

November 1, 2015

Via Electronic Mail (tedder.newton@epa.gov)gg

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 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 is a member-supported environmental advocacy organization that works to solve the problems threatening our natural resources and communities in New Hampshire and throughout New England. CLF has worked, and continues to work, to protect the health of our waterways and, in doing so, to promote effective regulations and strategies to reduce and minimize the significant impacts of stormwater pollution. CLF submitted comments on prior iterations of this draft permit by letters dated February 20, 2009, July 27, 2010, and August 12, 2013. CLF incorporates its prior comments, including all attachments submitted therewith, as if fully set forth herein. With respect to the proposed modifications, CLF provides the following comments.

1. Compliance Schedules

In its Statement of Basis for Proposed Modifications (“Statement of Basis”), the Environmental Protection Agency (“EPA”) references new regulations in New Hampshire relative to compliance schedules in National Pollutant Discharge Elimination System (“NPDES”) permits, stating:

When EPA drafted the 2013 draft New Hampshire small MS4 permit, New Hampshire regulations did not allow for the use of compliance schedules in NPDES permits. On November 22, 2014, Env-Wq 1701.03 “Compliance Schedules in NPDES Permits” was adopted into rule and became effective, allowing compliance schedules to be put into NPDES permits. Accordingly, EPA has amended the language in Sections 2.1.1 and 2.2 and Appendix F and added specified schedules leading to compliance with water quality standards which are consistent with Env-Wq 1701.03 and 40 CFR §122.47.

See Statement of Basis at 2.

The above-referenced regulations pertaining to compliance schedules only apply in limited circumstances. Specifically, Env-Wq 1701.03 provides that a NPDES permit issued or renewed for a discharge to New Hampshire surface waters “shall not specify a schedule leading to compliance with New Hampshire or federal surface water quality standards, or both, *unless . . . [t]he compliance schedule is provided to afford the permittee adequate time to comply with one or more permit requirements or limitations that are based on new, newly interpreted, or revised water quality standards that became effective after issuance of the original discharge permit and after July 1, 1977.*” See Env-Wq 1701.03(a) (emphasis added). 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 proposed modifications. CLF does not concede that the limited conditions in which compliance schedules are allowable under Env-Wq 1701.03 have been satisfied. To the extent one or more “new, newly interpreted, or revised water quality standard” exists to lawfully allow the use of compliance schedules, such schedules must be related directly to such water quality standard and not to the permit generally.

To be clear, and as stated in prior comments, CLF supports the more prescriptive nature of the draft permit, as compared to the Small MS4 permit it will replace. Accordingly, CLF supports clear deadlines by which permittees must complete specified actions. However, the Statement of Basis does not provide sufficient information to determine whether, pursuant to Env-Wq 1701.03, EPA can lawfully determine that permittees are *in compliance* with the permit, even when discharges are causing or contributing to the violation of water quality standards, simply by virtue of proceeding with actions on certain specified timelines. Accordingly, CLF objects to any and all amendments that would have such an effect. See, e.g., EPA’s proposal to strike §2.2.1(h).

To the extent there is a lawful basis for a compliance schedule pursuant to New Hampshire’s recently adopted regulation, Env-Wq 1701.03 provides that “[a] compliance schedule established to meet any surface water quality standard that applies to New Hampshire waters receiving the discharge shall . . . [r]equire compliance at the earliest practicable time.” See Env-Wq 1701.03(b). Various deadlines enumerated included in the proposed modifications are not consistent with this requirement and must be accelerated; and under no circumstances should deadlines extend beyond the five-year term of the permit.¹

2. Discharges to Certain Impaired Waters

EPA proposes to modify the draft permit by striking the following language: “EPA or the State agency may determine that additional waters shall be treated as ‘impaired’ waters pursuant to this Part based on water quality or modeling information and shall notify the affected MS4 operators of any such determination.” See Proposed Modifications to Draft Permit §2.2. In light

¹ The proposed modifications include a requirement that implementation of Lake Phosphorus Control Plans be completed “as soon as possible but no later than 15 years after the effective date of the permit.” See Appendix F at 16. CLF strongly objects to this fifteen-year timeframe and urges that the deadline for this requirement, and related milestones, be greatly accelerated.

of the five-year term of the draft permit, it is essential to provide flexibility to ensure that waters not designated as impaired at the time of the permit's issuance, but that are demonstrated to be impaired at some future time during the permit term, are provided necessary protections. While it appears EPA may intend such protections on a pollutant-specific basis,² CLF objects to striking this overarching language.

3. Discharges Subject to Requirements Related to an Approved TMDL

CLF objects to the draft permit's limitation of §2.2.1 to TMDLs that are in existence "as of the effective date of this permit," as the permit should provide special provisions for impaired waters that are subject to TMDLs that are approved by EPA *during* the term of the permit. CLF also objects to EPA's proposal to strike the following language as set forth in §2.2.1(b): "In addition to those specific requirements, EPA may notify the small MS4 of the need to comply with additional requirements that are consistent with the assumptions and requirements of the Waste Load Allocation (WLA)." It is essential that EPA have greater flexibility and discretion to ensure necessary actions to achieve needed load reductions. CLF urges that this language be restored in finalizing the permit.

4. Discharges to Certain Water Quality Limited Waters Without TMDLs

CLF appreciates the more detailed and prescriptive approach of the draft permit, as compared to the prior Small MS4 permit, to addressing Small MS4 discharges to impaired waters that do not yet have approved TMDLs. We are greatly concerned, however, with the proposal to strike prior language pertaining to the development of Water Quality Response Plans ("WQRPs"). While presumably EPA intends to rely upon the various pollutant-specific requirements set forth in its new, proposed Appendix H, we believe the permit will be weakened with the elimination of prior WQRP language (*i.e.*, language contained in §2.2.2.a.ii. of the prior iteration), including the elimination of a one-year timeframe for developing a WQRP, and the requirement that Stormwater Management Plans contain separate sections specifically addressing the matters to be addressed in WQRPs.

CLF is greatly concerned with the timeframes contemplated in the proposed modifications, as set forth in proposed changes to §2.2.2 and Appendix H. In the first instance, it is important to note that while the prior iteration of the draft permit contemplated an iterative approach to addressing impairment-related discharges from Small MS4s, it provided for the development of WQRPs within one year of the effective date of the permit, and an iterative approach that would take place over the course of the permit term. *See, e.g.*, prior language in §2.2.2 describing a three-phase iterative approach to take place "over the course of the permit term," which EPA now proposes to strike. For the reasons discussed above (*see* Item 1), and because it is essential to make more expedited progress in reducing pollution and resolving impairments, we object to an iterative approach that is not temporally bounded by the permit's five-year term. For the same reasons, we also urge EPA to adopt schedules in Appendix H – such as for nitrogen and phosphorus Source Identification Reports, and for structural BMPs – that are more accelerated

² *See, e.g.*, §§2.2.2(a)(i)(2) (relative to nitrogen), (b)(i)(2) (phosphorus), (c)(i)(2) (bacteria and pathogens), and (d)(1)(2) (chlorides). Note that in §2.2.2(e)(i)(2), the proposed modification omits the words "solids, oil and grease (hydrocarbons) or metals." These words should be added following the clause "that is water quality limited due to".

than currently proposed. We reiterate our position, discussed in Item 1, above, that such schedules cannot be considered *compliance* schedules.

5. Stormwater Management in New Development and Redevelopment

The proposed modifications include the requirement that “[p]ermittees shall develop, implement, and enforce a program to address post-construction stormwater runoff from all new development and re-development projects that disturb a minimum of one or more acres and discharge into the permittees [*sic.*] MS4 at a minimum.” See §2.3.6(a), as proposed for modification. CLF strongly supports such a program (with modifications to be consistent with our comments below). However, we strongly urge adoption of a lesser acreage threshold. Specifically, and particularly in light of past development trends in southern and southeastern New Hampshire, and the potential for those trends to occur again (particularly in the Seacoast region), the permit should adopt a threshold no greater than one-half acre.

As set forth in our prior comments, low impact development (LID)/green infrastructure has become the most effective way to reduce the stormwater impacts of development (both new and existing). In addition to LID/green infrastructure-related materials submitted by CLF in its prior comments, continuous monitoring and adaptive control technologies can and must play a critical role in reducing stormwater and associated pollutants for both new development and redevelopment, and enhancing the effectiveness of best management practices.³ In addition to their significant water quality benefits, LID/green infrastructure and continuous monitoring/adaptive control approaches can and must serve as essential tools in making communities more climate resilient, helping reduce flooding from storm surges and severe rain and snow events.⁴ These technologies are entirely practicable and reduce stormwater pollution to the maximum extent. Accordingly, as CLF has made clear in its prior comments, the permit should *require* their adoption and implementation as part of its governing “maximum extent practicable,” or “MEP,” standard.

In light of the foregoing, CLF is heartened to see language in the proposed modification requiring permittees to develop ordinances or other regulatory mechanisms “that are at least as stringent as the following: (a). Low Impact Development (LID) site planning and design strategies must be used to the maximum feasible in order to reduce the discharge of stormwater from new development.” See §2.3.6.a.ii.(a) of proposed modifications. CLF strongly supports this language and urges – for the reasons set forth in our prior comments – the adoption of other

³ See Marcus Quigley, P.E., D.WRE and Lefkowitz, Jamie, P.E., *Overview of Continuous Monitoring and Adaptive Control for Enhancing or Converting Approved Stormwater BMP Types in the Chesapeake Bay Watershed*; Marcus Quigley, D.WRE, P.E and Lefkowitz, P.E., “Presentation to the Chesapeake Bay Program Urban Stormwater Work Group (Oct. 20, 2015). Both documents are provided herewith.

⁴ EPA itself has released several documents highlighting the stormwater reduction and economic benefits from LID/GI. See, e.g., *Enhancing Sustainable Communities With Green Infrastructure: A guide to help communities better manage stormwater while achieving other environmental, public health, social, and economic benefits* (2014) <http://www.epa.gov/smartgrowth/pdf/gi-guidebook/gi-guidebook.pdf>; *Getting to the Green: Paying for Green Infrastructure -- Financing Options and Resources for Local Decision Makers* (2014) http://www2.epa.gov/sites/production/files/2015-02/documents/gi_financing_options_12-2014_4.pdf; *Case Studies Analyzing the Economic Benefits of Low Impact Development and Green Infrastructure Programs* (2013) http://water.epa.gov/polwaste/green/upload/lid-gi-programs_report_8-6-13_combined.pdf.

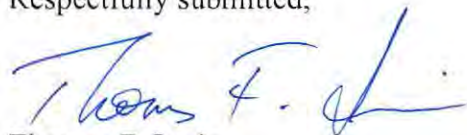
provisions ensuring that LID/green infrastructure, as well as continuous monitoring and adaptive control technologies, are required and actually implemented in furtherance of meeting the MEP standard, as well as for ensuring that discharges do not cause or contribute to water quality violations.

While CLF strongly supports the above-quoted language (*i.e.*, §2.3.6.a.ii.(a) of the proposed modifications), we are greatly concerned that §2.3.6.d of the proposed modification is inconsistent with, and undermines, the mandatory nature of LID/green infrastructure as set forth in §2.3.6.a.ii.(a). Specifically, §2.3.6.d merely requires permittees to assess whether local regulations and codes *allow* LID/green infrastructure, and to take steps, if necessary, to make such practices *allowable*. These provisions should be changed to require an assessment of local ordinances and codes, and necessary changes to such ordinances and codes, to *require* (not simply *allow*) LID/green infrastructure. Similarly, §2.3.6.c, as set forth in the proposed modifications, should be amended to *require* permittees to change street design and parking lot guidelines, and other local requirements related to the development of impervious surfaces, to adopt low impact design options. The time for communities to achieve these actions (relative to LID in local regulations and ordinances, and relative to impervious surfaces) should be shortened from three years to a maximum of two.

EPA's proposed modifications include striking language related to tracking impervious area (IA) directly connected impervious area (DCIA), namely §2.3.6.8.a of the prior iteration of the draft permit. CLF strongly supports requirements that permittees track impervious area and DCIA, and assess possible locations for LID retrofits, as tracking overall impervious cover and DCIA will allow communities to fully account for the causes of waterway impairment, and is an important step towards the deployment of LID/green infrastructure on a broader scale. Accordingly, CLF objects to the proposed striking of this language and urges that it be restored. For the same reasons, CLF also objects to the proposed striking of language in §2.3.6.8.c of the prior iteration of the draft permit.

CLF appreciates the effort EPA has invested in advancing this permit. In light of the many years of process, it is CLF's hope that EPA will, following the conclusion of the process noticed in the Federal Register, promptly proceed to a final permit without delay, and with changes that address concerns identified by CLF. Again, we appreciate the opportunity to provide these comments.

Respectfully submitted,



Thomas F. Irwin

Vice President & CLF New Hampshire Director

Overview of Continuous Monitoring and Adaptive Control for Enhancing or Converting Approved Stormwater BMP Types in the Chesapeake Bay Watershed

Marcus Quigley, P.E., D.WRE. and Jamie Lefkowitz, P.E.

There are now reliable, robust, and secure solutions for cost effective continuous monitoring and adaptive control (CMAC) of stormwater infrastructure. These solutions have an important role to play in accelerating the enhancement and conversion of existing stormwater facilities and construction of new facilities. CMAC solutions integrate information directly from field deployed sensors with real-time weather forecast data (i.e., NOAA forecasts) to directly monitor performance and make automated and predictive control decisions to actively manage stormwater storage and flows. The approach is non-proprietary, commercially deployed throughout the county for other stormwater management applications, and the outcomes have been verified by separate independent research efforts.

Specifically CMAC BMPs can improve environmental outcomes by:

- Using a facility's storage volume to detain flow across all storm sizes.
- Dramatically improving water quality from facilities by increasing residence time and/or improving unit process effectiveness (e.g., settling, denitrification).
- Restoring pre-development hydrology and base flows by actively modulating release rates based on forecast information.
- Increasing the volume retained on site.
- Intelligently detaining flows in combined sewer systems for release during dry weather.
- Reduce the frequency of flooding events.
- Enabling durable and adaptable designs that are less dependant on site specific conditions.
- Being adaptable to future climatic conditions or changes in site characteristics without new infrastructure and with only operation changes.

and reduce technical, regulatory, and compliance risk by:

- Providing auditable performance and supporting data without additional cost.
- Increasing uptime of facilities through alerting of operational or maintenance issues.
- Providing direct verification of facility performance.

State of the Practice and Technical Discussion:

Through empirical research, modeling, and widespread field deployments, CMAC solutions have been shown to result in significant increases in the performance of a range of existing stormwater BMPs while reducing operational and outcome risk.

Example Field Deployments and Existing Research:

- **EPA and the Water Environment Research Foundation (WERF)** published a report "*Transforming our Cities: High Performance Green Infrastructure*", which was a pilot level study at eight locations around the country (WERF, 2014). The study concluded that distributed real-time control of green infrastructure can: significantly reduce contributions to combined sewers and mitigate post-storm combined sewer overflows, reduce stormwater runoff, conserve water, with

particular benefits in drought-inclined areas, maximize reuse for irrigation. No other BMP can simultaneously accomplish these goals

- **Center for Research in Water Resources at the University of Texas at Austin and Geosyntec (2015)** showed that a passive dry pond conversion to a CMAC wet pond resulted in a facility that achieved a 73% reduction in Nitrate+Nitrite (Geosyntec, 2015) and a six fold reduction (from an average of 0.66 mg/L to 0.11 mg/L) in Nitrate+Nitrite over the pre-retrofit dry basin.
- **Muchalla et al. (2014)** found that retaining water using real-time rainfall-driven controls resulted in a 48 to 60% increase in removal of small particles from captured stormwater. “The removal efficiency for suspended solids could be significantly increased by all control strategies and the hydraulic peaks were reduced by at least 50%... [CMAC solutions] provide significantly higher removal efficiency for suspended solids and a possible flexible adaptation to future demands”. Increasing retention time without increasing storage volume, such as with a dry pond to wet pond retrofit, has been shown to increase total suspended solids removal from 39 to 90% and ammonia-nitrogen removal from 10 to 84% (Carpenter et al., 2014 and Gaborit et al., 2012).
- **An analysis of the performance of the addition of CMAC on the harvesting systems installed in at USEPA headquarters in Washington DC** greatly improved the system’s ability to mitigate stormwater volumes and flow rates and improve water quality. Total mass reductions estimated from this system during a one year monitoring period indicate removals based on residence time of 89% (TSS), 14% (TP) and 77% (TN), (Debusk, 2015).

Typical Applications in the Chesapeake Bay Watershed:

CMAC of stormwater storage can have a particularly positive impact on the water quality improvement performance of existing approved best management practice (BMP) approaches while also restoring predevelopment flows. CMAC provides a mechanism for achieving both the BMP Conversion and BMP Retrofit categories of retrofits recognized by the Chesapeake Bay Program Expert Panel to Define Removal Rates for Urban Stormwater Retrofit Projects (Scheuler et al., 2012) using existing approved retrofit approaches.

Stormwater BMPs with forecast-based adaptive control achieve better pollutant removal and runoff reduction outcomes because, among other benefits, they can increase the amount of time that stormwater remains in the treatment facility without compromising capture rate while also reducing the frequency of erosive flows. Further, the technology used to deploy the CMAC also collects performance continuously, allowing for accurate and precise quantification of a BMP’s actual (not theoretical) performance. Direct continuous monitoring of facility performance should be the gold-standard in the Chesapeake Bay Watershed for quantifying and verifying load reduction credits and verifying implementation plan results. This direct documentation is available using CMAC solutions with approved BMP types.

Considerations for Use of CMAC in the Chesapeake Bay Watershed

CMAC provides a reliable, cost effective means for continuous monitoring and adaptively controlling new and existing stormwater quality facilities. Given that CMAC can provide significant and auditable performance enhancements to approved BMP types, credit should be given for directly demonstrated outcomes. Specifically:

- In the current credit system, a wet pond only gets credit for its volume. However, with CMAC, the precise volume that meets treatment requirements is continuously measured. Therefore, credit can and should be given for the actual treated volume, increasing the credit derived from an existing BMP.

- CMAC is an enhancement to BMPs; therefore, no new BMP types are required to be approved by the expert panel.
- Annual reporting of CMAC integrated project performance should accompany annual compliance reports under implementation plans. These reports should be verified by a professional engineer in the state of record.

Conclusions

Over the past decade, significant advances in hardware, software, communications infrastructure (i.e., the internet) and scalable computing architectures (i.e., cloud computing) have made it cost-effective to deploy reliable, secure, highly intelligent continuous monitoring and adaptive control solutions to help address some of our most challenging water quality issues. We have a significant opportunity to leverage these new technologies alongside the significant existing work of the Working Group and Expert Panel reports to help protect and restore the Chesapeake Bay.

Examples and References

Retrofit Example 1: Dry Pond to Wet Pond Conversion

Forecast-based CMAC provides the most cost-effective method to convert a dry pond to a wet pond, adding quantifiable water quality improvement performance without substantially altering the footprint or structural design of the facility. The retrofit involves modification of the passive outlet structure with a fail-safe actuated valve and installing a level sensor in the pond storage area. In order to evaluate the long-term performance of these systems, continuous simulation modeling has been conducted using 50 years of hourly rainfall data from Baltimore Washington International Airport (OptiRTC, 2015). The model simulates the function of a storage unit sized to capture 1.5 inches of rainfall per impervious acre with an adaptive controlled outlet sized to drain from full in 48 hours, when fully open. The active control logic, designed to maximize retention time by closing the valve except when rainfall is predicted in the 48-hour forecast, achieves:

- 270-hour average retention time of discharged water (the existing dry pond achieves ~12 hours average retention time)
- 74 percent reduction in wet-weather flow volumes
- 70 percent asset volume utilization during wet-weather

These metrics were calculated without assuming any infiltration or evapotranspiration loss from the pond, which would further increase the performance of the system.

Retrofit Example 2: Enhancing the Performance of an Undersized Stormwater Asset

In a recent field study, adaptive control was added to a small legacy wet pond to mitigate post-development erosive flow impacts and improve water quality. The total storage volume equated to just 0.1 inches of rainfall per impervious acre. Analysis of one year of monitoring data resulted in a 25 percent reduction in the duration of channel-forming flows and that approximately 15 percent of total runoff volume was shifted from wet weather to dry weather period (equating to approximately 22 times the active storage volume of the pond). Furthermore, the adaptive control retrofit also inherently provides continuous monitoring data and real-time information on water quality performance indicated by retention time. For example, using readily available readings of water level and discharge rate, the facility reported that 31 percent of the total volume of water discharged from the pond during a 6-month wet-weather season had been retained for 24 hours or more. This type of reporting goes far beyond what is possible or practicable for passive, unmonitored BMPs where monitoring is an afterthought or additional (frequently costly) project. CMAC presents the possibility to bring stormwater permitting and crediting on par with point source discharges - basing compliance on real field collected performance data instead of design criteria and largely uncalibrated site level modeling.

