EPA Response to Comments on:

National Pollutant Discharge Elimination System (NPDES) General Permits for Stormwater Discharges from Small Municipal Separate Storm Sewer Systems in New Hampshire

NPDES Permit Nos. NHR041000, NHR042000, and NHR043000

Dated: January 18, 2017

In accordance with the provisions of 40 C.F.R. § 124.17, this document presents EPA's responses to comments received on the Draft NPDES General Permits for Stormwater Discharges from Small Municipal Separate Storm Sewer Systems in the State of New Hampshire, 78 FR 9908 (Feb. 12, 2013). EPA took public comments on the draft permit from February 12 to August 15, 2013 after two comment period extensions. EPA received over 50 unique written letters and oral comments on the draft permit. In 2015, EPA edited and reopened for comment select sections of the 2013 draft permit (2.1.1., 2.2., and 2.3.6. as well as Appendices F and H). *See* 80 FR 52751 (Sept. 1, 2015). EPA took comments on these updated sections from September 1 to November 2, 2015. In accordance with 40 CFR § 124.14, EPA took comments on comments received during the comment period until November 20, 2015. This Response to Comments does not respond to comments received outside of the above-mentioned comment periods. This Response to Comments and all attachments, as well as the final permit and associated documents, should be considered collectively as EPA's response to all significant comments submitted on the proposed permit.

Each comment letter contained one or more comments that EPA excerpted and ordered according to the corresponding topic or permit part. EPA did not otherwise edit the comment excerpts. EPA has addressed all significant issues that the public comments raised. In many cases, EPA has cross-referenced similar responses. To the extent that a comment response addresses issues that other comments raised, the responses should be considered together.

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1.0 INTRODUCTION

1. Comment from the Durham/UNH Integrated Watershed Partnership

The Partnership requests that the following general language be included in the Introduction of the proposed 2013 MS4 permit: "To the maximum extent allowed by laws in effect, EPA may develop special permit limitations or conditions for the purpose of facilitating implementation of an integrated planning approach as set out in Section IV of EPA's June 5, 2012 Integrated Municipal Stormwater and Wastewater Planning Approach Framework." This new general language explicitly recognizes that MS4 permits, in conjunction with NPDES permits, are at the heart of the Integrated Planning Approach Framework.

Similarly, introductory permit language should be added similar to that contained in 40 CFR § 122.30(d) which provides: "EPA strongly encourages partnerships and the watershed approach as the management framework for efficiently, effectively, and consistently protecting and restoring aquatic ecosystems and protecting public health."

EPA response to Comment 1

EPA agrees that integrated planning can be an important watershed-based tool for municipalities to meet Clean Water Act requirements, and EPA is committed to the principles described in EPA's June 5, 2012 Integrated Municipal Stormwater and Wastewater Planning Approach Framework. EPA encourages communities to consult with EPA and NHDES about the development of integrated plans where that makes sense. While EPA agrees that provisions of this general permit can inform a municipality's integrated planning effort if it includes MS4 responsibilities, EPA also recognizes that integrated planning is based on community-specific considerations and the nature of an integrated plan depends on local conditions. In that regard, coverage under this general permit likely is incompatible with the individualized nature of municipal integrated planning, and this general permit – which applies to more than 40 communities – is not an appropriate vehicle for an integrated permit in a particular community. However, please note that all elements of the permit requirements may be developed or administered in collaboration with other MS4s or organizations in accordance with Part 2.3.1.

Regarding the commenter's proposed permit language additions, EPA is striving to clearly describe permit requirements and does not see these suggestions as furthering that objective. In that regard, EPA does not see this permit as the appropriate place to include suggestions or encourage "special permit limitations or conditions" where the permit already contains defined requirements. Nor does EPA see this permit as the appropriate place to describe aspects of EPA's mission such as partnerships or the watershed approach.

Additionally, one of the four overarching principles of the 2012 Integrated Municipal Stormwater and Wastewater Planning Approach Framework states:

> "The responsibility to develop an integrated plan rests with the municipality that chooses to pursue this approach. Where a municipality has developed an initial plan, EPA and/or the State will determine appropriate actions, which may include developing requirements and schedules in enforceable documents."

Thus, it is the permittee's responsibility to develop integrated plans.

For these reasons, EPA has not explicitly included integrated planning language into this general permit. Instead, this permit provides requirements that are applicable to all permittees, and

contains requirements that can help inform each permittee if they choose to pursue integrated planning to meet its MS4 Clean Water Act responsibilities through an individual permit or enforcement agreement.

1.1 AREAS OF COVERAGE

2. Comment from the Town of Newmarket

[W]e believe that EPA's sole reliance on Census Bureau data to identify "'urbanized areas" that are subject to the provisions of the MS4 Stormwater Permit is arbitrary and capricious resulting in inefficient use of limited staff and financial resources. We believe that additional risk factors should be included in the determination of "eligible areas" in order to more effectively target areas that are likely to have greater potential impacts on water quality. These risk factors could include recent changes in impervious cover, development potential, extent of commercial and industrial areas and juxtaposition within the watershed. This would result in a more effective, and balanced regulatory program. EPA should also consider including incentive criteria to reward towns who have taken steps to proactively reduce their pollutant contributions and by offering a reduced set of compliance actions for proactive or lower "risk" communities. This would encourage more positive and perhaps widespread actions.

3. Comment from the Rockingham Planning Commission

Based on practical results seen in our region, we believe the current method for identifying MS4 areas is inadequate and outdated, especially when applied in smaller communities. In such cases the MS4 regulated areas do not correlate well to the areas within those communities that are most likely to generate significant stormwater discharges. MS4 area identification appears to rely too heavily on population density and not enough on the existence of concentrated areas of impervious surface. Locally and regionally the capability exists (through high resolution aerial photography and land cover mapping) to more accurately define and track large areas of impervious surface. The validity of the MS4 program is somewhat undermined in the minds of some local officials because of this poor correlation- where large areas of commercial strip development are outside the MS4 area, yet relatively benign areas of low and moderate density residential development are included. We recognize that the method of designation is not necessarily an issue that can be addressed through the Draft Permit, but it should be of concern to the program. We would urge EPA to consider a more refined method of MS4 area determination- and going forward, include a mechanism or process for municipalities, with adequate rationale, to modify their MS4 boundaries.

EPA response to Comments 2 - 3

Operators of Small MS4s are required to obtain coverage under this permit if their separate storm sewer system serves a census-designated urbanized area and discharges to a Water of the United States. These two criteria were codified in EPA's Phase II Stormwater regulations in 1999 and this permit cannot change them. EPA's decision to designate, on a national basis, small MS4s in urbanized areas is supported by studies that show a direct correlation between urbanization and adverse water quality impacts from stormwater discharges.

However, the New Hampshire small MS4 permit also provides flexibility for permittees to implement their stormwater management program across their entire MS4 system, not just within the regulated area. There are other mechanisms for EPA to regulate additional stormwater discharges impacting water quality through the NPDES program. In response to one commenter's

request for incentives for proactive operators, it is not appropriate for EPA to include incentives through the NPDES permitting program because full compliance with the terms and conditions of the permit is required.

1.2 ELIGIBILITY

4. Comment from the Town of Merrimack

The EPA Stormwater Phase II Final Rule mandates inclusion in the small MS4 program if the municipality is not in the Phase I program and is in an Urbanized Area (UA) as defined by the Bureau of the Census, and on a case by case basis that the NPDES permitting authority designates. The U.S. Census Bureau defines an urban area as: Core census block groups or blocks that have a population density of at least 1,000 people per square mile and surrounding census blocks that have an overall density of at least 500 people per square mile. New Hampshire has 8 municipalities with a population density greater than 1000 per square mile with seven of the eight regulated by the MS4 program (Conway is not). NH has 27 municipalities with population densities greater than 500 per square mile. Of those 27, 22 are regulated (Conway, Concord, Keene, Laconia, and Sunapee are not). There are 39 municipalities with population density of less than 500 per square mile that are regulated, with Lyndeborough having the lowest density of only 54 per square mile. Given the large disparity between those that are regulated and not, please explain the criteria used for inclusion to the program.

EPA response to Comment 4

See EPA response to Comments 2 - 3. Please note that the U.S Census Bureau, not EPA, develops algorithms to determine what qualifies as an "urbanized area" based on factors such as the population density of census blocks or tracts, which do not necessarily follow municipal boundaries, impervious area, and proximity to an "Urban Core." Many less "urbanized" municipalities may only have a portion of their jurisdiction regulated under the permit (their more urbanized areas). In addition, the population density of adjacent census blocks also factors into the degree of urbanization as determined by the U.S. Census Bureau. Conway, Keene, Concord, Laconia and Sunappee have populations less than 50,000 and are not considered "Urban Cores" individually and are not in close proximity to an "Urban Core" (i.e. Boston (MA), Manchester, Nashua, Rochester/Dover, or Portsmouth) necessary to be delineated as an "Urbanized Area" according to the US Census Bureau. See US Census website[1] for more information on "Urbanized Area" delineation. This may account for the discrepancies in municipalities that are regulated. Please see the map of regulated (urbanized) area in New Hampshire on EPA's website[2].

