"*. Manchester did state that the 1,000 count limit in many cases is caused by water fowl or small wild animals that inhabit the banks of rivers and ponds. CSOs are the major contributor by far and are being addressed separately by LTCPs.

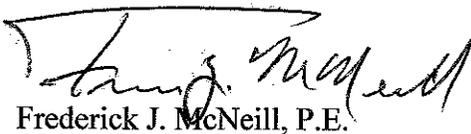
Contamination has been evidenced at swimming areas when parents change children's diapers and leave them next to the beach or river banks. Also, when children enter waters with fecal matters in their diapers this usually raises the e-coli counts. If there is an assurance that all of the illicit discharges have been controlled within a community, then e-coli contamination is beyond the control of any municipalities BMPs. These are individual instances that cannot be policed by the municipality in an ongoing fashion.

The Statewide Bacteria TMDL assumes that all waterbodies are impaired for bacteria. Manchester has demonstrated that in instances where contamination has been found, it was usually the result of fowl. The last true cross-connection causing fecal contamination was discovered over 10 years ago at a restaurant near the Hooksett town line. This was investigated, found and completely removed within two weeks. A few other hot spots have been investigated since then with results in the 1,000 to 3,000 range. The hot spot areas were followed back upstream of the hit location. The results got lower the further the upstream investigation went indicating fowl or warm-blooded animal contribution.

End of Comments

Thanks you again for the opportunity to comment on these important proposed stormwater regulations. If you have any questions, or require any additional information, please feel free to contact us at your convenience.

Sincerely,



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Chief Engineer

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