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- Klenzendorf, Brandon, Michael Barrett, Marty Christman, Marcus Quigley. *Water Quality and Conservation Benefits Achieved via Real-Time Control Retrofits of Stormwater Management Facilities near Austin, Texas*, 2015.
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Presentation to the Chesapeake Bay Program Urban Stormwater Work Group

October 20, 2015

Marcus Quigley, D.WRE, P.E.
Chief Executive Officer, OptiRTC, Inc.

Jamie Lefkowitz, P.E.
Senior Engineer, OptiRTC, Inc.

Continuously Monitored and Adaptive control (CMAC) Retrofits for Approved BMP Types

Not a new technology - relies on existing approved BMPs
for treatment,
but has significant additional benefits:

Benefits of Continuous Monitoring

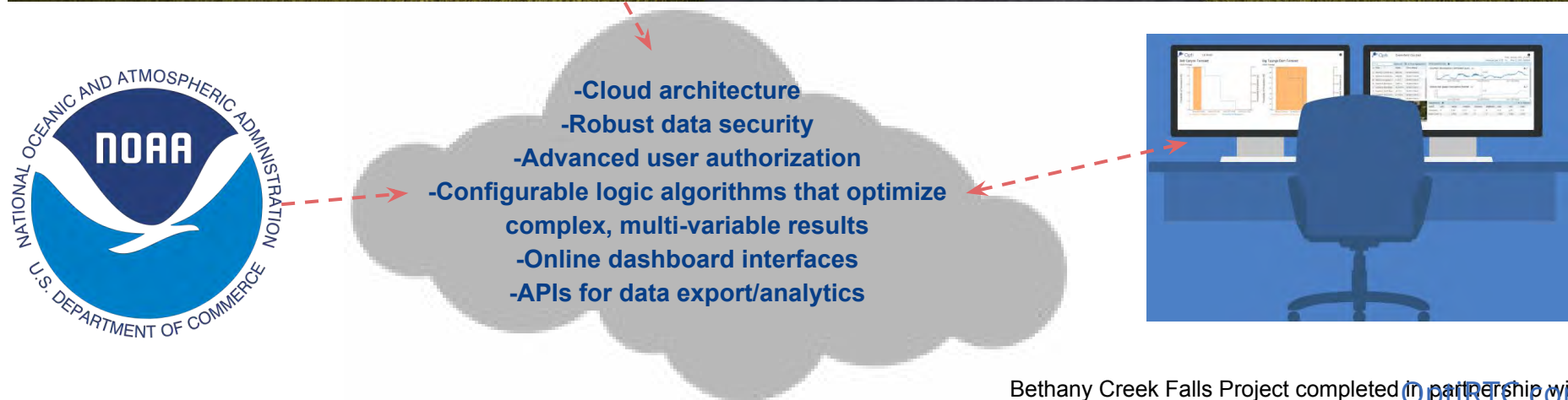
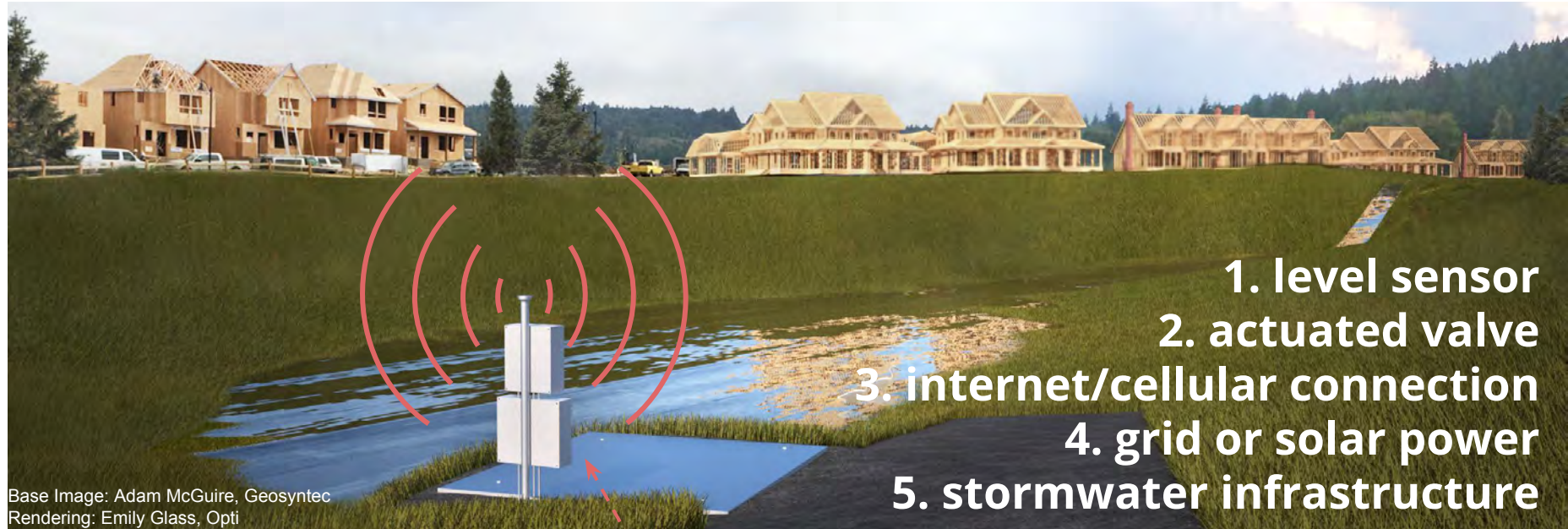
- Direct verification of performance.
- Auditable performance and supporting data without additional cost.
- Increasing uptime of facilities through notification of operational issues.
- Reduce maintenance costs without sacrificing performance.

Benefits of Adaptive Control

- Dramatically improving water quality from facilities by increasing residence time and/or improving unit process effectiveness (e.g., settling, denitrification).
- Reduce the frequency of flooding events.
- Enabling robust adaptable construction designs that are less dependant on site specific conditions.
- Allowing for updated operation to adapt systems to for future climatic conditions or changes in site characteristics.
- Utilizing an entire facilities storage volumes for the full range of storm event sizes.
- Intelligently detain flows in combined sewer systems for release during non-critical periods.
- Restoring pre-development hydrology (i.e., flow-duration matching) by actively modulating release rates based on forecast information.
- Increasing the volume retained on site.
- Maintaining ecological base flows.
- Allowing for changes to operation without major redesign or reconstruction.

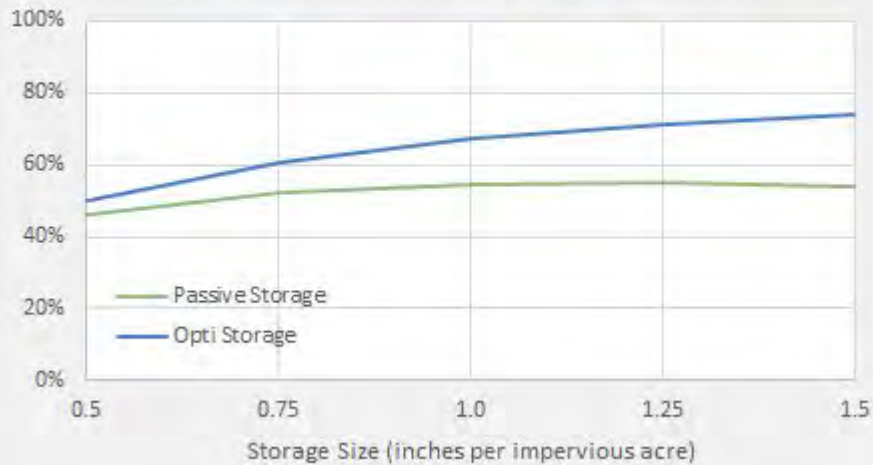
Continuous and adaptable stormwater management

Combine sensor data, weather forecasts, and algorithms to optimize stormwater infrastructure through active, cloud-based control

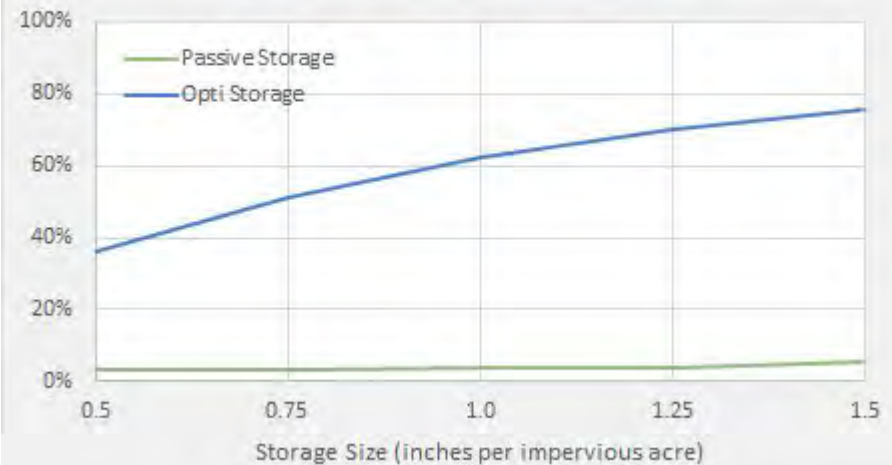


BMP Conversion: Dry to Wet Pond Modeling

Percent Wet Weather Flow Captured

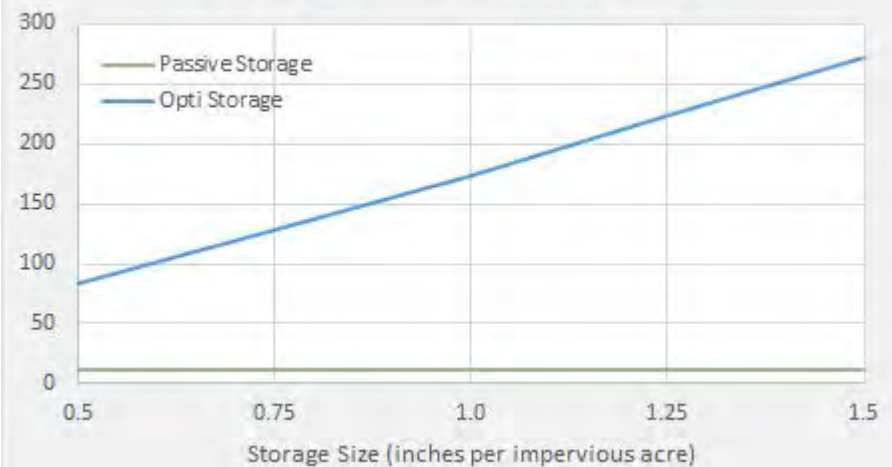


Percent Time Runoff Retained



- 50 years of hourly rainfall data from BWI
- Simulated passive dry pond and active retrofit to wet pond
- Various storage sizes
- 74 percent wet weather capture by volume
- 70 percent asset volume utilization during wet weather
- 270-hour average retention time of discharged water
- Complete runoff retention 76 percent of wet weather hours

Average Retention Time (hours)



BMP Enhancement: Wet Pond Retrofit

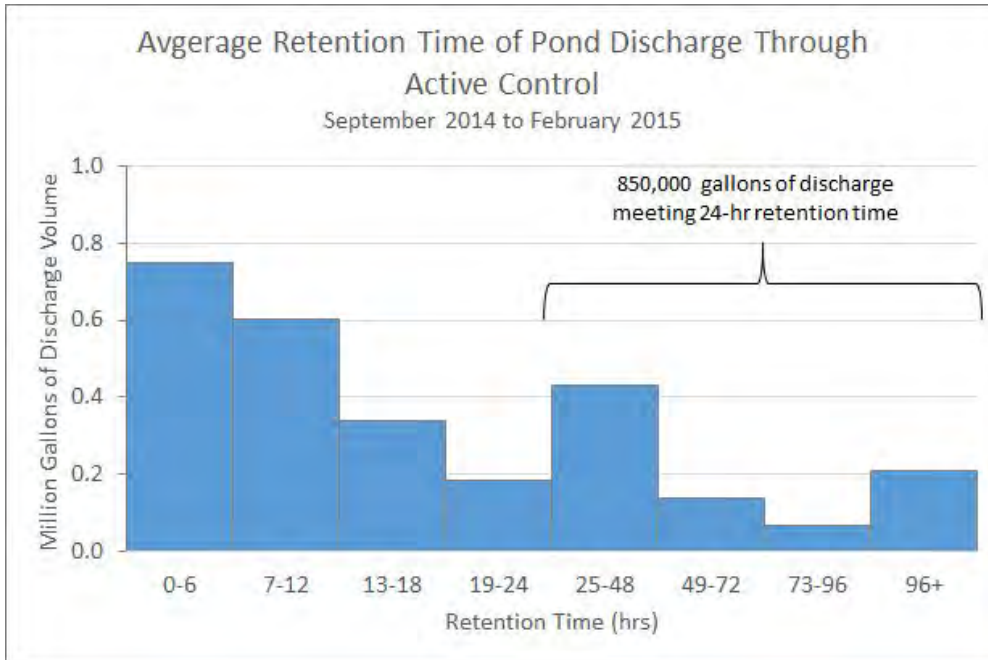
- 120 acre drainage area
- Runoff from 0.2" in storm event or 0.12" of impervious storage
- Very small existing pond
- Did not have an original water quality control purpose



Field Monitoring Results

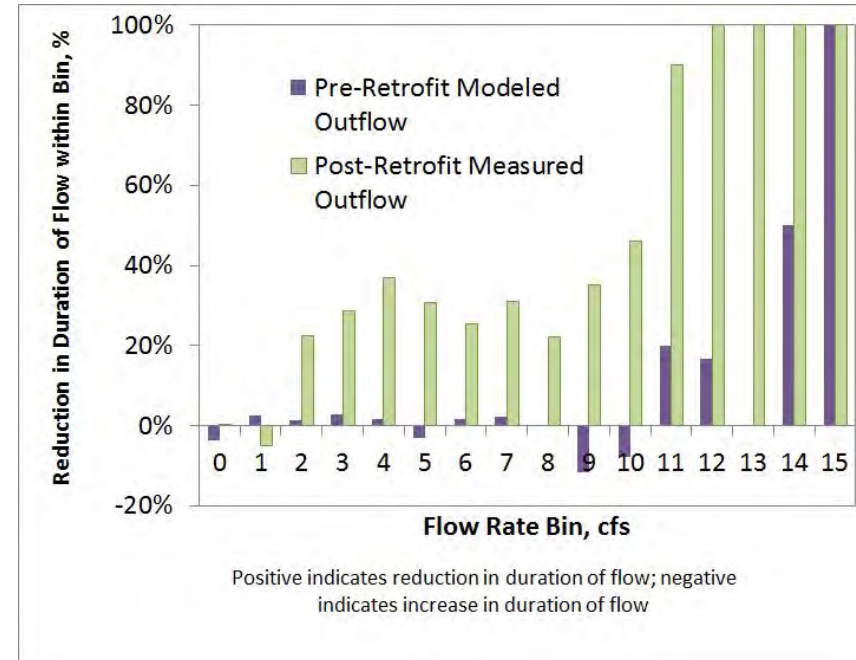
Accurate and Precise Performance Metrics

Water Quality



0.1 watershed inches of storage - dramatic increases in retention time for a very small facility

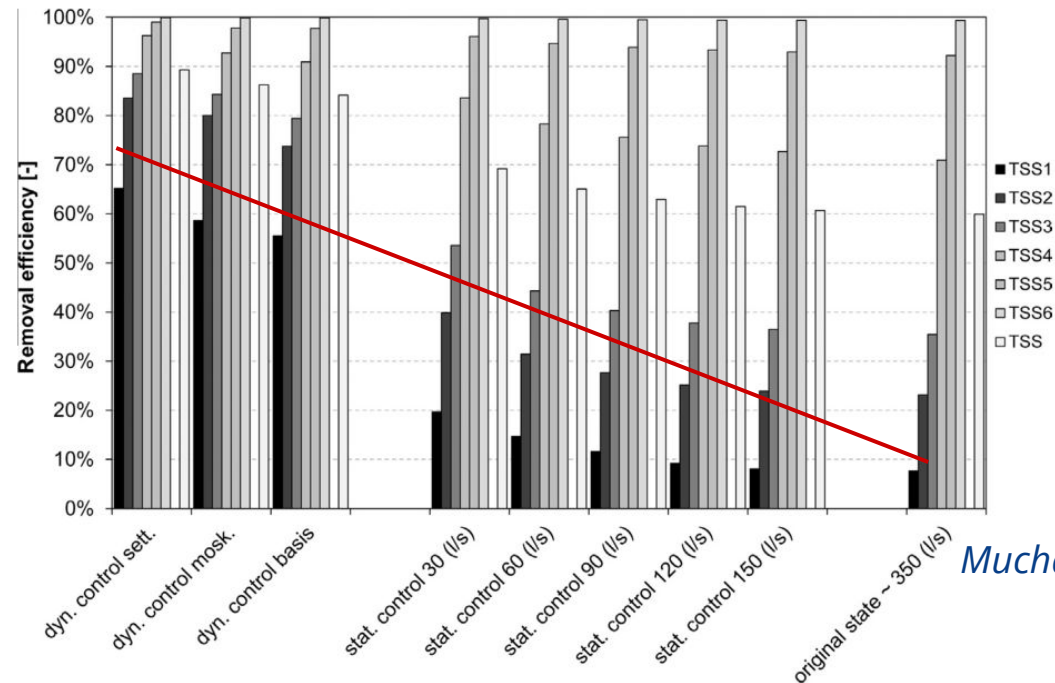
Stream Restoration



Quantitative and Verifiable Reporting Data

Increased control → Increased retention time → Increased WQ benefit

increased removal of smallest
particle fraction
with increased active control



Muchalla et al. 2014

Dry pond to wet pond retrofit (no active control) increased retention time and improved TSS and ammonia-nitrogen removal efficiencies

TSS: from 39 to 90%

NH₃-N: from 10 to 84%

Carpenter et al. 2014

Gaborit et al. 2012

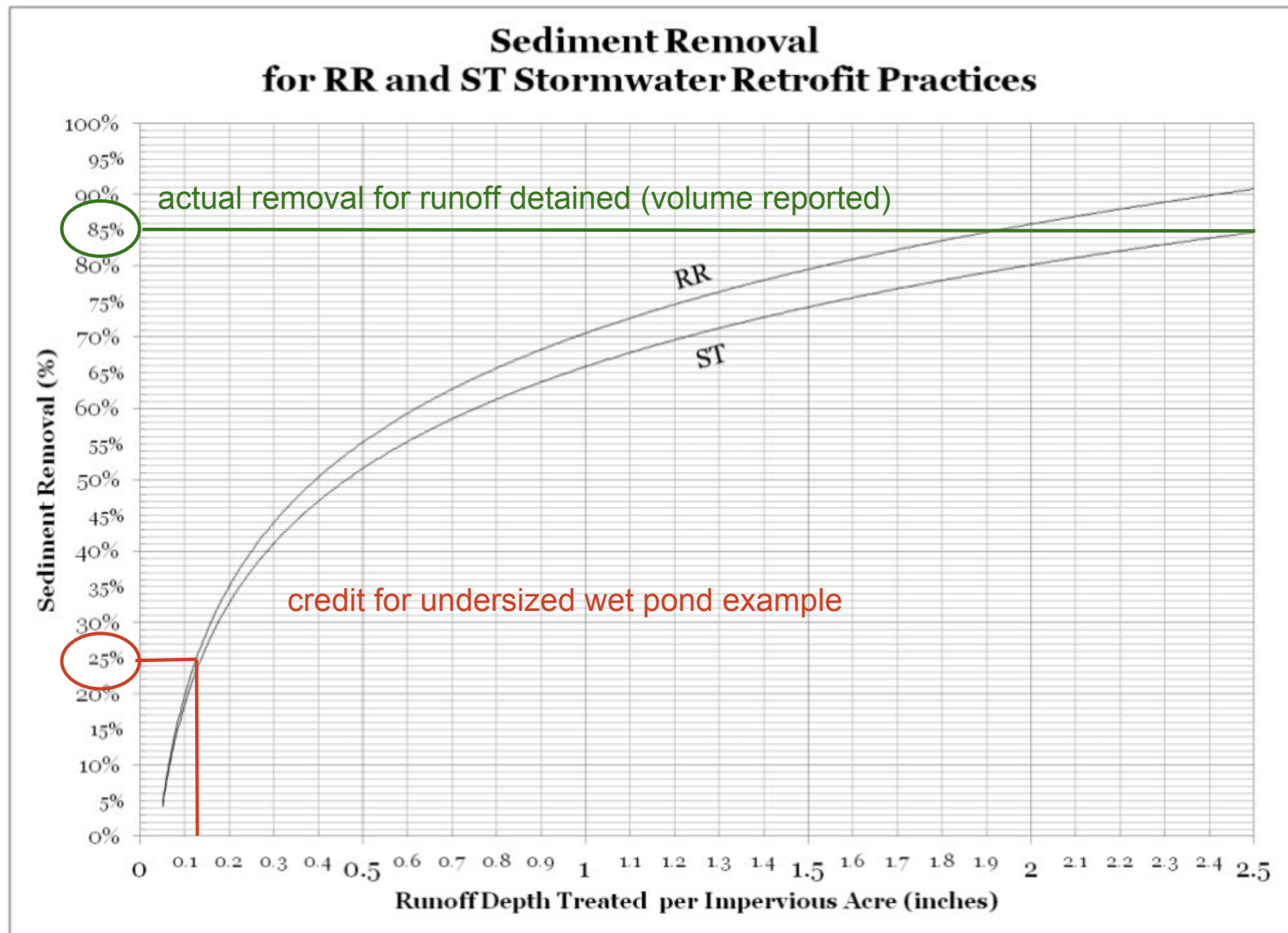
48-60% better removal efficiency of small particles in pond with active, rainfall-driven control

Muchalla et al. 2014

Smaller particles have higher associated phosphorus concentrations than larger particles

Moquecho and Pitt 2005

Credit Calculation: possibilities with quantification of volume treated



Conversion Types

- Dry Pond to Wet Pond
- Wet Pond to Wet Extended Detention Pond

Enhancements

- Wet Extended Detention Ponds
- Bioretention
- Wetlands
- Demand Dependant Cisterns to Fully Utilized Cistern
- Infiltration Facility

Benefits

- Increased residence time
- Increased volume retained
- Restore pre-development hydrology
- And additional benefits

References

Carpenter, Jason Faber, Bertrand Vallet, Genevieve Pelletier, Paul Lessard, and Peter A. Vanrolleghem. Pollutant removal efficiency of a retrofitted stormwater detention pond. Water Quality Research Journal of Canada. 49.2. 2014.