5. Comment from the Town of Merrimack

Merrimack is listed in the Draft Permit as requiring a bacteria TMDL within the Merrimack River watershed. Concord contributes flow to the Merrimack River yet is not an MS4 community. By way of comparison, Merrimack is 12th in population density and 8th in population; Concord is 17th in population density and 3rd in population. A quick look of aerial views of each community shows the Merrimack (left) as a whole is far more rural than Concord (right) (see pictures below - both views taken at same scale) [pictures

[1] https://www.census.gov/geo/reference/ua/uafaq.html, Accessed January 2, 2017
[2] https://www3.epa.gov/region1/npdes/stormwater/nh.html, Accessed January 2, 2017

removed]. Merrimack requests removal from the program so long as contributing towns with greater areas of density up river are not included in the program.

EPA response to Comment 5

See EPA response to Comments 2 - 3. Please note the U.S. Census Bureau determines urbanized areas based on population density within census blocks and not overall municipal populations. EPA's decision to designate, on a national basis, small MS4s in urbanized areas is supported by studies that show a direct correlation between urbanization and adverse water quality impacts from stormwater discharges. The program provides for waiver provisions. A municipality which meets either the criteria in 40 CFR 122.32(d) or (e) may request a waiver. The basis provided by the commenter is not a sufficient reason for removal from the program.

6. Comment from the Town of Newmarket

In the past, EPA has granted the Town of Newmarket ("Town") a waiver that exempted the Town from having to comply with the 2003 MS4 Permit requirements, presumably due to the Town's relatively small urbanized area. It is our understanding that now due to revised "urbanized area" limits based on 2010 Census data, the Town would, for the first time, be subject to the full provisions of the proposed 2013 MS4 Stormwater Permit. The added costs to comply with another regulatory program will result in an onerous and undue financial burden for our taxpayers when considering the $14 million the Town has recently agreed to spend to upgrade its wastewater treatment plant to meet EPA's more stringent nitrogen effluent limits.

In addition, this potential status change of now being required to comply with this stormwater permit program is not commensurate with any meaningful change in our Town's land cover or infrastructure that would suggest our relative risk to contribute stormwater related pollutants has increased. Despite a marginal increase in population in the last decade according to the Census Bureau, our Town's population density and amount of impervious area, particularly in our identified small "urbanized area", has changed very little over the last 10 to 15 years. In fact, when accounting for several recent steps to reduce our pollutant load to the Great Bay, including the pending WWTF upgrade and the adoption of new stormwater management requirements as part of our Subdivision and Site Plan regulations, we believe our potential pollution contribution has only decreased compared to previous years. We are one of few towns in the Seacoast Region that have adopted these more stringent regulations.

We share in EPA's goal of improving water quality as evidenced by the Town's recent steps to reduce its share of pollutant contributions. However, as discussed further below, we strongly believe that EPA's sole reliance on population data to designate areas subject to additional stormwater regulations leads to an imbalanced and inefficient use of limited resources as well as limits the potential for water quality benefits that could otherwise be achieved if higher priority areas were targeted based on relevant risk factors. These factors should include recent development patterns, extent of impervious area, land use types and whether the community has proposed or instituted recent pollutant reduction efforts. Much of the new impervious area created in our watershed in the last decade is outside of Newmarket's boundaries and is related to new commercial and industrial areas that are not reflected in the population data and not regulated under the MS4 program. Based on this trend, any potential gains that we may achieve while expending additional significant funds are likely to be negated by continued increased commercial development in unregulated areas in the upstream watershed. We suggest that EPA revaluate and consider a significant overhaul of the MS4 Program to develop a more effective and balanced approach to addressing stormwater runoff from all developed areas. This would include requiring watershed-based planning and permit compliance.

As such, we request that EPA either to continue grant the Town of Newmarket a waiver and/or delay the effective date for at least three (3) years in which would have to fully comply with the proposed DRAFT 2013 MS4 Stormwater Permit Requirements. We believe we can make more efficient use of our limited financial and staff resources on are ongoing efforts and continued progress to adopt feasible and flexible measures to further improve water quality without having to be subject to the full provisions of the proposed DRAFT 2013 MS4 Stormwater Permit Requirements.

EPA response to Comment 6

See EPA response to Comments 2 - 3 and EPA response to Comment 4.

This permit will take effect on July 1, 2018 (approximately 5 years from the 2013 Draft Permit release) in order to allow municipalities to plan for the schedules and requirements of the final permit. In addition, the commenter will be a new permittee under the final permit and many requirements and timeframes have been extended for new permittees (See permit section 1.10.3 for extended implementation timelines and schedules for new permittees). EPA notes that this comment includes a request for a waiver. EPA may grant a waiver for small MS4 permit coverage if the criteria at 40 CFR 122.32(d)(1) and (2) are met. Based on the information provided in this comment, it is EPA's view that these waiver criteria have not been met.

7. Comment from the Town of Hampton

The Town of Hampton herewith requests a waiver from the MS4 program as a whole because of the recent release of the 2012 TMDL listing. If a major reason for including the Town in this program was the basis that our waters were impaired, then the new TMDL listing excludes us. It is apparent to us in the community that the process of determining TMDL's and thus the need to the MS4 program is flawed and therefore should be scrapped.---The EPA and the State DES need to work together better to determine what is impaired water and what is just a historical background element. Case In point would be to determine what the background level for arsenic is when our whole State rests on bedrock containing arsenic. If we cannot agree on arsenic then the residents of our State and Town wonder if we really can differentiate between in bacteria levels caused by humans and those resulting from wildlife.

EPA response to Comment 7

Neither TMDL listings nor water quality are the basis for a municipality being considered in an urban area as defined in the MS4 regulations and these are not basis for the requirement that Hampton's stormwater discharges be covered by an MS4 permit. Rather, inclusion in the small MS4 permitting program is based on urbanized area as determined by the latest U.S. Census. This is the case for Hampton. On a national basis, EPA's decision to designate small MS4s in urbanized areas is supported by studies that show a direct correlation between urbanization and adverse water quality impacts from stormwater discharges (64 FR 68722). These impacts may already have necessitated the development of TMDLs for certain receiving waterbodies or contributed to a waterbody's designation as "impaired" on New Hampshire's Section 303(d) list. This permit does not re-open any TMDL for comment and each TMDL had a separate comment period. In addition, EPA Region 1 must approve both the state's Section 303(d) list and any TMDLs developed, which involves coordination and agreement among both agencies. EPA notes that this comment includes a request for a waiver. EPA may grant a waiver for small MS4 permit coverage if the criteria at 40 CFR 122.32(d)(1) and (2) are met. Based on the information provided in this comment, it is EPA's view that these waiver criteria have not been met.

8. Comment from the Town of Litchfield

Specifically, as a previously permitted community, the lack of a meaningful opportunity to request a waiver is a challenge. Ideally, the ability to request a waiver would include benchmarks for levels of impervious coverage and housing density rather than a blanket census designation.

EPA response to Comment 8

See EPA response to Comments 2 - 3.

Operators of MS4s that have been designated as needing a permit based on census data and that have coverage under the administratively continued general permit from 2003 cannot discontinue permit coverage unless they meet the waiver requirements of 40 CFR §122.32(d)(1) and (2); these MS4s have been determined as a source of pollution discharging to waters of the United States in need of an NPDES permit under the Clean Water Act. *See generally* CWA § 402(p)(3)(B); 40 CFR 122.30. EPA notes that this comment includes a request for a waiver. EPA may grant a waiver for small MS4 permit coverage if the criteria at 40 CFR 122.32(d)(1) and (2) are met, and has granted waiver requests to 16 municipalities covered by this permit. Based on the information provided in this comment, it is EPA's view that these waiver criteria have not been met. EPA notes that the commenter suggests possible changes to EPA's waiver regulations, but EPA is not revising these regulations at this time.

1.3 LIMITATIONS ON COVERAGE

9. Comment from the Town of Hampstead

Endangered Species Act Requirements: The Town has no knowledge or experience with this. In the past, when the Town has requested funding though grants, federal and/or state agencies determined whether or not endangered species was an issue.

10. Comment from the NH Stormwater Coalition:

Section 1.9.1 and Appendix C of the Draft Permit requires permittees to engage in a multi-step consultation process which imposes conditions that are not based upon the water-quality of the discharge (*i.e.,* these are not effluent limitations or provisions designed to ensure effluent limitation attainment). This requirement is unprecedented and cannot be imposed on the permittees as it is EPA's duty, not the permittees.

[footnote: Potentially the multi-step consultation incorporates, amongst other things, the following general conditions in the permit:

(1) Engage in informal consultation under 50 C.F.R. § 402.13, to determine if the permit would "likely [] jeopardize the continued existence of any endangered species or threatened species or result in the destruction or adverse modification of habitat of such species." 16 U.S.C § 1536(a)(2).