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Acknowledgement: Project data and analysis from projects completed in partnership with Clean Water Services, Geosyntec Consultants, and Opti.



Town of Danville

210 Main Street
Danville, NH 03819
Tel. 603-382-8253



Selectmen

Shawn O'Neil
Chris Giordano
Kimberly Farah
Sheila Johannesen
Joshua Horns

Town Clerk

Christine Tracy

Tax Collector

Kimberly T. Burnham



October 25, 2015

US EPA

ATTN: MR. NEWTON TEDDER
5 Post Office Square, Suite 100
Mail Code OEP06-1
Boston, MA 02109-3912

Dear Mr. Tedder:

The Town of Danville New Hampshire has concerns and comments regarding the proposed revisions to the draft NH Small MS4 Permit. This list of concerns was generated through discussions with the Danville Board of Selectmen and, the Danville Stormwater Department/Highway Department.

We would appreciate the EPA reviewing our concerns and addressing these points with the same level of importance that they were discussed in Danville and generated for your review. These concerns are based upon the fact that Danville is a small town and these initiatives would prove to be very costly for the Town to comply with.

The Town of Danville has 7,070 acres of land with approximately 3,451 acres restricted to Open Space land with long term and permanent restrictions on future development. The remaining land, due to our zoning and natural terrain features is predominantly forested. The acreage provides for natural infiltration of stormwater into watershed areas. The Town of Danville's regulated MS4 area only encompasses approximately one half of the Town's total area.

Danville is listed under section 2.2.2 a. i. of the proposed Small MS4 Permit as a municipality with stormwater discharges to waterbodies or their tributaries that are impaired due to nitrogen. As such, the draft MS4 will require Danville to meet updated water quality standards. The data used for the draft permit was provided by the New Hampshire Department of Environmental Services but is dated, contains incomplete data sets, and provides limited analysis regarding New Hampshire waterways. The area of Danville's urbanized area that falls into the Exeter River Watershed is a very small portion of the urbanized area and may not be contributing to the cause of the impairment, yet we must somehow comply with all of the provisions of the permit.

The revised permit sections also have a street sweeping mandate, requiring street sweeping on all municipal owned streets and parking lots twice a year. This request is unrealistic and unnecessary for Towns that do not have any street curbing. Danville has limited closed drainage, and the idea of street sweeping or having to hire a street sweeper to sweep up leaves, pine needles, etc. seems excessive as Mother Nature composts them naturally. This requirement has the appearance of gathering natures'

resources and disposing of them differently than what occurs naturally. The Town of Danville also uses a limited amount of sand during winter roadway maintenance, therefore avoiding large amounts of sediment accumulation on roadway edges.

An additional aspect in this permit involves the inventory and ranking of MS-4 owned property for BMP retrofits. Danville owns a varied amount of property from town owned buildings to town forest areas and conservation land. The work that would need to be done to access and retrofit town properties with BMPs would require funding that the town does not have.

The estimated costs of complying with the revised sections of the MS-4 permit may increase our towns compliance costs may be upwards of \$50,000.00 or more, over the first two permit years, with additional funding required during future years as the permit progresses. Each year additional requirements will add more and more costs onto the public.

Please be advised that additional comments to the current revisions of the Small MS-4 General Permit will be included in a comment letter being prepared on behalf of the New Hampshire Small MS-4 Coalition.

Thank you for your review of these comments and taking them into consideration when working on the final permit of this section. It is our desire to work together, as well as with other communities in implementing a viable solution to all of these issues and continue to have meaningful discussions to arrive at a successful final draft.

Respectfully,
Danville NH Board of Selectmen



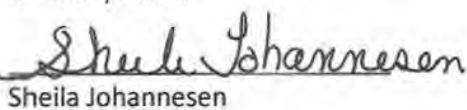
Shawn O'Neil, Chair,



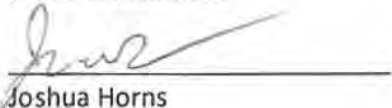
Chris Giordano, Vice Chair



Kimberly Farah



Sheila Johannesen



Joshua Horns

Town of Derry

"Derry, New Hampshire's Place to Be"

DEPARTMENT OF PUBLIC WORKS,

Michael Fowler, P.E., Director

Thomas A. Carrier, Deputy Director

PW15-261

October 30, 2015

Newton Tedder
US Environmental Protection Agency
5 Post Office Square – Suite 100
Mail Code-OEP06-1
Boston, MA 02109-3912

RE: Comments – 2015 Revisions to 2013 Draft Municipal Separate Storm Sewer System General Permit

Dear Mr. Tedder,

The Town of Derry is submitting the attached comments on the revised sections of the Draft 2013 Municipal Separate Storm Sewer System General Permit (MS4GP) for your consideration.

2.2 - This section states that the permittee shall identify in the SWMP and Annual Reports "all discharges... that: ...are subject to an approved Total Maximum Daily Load" Does this include all discharges that are privately owned or not belonging to the MS4?

2.2.1.a – This section states that *"Approved TMDLs" for discharges from the permittee's MS4 are those that have been approved by EPA as of the effective date of the this permit.* The draft permit does not consider future revisions during the permit term for waterbodies that are candidates for or are eventually delisted for which a TMDL may no longer be required.

2.2.1.e – This section has been recently revised to state "The operators of MS4s...that discharge to a waterbody *segment* listed on Table F-1 in Appendix F...shall meet the requirements of Appendix F, Part II with respect to reduction of bacteria/pathogens discharges from their MS4s" (emphasis given to change in *italics*). This change suggests that if the MS4 does not discharge to the segment of the waterbody, as opposed to the entire waterbody (e.g., beach versus entire lake, or segment of a brook versus the entire river), then the requirements of Appendix F do not apply. Table F-1 specifically lists 4 beaches and a brook in Derry. Two of these beaches are privately owned for which the Town has no jurisdiction, does not own surrounding property, and does not discharge stormwater to. While the town recognizes its responsibilities for MS4 discharge to the associated lake, bacteria or pathogen impairment at the private beach is not within the Town's control.

2.2.2 Discharge to Certain Water Quality Limited Waters without an approved TMDL –This section states that if ..."the MS4 is located in a town listed in Part 2.2.a.-b., the permittee shall

section relative to nitrogen impairment of the Exeter River Watershed and the limited area located within Derry. These comments are reiterated here.

- The Exeter River Watershed covers an area approximately 67,700 acres in size. Approximately 500 acres (or 0.8 square miles) of the watershed is in the Town of Derry and is associated with a tributary which flows to the Exeter River whose headwaters are in the Town of Chester.
- The majority of the Derry portion is undeveloped forest, surface water, or bordering wetlands.
- Much of the watershed in Derry also lays outside of the formally designated MS4 area and has, at most, only a couple catchbasins.
- Most of the Town of Chester lies within the Exeter River Watershed, however Chester has received waiver from the MS4 permit.
- The Derry's contribution in the watershed is negligible compared to the area within Chester and the downstream towns.

Installation of structural BMPs and implementation of the requirements outlined in Appendix H would be extremely burdensome and an unnecessary use of limited town resources, given the natural assimilative capacity of the streams within the Derry portion of the watershed, and the magnitude of the downstream segments within the adjacent referenced community not required to implement nitrogen reduction efforts.

Section 2.3.6.a.ii.(a) EPA is requiring the Town mandate the use of Low Impact Development (LID) for all new development in order to reduce the discharge of stormwater from new development. This is entirely unnecessary as current state regulations and town ordinances already have requirements relative to reducing discharge of stormwater.

Section 2.3.6.a.ii.(c),(d),(e) - There is no definition of LID. It appears that the EPA wants to legislate to the towns how development will be permitted to the point of compromising our minimum standards. The Town of Derry has already evaluated the feasibility of mandating the use of various LID practices in new or redevelopment. Numerous stakeholders were brought to the table including conservation, public works, and public safety. Given the requirements already included in our land development regulations, requirements for road maintenance/plowing, and public safety access for fire trucks, the Town does not believe mandated LID would provide any added benefit.

The requirement of an evaluation of all municipal property for stormwater BMPs is not necessary and difficult to implement. The Town takes property each by Tax Deed with the intent to have these properties back on the market producing taxes. Some of these may be in the urban compact where space is limited for BMPs or some may be vacant parcels. Does the town have to consider these for installation of BMPs where it may not be feasible due to space limitations, or to use up valuable real estate thereby eliminating tax revenue? Do we need to consider BMPs for properties that already have adequate BMPs or stormwater pollution protection practices?

Appendix F Section I, I.1.b.(ii) and (iii) - These sections require applicable MS4s to prepare a Salt Reduction Plan that shall include 1) requirements for private parking lot owners and operators and private street owners and operators that drain to the MS4 to use trained and certified salt

applicators in accordance with Env-Wq 2203, and 2) requirements for new development and redevelopment to minimize salt usage and to track and report amounts used.

The Town finds this an unnecessary and burdensome requirement. New Hampshire's successful "Voluntary Certified Salt Applicator Program" has been in effect since November 2013 and has over 300 certified salt applicators listed on the NHDES website. The Town has been a leader in supporting this program, bringing key stakeholders to the table and assisting NHDES in the formulation. Given the success of the voluntary program in Derry, requiring the towns to mandate the use of certified salt applicators by private property parking lot/street owners and operators is unnecessary. It is also unenforceable. No town has the resources to be "salt police". The authors of the draft NH MS4GP should reach out to and discuss the success of the program with NHDES and impacted communities before arbitrarily mandating actions on the part of towns that are virtually impossible to implement and enforce.

If you have any questions, please contact Craig Durrett or me at (603) 432-6144

Very truly yours,

A handwritten signature in dark ink, appearing to read "Mike A. Fowler". The signature is fluid and cursive, with the first name "Mike" being more prominent than the last name "Fowler".

Michael A. Fowler, P.E.
Director of Public Works

Cc/att: Craig Durrett, Derry Public Works

/csd



DEPARTMENT OF THE NAVY

COMMANDER
NAVY REGION MID-ATLANTIC
1510 GILBERT ST.
NORFOLK, VA 23511-2737

IN REPLY REFER TO:

5090

EVN40/05/RE400

NOV 2 2015

Mr. Newton Tedder
U.S. Environmental Protection Agency, Region I
5 Post Office Square, Suite 100
Mail Code OEP06-4
Boston, MA 02109-3912

Dear Mr. Tedder:

SUBJECT: DEPARTMENT OF DEFENSE (DOD) COMMENTS ON THE NOTICE OF A
REOPENING OF THE PUBLIC COMMENT PERIOD ON SELECT SECTIONS OF THE
DRAFT SMALL MUNICIPAL SEPARATE STORM SEWER SYSTEM (MS4) NPDES
GENERAL PERMIT – NEW HAMPSHIRE

As the Department of Defense (DoD) Regional Environmental Coordinator (REC) for U.S. Environmental Protection Agency (EPA) Region 1 and on behalf of the military services, the Commander, Navy Region Mid-Atlantic is responsible for coordinating responses to environmental policies and regulatory matters of interest. We appreciate the opportunity to provide comments for your consideration in response to the notice of a reopening of the public comment period for the subject permit. Our comments are enclosed.

Please note that by letter dated June 19, 2013, we commented on the public notice regarding the initial draft of this permit. At that time, we expressed significant concerns with language in a NPDES permit (Section 5.2 of the draft permit) requiring that federal agencies comply with the development and redevelopment post construction stormwater control standard in Section 438 of the Energy Independence and Security Act of 2007 (EISA § 438). We do not believe the CWA authorizes the inclusion of EISA § 438 standards in New Hampshire GP-NHR042000. Section 5.2 of the draft permit was not a section that was reopened for comment and to our knowledge this issue has not been resolved.

If you have any questions, my points of contact for this matter are Lieutenant Commander Mary Pohanka, JAGC, U.S. Navy at E-Mail mary.pohanka@navy.mil or or (757)322-2938 and Mr. William Bullard, Senior Water Program Manager at (757) 341-0429 or E-Mail william.bullard1@navy.mil.

Sincerely,

SEAN S. HEANEY

Director

Environmental Compliance

By direction of the Commander

Enclosure

Copy to: U.S. Army REC, Region I (Mr. Kevin Kennedy)
U.S. Air Force REC, Regions I, III (Mr. Ron Joyner)

Part 2.3.6. Stormwater Management in New Development and Redevelopment (Post Construction Stormwater Management). This section states that the stormwater management objective is for the hydrology resulting from new development to approximate the pre-development hydrology of the site or to improve the hydrology of a redeveloped site and reduce the discharge of stormwater pollutants.

Section 2.3.6.a.ii.(a). This section states that “Low Impact Development (LID) site planning and design strategies must be used to the *maximum extent feasible* in order to reduce the discharge of stormwater from new development.” (emphasis added)

Comment: The Clean Water Act (CWA) and EPA’s stormwater regulations require controls to reduce the discharge of pollutants to the “maximum extent practicable” (MEP). Although not specifically defined, the preamble to the regulations provide guidance for interpreting this term, stating “EPA has intentionally not provided a precise definition of MEP to allow maximum flexibility in MS4 permitting. MS4s need the flexibility to optimize reductions in storm water pollutants on a location-by-location basis. EPA envisions that this evaluative process will consider such factors as conditions of receiving waters, specific local concerns, and other aspects included in a comprehensive watershed plan. Other factors may include MS4 size, climate, implementation schedules, current ability to finance the program, beneficial use of receiving water, hydrology, geology, and capacity to perform operation and maintenance.” We note that Section 2.0 of this permit also uses the term “maximum extent practicable,” stating “The permittee shall develop, implement and enforce a program to reduce the discharge of pollutants from the MS4 to the maximum extent practicable; to protect water quality and to satisfy the appropriate water quality requirements of the Clean Water Act and the New Hampshire Water Quality Standards.” The term used in this section, “maximum extent feasible,” is not used in the CWA or stormwater regulations. Consequently, there is no definition or interpretive guidance to assist permittees in understanding what it means and how it might differ from MEP.

Recommendation: Consistently use the term “maximum extent practicable” throughout the permit when discussing requirements for meeting minimum measures, including those for post construction stormwater management.

Sections 2.3.6.c. and 2.3.6.d. Section 2.3.6.c. requires the permittee to develop a report assessing street design and parking lot guidelines, involving local planning and transportation boards, and recommend changes to local regulations and guidelines to support low impact design options. Section 2.3.6.d. requires the permittee to “develop a report assessing existing local regulations including, but not limited to, zoning and construction codes to determine the feasibility of making” certain green infrastructure practices allowable when appropriate site conditions exist. Further, this section states that “[i]f the practices are not allowed, the permittee shall identify impediments to the use of these practices, and what changes in local regulations may be made to make them allowable including a schedule for implementation of changes to local regulations.”

Comment: It appears that these sections apply to all MS4s, including non-traditional MS4s. Because non-traditional MS4s are subject to different authorities than traditional MS4s, existing local regulations may not apply. As written, these sections may be difficult for non-traditional MS4s to implement.

Recommendation: Exclude non-traditional MS4s from the requirements of 2.3.6.c. and 2.3.6.d. Alternatively, revise these sections in a manner that recognizes the differences between traditional and

non-traditional MS4s. This could include the addition of the following sentence: “The term ‘local regulations’ in this section applies to non-traditional MS4s to the extent they have similar applicable regulations.”

Section 2.3.6.e. This section requires the permittee to complete an inventory and priority ranking of permit-owned property and existing infrastructure that could potentially be modified or retrofitted with BMPs to reduce the frequency, volume, and pollutant loads of stormwater discharges.

Comment: This section would appear to extend beyond “stormwater management in new development and redevelopment” sites. Practicality, feasibility, and cost are not listed as considerations the permittee must use in developing the priority ranking. However, the Fact Sheet on page 55 recognizes that properties can be retrofitted “where it is practicable.”

Recommendation: Add “The permittee should also consider factors such as practicality, feasibility and cost.”

J. MICHAEL JOYAL, JR.
City Manager
m.joyal@dover.nh.gov



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City of Dover, New Hampshire

OFFICE OF THE CITY MANAGER

November 2, 2015

Newton Tedder
U.S. Environmental Protection Agency, Region 1
5 Post Office Square, Suite 100
Mail Code OEP06-4
Boston, MA 02109-3912

Re: City of Dover comments on EPA proposed 2015 Draft NH MS4 permit Revisions

Dear Mr. Tedder:

The City of Dover submits this comment letter to the proposed changes to the EPA NPDES NH General Stormwater Permit. Dover as a member of a Coalition of concerned communities includes by reference the attached set of comments prepared by Sheehan Phinney Bass and Green on behalf of the communities dated November 2, 2015. In addition Dover submits the following additional comments for the record.

Dover has an extensive stormwater system, much of which dates back well before 1940. During the past 15 years the city has devoted significant effort and funds to upgrade and maintain the stormwater system. The MS4 program has raised awareness in the public to build support to make available the resources for better management and performance of the system. As a result there is less flooding during large rain events and water quality exiting the system has improved.

Section 2.1.1.a suggests that any contribution of a pollutant from a stormwater pipe to a water body not meeting water quality standards would be in violation. The permit language does not consider or define a de minimis concentrations from an intermittent discharge, creating an unacceptable and unreasonable burden on Dover and any MS4 community to comply. A low concentration of a pollutant exiting a stormwater pipe that intermittently discharges to an impaired river would not be a cause of not meeting water quality standards, but would be considered to contribute to the exceedance. Every stormwater outfall discharging to an impaired waterbody would require retrofits and still never be in compliance.

Sec 2.1.1.b and c Both subsections include the phrase "(or its tributaries in some cases)" This is a vague description and leaves its application to who's discretion, EPA, NHDES, others?

Sec. 2.1.1.c This section provides an on ramp to include additional portions of the stormwater system to come under additional requirements if water quality standards of receiving streams are found not in compliance for any of the referenced pollutants. The term "water quality limited" is not defined in Appendix A. Appendix A should be updated to include a definition. The definition should clearly define "water quality limited" utilizing the same standards to list a stream as impaired.

Conversely the permit does not provide an off ramp for assessment units that show they are meeting water quality standards through either a future 303(d) delisting or recent water quality data suggesting that water quality standards

are being met. The permit should provide language which allow communities to devote resources where most needed and based on the most current information available. The current permit was issued in 2003 and since then there have been numerous 303(d) lists approved all within the current permit. This is an important issue that needs revision in the proposed permit. Linking the permit requirements to the approved 303(d) list at the time the final permit is issued, 2012 303(d), and remain in effect until the next permit is issued doesn't work or make sense.

Sec. 2.2.1.e This section references Appendix F Table F-1 which lists the bacteria impaired waterbodies by community. The waterbodies listed appear to be from the 2010 approved 303(d) listing. EPA has recently approved the 2012 list and NHDES has issued a draft of the 2014 303(d) list which is based on the most currently available information. The list in Table F-1 in Appendix F should reflect the latest information available for bacteria.

Sec. 2.2.2 References Appendix H. Appendix H Part 1 references "Water Quality Response Plans" which are no longer proposed in the permit and the language should be deleted from Appendix H and all other places in the permit. Perhaps the Stormwater Management Plan would serve as an appropriate substitute.

Attachment 1 to Appendix H prescribes calculations to measure load reductions when a new BMP is installed. The methodology calculating load reductions should be consistent with those being developed in the PTAP process in New Hampshire. Communities that agree to participate in the PTAP program should be exempt from the proposed MS4 reporting requirements to EPA. MS4 reporting would be redundant and potentially produce conflicting results if methodologies aren't consistent. The addition of new language in the proposed MS4 could provide MS4 communities with an exemption from the MS4 reporting as an incentive to participate in PTAP. This comment also applies to Sec. 2.3.6.e; Appendix H Part I. 1.c.iii; and Appendix H Part II. 1.c.iii.

Sec.2.2.2 requires any MS4 listed in Sec 2.2.2.a.i.1 must comply with the requirements in Appendix H Part 1. The requirements apply for the entire MS4 without regard to whether a catchment is discharging to a Nitrogen impaired water body. A community may have only one outfall to a nitrogen impaired waterbody in their entire MS4 system; but will be required to install and track BMPs for nitrogen reduction throughout the entire MS4. Section 2.2.2 should apply only to discharges to the impaired waterbodies.

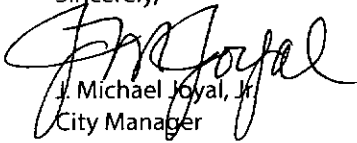
Sec. 2.2.2.d The City of Dover recognizes the chloride issue and appreciates EPA's concern. Dover derives its drinking water from groundwater in glacial outwash deposits which are susceptible to chloride contamination, and agrees that road salt used during winter operations on public roads and private properties are the primary source. The balance between public safety and environmental protection are at odds on the issue but have not been ignored by MS4's. Community winter operations are a significant public works budget item. Managers are keenly aware of salt use from a cost perspective as well. Dover and other communities have implemented automated equipment to uniformly lay down salt which adjusts to vehicle speed, performed equipment calibration, and hold annual training for staff on appropriate use of deicing agents. Dover was one of the first communities in NH to embrace using salt brine as a pre-treatment practice. Pre-wetting salt has been a standard practice for more than a decade in Dover.

Dover believes it makes sense for an MS4 to report salt use on an annual basis from year to year. The proposed tracking requirements in the draft permit are overly burdensome and will not produce any benefit. Each winter season and each winter storm is unique. The natural variability in winter weather from storm to storm, and year to year will make the proposed data reported impossible to make any sense of. Storm intensity varies widely by geography as well. As an example a winter storm in Dover frequently has snow in north Dover, sleet and ice in central Dover and all rain on Dover Point, while the storm may be all snow in Rochester.

Winter operations utilize different techniques based on type of precipitation and pavement temperatures. Sunny days and cold nights create melting in the day followed by refreezing at night requiring salting operations even though there was no storm. Dover suggests that the permit reduce the reporting to a simple annual salt use by weight as a way to judge effectiveness over the long run. Staff training, investment in state of the art equipment and educating public regarding appropriate driving during winter are the most important factors that will produce desired lower salt use. Dover has already implemented all of the proposed reduction strategies for its operations so projecting additional reductions is not beneficial as variability in annual weather will drive the use of salt.

Dover agrees that a private sector salt use accounting program will have educational value to independent contractors and property owners and produce positive benefits. However, the proposed changes in the permit place the burden on the MS4 community to initiate and enforce a program for private properties to reduce and track salt use. The effectiveness and enforcement of such a program has many obstacles both practical and political. EPA should encourage the State of NH to work with communities to augment wider participation in the existing salt reduction program for commercial salt applicators, rather than putting communities in a noncompliance position with limited ability to become compliant. A cooperative effort including EPA NHDES, and the communities to educate the public on the negative effects on surface and groundwater caused by salt, and how and when to use salt will achieve the needed reductions.

Sincerely,



J. Michael Joyal, Jr.
City Manager



TOWN OF HAMPSTEAD

OFFICE OF THE SELECTMEN

11 MAIN STREET • HAMPSTEAD, NEW HAMPSHIRE 03841

Mr. Newton Tedder
5 Post Office Square, Suite 100
Mail Code OEP06-1
Boston, MA 02109-3912

Re: Public Comment on Proposed Modifications

Dear Mr. Tedder,

November 2, 2015

Thank you for speaking with me earlier today to discuss the MS4 reporting requirements.

I would like to take this opportunity to reiterate that the concerns outlined in the first portion of the public comment period dated August of 2013 still remain. Hampstead's main concern at this point is the EPA's reliance that the MS4 communities potentially "cause or contribute" to water quality violations. There is no factual data to support this claim. As such, the towns will be required to comply with extensive testing and reporting requirements without adequate data.

According to Appendix H, Hampstead will have to undertake extensive reporting, screening and monitoring of Nitrogen and Phosphorus. This is without the benefit of having data from which the Town can chart any benefit derived from such activities. The requirement to install a minimum of one structural BMP within the drainage area may be cost prohibitive and/or ineffective. As you are already aware, some of the "impairments" are causally related to nature. Try as we may to reduce any impairments, it may be impossible due to nature.

As it relates to Appendix F (*Escherichia coli*), Hampstead expresses the same concerns listed above and would like to add that bacteria levels are cyclical due to the activities of the lake. It is difficult to rely on data that is forever changing.

Finally, the Town of Hampstead supports those arguments outline by the NH Small MS4 Coalition, which was submitted by its representing attorney.

Regards,



Sally Theriault, CPM

AA , Town of Hampstead

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 2, 2015

Mr. Newton Tedder
USEPA – Region 1
5 Post Office Square, Suite 100
Mail Code OEP06-4
Boston, MA 02109-3912

Subject: **City of Manchester - Review Comments on
2015 Draft New Hampshire Small MS4 General Permit**

Dear Mr. Tedder:

The City of Manchester (City) is pleased to submit comments on excerpts from the 2015 Draft New Hampshire Small MS4 General Permit. Our staff met with the New Hampshire Department of Environmental Services and EPA to discuss key permit requirements. In addition, a regional stormwater coalition that was formed in 2013 with legal counsel was reformed to assist with our 2015 draft permit comments. These coalition comments will be submitted under a separate cover letter. Lastly, we consulted with several engineering firms for their feedback on the draft permit requirements.

Below are general comments that pertain to the overall permit and the sections reissued for comment. Attached to this cover letter are 12 pages of specific comments to sections 2.11, 2.2, 2.3.6, Appendix F, and Appendix H.

General Comments

1. Insufficient Implementation Schedule

The City has a well-established history of stormwater environmental stewardship. We have had an Urban Ponds program for over a decade and have demonstrated water quality improvements through the implementation of several structural and non-structural stormwater best management practices (BMPs). Based on our experience, to implement the requirements of this draft permit in five years is unrealistic and cost prohibitive. The requirements of this permit more realistically will require about 20 years of sustained work. Within our comments we recommend that this be extended to a 20 year permit with the first five years focusing on data verification.

2. Data Verification Required

A significant portion of the water quality data that this permit is being based is dated, in some cases there are insufficient data points, and the sampling techniques used are unknown. Considering this program will cost hundreds of millions to implement, it is imperative that sound and accurate science be used to determine the appropriate mitigation measures. We have

partnered with DES in sampling programs in the past using clean sampling techniques governed by a formal QA/QC program. We propose that we continue this sampling partnership and focus the first five years of the permit on data verification. This will help ensure that appropriate, cost effective, and successful mitigation measures are implemented.

3. Interjurisdictional Issues and Responsibilities

This permit deals with watershed based issues. However, the permit, and its compliance responsibilities, is being issued to individual communities. Therefore, the community where the water bodies are located will be responsible for compliance despite not controlling the flows from neighboring communities that contribute to water quality impairments. There are ponds within the City that receive 70% of their flows from communities outside of Manchester. In addition, the New Hampshire Department of Transportation (NHDOT)'s highways are significant contributors to the City's pond water quality impairments. There is also atmospheric deposition which is a national problem and contributes to the City's water quality impairments. This permit should be restructured to address impairments on a watershed basis with all stakeholders contributing in a fair and equitable manner as opposed to individual communities being forced to assume the full implementation and financial responsibility.

4. Cost Prohibitive/Unfunded Mandate

The cost of the City's full compliance with this five-year permit is estimated to be over \$700 million. For comparison, the City's annual operating budget is about \$310 million. With so many competing interests for the City's limited funding, compliance with this draft permit is cost prohibitive.

This permit is an unfunded mandate as defined in Article 28-a of the State's Constitution, Bill of Rights, adopted on November 28, 1984 states, *"The state shall not mandate or assign any new expanded or modified programs or responsibilities to any political subdivision in such a way as to necessitate additional local expenditures by the political subdivision unless such programs or responsibilities are fully funded by the state or unless such programs or responsibilities are approved for funding by a vote of the local legislative body of the political subdivision."*

Sewer and water are specifically included in Section 541-A: 25 Unfunded State Mandates II of the Administrative Procedures Act State, *"Such programs also include, but are not limited to, functions such as police, fire and rescue, roads and bridges, solid waste, sewer and water, and construction and maintenance of buildings and other municipal facilities or other facilities or functions undertaken by a political subdivision."*

The draft MS4 permit has significant and costly long-term impacts to the City of Manchester. We look forward to working with EPA and NHDES in developing this permit as a useful tool to continue our partnership of environmental stewardship in a practical, reasonable, and cost effective manner.

Sincerely,



Frederick J. McNeill, P.E.
Chief Engineer

Cc: Kevin A. Sheppard, P.E. - City of Manchester
Timothy J. Clougherty - City of Manchester
Jeff Andrews, P.E. - NHDES

NH MS4 General Permit - Comments to Section 2

In Section 2.1.1 (d), the sentence after the URL reference, should state, “the permittee shall, as expeditiously as possible, but no later than 60 days of becoming aware of the situation, eliminate the condition causing or contributing to an exceedance of water quality standards, *unless permittee is subject to the schedule in Appendix F*. This assures the permittee there is a relaxation in the 60-day compliance deadline outlined in this section. The section 2.2.1 (b) further enforces the 60-day compliance period in the opening sentence and then states the satisfaction of the appropriate requirements of Appendix F. This is another reason that the additional language in 2.2.1 (d) is so important.

Section 2.2.1 (d) through (f) will be discussed in Appendix F comments.

Section 2.2.2, Discharge to Certain Water Quality Limited Waters without Approved TMDL states that, for the purpose of this permit, a ‘water quality limited water body’ is any water body that does not meet applicable water quality standards. There have been comments sent to the NHDES requesting the separation of the “Human Health Criteria” from the designation of the applicable quality standards. The Human Health Criteria are generally much lower than the acute and chronic limitations. The Human Health Criteria is based on members of the general population drinking two-liters of the associated water body’s water for a 70 year period. This does not apply to any of the waters in Manchester other than Lake Massabesic.

It needs to be noted that the water quality standards do not include the Human Health Criteria Standards as outlined in the NHDES criteria unless the water is used for drinking purposes (Lake Massabesic in Manchester).

Section 2.3.6 (a) (ii) requires the development of an ordinance or other regulatory mechanism within two (2) years of the effective date of the permit. In Appendix F, (3), it outlines the requirement to define the LPCP area. Even though this is phosphorus related, it does play into the development of ordinances. It takes a huge effort to develop ordinances, get them through committees then bring them before the City council for full approval. It would be relevant to understand the scope of the affected area and the treatment options to assure these are included in the ordinance. Once an initial ordinance is drafted, it is very difficult to go ahead and change the content on an as needed basis. This is evident in other EPA departments when there is a need to update IPP ordinances, update Inter-municipal agreements and other such city actions. This should be extended to five years.

Section 2.3.6(a) (ii) (b) is a burden to municipalities as it requires them to now monitor commercial and industrial developments for salt storage. This is something that the NHDES controls and the municipality should not be the watchdog for a state department due to funding issues. The municipalities are working under

as strict, if not stricter, budget restraints. The municipality agrees that these areas in the City need to be designed and maintained in an environmentally responsible manner.

The 2014/2015 winter was an ideal example of problems that can be associated with this requirement. Manchester had huge amounts of snow with no place to put it. There was a petition made to the State to relieve the requirement of snow dumping into the Merrimack River (this is allowed under state law if conditions warrant), but Manchester was denied this ability. There will be situations where direct untreated discharge will eventually reach receiving waters with winters of this magnitude regardless of the preventative measures taken. There should be a conditional statement that this is the requirement if the winter is normal (note: use the average NH snowfall amount in NH over an average winter season). Anything over this there is a temporary stay in this requirement as long as the City does everything possible to curtail snow runoff to the waterbodies from happening.

Section 2.3.6 (d) requires a report assessing local regulations to include zoning, construction codes, and at a minimum green roofs, infiltration practices, and water harvesting methods. This is an aggressive schedule, and may prove to be somewhat detrimental during periods of draught. The summer of 2015 demonstrated that New England can see these conditions. There were voluntary and mandatory water restrictions throughout the seacoast region over this past summer.

Rain and planter gardens, porous pavement rain barrels and cisterns all locally infiltrate water into small base load areas rather than spread it out over a wider location that would better benefit the aquifer recharge. Ares out west have banned these practices due to the capture of water that is highly needed for groundwater recharge. A study done by Douglas County, Colorado looked at rainwater harvesting. All water that falls as precipitation is assumed to ultimately contribute to flows in the stream and is deemed to be part and parcel of the water that existing water rights are entitled to use. Intercepting precipitation that would have otherwise migrated groundwater or surface water might interfere with the full allocation of existing water rights. The recommendation from the study would allow for precipitation capture and use with the understanding that the person who captures the water must augment this amount by maintain the amount, timing and location of historical runoff and deep percolation, which is the water supply for existing water rights. This requirement makes it infeasible to capture rain water. As climate change is an inevitable process that is beginning to demonstrate drought conditions in the east, it won't be long before water capture is outlawed, rendering at least rain barrels and cisterns obsolete.

The section "Description of Planned Structural Controls states that a priority ranking needs to be developed through the use of available screening and monitoring results. The requirement states that any monitoring plan be approved by the NHDES. This only happens after installation evaluation of non-structural BMPs during year six and seven. Item 12 is way too ambitious as 20% over 1 year, one year evaluation, another 20 percent at year

10 with two years of evaluation of both combined. Then another 40% reduction in year 13. This is going to be the hardest due to the fact that low-hanging fruit will be used in years eight and ten. This portion of the project will take at a minimum of five to ten years.

The EPA should add an appendix of what exactly would be expected with these tables for municipalities to view. This would include a baseline load to a pond, the actual load to the pond, the an example of non-structural BMPs, how EPA expects the evaluation to proceed, the preparation of structural BMPs, the installation schedule for structural BMPs, the review of these BMPs during year 14 evaluation and how to achieve full compliance with the final 30% of the most difficult BMPs with only one year to implement (year 15).

Calculate Baseline Phosphorus Load does not allow a municipality to account for phosphorus reductions resulting from implemented structural BMPs completed to date. Does this rule out the Stormtreat system at Crystal Lake and the baffle tanks? Does it also disallow the three baffle tanks and vegetated repaired swale at Dorrs Pond. This section needs to be better explained.

Performance evaluation is done by calculated methods first. Monitoring and other means is only allowed if NHDES approved a monitoring plan and other assessment.

2013 Comments section –

The requirements of this permit more realistically will require about 20 years of sustained work based upon our 13 years' experience with our formal Urban Ponds Program. Within our comments we recommend that this be extended to a 20 year permit with the first five years focusing on data verification.

NH MS4 General Permit - Comments to Appendix F

Chloride TMDLs 1 (a) – page 3 of 23, (i.) The salt applied will not reflect the need of application. There are several variables that will make one day's application either slightly or greatly more or less than a corresponding day. The tracking system will need to take into account the temperature (around 32 F⁰ means more freezing and therefore more salt application). When there are periods of lull in the storm where trips for reapplication may become necessary. The rate of snowfall, (was the snowstorm intense increasing the depth quickly requiring only one application of salt, or was the storm light, but throughout a 24 hour period) where there needed to be three or four applications.

There is always the question of public safety with salt application. Yes there are semi-adequate alternatives to salt application, but the most responsive and cost effective, and also the one that promotes the most public safety is salt application. Section 2.3.6 (e), second paragraph states that the permittee may consider public safety when evaluating potential retrofits for development and redevelopment. Even though this section pertains to

constructed BMPs, it should hold more weight in salt application, which is a non-structural BMP, where weather conditions are so variable.

As Manchester has evidenced with precipitation gages for CSO rainfall activity, it may rain (in the winter snow) heavy in one area of the City requiring more application than in another (no or little application required). The tracking system must have full integration with local weather conditions to correlate meaningful results and determine the true percentage reduction on salt dependent conditions.

Item (a) (ii) Planned activities are difficult to determine as they will always be weather dependent as outlined above.

Item (a) (iii) Estimation of total tonnage reduction is again very weather dependent. A sustained freezing rain with maybe 2" of accumulated snow may require ten times the salt application as compared to a one-foot storm that comes down heavy and quickly with only a minor application needed pre-storm event.

There needs to be an appendix in the final document to demonstrate how the UNH tracking system is to be specifically used with a print out of an actual weather event, and a qualifying statement to account for all of the weather variables.

In Section (b) (i) there is a requirement for municipalities to identify private parking lots that drain into the MS4 with 10 or more parking spaces. This is a burden to the municipality to do this initially. If a municipality would find high salt concentrated water body (like Stevens Pond in Manchester) then the municipality would look at the surrounding contribution to determine where the excess salt comes from (roads, parking lots, commercial establishments industry etc.). It probably will not be necessary to have this information initially as this would be considered by the licensed certified salt appliers and larger commercial lots sub-contract this work out.

Section (b) (ii) anticipates that the municipality will determine who the commercial salt users are and to require that they are certified under State program. As this is a state requirement (Env-Wq 2203) it should ultimately be a State responsibility to assure that the salt appliers are certified and not mandated to the local municipality. Env-Wq 2201.01 clearly states, "The purpose of these rules is to implement the voluntary salt applicator certification program established in established in RSA 489-C. This requirement makes it mandatory and is contrary to established RSA and Env-Wq.

Manchester continues to stand behind their 2013 comment pertaining to (b)(ii)that follows, *The community must also identify parking lots that are 10 spaces or greater that discharge to the MS4 and develop requirements that make sure that the salt applicators are trained and certified and that they provide the community with annual salt usage. Salt applicators can change from one season to another based on their price*

to treat the parking lots. In New Hampshire the Green SnoPro Certification Program was developed to help train and certify applicators across the state. These salt applicators also track their salt usage. The EPA should consider that this requirement is met through this state program and not pass this requirement down to the individual community.

Requirements for new and redeveloped properties must be established that will minimize salt usage, track salt usage, and report to the community their annual salt usage. This requirement can also be met through the Green SnoPro Certification Program. To also include the UNH road salt tracking program.

The same rationale as above for (b) (iii) development and redevelopment areas is that it is voluntary as outlined in RSA and Env-Wq.

II. Bacteria TMDLs Section 1(i) (1) outlines Public Education to dog owners at time of issuance of dog license. Manchester has been doing this since 2005 with unknown results. There needs to be an appendix outlining ways to measure this success. An example is Manchester sets up kiosks at all their ponds with information on types of fish, flora and fauna, map with pond water depth etc. This is also set up at the public beach at Crystal Lake.

In 2006, Manchester set up booths at Crystal Lake and Dorrs Pond to question users what was on the kiosk. As incentive water bottles were distributed to those who were willing to discuss what was on the kiosks. What was discovered is that some of the frequent users walked by the kiosks never reviewing the material. Others had scanned, but did not know of any of the information contained in the kiosk. A small portion seemed to know there was information about fish and maybe what type, but that was the extent of their knowledge. It was disheartening, but it demonstrated a realization that people who use the resource, may not necessarily care about what exotic vegetation, depth of the pond etc. about what they are using. All of them were aware of litter and the need to put trash in the barrels. None were aware of the "Do not feed the ducks" signs that were posted in the vicinity.

There needs to be an EPA/NHDES study on what is effective and how to truly implement a Public Education Program, before requiring municipalities spend thousands of dollars on education that has not historically worked. There needs to be explicit examples of what to implement, how to present this information, determine psychological wording that will be implanted into the user etc. In short, it is almost a Public Service Commercial and municipalities have to be given direction on how best to present this information.

In Section II (A) (1) (2) it talks about development of an Illicit Discharge program for catchments. State program limitations for bacteria are 88 count for swimming areas and 126 count for other recreational areas. There is a limit of 1,000 count for non-recreational and swimming areas.

Manchester notes that many of the summer samples taken along the Merrimack River and analyzed here at the WWTP for e-coli show a higher value when there are fowl or warm blooded animals present. High numbers have been associated with geese and duck sightings alone with sightings of ground hogs in the area. There are 198 waterbodies declared impaired for coliform bacteria and there is the possibility that many of these are due to fowl or animal contamination.