(2) If during informal consultation it is determined that jeopardy or adverse modification would occur, then EPA and Fish and Wildlife Service ("FWS") and/or National Oceanic and Atmospheric Administration ("NOAA") word engage in formal consultation under 50 C.F.R. § 402.14. The permittee‟s role in formal consultation involves submitting any additional information for consideration during the consultation process (Id. § 402.14(d)) and involvement in the discussions regarding FWS/NOAA "review and evaluation" of the data submitted and development of suggested alternatives to avoid jeopardy or adverse modification (Id. § 402.14(g)(5))]

EPA has not historically imposed conditions in an NPDES permit which makes the permittee responsible for compliance with ESA (16 U.S.C. §§ 1531 *et seq.*) requirements (*e.g.*, Section 7 consultations under 16 U.S.C. § 1536). NPDES regulations do not make such an assessment part of the permit application or compliance process. It is EPA's responsibility (not the permittee's) to ensure that NPDES permits comply with ESA requirements. *See* 50 C.F.R. § 402.08 ("The ultimate responsibility for compliance with Section 7 remains with the Federal agency."). The CWA regulations specifically state that the ESA and its implementing regulations "require [that the EPA] Regional Administrator ensure, in consultation with the Secretary of Interior or Commerce, that any action authorized by EPA is not likely to jeopardize the continued existence of any endangered or threatened species or adversely affect its critical habitat." 40 C.F.R. § 122.49(c). To the extent EPA had discretion to allow non-Federal parties to engage in section 7 consultations, EPA made clear in its regulations that it would not use this discretion and instead retains sole responsibility to ensure all permits are in compliance with ESA requirements. Therefore, EPA should be undertaking any ESA activities prior to issuing the NPDES permit and any attempt to delegate that responsibility is contrary to the ESA and the implementing rules.

Furthermore, to the extent Section 7 consultation is required in the NPDES permit context, it must be undertaken *by EPA* before an agency action is final. *See e.g.,* 16 U.S.C. § 1536(a)(3) ("a Federal agency shall consult with the Secretary on a *prospective agency action* …and in cooperation with, the *prospective permit or license applicant* …") (emphasis added). The purpose of engaging in Section 7 consultation is to "insure that any action authorized, funded, or carried out by such agency is not likely to jeopardize the continued existence of any endangered species or threatened species or result in the destruction or adverse modification of habitat of such species …" *Id.* at § 1536(a)(2). The no jeopardy or adverse modification determination must be made prior to the finalization of the agency action in order to allow for modifications to the action if a jeopardy or adverse modification determination is made. *See e.g., id.* at § 1536(b)(3)(A) ("If jeopardy or adverse modification is found, the Secretary shall suggest those reasonable and prudent alternative which he believes would not violate subsection (a)(2) of this section and can be taken by the Federal agency or applicant in implementing the agency action."). Therefore, if Section 7 consultation is required for an NPDES permit, it must be undertaken *by EPA* before the NPDES permit is issued.

Assuming, for the sake of argument, that ESA Section 7 consultation is required and EPA can pass this requirement on to the permittee, this requirement cannot be imposed as a NPDES permit condition. The Court of Appeals for the District of Columbia Circuit made clear in *Natural Res. Def. Council ("NRDC") v. EPA,* that EPA may not impose conditions in a CWA permit that are unrelated to water-quality. 859 F.2d 156 (D.C. Cir. 1988). In that case, NRDC challenged NPDES regulations promulgated by EPA related to National Environmental Policy Act ("NEPA", 42 U.S.C. §§ 4321 *et seq.*) regulations (40 C.F.R. §§ 129.29(c)(3), 122.44(d)(9), 122.49(g)) which EPA interpreted to grant it authority to "impose permit conditions unrelated to effluents." *Id.* at 169. EPA argued that NEPA allowed the agency to consider "additional environmental factors" and "to act on these by imposing any condition necessary to account for the environmental effects of the entire new facility," not just the discharge from the facility. *Id.* The court disagreed with EPA‟s position and held that NEPA "does not expand the range of final decisions an agency is authorized to make. … NEPA does not expand an agency‟s substantive powers." *Id.* (*citing NRDC v. EPA*, 261 U.S. App. D.C. 272 (D.C. Cir. 1987)). The court further stated that "EPA may not, however, under the guise of carrying out its responsibilities under NEPA transmogrify its obligation to regulate discharges into a mandate to regulate the plants or facilities themselves. To do so would unjustifiably expand the agency‟s authority beyond its proper perimeters." *Id.* at 170. Therefore, the court held that EPA‟s authority under NEPA, only allowed EPA to consider the environmental effects based on the water quality impacts of the discharge. *Id.*

It is clear from *NRDC v. EPA* that, in issuing NPDES permits, EPA may only add requirements based on other statutory mandates that apply directly to the water-quality impact of the discharge as provided for by its

CWA authority. The CWA does not regulate endangered species. EPA, in other contexts, has stated that adopted standards are presumed protective of endangered species absent information to the contrary. While the imposition of water quality-based permit limits due to a consultation may be possible under EPA‟s approach, the formal consultation process imposed clearly cannot be imposed in the NPDES permit as a permit requirement based upon the mere possibility that a facility may or may not be subject to additional water quality-based effluent limits. This entire section and related Appendix should be deleted.

EPA response to Comments 9 - 10

The Endangered Species Act of 1973 requires federal agencies, such as EPA, to ensure in consultation with the U.S. Fish and Wildlife Service (FWS) and the National Marine Fisheries Service (NMFS) (collectively referred to as The Services) that any actions authorized, funded or carried out by the agency are not likely to jeopardize the continued existence of any Federally-listed endangered or threatened species or adversely modify or destroy critical habitat of such species (see 16 U.S.C 1536 (a)(2), 50 CFR part 402 and 40 CFR 122.49(c)). The issuance of an NPDES permit by EPA is an action which is subject to ESA.

50 CFR 402.08 allows a federal agency to designate a non-Federal representative to conduct informal consultation or prepare a biological assessment during the ESA process. EPA utilized this approach during the 2003 issuance of the Small MS4 general permit for the state of New Hampshire. Any applicant seeking coverage under the general permit was required to certify that none of its storm water discharges, allowable non-storm water discharges or discharge related activities was likely to impact a threatened or endangered species. Each permittee was required to certify that the ESA eligibility criteria (established by the Services) were met.

For the current issuance of the small MS4 general permit, EPA has slightly modified its approach and reduced some of the burden of complying with ESA requirements for small MS4 applicants in the state of New Hampshire. EPA has only designated applicants as non-Federal representatives for the purpose of conducting formal or informal consultation with the U.S. Fish and Wildlife Service (USFWS). Appendix C (Endangered Species Guidance) to the NH Small MS4 General Permit provides step by step guidance to aid applicants with the U.S. Fish and Wildlife Service ESA Eligibility Process, including the link (http://ecos.fws.gov/ipac/) to USFWS's IPaC – Information, Planning, and Conservation System tool. These resources list the relevant threatened or endangered species that fall under the jurisdiction of the USFWS and provide guidance on how to determine impacts to any listed species.

After communication with the National Marine Fisheries Service, EPA has decided not to designate NH Small MS4 applicants as non-Federal representatives for the purpose of conducting formal or informal consultation with the National Marine Fisheries Service. EPA has already initiated informal consultation with NMFS on behalf of all permittees. After preparing a biological assessment supporting document, EPA has determined that discharges from MS4s are not likely to adversely affect listed species or critical habitat under the jurisdiction of NMFS. NMFS concurred with EPA's conclusion on August 16, 2016. Therefore, no further action is required by applicants in order to fulfill ESA requirements of this permit related to species under the jurisdiction of the National Marine Fisheries Service. If EPA had been able to further reduce the burden on communities by completing a similar consultation with the Fish and Wildlife Service, we would have, but the potential impacts to species within their jurisdiction require more site-specific analysis that could not be done at a statewide level.

Changes to permit: Language in Section 1.3.e of permit was updated to change "Appendix D" to "Appendix C"; Appendix C was modified accordingly to describe applicant's responsibility for certifying compliance with ESA requirement.

1.4 NON-STORMWATER DISCHARGES

11. Comment from the Neponset River Watershed Association

Other than the MS4 municipalities themselves, watershed associations and local environmental organizations are frequently in the best position to provide information relevant to the implementation of the MS4 permit. The General Permit should establish a formal procedure whereby a third party may submit such information. For example, Section 1.4, "Allowable Non-Stormwater Discharges," states that if "the permittee, EPA or the state agency identifies any category of non-stormwater discharge in Part 1.4.a-r as a significant contributor of pollutants to the MS4, then that category is not allowed under Part 1.4, but rather shall be deemed an 'illicit discharge' under Part 2.3.4.1." Watershed organizations and other third parties could be useful in providing information that would assist any of these three parties make such a determination.

EPA response to Comment 11

EPA concurs that watershed associations and local environmental organizations could provide useful information regarding the MS4 permit, such as sites of potential illicit discharges. There is no prohibition to prevent these entities from contacting either the permittee(s) or permitting authorities regarding illicit discharges. Therefore, EPA does not believe that a formal procedure is necessary for a third party to submit relevant information.

12. Comment from the Town of Seabrook

Section 1.4 identifies 18 specific non-stormwater discharges that EPA will allow under this permit such as watering the lawn and washing the street. Our questions concern discharges that are not listed and thereby not allowed.