The City spent a week in the Dorrs Pond area looking for a source of bacteria that measured 4,000 in a feeder brook to the Pond. After extensive removal of vegetation from the embankments in search of a discharge a small natural dam made out of rocks was evident in the stream. There were choke cherry bush overhand in this area and grosbeak birds visited this brush to eat berries. A sample was taken in the dammed are and upstream. The dammed area was high with the upstream area being almost clean. It demonstrates that fowl can add quite a bit of coliform contamination. This was also discovered in the Merrimack River when a family of ducks was habituating a corrugated drainage pipe and an area on the west side where cats were inhabiting an abandoned building and the outfall under the Queen. City bridge as picking up this fecal contamination. The NHDES should consider raising the coliform limitation from 1,000 to 5,000 to account for this typical contamination.

III. Lake and Pond Phosphorus TMDLs - There are four ponds in Manchester with TMDLs, Dorrs, Nutt, Pine Island and Stevens Ponds. The pond TMDL was originally set at 15 ug/l for phosphorus. At some point after Manchester had done extensive work at Nutt Pond the decision was made by NHDES to lower the pond level to 12 ug/l to allow for a 20% safety factor. Many field personnel and scholars believe that this consistent limit is almost impossible to achieve.

As the ponds reside within a municipality, the option of whether or not the municipality wants to apply a safety factor should be left entirely up to that individual community and not the NHDES. A community may need to spend upwards of an extra million dollars to reach the 12 ug/l limit rather than the 15 ug/l when it is not necessary.

Also, one of the **Water Quality Goals** bullets (second bullet, *estimate the loading capacity, a sub bullet of the WQ Goal bullet*) does not take into account flush rates. Manchester has a low flush rate at Nutt Pond of about 10 turn overs a year. It is about one a week at Dorrs Pond and four times a week at Pine Island. These flush rates have a direct impact on peak phosphorus detention in the pond and should be considered when modeling the TMDL. A one size fits all 12 ug/l is not appropriate for these varying flush rates. Visually, it is obvious Nutt Pond is much more strained than Pine Island and yet both have the same stringent phosphorus criteria.

As stated in the 2013 comments and reiterated here, Manchester has serious concerns about using calculated data when the models can be far out of calibration. Those comments were,

Watershed Modeling Overview - Manchester is outlining the assumptions made in both the CEI Watershed Restoration Plan and the AECOM TMDL to identify significant modeling differences within both approaches. Both models, in view of predictive conditions vs. actual field conditions are off by greater than 90%. The specifics of each model are viewed in detail and demonstrate that phosphorus is not always an accurate predictor of algal blooms. There are many other conditions that can contribute to algal blooms.

The CEI Plan, page 3-1 under 3.1, Critical measurement states, "It is expected that the goals may take years to achieve and actual in-pond measurements can vary widely from year to year due to climatic factors, therefore, the overall average and trend is important to review." As the Nutt Pond Restoration Plan has been a focus of the City's for 13 years, and has yet to achieve WQ criteria, it would be unreasonable to expect full compliance with the currently issued MS4 permit in the five-year permit cycle. The experience with Nutt Pond demonstrates that even two five-year permit cycles would not have achieved compliance and this is the smallest pond within Manchester with a current TMDL.

The CEI, Watershed Restoration Plan, is very similar to the AECOM TMDL for Nutt Pond ([Attachment 2](#)) in basic assumptions.

Nutt Pond Watershed Restoration Plan

	Lake Area Acres	Lake Vol Gallons	Water Budget (gals/yr)	Watershed Acres	Gallons per Acre	Modeled TP Loading	Target TP Loading
AECOM	17.5	69,383,601	637,652,672	645	988,715	230.3 lbs	69.1 lbs
CEI	17.3	69,000,000	667,000,000	557	1,197,487	161.32 lbs	75 lbs

Note that the watershed acreage is different by 13.6% and the TP load is different by 30%. CEI used one model (Reckhow) and AECOM used an average of five models of which Reckhow was one and it had the lowest TP modeling predictive load of 28 ug/l (Kirchner-Dillon – 35 ug/l, Vollenweider – 39 ug/l, Larsen-Mercier – 32 ug/l, Jones-Bachmann – 34 ug/l and Reckhow – 28 ug/l). The calculated mass balance was 43 ug/l. It would appear that Reckhow is the most liberal of the group in predicting TP modeling.

The five AECOM empirical models have a predicted in-lake TP concentration for Nutt Pond between 28 and 39 ug/l which is a 28.2% variation. When compare the mass balance calculated amount of 43 ug/l that variation increase to 35%. That's a significance variation that can mean millions of dollars in the planning stage.

A section regarding TMDL development should state that if any model needs to be corrected by more than 30% to fit the actual calculations, this TMDL is ruled not applicable to the TMDL calculation process as it doesn't demonstrate strong science beyond any reasonable doubt.

In Section III, 1(ii) (b) there needs to be a subsection in the LPCP Components in #4. Calculate Baseline Phosphorus, Allowable Phosphorus Load and Phosphorus Reduction. A few words need to be included that this only pertains to jurisdiction within the regulated MS4. Compare that to the total allowable phosphorus loading and determine how much reduction needs to take place on the municipalities end.

In the future should the EPA determine how to enforce regulations in outside communities and their impact to the regulated MS4 waterbodies, then the municipality can proceed to recalculate their portion of the total load to that waterbody. The assumption is that the waterbody is located in the municipality therefore, the municipality has all the loading benefits until laws change to address outside contributions.

An example for Manchester would be Dorrs Pond has 100 lbs. of calculated phosphorus loading to the pond. The TMDL measures 300 lbs. of P contribution. There needs to be a reduction of 200 lbs. Say that 70% of the load is coming from Hooksett (210 lbs.). Manchester would be contributing 90 lbs. to its pond that can accept 100 lbs. of P. Manchester is in compliance with the 100 lb. limit.

Under Section 1(ii) (a) the final plan must be fully implemented no later than 15 years. Manchester has been working with Nutt Pond since 2000 (going on 16 years). There is still a gravel wetland to be installed over next spring and summer and the belief is that the 12 ug/l limit will still not be achieved. There have been ongoing projects each year with design, construction, evaluation etc. It is clear Nutt Pond, which has received the bulk of Manchester's attention and funding, could not be completed in the 15 year time frame allotted and it is the smallest volume TMDL pond in Manchester. A small community like Kingston with three TMDLs may take more than 40 years to implement full compliance consistently at 12 ug/l.

If you look at the performance table milestones it allows 7 years to evaluate performance evaluation of all nonstructural controls. Item 12 is requiring implementation of 20% of structural controls required to achieve this year's phosphorus load reduction. This is one year to complete what has been ongoing in Manchester for at least 10. When you consider the time to design, bid and build a facility it typically takes three years. It is economically unfeasible and also does not allow sufficient time to demonstrate the effectiveness of each individual structural BMP. The 20%, 40% and 70% reduction schedules should all be increased by at least three years. The final 30% reduction is going to be the hardest as this is going to be the hardest amount to remove as the low-hanging-fruit will all be taken in the first 40% reduction. This component may take 10 years in and of itself and be the most cost intensive. Structural controls need to be put in place sequentially, measured and evaluated to determine the effectiveness of each. This table needs significant time increases in regards to years to complete.

The LPCP components and milestones, outlined in the table, are the same for all water bodies throughout the State of New Hampshire regardless of physical location. Some waterbodies are easily accessible for the

implementation of structural BMPs (Nutt Pond in Manchester for instance). Some are a little tougher to get at and have moderate difficulty (Dorrs Pond and Stevens Pond in Manchester only have one or two side access). Others are very difficult to get at due to remoteness and general out of urban area location. This would be the case for Pine Island Pond with one area of easy access. There should be a difficulty factor put into the table for implementation of the non-structural and structural BMPs. Adjust the schedule as outlined above for easy accessibility to the waterbody. Give a multiplication factor of say 1.33 for construction time if waterbody is moderately difficult to access the waterbody. It would also make sense to use a multiplication factor of 1.66 to 1.75 if it is very difficult to access the waterbody.

This same line of thought would go into the % reduction load to the pond. In Manchester Stevens Pond has a 50% reduction where Pine Island Pond has a 73% reduction. Pine Island should be given proportionately more time for construction as there is 23% more phosphorus reduction needed. With this additional reduction and the fact that this pond is remote with difficult access, it would reasonably take over two times as long to complete a compliance schedule as compared to Stevens Pond. These factors have to be considered within any issued permit to allow for continued success in this program.

The performance evaluation section is somewhat confusing and we will ask for an example at the roll out meeting. If a pond is only partially in a regulated community (i.e. Dorrs pond is located in Manchester) has an annual loading rate of 300 lbs. of P and the calculated loading should be 100 lbs. of P. There are 200 lbs. of P that must be reduced. If the drainage area lays 30% in Manchester and 70% in Hooksett does Manchester only have to deal with 30% of the loading or 60 lbs. of P to be in compliance? Another issue comes in with Stevens Pond. The drainage is almost entirely within the Manchester land boundary, but the roads that drain into that pond are about 20% Manchester maintained roads and 80% State Highway (Interstate 93). Is Manchester 100% responsible to meet the compliance criteria in this case, or do they fall under the same conditions as Dorrs Pond with the Town of Hooksett and only be responsible for the salt the City adds to Stevens Pond.

In **Section C, Description of LPCP Components** under Scope of the LCP the verbiage is somewhat vague and confusing. Item 1 talks about the drainage area within the jurisdiction of the permittee. Item 2 states that same thing. The section encourages the implementation of measures outside of the regulated area. However, in the last sentence it states "structural and non-structural controls implemented outside of the MS4 regulated area may not be counted towards the meeting of the Allowable Phosphorus Load for the purpose of permit compliance." This makes no sense.

Section C, Description of Planned non-structural Controls outlines that there must be a priority ranking developed through the use of available screening and monitoring results collected during the permit term either by the permittee or another entity. Section 3 on page 21 indicates that phosphorus tracking must be done by calculated means. If a municipality chooses to use monitoring, their plan must be approved by the NHDES in order to evaluate the effectiveness of the LPCP, or other work the permittee has conducted. This would

hamper the program effectiveness determinations in the early stages. Yet this section describes that "All phosphorus reduction from structural BMPs shall be calculated consistent with Attachment 3 to Appendix F." Either or language should be used here.

Implementation schedule section states that all non-structural BMPs shall be fully implemented within six years of the permit effective date. It also states that "The permittee shall within four years of the effective date of the permit have a schedule for completion of structural BMP retrofits consistent with the reduction requirements in Table F-3. Complete written LPCP is 5 years. The table schedule only requires structural BMPs to begin in year eight.

NH MS4 General Permit - Comments to Appendix H

Appendix H – To demonstrate compliance a municipality must over the course of 2 to 3 years take 30, flow-weighted composite samples. How do you flow weight a sample in a pond or small stream without a flume and some type of flow meter? If samples are grab every hour how do you determine flow in a channel? A timed composite on a non-rain day should be good enough. This standard should be the same that is used to list water as impaired. This should follow the NHDES CALM.

In Section II (1) (c)) (ii) requires the submission of a listing of planned structural BMPs with the 5-year report and to install a demonstration project in year 6. This should not be necessary as with Appendix F section III(c)) a permittee is allowed to calculate the baseline P load through calculated methodology as outlined in Attachment 1. This is also outlined in Appendix F, attachment 3 and should have a time frame like the phosphorus table to be done in year 10.

Section IV, 2 should not include private facilities as outlined in the comment section under phosphorus.

Section IV 4) (b) requires the tracking of private parking spaces and that the municipality assure that commercial salt applicators report their salt usage. The response would be the same as under the chloride section of phosphorus.

Section IV 5) requiring 30 flow-weighted averages is a proposal for a one-size-fits all criteria. Nutrients are different than bacteria. Metals are different than chloride and oil & grease. It should be sufficient to sample nutrients over a growing season (once per month during June, July August and September) if the concentrations are consistently less than 90% of the WQ parameter, there is a strong indication that the WQ limit is being attained. In a case like this, if the EPA insists on two to three growing seasons, then the requirements under the stormwater program should be stayed until the next growing season and the next round of samples. If these also are in range then that should be enough to determine that the waterbody has attained WQ certification.

Bacteria are always caused by some type of intrusion. Whether it is from a cross-connection, fowl, animals or pets it is always from an outside source. Bacteria are most harmful during the swimming/recreation season. If a waterbody meets a season WQ limit for bacteria (one sample each month from May through September – five samples) then the waterbody should be assumed to meet WQ attainment.

Oil & Grease (hydrocarbons) are generally rare unless boaters leak gas, people bathe, septic haulers illegally dump or cars change their oil and dump the waste oil in catch basins. This is a tough parameter to regulate. Is the waterbody considered impaired because O&G was found at the entrance of one inlet, but the rest of the waterbody is clear? This is something that must be determined in the final permit issuance. Is there a percentage of pollution (5% of the waterbody), or one hot spot. This is something that can be proven out with additional testing in the affected area. A sample a week for a month should prove or disprove WQ attainment. The need for 2 to 3 years is excessive.

Metals are a whole other issue. Clean sampling has proven that metals content can be reduced consistently between 50% and 80% of the samples. If the municipality is willing to undergo clean sampling and can prove that the background of the waterbody is attaining WQ standards then this should be sufficient to determine that the waterbody is attaining WQ. Four consecutive days of samples on one week during mid-summer and four consecutive days of samples on one week during late summer should be sufficient to demonstrate the waterbody is meeting WQ criteria. It must also be noted that any future sampling from outside groups must be at least as stringent as the municipalities sampling to have a sound scientific comparison. If outside agencies (watershed groups, environmental groups, the NHDES or the EPA) should find this too difficult to complete, then they must provide the municipality with a two-week notice so comparable samples can be taken at the same time. The municipality will have time to prepare acid-washed, double-bagged clean containers and prepare for the sampling event. The municipality will join the other sampler and each will take their sample. Whatever the % difference that is measured in this sampling event (say the watershed group obtains a sample with 12 ug/l of copper and the municipality obtains a concentration of 3 ug/l copper) then future outside samples are reduced by 75% to account for contamination contribution due to technique and sampler protocol.

Basis for Modification, the second paragraph outlines all the constituents believed to be contained in stormwater runoff. The assumption is that 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. This is a rather huge assumption that if sufficient data for any single urban stormwater discharge it can be assumed that all of the above is present.

Manchester's efforts in 'Clean Sampling' has demonstrated that metals are highly over estimated due to a sampler's contribution and technique application. The Wisconsin DEQ demonstrated that field filtered chlorophyll-samples were almost always lower than lab filtered samples. This is the cause and effect from

excess nutrients. Every sample that is taken must be done so under an approved QAPP and in context with the NHDES CALM. Poorly taken samples with no QAPP provide poor scientific results and can cost the municipality hundreds of thousands of dollars in unnecessary treatment options. A reasonable comparison and sound scientific approach is outlined in Section IV 5) above.

END OF COMMENTS

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November 2, 2015

Newton Tedder
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5 Post Office Square – Suite 100
Boston, MA 02109-3912

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

Dear Mr. Tedder:

On behalf of the following New Hampshire MS4 Communities that
comprise the New Hampshire Stormwater Coalition:

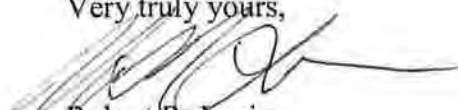
Town of Amherst
Town of Bedford
Town of Danville
City of Dover
Town of Hampton
Town of Londonderry
City of Manchester
Town of Merrimack
City of Portsmouth
Town of Raymond
City of Rochester
Town of Rollinsford
Town of Salem
Town of Stratham

Pursuant to the re-opening of the comment period on select sections of the
Draft Small Municipal Separate Storm Sewer System (MS4) NPDES General
Permit-New Hampshire, Hall & Associates and Sheehan Phinney Bass + Green,
PA submit these joint comments in reference to Sections 2.1.1, 2.2 (including all
subsections), Appendix F and Appendix H.

In addition to these joint comments, many of the above-listed communities are submitting separate comments to address specific issues that relate to the individual concerns of those communities.

If there are any questions on the comments or further information is required, please do not hesitate to contact us.

Very truly yours,



Robert R. Lucie

Enc.

Comments on Stormwater Rule Amendments

The following presents the comments of the following New Hampshire MS4 communities: 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 and Town of Stratham regarding the proposed MS4 general permit provisions EPA has republished for comment on September 1, 2015.

Incorporation by Reference

The prior comments submitted by the NH Stormwater Coalition are hereby reiterated and incorporated by reference. In particular, comments on pages 6-12, 15-17 and 23-29 are also applicable to this set of proposed changes.

General Comments

EPA is proposing a permitting approach in revised permit provisions (*e.g.*, Sections 2.1.1, 2.2, 2.2.2, 2.3.6) that are (1) not authorized by Section 402(p) of the Clean Water Act, (2) not authorized by the adopted storm water permitting rules 40 CFR 122.26 *et seq.*, (3) inconsistent with data and analysis requirements applicable to establishing water quality-based permitting under 40 CFR 122.44(d) and are contrary to the agency's published decision addressing various petitions for residual designation under CWA Section 402(p). In essence, EPA is acting beyond its statutory and regulatory authority in seeking to enact these provisions. Specifically, EPA's proposal concludes that it is acceptable to presume that all MS4 stormwater sources have the reasonable potential to cause and contribute to water quality standard violations, without the use of any site-specific data analyses or assessment of the various loading sources causing an exceedance to exist or any existing or proposed controls that are intended to address or resolve the exceedance. Such "probabilistic" analyses (*i.e.*, claiming that one can presume the specific stormwater discharge is causing a violation of applicable water quality standards based on generalized information) (1) are not authorized by the APA or the applicable NPDES rule for stormwater permitting and (2) was expressly rejected by EPA in turning down the various petitions for rulemaking filed by NRDC and others (*e.g.*, CLF) on this subject.

Clean Water Act provisions, like their Clean Air Act counterparts, are based on a causation demonstration confirming the need for the addition pollution reduction requirements (*See, e.g.*, *Sierra Club v. EPA*, No. 12-2853 (7th Cir. Dec. 16, 2014).) Such causation demonstration must be "more than simply draw[ing] a correlation in the absence of an adequate causative link." *Id.* Moreover, the impact must be "reasonably attributed" to the pollutant sources. *Id.* While 40 C.F.R. § 122.44(d) doesn't require the relationship to be documented to a scientific certainty, the

phrase “reasonable potential” was not intended to allow the imposition of limitations simply based upon speculation that a discharger is causing or contributing to an impairment. EPA’s misplaced claim aside, the entire Clean Water Act is premised on the idea of regulating when “necessary” (assessing causes and effects) to ensure one is regulating the proper pollutant at the proper level. For instance:

- All EPA WQS/criteria are based on a cause/effect demonstration or at the level necessary to protect use; [See 40 C.F.R. § 131.3(c); 40 C.F.R. § 131.2(a)]
- Water quality-based effluent limitations when dischargers are interfering with attainment of water quality; [CWA § 302(a)]
- EPA guidance on nutrient regulation for estuaries explicitly requires cause and response relationship; [See Att. 65, EPA Estuarine Criteria Guidance at 7-5, *passim*]
- EPA guidance providing how to use ambient data to make valid cause and effect predictions for nutrients. [See Att. 59, EPA Stressor Response Guidance, at 6, 32]

The NPDES permitting program merely integrates these aspects of the CWA (*e.g.*, water quality standards, impairment listings, etc.); it isn’t an independent program that creates additional effluent restrictions without a site-specific demonstrated need. Put differently, EPA can’t just arrive at the permitting stage and do what it pleases. *Am. Paper Inst. v. United States EPA*, 996 F.2d 346 (D.C. Cir. 1993). The point is simple – without some reasonable cause/effect analysis, which EPA agrees that it does not possess in this case, there is no objective basis to determine (1) if the pollutant is part of the problem, (2) if something else is responsible, or (3) how much control is needed. Consequently, this proposed permit action is fundamentally flawed and must be withdrawn.

These are precisely the same conclusions drawn when EPA rejected multiple petitions from NRDC and CLF to use “residual designation” authority to establish more restrictive “water quality-based” requirements on presently unregulated stormwater sites. (*See*, EPA Region 1, 3, and 9 petition response letters from March 2014). In rejecting the petitions, EPA observed that it was required to (1) evaluate the nature of the individual watersheds (2) assess the nature of the impairment (3) determine the extent to which stormwater discharges contributed to the problems and then, if appropriate, only regulate “significant contributors”. (*See, e.g.*, EPA Region I response of March 11, 2104 at 1). EPA noted that the available data must be sufficient to allow these assessments to occur and that Section 303(d) listings “*alone do not provide the connection between the impairments and any ...stormwater sources.*” (*Id* at 9 – emphasis supplied). EPA ultimately concluded that the available data “does not provide the Region with specific information about the specific sources within the Region.” *Id*. In rejecting the petition, EPA concluded that “Petitioner’s approach is too simplistic.” *Id*.

It is not apparent how EPA could conclude that certain data requirements and specific showings are necessary to regulate stormwater discharges on the basis of alleged water quality impairment and then, a mere 18 months later, assert that the same “simplistic” approaches (without the necessary data and analyses) are now acceptable for imposing more restrictive requirements on the MS4 communities. Such action is a quintessential example of arbitrary and capricious behavior under the Federal Administrative Procedures Act.

General Objections Applicable to Entire Regulatory Action

Case Specific Impact Demonstration Is Required by the Act and Existing Rules to Impose More Restrictive Water Quality-based Limits

EPA’s Nov. 26, 2014 MS4 stormwater policy paper¹ states that in order to impose a water quality-based limitation on a stormwater discharge, a site-specific finding must be made on an individual permit basis showing that a discharge needs a specific water quality based limitation:

“Where the NPDES authority determines that MS4 discharges have the reasonable potential to cause or contribute to a water quality standard excursion, EPA recommends that the NPDES permitting authority exercise its discretion to include clear, specific, and measurable permit requirements and, where feasible, numeric effluent limitations as necessary to meet water quality standards.” (at 4).

Page 10 of EPA’s stormwater guidance provides a sample permit provision that illustrates how such a limit is to be structured:

“Discharges from the MS4 must not cause or contribute to exceedances of receiving water limits for Diazinon of 0.08µg/L for acute exposure (1 hr averaging period) or 0.05µg/L for chronic exposure (4-day averaging period), OR must not exceed Diazinon discharge limits of 0.072 µg/L for acute exposure or 0.045µg/L for chronic exposure (2013 San Diego, CA Regional MS4 permit).”

Rather than complete the necessary analysis considering the requisite site-specific factors and create the specific limitation necessary to resolve the impairment concern, EPA has created a general conclusion that since all stormwater contains metals, nutrients, and bacteria, one may simply presume that the discharge significantly “causes or contributes” to downstream water quality exceedances, whenever those pollutants are identified as exceeding water quality standards on a Section 303(d) list. This “guilty until proven innocent” approach is not authorized by any implementing regulations under 40 CFR 126 *et seq* and is clearly contrary to the requirements of 40 CFR 122.44(d) for the following reasons:

¹ http://water.epa.gov/polwaste/npdes/stormwater/upload/EPA_SW_TMDL_Memo.pdf

- EPA is presuming that the stormwater discharge contribution to an alleged impairment is more than “*de minimis*” with no data or analyses to support that conclusion. The Act does not authorize EPA to regulate “*de minimis*” pollutant contributions. (*Alabama Power Co. V. Costle*, 636 F.2d 323 (D.C. Cir. 1979) (“the law does not concern itself with trifling matters”); *Public Citizen v. Young*, 831 F.2d 1108 (D.C. Cir. 1987) (statutory implementation should not yield “futile results”). EPA itself has stated such contributions do not have to be regulated under the federal stormwater and water quality-based permitting programs.²
- All water quality based analyses must consider the factors identified in 40 CFR 122.44(d)(ii) regarding current data on the relative contribution of other sources, available dilution and existing and anticipated pollutant reductions from the major sources of the pollutant of concern – EPA’s analysis does none of this. It is axiomatic that an agency must conform its actions to its published rules. *U.S. v. Nixon*, 418 U.S. 683 (1974). EPA’s action plainly fails to consider the factors required by the adopted rules as a prerequisite to imposition of a water quality-based limitation. These are the prerequisites EPA itself applied to the NRDC/CLF petitions. Such action is therefore, *per se*, arbitrary and capricious under *Motor Vehicle Mfrs. Ass’n v. State Farm Mut. Auto. Ins. Co.*, 463 U.S. 29 (U.S. 1983), the seminal case governing review of agency decision making under the federal Administrative Procedures Act.
- The existence of a Section 303(d) listing at some downstream location does not provide a rational basis for concluding that all contributing or upstream stormwater sources must be regulated to achieve water quality standard compliance. (See, EPA Region I NRDC/CLF petition response). First, fate and transport of the pollutant must be considered as pollutants settle and bacteria die off. Thus, the amount of pollutant reaching the area of concern could be of no relevance for standards compliance. Second, the source of and timing of the conditions surrounding the impairment listing could have nothing to do with MS4 contributions (e.g., combined sewer overflow, natural runoff, farm land contribution, local wild geese population, nutrient impact under low flow conditions when MS4 contributions are essentially non-existent). There is no rational basis to presume, *a fortiori*, that regulating MS4 loadings is always required to abate an impairment listing. In fact, as noted earlier, EPA’s response to a similar approach requested by CLF/NRDC was rejected as contrary to existing rules and statutory requirements.

² EPA authorizes *de minimis* changes to water quality under the federal antidegradation program. EPA’s petition responses to NRDC and CLF concurred that the stormwater discharge must be more than *de minimis* for it to be regulated, it must be a “significant source of pollutants”.

- Where the MS4 is not directly contributing the pollutant of concern to the segment where the impairment exists, it is plainly improper to presume further reductions must occur to achieve compliance downstream. *National Mining Ass'n v. Jackson*, 880 F. Supp. 2d 119 (D.D.C. 2012). In this instance, the MS4 is not causing or contributing to a standard violation at the point of discharge. This meets the terms of 40 CFR 122.44(d) under which no water quality-based limit is to be established. Unless EPA can demonstrate that some type of “cumulative” pollutant effect is only manifesting itself at a downstream location no limit is allowed. Absent such analysis in this document, EPA is acting beyond its statutory authority by regulating more stringently even discharges that meet water quality standards.
- EPA is also improperly presuming that whatever data used to develop a Section 303(d) listing reflects current conditions in the water body – this is also not objectively accurate. For example, the most current Section 303(d) listing for New Hampshire, at the time this action was proposed in 2015, was the 2010 Section 303(d) list – based on data from 2008 which are presently 7 years out of date. 40 CFR 122.44(d)(ii), however, requires that the Agency use “current data” in determining the need for water quality based limitations. As noted by EPA’s Environmental Appeals Board “using the most currently available data is logical and rational in light of the need to assure compliance with water quality standards.” *In re Town of Concord, Dep’t of Pub. Works*, NPDES Appeal No. 13-08, 16 E.A.D. __, 14 (EAB 2014) (internal citations and quotations omitted). This regulatory action plainly fails to meet that requirement. The need for current information is underscored by the NHDES action on the proposed 2014 303(d) list, which has deleted many water bodies as not impaired, based on more recent regulatory analyses and data collection. This includes numerous nutrient impairment delistings for Great Bay Estuary – in consideration of a 2014 independent peer review conducted by DES and the local communities. It is plainly arbitrary and capricious for EPA to have created a rule – frozen in time – that fails to accommodate any assessment of current water quality data or other relevant scientific analyses to confirm or refute the need for more restrictive water quality based requirements for MS4 communities, as evidenced most clearly by the DES impairment actions for Great Bay Estuary.
- EPA’s assertion that using approved Section 303(d) listings as conclusive proof of the need to regulate MS4 contributions of certain substances is directly at odds with EPA’s legal arguments submitted to the DC Circuit and accepted by that court on that issue. *See Dover, et al. v. EPA*, Docket No. 1:12cv1994 (D.D.C. Dec. 13, 2012). The Court agreed with EPA that impairment listing do not trigger any specific regulatory mandates for communities discharging the pollutant of concern. Such action is merely a preliminary step in the process which may or may not result in the need for specific pollutant reductions from point sources. EPA’s assertion that any downstream

impairment listing should always result in further restrictions on MS4 contributions is specifically at odds with the holding of that case - *that EPA itself sought*.

In summary, EPA's approach regulates by presumption and fails to develop the case-specific analyses (using current information) that is, by rule, required to impose a more restrictive water quality-based limitation. EPA is therefore acting inconsistent with the adopted rules and is acting beyond statutory authority.

A Prohibition on “Causing or Contributing” a Pollutant to Waters Exceeding Standards Does Not Exist Under the Act or Implementing Regulations

The revised Section 2.1.1.a. seeks to impose a new discharge prohibition for all MS4 dischargers – “such discharge may not cause or contribute to an exceedance of water quality standards.” Once again, this new regulatory provision is infirm for a host of legal and technical reasons, as follows:

- As described in EPA's stormwater permitting guidance, noted above, a water quality-based limit must identify the specific numeric characteristics of the discharge that constitute compliance (*e.g.*, milligrams of pollutant for a specific flow rate or the allowable pounds of pollutant). See, 40 CFR 122.45(e),(f). Moreover, rather than establish a specific water quality-based limit regarding the pollutant of concern, EPA seeks to impose a vague “no cause or contribution” mandate – the most restrictive limitation possible. Such a non-specific compliance requirement is “void for vagueness” as it provides no objective basis to determine what actually constitutes compliance. See *McClellan Ecological Seepage Situation v. Weinberger*, 707 F. Supp. 1182, 1198 (E.D. Cal. 1988). Prohibitions based upon “contamination,” “pollution” or “nuisance” lack precision and objectivity that led courts in NYS to dismiss similar CWA claims.³ EPA must identify the specific limitation that would apply in this circumstance.
- The CWA does not allow for non-compliance to be based on the mere “contribution” of a pollutant to alleged water quality impairment or permit violations. (See, *National Ass'n of Metal Finishers v. EPA*, 719 F. 2d 624 (D.C. Cir. 1983)). Any alleged violation of CWA requirements must be based on a causation analysis that demonstrates the connection between the pollutant discharge and the alleged violation at issue.⁴ (*Id* at 640

³ EPA has, in other circumstances, indicated that not establishing a water quality-based limit may occur if (1) the pollutant is not discharged or (2) the discharge meets the applicable standard end of pipe. However, no such rule has ever been established and EPA Headquarters has not issued specific guidance asserting that meeting such limitations constitutes compliance with Section 301(b)(1)(C) of the Act.

⁴ See *Upper Blackstone Water Pollution Abatement Dist. v. EPA*, 690 F.3d 9, 14 (1st Cir. 2012) (“State water quality standards generally supplement these effluent limitations, so that where one or more point source dischargers, otherwise compliant with federal conditions, *are nonetheless causing a violation of state water quality standards*, they may be further regulated to alleviate the water quality violation.”) (emphasis added); *id.*, at 25-26

“that neither the language of the Act nor the intent of Congress appears to contemplate liability without causation.”) *rev'd on other grounds Chemical Mfrs. Ass'n v. Natural Res. Def. Council*, 470 U.S. 116 (1985); *Ark. Poul. Fed. v. Env'tl. Prot. Agency*, 852 F.2d 324, 328 (8th Cir. 1988) (stating the discharge must at least be “a cause” of the violation). Simply claiming someone “contributed” a pollutant does not objectively provide such a demonstration and was rejected by EPA in its petition responses. Therefore, attempting to hold a community in violation of its MS4 permit simply because it contributes some amount of a pollutant is beyond EPA’s statutory authority.

- The “no cause or contribute” discharge prohibition is contrary to both the adopted NPDES rules and the US Supreme Court case in *Oklahoma v. Arkansas*, 473 U.S. 610 (1985). As confirmed by the Supreme Court, the CWA does not contain a discharge prohibition simply because a discharge is contributing to a downstream water quality impairment or violation of a downstream state’s standards. This restriction is certainly not contained anywhere in 40 CFR 122.26. Moreover, under the existing NPDES rules, and consistent with the Supreme Court decision, the “no cause or contribute” restriction only applies to *new sources* seeking permits to discharge to existing impaired waters (See, 40 CFR 122.4(i)). MS4 communities are not “new dischargers” under the Act. The relevant provision, 40 CFR 122.44(d), established that some limitation may be required for a discharge that “causes or contributes” a pollutant – it plainly does not establish that any such discharge may not “cause or contribute” as EPA has attempted to establish here. EPA is illegally seeking to amend the requirements of 40 CFR 122.44(d) to be more restrictive.
- EPA’s action also illegally seeks to prevent communities from offsetting loadings of a particular pollutant from a different source and thereby obviate the need for any MS4 reductions – assuming that the contribution of the pollutant to a problem was significant. If the pollutant can be removed more cost-effectively by a POTW or another source, there is no requirement that the pollutant nonetheless be further restricted by the MS4 source.
- The Appendices (F/H) indicate that to avoid the more restrictive requirements the community must show that the pollutant is not “measurable” in the discharge. This effectively imposes the detection levels contained in 40 CFR Part 136 as effluent limitations that must be attained. There is no analysis, however, showing that these detection levels have anything to do with demonstrating standards compliance. On its face, the selection of detection levels as the required effluent limitations for all MS4 communities is arbitrary and capricious as the establishment of Part 136 detection levels has nothing to do with water quality standards attainment in general, and most certainly

nothing to do with the needs of specific water bodies identified as impaired on a state's Section 303(d) list.

- Finally, EPA's immediately applicable prohibition contained in this rule is contrary to the state's rules which allow for schedules of compliance where needed to achieve water quality standards compliance. Based on the existing state law, NPDES permits may contain extended schedules of compliance to achieve water quality-based limits. By establishing the discharge prohibition, EPA negates state law and places communities in immediate non-compliance for every Section 303(d) impairment listing for any pollutants EPA claims are measurable in all stormwater discharges (metals, bacteria, chloride, nutrients). EPA is required to issue permits consistent with the applicable state laws for proper implementation of water quality standards – not to run roughshod over those requirements. *See, In the Matter of Star-Kist Caribe, Inc.*, 3 EAD 172 (Apr. 16, 1990).

EPA's Non-TMDL Available Reduction Mandates Are Arbitrary and Capricious

EPA seeks to establish, presumptively, that anytime a discharge “causes or contributes” a pollutant related to some identified water quality impairment – the community must act to immediately eliminate the contribution of the pollutant. *See, e.g., 2.1.1.d.* The record, however, contains no analysis showing that such a level of control (pollutant elimination or reduction to the level that does not “cause or contribute”) is “necessary” to bring the waters of concern into compliance. In essence, EPA is leaping to the conclusion that the most restrictive effluent limitation possible (*e.g.,* meet water quality standards end-of-pipe or prove it can no longer be measured in the effluent) is the limit that is justified by the situation. This regulation is presumption, not analysis, and is contrary to the requirements of both the CWA Section 301(b)(1)(C) and 40 CFR 122.44(d) which require that only the “necessary” effluent limitation be established. This is beyond EPA's statutory authority and is inconsistent with the requirements of 122.44(d) since no objective basis is presented to demonstrate that the most restrictive limitation is required, in advance of a TMDL that could certainly establish that no limitation at all is required.

EPA is establishing that, in advance of a TMDL being prepared, a stringent “meet WQS end-of-pipe” is mandated by the adopted rules. EPA has never adopted such a rule and this would be a major modification to 40 CFR 122.44(d) which contains no such provision, but directs the permitting authority to use discretion considering the site-specific circumstances to fashion a reasonable effluent limitation, where a TMDL is not available. There are literally thousands of permits that have been issued and reissued in advance of TMDL completion that did not mandate WQS compliance end-of-pipe pending TMDL completion. Even the federal mercury and PCB TMDLs do not require any specific action to reduce mercury in MS4 discharges, though the level of mercury in stormwater is “measurable” and often exceeds the applicable WQS due to

atmospheric deposition. Plainly, the existence of a pollutant in a discharge does not and cannot create a presumption that a ban on “causing or contributing” the pollutant applies. EPA has not mandated that states follow this more restrictive approach when acting in their delegated program capacity in issuing permits or in issuing TMDL decisions. To the degree EPA is claiming that 40 CFR 122.44(d) mandates the result they are imposing, they are undertaking an illegal modification to the applicable rules.

Specific Objections

Approved TMDL Implementation Is Not Apparent for Bacteria – Section 2.2.1.e

An approved statewide bacteria TMDL has been approved by EPA. EPA has stated that the communities that “cause or contribute” bacteria must comply with the approved TMDL. *See, e.g., 2.1.1.b.* However, the Bacteria TMDL, on its face, states that specific effluent limits are not to be applied to intermittent discharges and that the dilution in the receiving water must be considered in deciding what if any additional pollution reduction measures are needed. (Bacteria TMDL at 37, Note 2). Therefore, unless and until instream dilution is considered, which has not occurred in this TMDL, further measures to implement the approved bacteria TMDL are not apparent. Moreover, where CSO discharges or other illegal contributions (*e.g.,* direct discharge from septic systems) are the source of the bacteria exceedance, mandating more restrictive action by MS4 discharges is plainly inappropriate.

EPA Statements Regarding Aluminum Compliance Are Unsupported and Vague - Section 2.2.1.c

EPA’s proposal recognizes that the TMDL analyses for aluminum do not mandate any action by MS4 communities, but asserts that if any contribution in excess of that present atmospherically is encountered, more restrictive “elimination” requirements automatically apply. The “elimination” of the condition is nowhere justified by the analyses presented in support of this regulatory action and is therefore arbitrary and capricious. There is no basis to conclude that where waters are presently not meeting standards due to atmospheric sources that any increment above that level must be eliminated – even if the incremental impact is *de minimis*. *Alabama Power Co. V. Costle*, 636 F.2d 323 (D.C. Cir. 1979) (“the law does not concern itself with trifling matters”); *Public Citizen v. Young*, 831 F.2d 1108 (D.C. Cir. 1987) (statutory implementation should not yield “futile results”). At a minimum, some site-specific analysis would be needed to justify the level of pollutant reduction needed under the specific circumstances.

Phosphorus Requirements – Section 2.2.1.f

Whether or not action is required by any and all MS4 areas tributary to a lake or pond with a phosphorus TMDL should be determined on a case-by-case basis, not ordered unilaterally by this rule. Such determination must be made consistent with the TMDL analyses, as mandated by 40 CFR 122.44(d)(1)(vii).

Chloride Requirements – General

The present chloride criteria utilized to derive TMDL reductions and identify waters as chloride impaired are seriously out of date. EPA has approved updated, less restrictive chloride criteria for several states in consideration of the extensive database of new studies confirming that less restrictive chloride criteria are protective of aquatic life resources. Before further implementation of the TMDLs that were based on the outdated standards, NH communities will be requesting either statewide or site-specific use of the updated criteria.

Claim to Regulate Non-Water Quality Listed Segments – Section 2.2.2

EPA asserts that any existing “water quality limited” segment without an approved TMDL must be addressed by implementing more restrictive requirements by the MS4 discharge in that area, or at times, tributary to the area of concern. Additional implementation and study requirements are identified in Appendix H. Beyond regulating waters that are specifically found to be water quality impaired, EPA is also asserting authority to impose more restrictive MS4 requirements on (1) waters that NHDES expressly concluded are NOT impaired at this time (*e.g.*, Great Bay Estuary – see proposed 2014 listing) and (2) any waters not previously identified as impaired by NHDES, but new information indicates may be impaired (“any other permittee that, during the permit term, becomes aware that its discharge is to a water body that is water quality limited...”). EPA’s proposed approach is inappropriate for several reasons:

- Where more recent data under evaluation by NHDES indicate that a prior impairment no longer exists (such as in the case for nitrogen in Great Bay Estuary), EPA must provide for an allowance to use the most current information and analyses. Continued reliance on outdated information is plainly not consistent with the NPDES program requirements. The Cities of Dover, Portsmouth, and Rochester are most certainly not causing or contributing to a nitrogen induced water quality impairment. As confirmed by the 2014 Independent Peer Review and verified by NHDES in its settlement agreement (and current 303(d) assessment), existing information does not show that nitrogen is causing impairment in the areas of Great Bay Estuary materially impacted by these discharges. (See Attachments). Available data confirm that existing TN levels in the system are lower than those present in 2003 when no concerns over eelgrass or macroalgae impairments existed. The growing season average TN levels are, in fact, well below those reported in the literature as fully supporting eelgrass populations. They are also at or below the levels EPA has acknowledged are safe for eelgrass growth in Massachusetts estuaries (*i.e.*, < 0.35 mg/l TN growing season average). There is no rational scientific or regulatory basis for EPA to assert that the communities of Dover, Rochester or Portsmouth are causing or contributing to a TN impairment in estuarine waters.

Imposition of Appendix H enhanced BMP requirements and additional study requirements are not supportable.

- EPA should not be seeking to impose more restrictive requirements on any MS4 discharge where NHDES has expressly determined that the current data do not verify an impairment for that pollutant (e.g., TN for Great Bay Estuary and fresh water section of the Cocheco River). Likewise, EPA should not seek to substitute its judgment regarding nutrient impairments on rivers or streams or seek immediate action simply because new data are collected. A process of data evaluation, verification and analyses must precede any determination that more restrictive actions by an MS4 community is required, as occurs with the State's 303(d) evaluation process and the issuance of NPDES permits. This case should be treated no differently.

The Requirement to Mirror Pre-development Hydrology Is Beyond Federal Authority

Section 2.3.6 seeks to impose a pre-development hydrology requirement on any new development or redevelopment. Federal courts have repeatedly informed EPA that it lacks authority to regulate based on flow or, to put it differently, to treat flow as a surrogate pollutant. *Va. Dep't of Transp. v. EPA*, No. 1:12-CV-775 (E.D.Va. Jan. 3, 2013). Therefore, all flow-based restrictions contained in this proposed rule must be deleted.