Question 1: The permit seems to allow homeowners to wash down their exterior siding on their home "without detergent'' but allow the washing of their car with detergent. Are we correct in assuming that, other than car washing, one is not allowed to use soap or bleach or anything where the rinse water will come into contact with the ground?

Question 2: "De-chlorinated swimming pool discharges" are allowed. What are EPA's recommended procedures for determining whether this water is sufficiently de-chlorinated? Is it anticipated that a Town employee or agent will need to verify the absence of chlorine before emptying the pool?

Question 3: "Water from crawl space pumps" is allowed. Crawl spaces in New Hampshire are rare. Cellars and basements are the norm. Is there a reason that basement sump pump discharges are not listed and possibly not allowed?

Question 4: "Individual resident car washing" is very specific in identifying the party allowed to wash a car. If a local school group wanted to have a car wash fund raiser, would they be required to obtain a Federal NPDES Permit?

Question 5: Is the spraying of pesticides or herbicides an allowable discharge? If not, what are the EPA's requirements for the use of these products?

Question 6: Is the spreading of fertilizer, lime, or manure an EPA authorized activity? If not, what are the requirements?

Question 7: Are active farms exempt in any way from these stormwater regulations?

Question 8: Enforcement-How does the EPA expect communities to police non-allowable discharges? Should towns encourage neighbors to spy on neighbors? Will the EPA's enforcement division be available to take calls from complainants?

EPA response to Comment 12

EPA has responded to the commenter's questions in order below:

1. The commenter's assumption is not accurate. It is not correct to assume that "…one is not allowed to use soap or bleach or anything where the rinse water will come into contact with the ground." The concern is not what touches the ground, but rather what is discharged into an MS4. Wash waters are typically considered process waters and contain pollutants. These process waters should not be discharged into the municipal storm sewer system. The inclusion of the list of allowable non-stormwater discharges is an attempt to capture normal human activities within an urban/suburban environment. It is not an all-inclusive list. Education to the residents about what is appropriate is one method to address and minimize the potential for non-stormwater discharges.

2. Several areas[3] have provided guidance concerning discharges of de-chlorinated swimming pool waters. It is anticipated that discharges to the sanitary sewer should receive treatment at the wastewater treatment plant. When the discharge is to the MS4, recommendations include letting the water remain in the pool untreated for seven to ten days. This allows the chlorine levels to drop. The chlorine levels should be less than 0.1 mg/l and the pH close to neutral (7 s.u). Discharges should be slow and over a vegetated area if practical. The permit does not require a town employee to test each resident's pool prior to discharge. If this is a concern for the town, the town is encouraged to provide public education on this topic.

3. A crawl space is a shallow unfinished space beneath the first floor of a building. The space is often used for wiring or plumbing. The use of a crawl space is different than that of a basement. Basements can contain many household chemicals. In the event of basement flooding, that water could come into contact with an unknown number of pollutants. It is because of the unknown contaminants that could be in this water that basement sump pump discharges were not listed as an allowable non-stormwater discharge.

4. New Hampshire Department of Environmental Services has developed an Environmental Fact Sheet for Community Car Washes and Water Quality (NHDES, 2003). EPA recommends the town reference this document for any community car wash fund raisers.

[3] http://www.fairfaxcounty.gov/dpwes/stormwater/pooldischarge.htm (Virginia), Accessed January 2, 2017

http://www.augustaga.gov/DocumentCenter/Home/View/5327 (Georgia), Accessed January 2, 2017

http://doee.dc.gov/service/how-drain-your-swimming-pool-properly (District of Columbia), Accessed January 2, 2017

5. Any discharges of pesticides or herbicides to a water of the U.S. must be consistent with the Pesticides General Permit[4]. Pesticide applications are not allowable non-stormwater discharges under the MS4 permit.

6. The Small MS4 permit does not prohibit the spreading of fertilizer, lime, or manure. However, care should be taken such that the application rate is appropriate for the use of the soil. These products should not be applied in a matter that results in their run-off into the MS4.

7. Agricultural stormwater and return flows from irrigated agriculture are not "point sources" under the Clean Water Act and therefore are not subject to NPDES permits. *See* CWA § 502(14). Additionally, according to 40 CFR § 122.3(e), any introduction of pollutants from nonpoint source agricultural and silvicultural activities, including stormwater runoff from orchards, cultivated crops, pastures, range lands, and forest lands are exempt from stormwater regulations. 40 CFR §122.3(f) also exempts return flows from irrigated agriculture. However, if an active farm meets the definition of a concentrated animal feeding operation (CAFO) as described in 40 CFR 122.23, NPDES permitting requirements may apply.

8. As stated in Part 2.3.4 of the draft permit, each permittee is required to implement an IDDE (Illicit Discharge Detection and Elimination) Program. As part of that requirement, the permittee needs to have adequate legal authority to "prohibit illicit discharges; investigate suspected illicit discharges; eliminate illicit discharges, including discharges from properties not owned by or controlled by the MS4 that discharge into the MS4 system; and implement appropriate enforcement procedures and actions" (Part 2.3.4.8.a). Adequate legal authority consists of a currently effective ordinance, by-law, or other regulatory mechanism. For permittees authorized by the 2003 Small MS4 permit, the deadline for such legal authority was May 1, 2008. EPA expects communities to have an understanding of their stormwater system and perform necessary inspections to ensure that the system is operating correctly. A system to educate the public and address complaints is an appropriate solution. It is the town's obligation to enforce its ordinances. It is EPA's obligation to enforce the terms of the final permit, which may be a result of receiving information about a permittee's non-compliance.

13. Comment from NH Stormwater Coalition:

Liability may not be imposed for "contributing to a violation; it may only be imposed for "causing" a violation.

In addition to the concern, discussed above, regarding the Draft Permit imposing liability upon the permittee for violation of a water quality standard, the Draft Permit exacerbates liability concerns by purporting to impose liability on a permittee that "contributes" to a violation, even if the violation is not caused by the permittee. While the standard "or contributes" may be appropriate when EPA is undertaking the "reasonable potential" evaluation and determining whether or not a water quality-based limit should be included, it is not an appropriate standard for imposing liability upon the permittee and does not define the degree of pollutant reduction that must be achieved. Again, attempting to impose a "cause or contribute" prohibition constitutes an illegal amendment to the adopted rules and is contrary to the CWA (e.g., Section 301(b)(1)(C) only allows imposition of more restrictive limits as "necessary" to achieve applicable standards; accord 40 C.F.R. § 122.44(d)).

[4] https://www.epa.gov/npdes/pesticide-applications-1, Accessed January,2 2016

Case law has specifically determined that liability can only be imposed for "causing" a violation, not for "contributing" to a violation. See Nat'l Ass'n of Metal Finishers v. EPA, 719 F.2d 624 (D.C. Cir. 1983). [footnote: 13 In response to the Nat'l Ass'n of Metal Finishers case, EPA amended its regulations stating:

Finding that the definition did not require causation to establish liability, the court held that this approach contravened the intent of Congress: "[W]e conclude that given the language and purpose of the [Clean Water] Act, an direct discharge [sic] cannot be liable under the prohibited discharge standard unless it is a cause of the POTW‟s permit violation or sludge problem" . . .

50 Fed. Reg. 25,527 (June 19, 1985).] The prohibition against "contributing" to a water quality violation should be deleted from the draft permit as it is inconsistent with the statute and implementing regulations.

14. Comment from NH Stormwater Coalition:

EPA's stormwater regulation at 40 C.F.R. § 122.26 repeatedly recognizes that third parties, whether it be individuals, industries, or neighboring municipalities, will on occasion and often illegally, contribute pollutants to discharges by a stormwater permit holder. However, unlike the proposed permit at issue, [footnote: The Fact Sheet specifically notes that the permit would hold the permittee liable for the illegal acts of others: EPA notes that the period between identification and elimination of an illicit discharge is not a grace period, and an illicit discharge to the MS4 remains a violation of the permit until eliminated. Fact Sheet, at 90 n.25.] EPA‟s regulation does not hold the permittee liable for such illicit discharges. For instance, 40 C.F.R. § 122.26 mentions "illicit" discharges twelve (12) times. In each case, the regulation talks about a MS4 permit holder's responsibility to identify, track, report, ameliorate, and, ultimately, eliminate such discharges. *See, e.g.,* 40 C.F.R. § 122.26(d)(1)(V)(B) ("A description of the existing program to identify illicit connections to the municipal storm sewer system. The description should include inspection procedures and methods for detecting and preventing illicit discharges, and describe areas where this program has been implemented."). However, the regulation nowhere identifies that a permit holder will be liable for such third party contributions or actions. Being obligated to take all reasonable measures to discourage such illicit additions to its MS4 collection system is a far cry from being held liable if such measures are not wholly effective. When it comes to illicit discharges, EPA's stormwater regulations do not require a MS4 to meet such a flawless standard and this permit should not seek to establish such a standard as it would be fundamentally unfair. [footnote: To hold an MS4 permittee liable for the illegal acts of others would be tantamount to holding every Department of Transportation liable for speeding or other illegal acts of drivers undertaken on its roads]