The following directives on requirements for stormwater programs/ordinances in Section 2.3.6.a.ii are also beyond federal authority and more restrictive than the adopted regulatory requirements found in 40 CFR 122.26:

1. Provision a - mandating use of low impact development "to the maximum extent feasible" – EPA is illegally dictating the design of pollution reduction requirements which is beyond its statutory authority *See Iowa League of Cities v. EPA*, 711 F.3d 844 (8th Cir. 2013).
2. Provision b – mandating "no untreated discharge" for chloride found in a snow storage area. No treatment technology can assure such a requirement regardless of the circumstances. This must be qualified "as practicable" pursuant to the statute.
3. Provision c – mandating compliance with a state design practices manual, "as amended, as applicable." This manual must be subject to formal notice and comment if it is to be federally enforceable. Moreover, the requirement to comply with "amended" documents violates NPDES rules which only allow permits to be derived based on existing requirements, not some future document that is not presently available for review. Finally, the inclusion of the statement "as applicable" renders the entire provision void

for vagueness. Who determines what is “applicable” and when do they do this? The applicability of requirements must be known presently to allow a permittee to understand the significance of a requirement and to ensure it knows what to comply with.

4. Provision d – mandating groundwater recharge, control of peak flow rates and channel protection – the Clean Water Act controls pollutants – it does not address any of these requirements which are not within EPA’s statutory authority to regulate.
5. Provision e – also illegally regulates groundwater recharge as a CWA requirement. This requirement is beyond the CWA and therefore should be deleted.

Appendix F Comments - Existing TMDLs

Chloride TMDLs – It is not apparent how the specific measures outlined in this section are demonstrated to be both necessary and appropriate for meeting any adopted chloride TMDL reduction requirements. The Appendix, however, outlines a series of measures that must be implemented “at a minimum.” EPA is again improperly dictating the corrective measures that must be implemented, rather than allowing the permittee to determine what makes sense, is required to address TMDL load reductions and is practicable in this instance. Unless EPA can demonstrate that these requirements are the minimum ones necessary to ensure water quality is attained (which is not presented in the background materials), the “at a minimum” language must be struck and replaced with “at the permittee’s discretion as necessary to meet water quality objectives.”

Bacteria TMDLs – As noted earlier the statewide bacteria TMDL did not establish specific effluent limits but recommended that future assessment efforts consider available dilution in determining what load reductions (if any) are necessary. Given the amount of time that has transpired from the adoption of those TMDLs, it is not apparent that any of the other TMDL recommendations are based on current information regarding existing water quality for any of these areas. Note, for example – stating that the goal of implementation of the Hampton/Seabrook Harbor TMDL is “remove all human sources of bacteria to extent practicable” is not an effluent limit and would certainly require further definition. Some load reduction recommendations (like that of Little Harbor – 12%) are well within the variation of the test method itself. Finally, as recognized by the Statewide Bacteria TMDL, many beach impaired waters are often impacted by bacteria loadings from the swimmers themselves or local septic systems. So, the MS4 loads may not be the material factor controlling compliance. While seeking to educate dog owners may be a common sense step, implementing the illicit discharge program (enhanced BMP i.2) and designating all catchments draining to the water body as a HIGH priority for IDDE implementation is not justified by the background documentation or the TMDLs themselves.

Phosphorus TMDLs – The reported load reductions required for the MS4 communities ranged from 40-80% TP reduction. The CWA requires that MS4 load reductions occur “to the maximum extent practicable.” There is no information in the record showing that these load reductions are attainable. EPA needs to recognize that the duty to reduce loadings is governed by the statutory language.

Appendix – H – Nitrogen (and Other) Reduction Requirements Where No TMDL Is Established

The section proposes imposition of enhanced BMPs for all MS4 communities tributary to an area designated as nutrient impaired due to nitrogen. This is inappropriate and premature. The extent of existing nitrogen impairments are poorly understood as confirmed by the recent draft 2014 Section 303(d) list and the 2014 Peer Review Report that are in EPA’s possession. Pending the resolution of these uncertainties on whether or not any nitrogen impairment actually exists in the Great Bay system, it is premature to mandate enhanced BMPs and additional studies. Moreover, establishing that nitrogen must be “unmeasurable” (Provision I.2) to avoid enhanced BMPs and study requirements is arbitrary and capricious. This provision essentially established that a zero nitrogen discharge must exist for BMPs to be avoided. This is a form of effluent limitation that has no basis in the administrative record.

Likewise, the mandates for additional BMP measures and other detailed/costly studies simply because a water body is listed as impaired for a pollutant, prior to determining whether or not the MS4 is a meaningful cause of the situation, is arbitrary and capricious as it regulates on presumption rather than data and analyses. EPA should not be squandering local resources based on speculation and innuendo rather than sound scientific analyses. Finally, there is no information showing that enhanced BMPs rather than the BMPs typically intended to be implemented will not be more than sufficient to address concerns with contributing MS4 loads. Until such information is presented, it is not defensible to presume that special, additional reduction methods must be employed.



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VIA ELECTRONIC AND FIRST CLASS MAIL

November 2, 2015

Newton Tedder
US EPA—Region 1
5 Post Office Square—Suite 100
Mail Code OEP06-4
Boston, MA 02109-3912

RE: Comments to the US Environmental Protection Agency Proposed Language Changes for the NH Small MS4 General Permit Published on September 1, 2015 from the City of Portsmouth New Hampshire

Dear Mr. Tedder:

The City of Portsmouth provides the following comments on the Environmental Protection Agency's ("EPA") Notice of a Re-Opening of the Public Comment Period on Select Sections of the Draft Small Municipal Separate Storm Sewer System (MS4) NPDES General Permit - New Hampshire (hereafter "NH MS4 Permit") published for public comment in the Federal Register on September 1, 2015, and found at http://www.epa.gov/region1/npdes/stormwater/MS4_2013_NH.html.

Introduction

The City of Portsmouth, New Hampshire with a population of approximately 21,000, consists of approximately 17 square miles and is located on the Piscataqua River. Portsmouth's City storm drain infrastructure consists of approximately 323,000 lineal feet of pipe, 4,700 catch basins or manhole structures and 450 outfalls. This proposed General Permit would be applicable to the City's Separated Storm Sewer system, and as such, the City is providing the following comments.

Incorporation of Other Comments

Portsmouth has previously submitted comments on the original draft of the NH MS4 Permit, see Comments dated August 15, 2013. Portsmouth incorporates those original comments by reference. Portsmouth has also participated with a coalition of other communities in developing comments, those comments are being submitted this date by the law firm of Sheehan, Phinney, Bass and Green and are appended to this document as attachment A.

Comments

Portsmouth objects to the issuance of the NH MS4 Permit as currently proposed. The City objects to improper and illegal assumptions as to non-point discharge impacts. Portsmouth is committed to water quality, but municipal efforts must be based on sound, up-to-date science so that major decisions regarding the City's infrastructure and operational investments will deliver demonstrable water quality results. In the absence of significant (if any) federal and state funding for stormwater management and infrastructure improvements, EPA must have a heightened sensitivity to the importance of getting regulatory changes right when local resources are already strained. The City seeks meaningful improvements and local flexibility to solve water quality issues. The City appreciates that some of the proposed changes to these amended sections seem to reflect EPA willingness to address local concerns to the earlier draft and that effort is acknowledged; however, issues remain, and they are noted below in both general and specific comments.

General Comments:

1. Portsmouth objects to any requirements being imposed on it under this MS4 permit for nitrogen removal. Portsmouth emphasizes the importance of using the most currently available water quality data to establish permit requirements. Or alternatively, there must be some means of modifying the permittee's obligations when the State agency updates its water quality findings during the permit period rather than freezing in time the permittee's obligations. Currently EPA has linked the MS4 permit to the current approved 2012 303(d) list for the entire length of the proposed permit, which could be a decade or more given past EPA practice. That approved 303(d) list shows Portsmouth discharging into waterbodies impaired by nitrogen, a conclusion that Portsmouth long has questioned. The proposed 2014 303(d) list by contrast shows no nitrogen impairments in the waterbodies to which Portsmouth discharges.
2. Portsmouth objects to the agency's use of the phrase "certain water quality limited waters" such as found in section 2.2.2. The phrase is undefined in the regulations and is too open-ended. It creates a risk that a permittee such as Portsmouth may be required to implement additional controls in the middle of the permit cycle without proper scientific and local agency review and without the requisite process required for such mid-permit modifications. In addition, Portsmouth notes that while this agency's attempt to add, mid-permit, additional obligations based on new data, 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.
- Portsmouth requests that the agency clarify the regulation of "tributaries" which is referred to in several sections including Sec. 2.1.1b and c. Portsmouth finds the attempt to regulate tributaries vague and suggests potential future limitations that must be subject to proper notice and comment. The City cites as an example Pickering Brook which is impaired for nitrogen in Greenland in the 2010 and 2012 303(d) listings, but not in the proposed 2014 303(d) list. Pickering Brook in Portsmouth isn't listed for nitrogen in any

of the 303(d) lists 2010, 2012, or the proposed 2014. Pickering Brook has its source in the Great Bog in Portsmouth but is tributary to the Greenland section. If Pickering Brook is determined to be impaired for Nitrogen, it seems that Portsmouth could potentially be required to adhere to the nitrogen requirements in the Greenland section is identified as impaired.

Comments to Specific Sections

Section 2.1.1. Portsmouth objects to this section to the extent that it implies that any contribution of a pollutant from a stormwater pipe to a water body not meeting water quality standards would constitute a violation. The permit language does not appear to consider or define a de minimis concentration such that, for example, a low concentration of a pollutant exiting a stormwater pipe that intermittently discharges to an impaired waterbody could be considered to contribute to the exceedance. An assessment should be required of the discharges impact before any necessary controls are mandated to be taken by the municipality.

Sec 2.1.1.b and c. See General Comment 3 above.

Sec. 2.1.1.c See General Comment 2 above.

Sec. 2.2.1.e This section references Appendix F Table F-1 which lists the bacteria impaired waterbodies by community. The waterbodies listed appear to be from the 2010 approved 303(d) listing. EPA has recently approved the 2012 list and NHDES has issued a draft of the 2014 303(d) list which is based on the most currently available information. The list in Table F-1 in Appendix F should reflect the latest information available for bacteria.

Section 2.2.2 a (i) (1) Portsmouth specifically objects to being identified as a community discharging to a waterbody impaired by nitrogen. See General Comment 1.

Section 2.2.2 (a) (1) In the event that the nitrogen controls set forth in Appendix H remain applicable to Portsmouth, Portsmouth seeks confirmation that the public education and outreach requirements, ordinance changes, good housekeeping, pollution prevention requirements, and the nitrogen removal tracking obligations found in Appendix H at Section I (1) apply only for the catchments within the impairment areas. As currently proposed, these requirements now appear to apply to the entire urbanized area.

Sec. 2.2.2 References Appendix H. Appendix H Part 1 references "Water Quality Response Plans" which are no longer proposed in the permit and the language should be deleted from Appendix H and all other places in the permit. Perhaps the Stormwater Management Plan would serve as an appropriate substitute.

Section 2.2.2 d – This section regulates municipalities such as Portsmouth that discharge into chloride impaired waters. With regard to the controls and requirements set forth in Appendix H the City provides the following:

Appendix H, IV, Section 4 (b) seeks to impose upon municipalities certain obligations relative to the application of salt on private parking lots and owners of private streets. New Hampshire is not a home rule state and consequently any authority the City has to mandate, regulate, and enforce such actions against private property owners must be found or derived from authorizing state legislation or law. While the City may be able to sustain an argument that there is authority for it to require private parking lot owners to use only trained and certified salt applicators due to possible runoff into City stormwater systems, the reporting requirement to UNH seems particularly hard to justify as being within the City's authority without state enabling legislation. Moreover, the enforcement logistics and difficulty of the requirement could be significant. It is difficult to enforce ongoing maintenance requirements of any systems when the ownership of property changes. Requiring the installation of a swale or detention pond as part of site review approval and holding a bond to secure such performance is routine and relatively easy. What this regulations calls for in terms of the oversight of private property owners across time and owners should be done at the State of New Hampshire level. The MS4 permit is the wrong vehicle for regulating the conduct of private property owners in the State of New Hampshire.

Section 2.3.6.a.ii (b) Portsmouth is concerned with regard to the ambiguous requirements for salt/snow storage areas on new/re-development sites. By way of example, it requires "no untreated discharge" and fails to define "treatment of stormwater."

Additional Comments

Appendix F: In Table F-1, please note that Assessment Unit NHRIV600031001-10 is named Newfields Ditch, not Newfileds Ditch.

Appendix H.V (impairments without TMDLs for hydrocarbons, metals and solids): It is not clear what waters are impaired for solids. Review of the 2012 final and 2014 draft 303(d) lists shows no waters in New Hampshire are impaired for "solids." Please clarify what is meant by "solids" and which waters in New Hampshire are impaired for this parameter, or delete this parameter from section H.V.

Thank you for the opportunity to provide comments to this proposed permit for stormwater discharges from small municipal separate storm sewer systems.

Sincerely,



Brian F. Goetz
Deputy Director of Public Works

Cc: John P. Bohenko, City Manager
Peter H. Rice, P.E., Director of Public Works
Suzanne Woodland, Deputy City Attorney
Terry Desmarais, City Engineer



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VIA ELECTRONIC AND FIRST CLASS MAIL

November 2, 2015

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Boston, MA 02109-3912

RE: Comments to September 1, 2015 Draft NH MS4 Permit

Dear Mr. Tedder:

These comments are submitted on behalf of the City of Rochester, NH ("Rochester") to the Environmental Protection Agency's ("EPA") Notice of a Re-Opening of the Public Comment Period on Select Sections of the Draft Small Municipal Separate Storm Sewer System (MS4) NPDES General Permit - New Hampshire (hereafter "NH MS4 Permit") published for public comment in the Federal Register on September 1, 2015, and found at [http://www.epa.gov/region1/npdes/stormwater/MS4 2013 NH.html](http://www.epa.gov/region1/npdes/stormwater/MS4%2013%20NH.html). Rochester appreciates the opportunity to submit these comments.

Introduction/Reservation of Rights

As an initial matter, Rochester notes that it previously submitted comments on the original draft of the NH MS4 Permit by letter dated August 14, 2013, in which it incorporated by reference comments submitted by the New Hampshire Stormwater Coalition ("Coalition"), to the February 12, 2013 draft NH MS4 Permit. Rochester incorporates those comments herein to the extent such comments may apply to the sections of the NH MS4 Permit published on September 1, 2015. Moreover, Rochester is also participating in the broader NH municipal coalition's comments submitted under cover letter from the law firm of Sheehan, Phinney, Bass + Green dated November 2, 2015. Rochester's comments set forth below are in addition to such comments.

Rochester notes that there are a number of issues in play, both in NH and nationally, that impact its ability to provide complete comments on the NH MS4 Permit. Such issues include, but are not necessarily limited to, the ongoing uncertainty regarding which 303(d) list will be in effect when the permit is finally issued as there are major differences between the approved 2012 list and the proposed Draft 2014 list, particularly for water bodies into which Rochester discharges. Most notably, the 2012 list removes or downgrades the status of the bacteria impaired waters

(currently listed in Appendix F and based on the 2010 list). The proposed 2014 list also delists many of the nitrogen impaired waters that were listed in the 2009 amendment to the 2008 list. Finally, the newly introduced term “water quality limited waterbodies,” appears to allow other water bodies to be added during the permit term that are not currently listed. Neither the process nor the criteria used in determining whether other water bodies will be considered “water quality limited” is set out. These issues raise a great deal of concern and uncertainty as to future efforts and costs that will be required to comply with this draft permit.

In light of the uncertainties referenced above, as well as the ongoing uncertainty regarding the overall jurisdiction of the Clean Water Act and EPA’s Waters of the US Rule, Rochester is limited in its ability to fully assess the impact of the NH MS4 Permit and the outstanding technical issues associated with the changes to the NH MS4 Permit only recently proposed. Rochester hereby reserves the right to submit additional/supplemental comments on all or any portions of the NH MS4 Permit to the extent necessary, applicable, and/or allowed by law.

Request for Hearing

Rochester hereby requests the EPA hold a public hearing on the September 1, 2015 draft changed sections of the NH MS4 Permit in accordance with 40 C.F.R. §124.12 and other applicable law, particularly given the significant degree of public interest in this permit and these changes.

Request for Incorporation of Comments into the Administrative Record

Rochester hereby requests that EPA incorporate its comments into the official administrative record for the issuance of the NH MS4 Permit.

Comments

For the reasons stated herein, Rochester objects to the issuance of the NH MS4 Permit as proposed. The proposed NH MS4 Permit will impose significant burdens and costs on both Rochester and its citizens, without adequate scientific or legal basis and without any reasonably clear evidence that such burdens/costs will in fact result in any meaningful improvement to the waters into which Rochester discharges and/or downstream waters, given, inter alia, the presumptions of impacts to such waters and the continued unregulated non-point discharges into such waters. Therefore, and as further set forth below, Rochester believes that the NH MS4 Permit is both technically and legally flawed and requests that EPA withdraw the draft or modify it consistent with these comments.

Rochester’s below comments are organized as follows. General comments are provided first, followed by comments on specific permit sections and appendices.

I. General Comments:

- **Costs** – The costs to Rochester and other municipalities to implement the NH MS4 Permit requirements are considerable. Resources at the municipal level are scarce, and

there is currently no federal or state funding, of which Rochester is aware, to assist in compliance efforts. Compliance obligations should be balanced with the municipalities' ability to accomplish necessary stormwater discharge reductions while not experiencing economic hardship. In its Preamble to the Phase II SW regulations addressing storm water discharges from small MS4s, EPA stated "[o]ther factors [to be considered] may include MS4 size, climate, implementation schedules, **current ability to finance the program**, beneficial uses of receiving water, hydrology, geology, and **capacity to perform operation and maintenance.**" (Highlighting added.) 64 FR 68722 at 68775-68776 (December 8, 1999). EPA should make modifications throughout the NH MS4 Permit to take into consideration affordability and practicality for implementation.

- **Compliance Schedules** – In addition to the factors to be considered as set forth above, EPA should also provide greater flexibility in the manner in which SW requirements are to be implemented, including an adaptive schedule for doing so. The State of New Hampshire now has in place a regulatory framework that allows for an extended timeline in the form of a Compliance Schedule that may be incorporated into an NPDES permit. A Compliance Schedule may extend the compliance deadlines beyond the 5-year term of a permit. Without incorporation of a Compliance Schedule, the draft MS4 Permit may place municipalities in immediate violation of some of the restrictive prohibitions in the permit. Extended Compliance Schedules that allow implementation to go beyond 5 years should be considered.
- **Administrative Burden** - The NH MS4 Permit imposes considerable administrative burdens on Rochester and other municipalities, including considerable reporting, sampling, investigative fieldwork and "public education" obligations, among others. Administrative reporting and tracking obligations should be consolidated and streamlined. EPA should develop outreach materials and modeling tools to share with municipalities to assist in meeting these obligations. Such considerations are consistent with EPA's stated approach cited in the preamble cited above.
- **The NH MS4 Permit Represents a Significant Change in Applicable Standards** - The Clean Water Act (§402(p)(3)(b)), as well as EPA's and NH's Stormwater ("SW") program (administered by EPA under 40 CFR §122.34) generally apply the "maximum extent practicable" ("MEP") standard to SW reduction requirements, which has long been the standard governing municipal responsibility for SW management. The NH MS4 Permit uses terms like "maximum extent feasible," "where feasible," and where "possible." It also requires implementation of strict controls "if they can be incorporated." (See, for example, §2.1.1(d), §2.3.6(a)(ii), §2.3.6(b)(ii), §2.3.6(f)(ii), and §2.3.6(c) of the NH MS4 Permit.) These phrases are undefined in the regulations and appear to impose obligations beyond "practicable;" such obligations are therefore contrary to law. The NH MS4 Permit should be revised to make clear that the MEP standard, through the implementation of Best Management Practices ("BMPs"), defines the municipal obligations under the NH MS4 Permit.
- **Misapplication of Discharge Standards** - The NH MS4 Permit further misapplies CWA standards when it refers to the "elimination" of discharges that "cause or contribute to an

exceedance of water quality standards (“WQS”)) (see for example §2.1.1(d) and 2.2.2(d)) rather than imposing the use of BMPs under the MEP standard. As such, the use of this standard effectively eliminates the concept of BMPs in the SW program and effectively requires the actual elimination of certain discharges. In addition, it appears to remove any impracticability standard. This is well beyond any conceivable MEP standard. Moreover, the use of the phrase “cause or contribute” also shifts the standard beyond the SW BMP-based program and imposes more of an “effluent limitations” permit program that is applied unilaterally to all “water quality limited water bodies” regardless of other source contributions, pollutant transport mechanisms and the nature or priority of the impairment status. Finally, SW regulations require nothing beyond “minimum control measures” where a TMDL is not in place (e.g., 40 CFR §122.34(b)). The NH MS4 Permit goes well beyond this standard.