Similarly, EPA‟s stormwater regulations repeatedly recognize that MS4s are frequently set up such that adjacent or neighboring systems are operated by "co-permittees." *See, e.g.,* 40 C.F.R. §

122.26(a)(3)(iii)(A) ("Participate in a permit application (to be a permittee or a co-permittee) with one or more other operators of discharges from the large or medium municipal storm sewer system which covers all, or a portion of all, discharges from the municipal separate storm sewer system"). In this regard, EPA specifically notes that "co-permittees need only comply with permit conditions relating to discharges from the municipal separate storm sewers for which they are operators." 40 C.F.R. § 122.26(b)(1)(vi). Put differently, a co-permittee is not liable for the failure of its neighboring jurisdictions to abide by its conditions. As drafted, however, the draft permit appears to hold a MS4 permit holder liable for the contributions of neighboring (up system) towns and municipalities. [footnote: For example, the Fact Sheet, in addressing lake and pond phosphorus discharges states: A permittee that operates an MS4 within the watershed boundaries of the respective impaired lake or pond is thus required to achieve the relative phosphorus reduction from the baseline phosphorus loading from any MS4 area draining to the impaired waterbody (both direct stormwater drainage, and stormwater discharge form outfalls and their contributing area). Fact Sheet, at 8.] Holding one municipality liable for the actions (or omissions) of a separate municipality is inconsistent with EPA‟s stormwater regulations. Accordingly, it is requested that the Draft

Permit be modified or clarified such that, at a minimum, the permit holder is not liable for such third party contributions and, where a joint discharge occurs, only the jurisdiction responsible for the violation is made liable for its excessive contributions to the MS4 discharge. Furthermore, the MS4 permit should be clarified to reflect that the MS4 permittee is not responsible for reduction in loads or implementation of BMPs associated with loadings that are generated upstream of its jurisdictional boundary and end up in the MS4 discharge. [footnote: This is particularly critical as municipalities generally do not have the legal ability to implement requirements outside of their jurisdictional boundary. See L.A. County Flood Control Dist. v. NRDC, 133 S. Ct. 710 (2013)]

Without waiving our right to object to the imposition of liability upon a municipality due to the illegal acts of others, we also point out that there are a number of municipalities being brought into the MS4 program for the first time. It would be impossible for a NPDES permittee, as of the first date of coverage under the permit, to be able to identify and eliminate illicit discharges. A compliance schedule, providing a reasonable time for implementation of activities to identify and eliminate illicit discharges, is therefore required. As this is purely a regulatory prohibition, not otherwise mandated to meet applicable standards, the federal or state authority allowing compliance schedules is applicable.

15. Comment from the City of Portsmouth

The draft permit holds the MS4 permittee liable for illegal acts/discharges from a third party, such as individuals, industries, neighboring municipalities, and State or Federal Agencies. It is requested that permit be modified or clarified not to hold the permittee liable for the third party stormwater contributions.

16. Comment from MCWRS

The draft permit holds the MS4 permittee liable for illegal acts/discharges from a third party, such as individuals, industries, neighboring municipalities, and state or federal agencies. The permit should be modified or clarified not to hold the permittee liable for the third party stormwater contributions.

EPA Response to Comments 13 - 16

See EPA Response to Comments 46 - 54, EPA Response to Comments 55 - 60, EPA Response to Comments 227 - 233 and EPA responses in Part 1.10(comments 36-45) of this document.

Discharges from an MS4 covered under this permit that contain non-stormwater sources not listed in part 1.4 are not authorized by this permit. Therefore, discharges that contain non-stormwater flows are considered illicit discharges and are unlawful. All illicit discharges from the MS4 are unlawful and remain unlawful until eliminated. Illicit discharges are subject to fines, enforcement actions and citizen suits. This permit does not create or relieve any additional liability for permitted MS4s with respect to discharges from other sources into their systems.

1.5 PERMIT COMPLIANCE

17. Comment from the City of Rochester

As written, the City of Rochester would be in noncompliance of the 2013 NH Small MS4 Draft General Permit and potentially the Clean Water Act, and therefore subject to potential enforcement action upon issuance of the permit. The City should be given a reasonable timeframe implement the necessary measures to reduce the pollutant load in those receiving waters identified in table F-1 in Appendix F.

18. Comment from the Town of Amherst

[N]on-compliance of this permit constitutes a violation and grounds for enforcement action. After careful review, it appears upon implementation of the new permit as written, each MS-4 community is immediately in violation. Is this what EPA planned? How does any municipality prepare through the budgeting process to implement the permit without sufficient time between the permit language becoming finalized and an implementation date? How does a community budget for something without the benefit of knowing the financial impact in advance?

EPA response to comments 17 - 18

It is unclear from the comments why the City of Rochester or the Town of Amherst will be in non-compliance upon issuance of the final permit. Not all actions specified in Appendix F are required immediately upon the effective date of the permit. Parts 1.10.2, 2.3.2 and 2.3.4 contain timeframes for implementation. See EPA Response to Comments 61-83 and EPA Response to Comment 254 for further explanation of compliance schedules. Moreover, the permit has an effective date of July 1, 2018. This allows significant time for planning and budget development, as well as implementation of any measures an MS4 may wish to implement by the effective date of the permit. See EPA response to Comments 592-593.

19. Comment from the Town of Merrimack

We are concerned that in section 1.5 Permit Compliance in Part I of the 2013 MS4 Draft General Permit Requirements it states that "Any non-compliance with any requirement of this permit constitutes a violation of the permit and the Clean Water Act and may be grounds for an enforcement action and may result in the imposition of injunctive relief and/or penalties" The EPA should have the burden to demonstrate that a discharge is causing or contributing to an impairment, not the permittee. In addition, this implies that the Town will be held responsible for the actions of others, such in the case of an illicit discharge that occurs within the MS4 system. The Town would also be held responsible for pollutant loadings generated upstream of its jurisdictional boundaries. The Town should not be held responsible at any time for the actions or discharges of others.

EPA response to Comment 19

The language in this section of the permit is a statement that the permit is issued under the authority of the Clean Water Act and that a violation of the permit is a violation of the Act. This statement applies to all elements of the permit not just the requirements of Part 2.1.1 which relate to "causing or contributing" to an impairment. The town is responsible for enforcement of its local ordinance or other regulatory mechanism to effectively prohibit sources of non-stormwater into its system. The town is responsible to use its authorities to address known situations. A town is responsible for what is discharged from its system which means that the town must have knowledge about what is entering its system. Discharges to a waterbody that is upstream of a permittee's discharge are not the responsibility of the permittee. See also EPA Response to Comments 13 - 16.

20. Comment from the Town of Hampstead

What ramifications/penalties can be instituted by EPA or other agency should a Town not comply fully or at all with the permitting requirements, whether willfully or not? Who would be held responsible?

EPA response to Comment 20

Appendix B to the NH Small MS4 General Permit details the requirements for compliance and the penalties for noncompliance with the permit. These conditions apply to any entity that is covered under the permit ("permittees"). These conditions are described in the Clean Water Act and are standard in all NPDES permits.

1.6 CONTINUATION OF THIS PERMIT

21. Comment from the Town of Amherst

If the MS4 operator does not submit a timely, complete and accurate NOI on the due date of the NOI the permit will terminate. Part II Summary of Receiving Waters requires Amherst NH submit a plan to reduce its TMDL for Baboosic Lake. Report EPA-SMP-07-002 Section 3-4 Acknowledges the report is based on assumptions, professional judgment and there are limitations to the analysis. How can a municipality be held accountable for a NOI based on limited scientific data? Should a municipality be held legally responsible and accountable to manage a TMDL without sufficient baseline data to begin with?

The Town of Amherst in partnership with area residents has demonstrated through the four phases of its community septic around Baboosic Lake that water quality is an important concern for the town. This is a priority, but it is imperative for all parties to start with accurate data.

EPA response to Comment 21

See EPA Response to Comment 115. The NOI requirements for discharges to waterbodies with a TMDL is simply a statement that the requirements of Appendix F applicable to the applicant will be followed thoroughly. Alternatively, the applicant can work with NHDES to develop an alternative pollutant reduction plan and submit that plan with their NOI to EPA to seek permittee specific permit requirements. See EPA Response to Comment 22.

1.7 OBTAINING AUTHORIZATION TO DISCHARGE

22. Comment from Conservation Law Foundation:

The Draft Permit Should Be Amended to Require-Prior to Authorization for Coverage-EPA Review and Approval of, and Public Participation Regarding, Stormwater Management Programs.

The draft permit contains provisions regarding Notices of Intent ("NOIs'') for coverage. See Draft Permit, Parts 1.7.2 - 1.7.4. Among those provisions, the draft permit requires EPA to "provide a public notice and opportunity for comment on the contents of the submitted NOIs." Id. Part l.7.4(a). It further states:

Based on a review of an NOI, public comments received, or other information, EPA may grant authorization, extend the public comment period, or deny authorization under this permit and require submission of an application for an individual or alternative NPDES permit .... A small MS4 will be authorized to discharge under the terms and conditions of this permit upon written receipt of notice of authorization from EPA. Id. Part l.7.4(b).

In its comments on the prior iteration of this draft permit, CLF raised significant concerns about the inadequacy of information provided by NOis for purposes of enabling EPA to engage in a meaningful,

substantive review of permittees' plans and to grant authorization under the permit. As stated in CLF's prior comments:

> In Environmental Defense Center v. Browner ("EDC"), the U.S. Court of Appeals for the Ninth Circuit addressed the type of review required for Notices of Intent ("NOIs") submitted by small MS4s seeking coverage under a general permit. [footnote: Environmental Defense Center v. Browner, 344 F.3d 832 (9°' Cir. 2003), cert. denied, 124 S.Ct. 2811 (2004).] Certain petitioners in EDC challenged the EPA's small MS4 regulations on the ground that they failed to require EPA to review the substance of NOI submissions to ensure compliance with the Clean Water Act. In addressing this critical issue, the EDC Court started with the proposition that the Clem Water Act imposes certain substantive requirements that must, consistent with the clear intent of Congress, be satisfied by small MS4s seeking coverage under a general permit. Specifically, the Court found "the plain language of§ 402(p) of the Clean Water Act, 33 U.S.C. § 1342(p), expresses unambiguously Congress's intent that EPA issue no permits to discharge from municipal storm sewers unless those permits “require controls to reduce the discharge of pollutants to the maximum extent practicable."' [footnote: EDC,344 F.3d at 854. Of course, i n addition to the "maximum extent practicable" requirement, the Clean Water Act and its regulations contain other important mandates, including the requirements (1) that discharges not cause or contribute to water quality violations, and (2) that the Phase II stormwater regulations (of which the Smaii-MS4 regulations are a part) constitute a comprehensive program designed "to protect water quality." EDC, 344 F.3d at 844 (citing 33 U.S.C. § 1342(p)(6))] The EDC Court concluded that EPA must review the substance of NOIs to ensure compliance.[footnote: The EDC court stated: According to the Phase 11 Rule, the operator of a small MS4 has complied with the requirement of reducing discharges to the "maximum extent practicable" when it implements its stormwater management program, i.e., when it implements its Minimum Measures.... Nothing in the Phase II regulations requires that NPDES permitting authorities review these Minimum Measures to ensure that the measures that any given operator of a small MS4 has decided to undertake will in fact reduce discharges to the maximum extent practicable.... Therefore, under the Phase II Rule, nothing prevents the operator of a small MS4 from misunderstanding or misrepresenting its own stormwater situation and proposing a set of minimum measures for itself that would reduce discharges by far less than the maximum extent practicable.
>
> In fact, under the Phase II Rule, in order to receive the protection of a general permit, the operator of a small MS4 needs to do nothing more than decide for itself what reduction in discharges would be the maximum extent practical reduction. No one will review that operator's decision to make sure that it was reasonable, or even good faith. Therefore, as the Phase II Rule stands, EPA would allow permits to issue that would do less than require controls to reduce the discharge of pollutants to the maximum extent practicable.... We therefore must reject this aspect of the Phase II Rule as contrary to the clear intent of Congress.
>
> EDC, 344 F.3d at855 (citations and parentheticals omitted) (italics in original). See also id. at 855, n. 32, stating, in pertinent part: That the Rule allows a permitting authority to review an NOI is not enough; every permit must comply with the standards articulated by 1he Clean Water Act, and unless every NO/ issued under a general permit is reviewed, there is no way to measure that compliance has been achieved. The regulations do require NPDES permitting authorities to provide operators of small MS4s with "menus" of management practices to assist in implementing their Minimum Measures, see 40 C.F.R. § 123.35(g), but again, nothing requires that the combination of items that the operator of a small MS4 selects from this "menu" will have the combined effect of reducing discharges to the maximum extent practicable.

> Absent review on the front end of permitting, the general permitting regulatory program loses meaning even as a procedural exercise.(Emphasis added)] As a result of the EDC decision (which the U.S. Supreme Court declined to review on certiorari), EPA must substantively review NOIs to ensure compliance with the Clean Water Act and applicable standards. Because NOIs include substantive elements of permit applicants' SWMPs ... , EPA must engage in a substantive review and approval of these SWMP elements - and, by logical implication, the SWMP as a whole - to ensure compliance with all applicable standards and requirements before granting authorization to discharge.

CLF Comments on Draft NH Small MS4 Permit (Feb. 20, 2009) at 16-17.

CLF reasserts its disagreement with EPA's proposed approach to authorize discharges on the basis of the limited information contained in NOIs. More specifically, without reviewing – prior to authorization- the specific best management practices ("BMPs") permittees plan to implement, and the anticipated pollutant reductions to be achieved by those BMPs (including assurances that BMPs will prevent discharges that cause or contribute to water quality violations), the draft permit violates the Clean Water Act in two important ways.

> A. The draft permit allows for authorization of discharges absent information enabling EPA to ensure Clean Water Act compliance

NPDES regulations state unequivocally that "[n]o permit may be issued: ...When the imposition of conditions cannot ensure compliance with all applicable water quality requirements...." 40 C.F.R. § 122.4(d) (emphasis added). Moreover, where EPA issues a permit for discharges of pollutants of concern into impaired waters that are subject to a TMDL, applicable regulations require that "the permitting authority shall ensure that: effluent limits...are consistent with the assumptions and requirements of any available [TMDL] wasteload allocation for the discharge prepared by the State and approved by EPA." 40 C.F.R. § 122.44(d)(l)(vii)(B) (emphasis added).

The draft permit appropriately makes clear that "[t]he requirements found in [Parts 2.1 and 2.2] constitute the water quality based effluent limitations of this permit." See Draft Permit, Part 2.1. Thus, i ts effluent limitations include, inter alia, the prohibition against discharges that "cause or contribute to an exceedance of applicable water quality standards (including numeric and narrative water quality criteria) for the receiving water." ld. Part 2.l.l.a. Its effluent limitations also include, inter alia, the development of a Water Quality Response Plan ("WQR.P") addressing pollutants of concern and, as an essential component of such WQRPs, identifying BMPs that will be implemented to ensure that discharges do not cause or contribute to impairments. ld. Part 2.l.l.c; Part 2.2.2.a.ii. Such WQRPs are to be developed within one year of the permit effective date and must be provided as part of a Stormwater Management Program ("SWMP"), which also must be submitted within one year of the permit effective date. Id. Part l.lO.a; Part 1.10.2. SWMPs must include, in addition to WQRPs, a "[d]escription of practices to achieve compliance with Part 2.2.1(TMDL requirements) including ... [t]he BMPs for the control measure or permit requirement ... [and] (t]he measurable goal(s) for each BMP," along with implementation milestones and timeframes and assessment measures for such BMPs. Id. Part 1.10.2.

The substantive information to be developed by permittees as part of their SWMPs, including WQRPs, is essential for purposes of defining the BMP-based effluent limits will implement, and for determining whether those BMP-based effluent limits will satisfy (1) the requirements of the Clean Water Act by ensuring compliance with all water quality requirements (see 40 C.F.R. §122.4, 40 C.F.R. § 122.44(d)(1)(vii)(B), supra), and (2) the draft permit's own prohibition against discharges that "cause or contribute to an exceedance of applicable water quality standards (including numeric and narrative water quality criteria) for the receiving water." Draft Permit, Part 2.l.l.a. The draft permit's approach of authorizing permit coverage on the basis of the limited information provided by NOIs, and without the substantive information required in SWMPs and WQRPs, violates CWA regulations because it allows EPA to

authorize discharges that it knows are contributing to violations of WQS without first ensuring that the eventual BMP-based effluent limitations will sa tisfy all water quality requirements. Moreover, allowing permittees to develop SWMPs, WQRPs and associated BMPs after having been authorized under the permit, and absent further review and approval by EPA, amounts to impermissible self regulation. See Puget Soundkeeper Alliance et al. v. State of Washington, Dept. of Ecology et al., 2008 WL 5510413 (Wash. Poi. Control Bd.) (Aug. 7, 2008) at 30.

B. The draft permit vi()lates the Clean Water Act's public participation requirements

"The (Clean Water] Act unequivocally and broadly declares...that '[p]ublic participation in the development, revision, and enforcement of any regulation, standard, effluent limitation, plan, or program established by the Administrator or any State under this Act shall be provided for, encouraged, and assisted by the Administrator and the States.' 33 U.S.C. § 125l(e)" Waterkeeper Alliance, Inc. v. U.S Envt'l Prot. Agency, 399 F.3d 486,503 (2d Cir. 2005) (emphasis added). Rather than providing for, encouraging, and assisting public participation in the development and possible revision of the permit' s essential water quality-based effluent limitations -such as SWMPs, WQRPs, and the specific BMPs contained therein - the draft permit's cart-before-the- horse structure precludes such participation. Specifically, nothing in the draft permit would provide the public the opportunity to receive notice, provide comment, and seek a hearing regarding permittees' substantive plans to control stormwater prior to EPA's grant of authorization under the permit. When, as is the case here, a polluter-created document such as a SWMP or WQRP contains the substantive information needed to assess whether a polluter will comply with applicable Clean Water Act standards, the Act requires pre-approval public notice and comment on the polluter's submission. [footnote: The draft permit's requirement that the permittee "shall annually provide the public an opportunity to participate in the review and implementation of the SWMP" does not satisfy this requirement, because the contemplated public participation is post-authorization. Draft Permit, Part 2.3.3.2.]See Waterkeeper Alliance, 399 F.3d at 502-503 (recognizing Nutrient Management Plans under EPA's final rule regulating Concentrated Animal Feeding Operations (CAFO) were "effluent limitations" within meaning of the Clean Water Act; striking down CAFO Rule for depriving the public of its right to assist in the "development, revision, and enforcement of .. . [an] effluent limitation."). See also Envt'I Def Center, 344 F.3d at 857 ("[I]f the Phase II Rule does not make NOIs "available to the public," and does not provide for public notice on NOIs, the Phase II Rule violates the clear intent of Congress.")