- The NH MS4 Permit Ignores Listing Categories - Virtually all of the 303(d) listings, and draft listings of waters into which Rochester discharges list the sources of impairment as “unknown” and as “low priority.” The NH MS4 Permit ignores these limitations in the listings and treats all of the municipal sources as if stormwater clearly causes the impairment and all are equal/immediate priorities. The assumed contribution to impairment and the equal treatment of all discharges is contrary to both fact and law. The NH MS4 Permit must be revised to recognize the lack of information regarding certain impairments and the low priority of certain of the listings. It must also provide additional time for discharges such as Rochester’s to comply in light of these listing categories.
- Lack of Flexibility – The CWA SW program is intended to provide flexibility to MS4s to design appropriate BMPs using MEP concepts in an iterative process. In its Preamble to the Phase II SW regulations addressing storm water discharges from small MS4s, EPA made very clear that the SW program is to be both flexible and iterative.

“EPA has intentionally not provided a precise definition of MEP to allow **maximum flexibility** in MS4 permitting. MS4s need the flexibility to optimize reductions in storm water pollutants on a location-by-location basis. EPA envisions that this evaluative process will consider such factors as conditions of receiving waters, specific local concerns, and other aspects included in a comprehensive watershed plan. Other factors may include MS4 size, climate, implementation schedules, **current ability to finance the program**, beneficial uses of receiving water, hydrology, geology, and **capacity to perform operation and maintenance**. The pollutant reductions that represent MEP may be different for each small MS4, given the unique local hydrologic and geologic concerns that may exist and the differing possible pollutant control strategies. Therefore, each permittee will determine appropriate BMPs to satisfy each of the six minimum control measures through an evaluative process. ... EPA envisions application of the MEP standard as **an iterative process**. MEP should continually adapt to current conditions and BMP effectiveness and should strive to attain water quality standards. Successive iterations of the mix of BMPs and measurable goals will be driven by the objective of assuring maintenance of water quality standards. ... EPA envisions that this process may take two to three permit terms.” (Highlighting added.) 64 FR 68722 at 68775-68776 (December 8, 1999) (See also EPA’s final rule on SW applications a 55 FR 47990, 48990-48991 (November 16, 1990) – “The language of CWA section

402(p)(3) contemplates that, because of the fundamentally different characteristics of many municipalities, municipalities will have permits tailored to meet particular geographical, hydrological, and climatic conditions.”)

The NH MS4 Permit removes all flexibility and the iterative nature of SW permits and imposes a “one size fits all” approach, contrary to law.

- **Use of Outdated Information** - The NH MS4 Permit assumes impairments and the need for stringent controls without consideration of current data or recently implemented remediation programs. By way of example, the listing of bacteria impaired waters in Appendix F is out of date. Moreover much of the data relied on to initially list these water bodies is quite old (more than 10 years old in some cases) and does not meet the water quality objectives of NH’s most recent CALM. Finally, it fails to take into account actual work to reduce discharges that has already been completed in certain waters and has been recognized by the NH Bacteria TMDL Report (e.g., Axe Handle Brook-Howard Brook). EPA’s use of this outdated information significantly undermines the assumptions on which the NH MS4 Permit is based.
- **Inappropriately Allows other Water Bodies to be Considered “Water Quality Limited” Outside of the NHDES 303(d)/CALM Assessment Process Creating Uncertain Future Changing Conditions** - The NH MS4 Permit incorporates additional requirements to address the listing of additional “impaired waters” or the addition of “water quality limited” waters during the term of the permit. (See for example §2.2.2(a)(i)(2), §2.2.2(b)(i)(2) and §2.2.2(c), (d) and (e).) Such language would potentially, and automatically, require significant changes to a permit during the pendency of the permit term. This is inconsistent with the manner in which most NPDES permits are implemented. While a typical NPDES permit may be modified based on changed conditions or changed regulations, such modifications require specific actions that may be appealable. (See for example 40 C.F.R. §122.62.) No such process is required here. To the contrary, the NH MS4 Permit provides no process to request removal of unnecessary controls should waters be delisted, determined no longer to be impaired, or determined to have improved during the term of the permit. The NH MS4 Permit should contain language making it clear that permit requirements will not automatically change during the course of the permit term, and that changes may be implemented through the process of permit amendment, consistent with law.

II. Section specific comments:

- **§2.1.1.c** – This section of the NH MS4 Permit uses the term “water quality limited water body” (WQLWB) for the first time and is not clearly defined. Its use is repeated a number of times thereafter. WQLWB is a term that is not defined in the CWA or applicable regulations. It is however defined in §2.2.2 of the NH MS4 Permit more broadly than the terms “water quality limited segment” which is specifically defined and has specific regulatory significance (See 40 C.F.R. §130.2). Its use could impose requirements on waters not yet determined to be impaired based on limited data, or even waters that have been or may be delisted. Moreover, its use could potentially allow EPA to disregard the settlement agreement Rochester entered into with NH, dated April 2014

that was based on the “Joint Peer Report of Peer Review Panel” commissioned by Coalition members and NHDES, dated February 13, 2014, which found little support for the assumption that eel grass loss in the Great Bay is directly related to nutrient inputs.

- §2.1.1.d – requires that certain discharges be “eliminated” w/in 60 days – a potentially impossible/illegal standard. There is also no consideration of other discharges that may be causing most or even all of the problem. Elimination of such MS4 discharges could be required even for fractional contributions to alleged impairments and even where no contribution is proven. Such “elimination” goes far beyond the MEP standard, and the minimum controls, that should apply to such discharges. Its application in the NH MS4 Permit is therefore contrary to law.
- The change of wording in §2.2.1(d), (e), and (f) appears, without explanation, to exclude non-traditional and transportation MS4s, where the wording used in §2.2.2 (a) specifically includes these other MS4 permittees. The wording in all sections should be consistent to avoid confusion. Such inconsistency may have the effect of imposing disparate requirements on other MS4s, while ignoring the contribution of such excluded MS4s.
- §2.2.2.a/b – refers to WQLWB for nitrogen/phosphorus. Such reference clearly attempts to impose requirements on waters beyond those listed on the 303(d) list. More importantly, this seems to assume actual impairment. Peer reviewers who assessed such potential listing disputed such assumptions and there is no proof, Rochester contends, of such impairment in most cases. NHDES’ Draft 2014 303(d) list recognizes the uncertainties raised by the peer review and proposes delisting or downgrading the water quality status to Insufficient Information- Not Potentially Supporting (3-PNS), which is considerably different from a Category 5 listing of an impaired water body.
- §2.2.2.a.i.2 – requires reductions if the permittee “becomes aware” during the permit term that the water into which it discharges is impaired (or presumably is a WQLWB). This changes permitting requirements mid-permit, which is contrary to law. The term “becomes aware” is not defined. The impaired waters status should be based on the §303(d) listing assessment process, which is presumably based on certain data quality assurance and control standards. See also general comment above.
- §2.2.2.c – there is confusion over bacteria/pathogen requirements. It is unclear how the requirements for 2.2.2.c (water quality limited water bodies) dovetails with the 2.2.1 requirements for water bodies with approved TMDL’s on page 3 of the permit. One cannot reasonably determine what measures may be needed for stormwater since the NH Statewide Bacteria TMDL Report did not provide estimates of bacteria contributions by source(s) nor did it provide a breakout of target allocations for various sources. Moreover, the TMDL Report did not account for site specific sources such as time of travel, flow conditions or dilution in the area streams, which are major factors in developing TMDL allocations consistent with EPA guidance. Any such requirements should be clarified and unified. Also, since the recently approved 2012 NHDES 303(d) list delisted many of the various bacteria impaired waters located in Rochester, the list of

bacteria impaired waters included in Appendix F (currently based on the 2010 list) is out of date and needs to be corrected.

- §2.3.6 – states the objective for new development is to “mirror” pre-development hydrology and “improve hydrology and reduce SW” for re-developed sites. Rochester believes such standards are ambiguous and may not be achievable at any reasonable cost. Moreover, such a standard is clearly beyond MEP and is therefore unlawful.
- §2.3.6.a.ii (a) requires Low Impact Development (“LID”) to the maximum extent “feasible.” Rochester believes such a requirement is not reasonably achievable. Moreover, such a standard is clearly beyond the MEP standard and beyond applicable law.
- §2.3.6.a.ii (b) contains ambiguous requirements for salt/snow storage areas on new/re-development sites. By way of example, it requires “no untreated discharge” and fails to define “treatment of stormwater.” Such requirements may not be reasonably achievable and are clearly beyond MEP and applicable law.
- §2.3.6.a.ii(d) applies NH Alteration of Terrain (AoT) regulations (NH Code of Administrative Rules § Env-Wq 1500) to all new and redeveloped sites, well beyond the current regulatory threshold that requires only sites disturbing more than 50,000 sf or 100,000 sf of area, depending on location, to comply with these regulations. The overly broad statement of the application of these regulations is therefore contrary to law.
- §2.3.6.a.ii(e) – imposes a requirement to “retain” or “treat” all runoff regardless of effect. Such requirement is ambiguous and well beyond the scope of the SW MEP standard and applicable law.
- §2.3.6.a.ii(f) – the language of this section is confusing in distinguishing how the proposed 10 percent threshold applies to redevelopment and road widening, and appears “arbitrary and capricious” as no basis for these thresholds was provided. Presumably, as written, any road widening (unclear if this includes repaving work) that increases the road width by 10 percent or any redevelopment, involving more than 1 acre, that increases the impervious area by 10 percent or more, would be required to fully meet all of the AoT stormwater management requirements. This standard is well beyond what is required by the AoT regulations and is inconsistent with the recommended guidelines included in the DES and Southeast Watershed Alliance Model Stormwater Management Ordinance/Regulations, which relies on MEP principles for redevelopment and has been adopted by many NH communities. It also imposes a requirement to “improve existing conditions” for virtually all redevelopment and all roadway widening where the impervious area and road width increases are less than 10 percent. The imposed standard, “improve SW where feasible” is ambiguous and undefined. These provisions are overly broad and may capture many re-paving projects. Such provisions are beyond the scope of MEP and beyond applicable law.

- §2.3.6.c – requires extensive reports on street design and incorporates LID “if it can be” incorporated. Such requirements are ambiguous, beyond the scope of the SW reduction requirements in applicable regulations and beyond MEP standards and applicable law.
- §2.3.6.d – requires the conduct of broad feasibility studies to implement all green infrastructure possibilities. Such requirements are unlikely to be reasonably achievable and clearly beyond MEP and applicable law.
- §2.3.6.e – requires an extensive inventory of all permittee-owned properties that “could be” retrofitted with BMPs. This requirement contains ambiguous terminology (e.g., “could be”) and is clearly beyond the scope of MEP. Moreover, it removes all flexibility afforded to the municipality to determine the most cost-effective alternatives. Modifications to other municipal activities and practices such as fertilizer use, sewer extensions and wastewater treatment could provide equal or greater pollutant load reductions. Finally, such a requirement is unlikely to be reasonably achievable and beyond applicable law.

III. Appendix H comments:

- Appendix H/§I/II creates a number of new housekeeping requirements for municipalities with respect to nitrogen and phosphorus. Such requirements unlawfully simply *assume* such sources are causing impairment. By way of example, Section I.1.a.i requires use of slow-release fertilizers, proper management of grass cuttings and leaf litter (including a prohibition on blowing organic waste onto impervious surfaces) and increased sweeping of all streets/roads in a municipality twice per year. Such requirements create significant burdens of municipalities (e.g., not all roads are paved and therefore able to be swept), and are unable to be reasonably achieved. Moreover, such requirements ignore the fact that a municipality may determine that there are other more effective and cost effective solutions and they remove flexibility on municipalities contrary to law.
- §I.1.b.i – requires a nitrogen source report that may not be reasonably achievable and is based on unsubstantiated assumptions regarding nitrogen impacts to the Great Bay Estuary.
- §I.1.1.c – requires the permittee to evaluate all permittee-owned properties for structural BMP retrofit opportunities within 5 years. This is highly prescriptive and may not be necessary if other nitrogen control strategies can be demonstrated to show similar reductions through other structural or non-structural measures, including offsets provided by additional treatment for redevelopment projects. Requiring that only stormwater retrofit opportunities be considered is likely to add unnecessary costs, be infeasible and is beyond MEP and applicable law.
- Under the NH MS4 Permit, the only way to “waive” out of many of the requirements mentioned above is through extensive and expensive sampling to

show - to EPA's satisfaction - "no measurable amount of nitrogen/phosphorus" in discharges. (See for example §1.2.) Such a requirement unlawfully shifts the burden to the permittee to comply with an impossible (e.g., "no measurable amount") standard. Such requirements are well beyond MEP and are contrary to law.

- Appendix H/§III - §3.i.2 requires the designation of any catchment discharging to a water that has been determined to be impaired for bacteria/pathogens as a problem/high priority that requires significant upgrades. These provisions impose arbitrary and ambiguous requirements in that they are undefined and assume such catchments contribute to such impairment. Municipalities should be provided flexibility to utilize their local knowledge and knowledge of their own systems to undertake the most cost effective approaches to reductions of such discharges. In addition, the only mechanism to waive out such requirements is to prove – to EPA's satisfaction – that there is no measurable discharge of such pollutant. Particularly in the case of bacteria/pathogens, such standard is impossible, and therefore arbitrary and capricious. One visiting goose would cause an inability to waive out of these requirements. Moreover, there is a confused overlap between the requirements of Appendix F and Appendix H. One applies to waters with TMDLs, while the other does not even require listing. These requirements are well beyond MEP and applicable law and ignore the concepts of BMP and flexibility. This requirement also ignores recent data and implemented improvements in these waters.

IV. Appendix F comments:

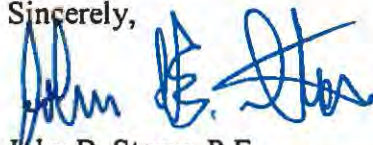
- Appendix F recommends implementation on a watershed basis, suggesting that more specific watershed plans be developed, where appropriate, to focus and prioritize appropriate restoration measures. Although this language allows greater flexibility in allocating resources and selecting effective measures, which we applaud, it is inconsistent with municipal-specific requirements set forth throughout the permit.
- Appendix F requires the implementation of enhanced BMPs. By way of example, one significant requirement is the illicit discharge section (A.1.i.2), which requires the designation of all catchments draining to any waterbody impaired for bacteria or pathogens as either "Problem Catchments" or "High Priority" and the implementation of a strident, prescribed Illicit Discharge Detection and Elimination ("IDDE") program. This "one-size-fits-all" approach assumes that SW is the primary source and ignores other significant factors involved with bacteria source contributions. This could impose considerable and unnecessary administrative and financial burdens for municipalities to meet the prescribed completion schedule for IDDE investigations without considering other potential source contributions. Such requirements may not be feasible and are beyond MEP and applicable law.
- Unlike Appendix H, Appendix F does not provide a mechanism to demonstrate that the MS4 discharges are not impacting receiving waters. This is particularly important for

bacteria impaired waters since the statewide bacteria TMDL report did not provide any estimates of source contribution. The NH MS4 permit assumes that SW is a major source of bacteria, which is likely *not* to be the case in many areas. Reasonable provisions to "test out" should be incorporated.

- The list of bacteria impaired water bodies needs to be corrected as it based on the 2010 303(d) list and the recently approved 2012 303(d) list delisted many of these water bodies due to a lack of sufficient information, particularly for water bodies located in Rochester.

Rochester appreciates the opportunity to provide these comments and looks forward to further revisions of the NH MS4 Permit consistent with these comments. Please call me at 603-332-4096 if you have any questions or if additional detail would be helpful.

Sincerely,



John B. Storer, P.E.

Director of Public Works

cc: Daniel Fitzpatrick, City Manager
Terence O'Rourke, City Attorney
Michael Bezanson, City Engineer
Attorney Steve Miano
Attorney Sherry Young
Bill Arcieri, VHB
Renee Bourdeau, GeoSyntec

November 2, 2015

Newton Tedder
U.S. EPA Region 1
5 Post Office Square – Suite 100
OEP06-4
Boston, MA 02109-3912



Re: **Comments on the Draft NPDES General Permit for Stormwater Discharges from Small MS4s in New Hampshire**
Fall 2015 Public Notice of New & Revised Language for Sections 2.1.1, 2.2 (including all subsections), and 2.3.6 and Appendices F and H

Dear Mr. Tedder:

Tighe & Bond appreciates that EPA has given additional consideration to proposed requirements for the New Hampshire NPDES Small MS4 General Permit and has released revised language for another round of public comments. We have prepared the following comments and questions in response to the new and revised language referenced above. Our comments are referenced by page (from the copy of the draft permit sections and appendices provided on EPA's website) and by the permit section number. We have focused our comments on sections where we believe there is a substantial need for improvement to allow appropriate flexibility and cost effective implementation of the Clean Water Act and NPDES program goals specific to New Hampshire.

Part 2.1.1: Requirements to Meet Water Quality Standards

- **(Page 2, Part 2.1.1.b & c):** Please clarify the statement "or its tributaries in some cases." Does EPA intend to say that if a discharge from a MS4 to a tributary of a downstream waterbody that is impaired and subject to an approved TMDL or is considered water quality limited, that the MS4 is subject to the same requirements as if the MS4 were discharging directly to the impaired or water quality limited waterbody, even if the tributary is not referenced in the most recent approved New Hampshire 303(d) List or 305(b) Report?

Part 2.2 Discharges to Certain Impaired Waters

- **(Pages 3-10, Part 2.2):** Upon scenario testing for a number of permittees, we have identified some inconsistencies in the applicability of pollutant-specific requirements to municipalities for TMDLs (Part 2.2.1) and Water Quality Limited Waters (Part 2.2.2) that EPA should correct or clarify. In several cases, it was unclear to us why some municipalities were listed in the Permit for certain impairments while the receiving waters within the Regulated Area were not listed as impaired for the pollutant of concern.
 - It appears that EPA has applied TMDL and Water Quality Limited Waters requirements to receiving waters that are *outside of the Regulated Area* by including those municipalities in the watershed-specific list. We request that prior to issuing the final permit, EPA revise the lists provided in the permit (both this section and Appendices F & H) as appropriate to correct this.
 - The first paragraph in Section 2.2.2 contains a definition of "Water Quality Limited water body" that is based on an extremely broad list of overlapping water quality standards that have potential of conflicting and causing great confusion. What documents govern interpretation of TMDLs and Water Quality Limited Waters

applicability; the individual TMDL reports, the 303 (d) List, the 305(b) Report, or the tables provided in Part 2.2? Please state the source in the final permit.

- **(Pages 3-8, Part 2.2.1, Part 2.2.2, and Appendix F and H):** Through the Pollution Tracking and Accounting Pilot Project (PTAPP) being coordinated by NHDES, communities in the Great Bay watershed are already taking steps to track reductions in nitrogen from non-point sources and identify both structural and non-structural BMPs that are appropriate to reduce nitrogen. We recommend EPA consider this ongoing effort and associated timelines for implementation in the MS4 permit requirements related to nitrogen TMDLs and impairments.

Part 2.3.6 Stormwater Management in New Development and Redevelopment (Post Construction Stormwater Management)

- **(Pages 9, Part 2.3.6.a.ii.(d)):** Tighe & Bond is concerned that the revised language relative to post-construction stormwater management standards will result in discouraging redevelopment project from moving forward, and in particular the reference to section Env-Wq 1507.03 of the New Hampshire Alteration of Terrain Administrative Rules. Env-Wq 1507.03 does not differentiate between new development and redevelopment and requires treatment of the full Water Quality Volume and Water Quality Flow which are both based on 1-inch of rainfall. This may be a significant challenge for many currently developed sites for a variety of reasons related to economic development and logistical site issues. Many communities in New Hampshire have recently adopted or are in the process of adopting updated stormwater management ordinances and regulations that recognize the importance of encouraging redevelopment projects over new development in order to reduce existing water quality impacts. To incentivize redevelopment projects these new local regulations provide higher degree of flexibility for redevelopment projects as compared to new development thereby creating an incentive for a developer would choose redevelopment of an existing grandfathered site over an undeveloped green field site. These flexibilities are not allowed with the proposed Permit language, and the result will be a disincentive for the redevelopment of sites that are currently contributing to quality impairments and push projects toward green field sites.

We thank you for the opportunity to comment on the draft New Hampshire Small MS4 General Permit Sections 2.1.1, 2.2 (including all subsections), 2.3.6, Appendix F, and Appendix H. Please contact me with any questions at 603-433-8818 or dcedarholm@tighebond.com.

Respectfully,

TIGHE & BOND, INC.



David Cedarholm, P.E.
Senior Project Manager

Copy: Gregg M. Mikolaities, Tighe & Bond
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