EPA Response to Comment 22

See EPA Response to Comments 46 - 54, EPA Response to Comments 55 - 60, and EPA Response to Comments 227 - 233 Absent evidence to the contrary, EPA presumes that a small MS4 program that implements the six control minimum measures does not require more stringent limitations to meet water quality standards. However, where EPA determines that MEP-level controls alone will not suffice to eliminate stormwater-based exceedances of water quality standards, EPA can determine that it is necessary and “appropriate” to include WQBELs in a permit. Accordingly, Parts 2.1 and 2.2 of this permit contain the water quality-based effluent limitations, also expressed in terms of BMPs, which EPA has determined are necessary and appropriate under the CWA. Section 402(k) of the CWA provides that compliance with an NPDES permit constitutes compliance with, inter alia, section 301 of the CWA. Section 301(a) provides that compliance with section 402 (among other provisions) is an exception to the prohibition against discharge of a pollutant. Because section 2.1.1 of the Final Permit is issued under and implements the requirements of section 402(p)(3)(B)(iii), compliance with its provisions and other permit terms constitutes compliance with the CWA. Under these circumstances, the permit accurately and reasonably states that compliance with parts 2.1.1.b and 2.1.1.c constitute compliance with the CWA.

On September 1, 2015 EPA reopened the comment period on updated language in Parts 2.1.1, 2.2, 2.3.6, Appendix F, and Appendix H in response to multiple comments received on the reopened parts and appendices of the 2013 draft permit and in order to comply with the recently effective New Hampshire Code of Administrative Rules Env-Wq 1701.03 and, in part, to address concerns raised by the commenter. The updated Parts 2.1.1, 2.2, 2.3.6, Appendix F and Appendix H fully replaced same parts or appendices of the 2013 draft permit. Parts 2.1.1, 2.2, Appendix F, and Appendix H contain clear, measurable and specific requirements and milestones that EPA believes once fully implemented, will lead to the attainment of water quality standards. It should be noted that the requirement to produce a WQRP was removed from Appendix H for re-notice.

Regarding the final permit conditions, the NOI expectations and permit authorization process, the final permit complies with 40 CFR §§ 122.28, 122.33 and 122.34 and the remand from the United States Court of Appeals for the Ninth Circuit in Environmental Defense Center, et al. v. EPA, 344 F.3d 832 (9th Cir. 2003). Final permit part 1.7 details the NOI process applicable to MS4 operators eligible for coverage under this permit. Generally, the final permit is written in compliance with 40 CFR § 122.28(d)(1) and is considered a "Comprehensive General Permit" containing clear, specific, and measurable terms to meet the MS4 standards. The 2016 Phase II Remand Rule Fact Sheet describes "comprehensive general permits" thus:

> For this type of general permit, the permitting authority issues a small MS4 general permit that includes the full set of requirements necessary to meet the MS4 permit standard "to reduce pollutant discharges from the MS4 to the maximum extent practicable (MEP), to protect water quality, and to satisfy the appropriate water quality requirements of the CWA." The general permit contains all requirements, and no additional requirements are established after permit issuance, as is the case with the "Two-Step General Permit" described below. (Final Municipal Separate Storm Sewer System (MS4) General Permit Remand Rule Fact Sheet, 2016)

EPA finds that the information requested in Appendix E necessary to provide enough information to determine that each applicant can fully comply with the terms and conditions contained in the final permit. The majority of operators will submit their NOI indicating their intent to be covered by this general permit and will provide all information contained in Appendix E. EPA will review each NOI for completeness and request additional information from operators if necessary. Upon review of each NOI and any additional information, EPA will issue an authorization letter to discharge under the final permit or require an operator to seek an individual permit in accordance with 40 CFR § 122.33 and part 1.8 of this Permit. Please note that since this authorization follows the "Comprehensive General Permit" process, the NOIs will not be publically noticed. The NOIs do not create operator-specific permit requirements. All interested parties were provided an opportunity to comment on permit requirements during the public notice period of the Draft Permit (February 12, 2013 – August 15, 2013) and the reopened comment period of certain sections of the Draft Permit (September 1, 2015 – November 2, 2015).

For those MS4 operators subject to additional requirements of Part 2.2.1. and Appendix F related to an approved TMDL, the final permit offers the option for the operator to seek permit authorization to discharge under operator-specific requirements to comply with the applicable parts of Part 2.2.1 and Appendix F through a "Two-Step General Permit," 40 CFR 122.28(d)(2). If the applicant is subject to the requirements of Part 2.2.1. and Appendix F and chooses to comply with Appendix F Part I.2, II.2, and/or III.2 rather than the prescriptive requirements of Appendix F

Part I.1, II.1, and/or III.1 respectively, then the applicant shall work with NHDES to create an Alternative Pollutant Reduction Plan(s). The Alternative Pollutant Reduction Plan(s) must be consistent with Appendix F Part I.2, II.2, and/or III.2 applicable to the operator and be submitted to EPA with the operator's NOI which includes all other information required in Appendix E. The Alternative Pollutant Reduction Plan(s) are offered to allow permittees to work with NHDES to come up with alternative plans to meet TMDL WLAs applicable to the operator. All plans must be consistent with the approved TMDL and the TMDL implementation plan (if applicable), and shall not exceed any schedules to meet WLAs included in Appendix F Part I.2, II.2, and/or III.2 (e.g. 15 years to implement Lake and Pond Phosphorus TMDL requirements and meet applicable WLAs). Each plan needs to contain clear milestones and requirements that are consistent with the TMDL. EPA will develop operator-specific requirements based on the submitted NHDES approved Alternative Pollutant Reduction Plan(s). EPA will also publically notice the operator-specific permit terms and the NHDES approved Alternative Pollutant Reduction Plan(s) for a minimum of 30 days to allow for public comment and hearing requests. Following the close of the comment period, EPA will issue authorization to discharge under the final permit and the operator-specific permit terms after reviewing the NOI, all comments received on the operator specific permit terms and any additional information, or require an applicant to seek an individual permit in accordance with 40 CFR §122.33. EPA will also issue a response to all significant comments received. This process of a "Two Step General Permit" is optional for operators subject to Part 2.2.1. and Appendix F, and MS4 operators can choose to comply with the specific requirements of Appendix F Part I.1, II.1, and/or III.1 applicable to them and not seek operator specific requirements. If the operator does not choose to seek operator specific requirements, the operator authorization will follow 40 CFR §122.28(d)(1) (and would have the effect of being a "Comprehensive General Permit" as described above).

Changes to Permit: Part 1.7 and Appendix F Parts I.2, II.2, and III.2 have been updated accordingly

23. Comment from the City of Nashua

Part 1.7.2.d Notice of Intent- "The NOI shall be submitted within 90 days of the effective date of the permit." Comment: The NOI requires a significant effort by the City and its stakeholders to develop and outline the City's 5-year program to meet the 2013 Draft Small MS4 General Permit, as written. The commitment to activities outlined in the NOI requires review and approval by multiple departments within the City and the authorization for funding needs to coincide with the City's budget cycle beginning July 1st. This effort cannot be effectively completed, reviewed and approved within such a short time frame. It is also more cost-effective to develop the NOI at the same time as the Stormwater Management Plan under Part 1.1 0 within one year of the effective date of the permit. Request: The City requests that the EPA extend the deadline for submitting the NOI to one year from the effective date of the permit to allow more efficient integration and coordination with the Stormwater Management Plan development and the City's budget cycle beginning July 1st.

24. Comment from the Town of Salem

Section 1.7.2 - The Town of Salem, NH believes the 90 day time frame within which to submit the Notice of lntent to be overly burdensome for a small community. In the likely event that the engagement of a consulting firm is desired to assist the Town in preparing the NOI (Notice of Intent), a procurement process will be needed. Solicitation and evaluation of RFQ/RFP (Request for Qualifications/Proposals), selection of a consultant, and subsequent contract negotiation will occupy much of the proposed 90 days, leaving inadequate time for preparation of the NOI. As such, the Town requests that 180 days be provided from the effective date of the permit to submit the NOI.

25. Comment from the Town of Milford

NOI (1.1.7.2d)- The NOI filing anticipates a significant amount of detail regarding future BMP's and other implementable activities. These will likely be the basis for future evaluation of our program. To develop this plan, it is necessary to evaluate many additional aspects of water quality that are being introduced elsewhere through the draft permit. Since the NOI is required within 90 days of the start date of the permit, and since this start date and other permit requirements are unknown, it is difficult to assess the staff effort as well as the availability of consultant time, if required. We believe this date should be extended to 180 days.

EPA response to Comment 23 - 25

The effective date of the permit will be July 1, 2018. NOIs from municipalities will be due 90 days after the effective date of the permit. Because EPA believes that the time period between the final issuance and the effective date is sufficient time for permittees to gather information for submittal on their NOI, there is no need to extend the deadline. Permittees will have a significant period of time between permit issuance and the effective date during which they can plan for implementation of the permit through a stormwater management plan. The NOI requires information on a town's planned actions during the permit term in order to ensure they will meet the conditions of the Small MS4 general permit, but does not require as much detail to be provided at that time as the eventual SWMP or other reports and deliverables, which will reflect the specific ways the town is addressing stormwater. The information on the NOI does not become permit requirements, but rather provides information about the planned approach a permittee will use to meet the terms of the permit. During the permit term, a permittee may modify planned BMPs as needed to meet the permit requirements.

26. Comment from the Neponset River Watershed Association

1.7.2 and Appendix E, Notice of Intent (NOI). NepRWA strongly supports the inclusion of the proposed electronic NOI in the final MS4 general permit. This is critical if watershed associations (as well as EPA and other interested parties) are to know the extent of compliance with the General Permit by each town. We would request that:

• NOIs be placed on the EPA website, available for public viewing;

• EPA develop (if it hasn't done so already) a reporting tool for the NOI data base so that, for example, watershed associations can compare the NOIs of the various towns in their watersheds;

• MS4s be required to use (or at least be made to show cause why they shouldn't be required to use) the electronic NOI, rather than allowing them to submit an NOI that "contains the information" identified in Appendix E. Our experience in Massachusetts with NOIs and Annual Reports submitted under the 2003 MS4 permit is that very few MS4s are addressing all of its provisions, even though the permit requires that they do so. As we understand how the electronic NOI will function, MS4s will not be able to skip any of the listed items before going on to the next. Having only some NOIs filed electronically would make it much more difficult for watershed associations and EPA itself to compare the progress and compliance rates of various towns.

• EPA develop at an appropriate time electronic forms for Annual Reports and, if possible, for SWMPs, Water Quality Response Plans, and IDDE programs, and post them on line.

EPA response to Comment 26

Although not required on the effective dates of the permit, under the new Electronic Reporting Rule, effective December 21, 2015, within 5 years (by December 21, 2020) EPA shall require general permit forms such as the NOI and MS4 annual reports to be submitted electronically.

See EPA Response to Comment 22 for NOI procedures.

27. Comment from the Durham/UNH Integrated Watershed Partnership

Page 8 of 60. Part 1.7.4 sets out the public notice requirements associated with the NOI. As currently drafted the public comment period is a "minimum of 30 calendar days." Based on the NOI and the public comments received, EPA may extend the public comment period and deny authorization under the MS4 permit. The potential for delay built into these proposed timeframes is significant, particularly for facilities already licensed under the prior MS4. Timeframes may make sense for new MS4 permittees who may not have developed stormwater management programs and begun implementing minimum control measures. But, for existing facilities that have these in place and are providing detailed information in the NOI, there should be a set time in which approval will be provided by EPA following submission of a complete application.

EPA response to Comment 27

EPA will make every effort to provide a response to NOIs in a timely fashion. In accordance with 40 CFR 122.28(d)(2) only those permittees that seek permittee-specific requirements in compliance with Appendix F will have those plans public noticed under the final permit conditions. See EPA Response to Comment 22. If an MS4 was authorized under the 2003 general permit and submits a timely NOI for the new permit, they will remain authorized under the 2003 permit until EPA authorizes them under this new general permit or they receive coverage under an individual permit. Since there is no lapse in coverage and the new requirements associated with this permit are spelled out, there are no obstacles preventing an MS4 from moving forward.

28. Comment from the Town of Amherst

It took approximately five years between the last comment period and the 2013 draft permit. At a minimum, Amherst encourages EPA to consider a ninety day window after publishing its comment responses to allow communities time to digest the answers to its questions.

EPA response to Comment 28

The effective date of the draft permit will be July 1, 2018. This date will allow sufficient time for interested parties to review the final permit and EPA’s responses to comments on the draft permit, once the final permit has been issued.

1.8 INDIVIDUAL PERMITS AND ALTERNATIVE GENERAL PERMITS

29. Comment from the Durham/UNH Integrated Watershed Partnership

Page 9 of 60. Part 1.8. should be relabeled Individual Permits, Alternative General Permits and Integrated Planning and Permitting. A new Part 1.8.d should summarize EPA's intention to incorporate integrated

plans into MS4 and NPDES permits where appropriate and assert EPA's authority to tailor MS4 permit terms and conditions to foster integrated planning. The Partnership offers the following suggested language:

"EPA may modify any requirement or provision of this permit when incorporating integrated plans into MS4 or associated NPDES permits provided that standards protective of public health and water quality are maintained."

EPA response to Comment 29

See EPA response to Comment 1. EPA does not see it as necessary to include integrated planning language into this general permit. There is nothing in this general permit that precludes a municipality and/or a non-traditional MS4, such as UNH, from integrating MS4 requirements and NPDES requirements from another municipally owned and operated facility, such as a POTW, into a single integrated permit. This permit provides requirements that are applicable to all NH MS4 permittees, and contains requirements that can help inform each permittee if they choose to pursue integrated planning or permitting. EPA anticipates that a permittee who seeks and integrated permit will have an individual permit which provides the greatest opportunity to incorporate the specificity necessary for an integrated permit.

1.9 SPECIAL ELIGIBILITY DETERMINATIONS

30. Comment from the Town of Merrimack

In section 1.9.1 of Part 1 of the 2013 MS4 Draft General Permit there are requirements that the Town be responsible for determining if federally listed endangered or threatened species are found in proximity to the MS4's outfalls and if such species are adversely affected by stormwater discharges or stormwater related activities, e.g. Best Management Practice (BMP) installations. Compliance with these requirements is the Federal Governments responsibility, not the Towns.

31. Comment from the Town of Hampton

1.9.1 Certify Eligibility with regard to Federal Endangered and Threatened Species and Critical Habitat Protection. The Town is neither prepared nor qualified to certify its own compliance with endangered/threatened species and /or critical habitat regulations. This type of certification requires educated and trained people to do the work. Furthermore, we are of the opinion that the responsibility of ensuring that permit requirements do not conflict with the Endangered Species Act (ESA) rests solely with the EPA. The Town cannot relieve the EPA of its responsibility under the ESA by having it included within this draft permit. We herewith request that you remove it from the permit.

EPA response to Comments 30 - 31

EPA regulations at 40 CFR 122.49 include a listing of federal laws that may apply to the issuance of a permit and require EPA to follow the procedures associated with those laws. The language in 50 CFR 402.08 allows a federal agency to designate a non-Federal representative to conduct informal consultation or prepare a biological assessment during the ESA process. EPA used this approach during the 2003 issuance of the Small MS4 general permit and will continue to do so to meet ESA requirements with regard to the U.S. Fish and Wildlife Services (USFWS). Any applicant seeking coverage under the 2003 general permit was required to certify that none of its storm water discharges, allowable non-storm water discharges or discharge related activities was likely to impact a threatened or endangered species. Under this general permit, each permittee is required to

certify that the ESA eligibility criteria (established by EPA and reviewed by USFWS) for coverage under the general permit are met. EPA and USFWS provide guidance and resources on determining endangered species within the action area of an MS4 and whether discharges covered under this permit are likely to affect nearby species (see Appendix C for details).

32. Comment from the Town of Londonderry

Section 1.9.2 dealing with Historic Properties requires documenting all drainage structures within our MS4 system. This potentially opens the Town up to onerous Section 106 reviews for each and every catch basin, detention pond and drainage swale that we need to work on. To avoid lengthy Section 106 reviews the EPA/NHDES could work with the State Historic Preservation Officer (SHPO) to develop a programmatic agreement regarding historic properties and MS4 related activities. This would streamline and enhance historic preservation and project delivery efforts.

33. Comment from the City of Rochester

New mapping and reporting requirements have been included in the 2013 NH Small MS4 Draft General Permit. With the new permit, all drainage structures within the City of Rochester's MS4 system we will be documented. The City of Rochester has hundreds of drainage structures, which are not all currently mapped, and many, if not most, are on private or State owned property. The City may be required to undertake Section 106 reviews for each and every catch basin, detention pond and drainage swale that will be worked on. This will place an undue burden on the City of Rochester.

34. Comment from the Town of Goffstown

Section 1.9.2 dealing with Historic Properties is unchanged from the 2003 permit; however, what has changed is the mapping and reporting requirements. The 2003 permit focused on outfalls; in the new permit we will be documenting all drainage structures within our MS4 system. This potentially opens the Town up to onerous Section 106 reviews for each and every catch basin, detention pond and drainage swale that we need to work on. To avoid lengthy Section 106 reviews the EPA/NHDES should work with the State Historic Preservation Officer (SHPO) to develop a programmatic agreement regarding historic properties and MS4 related activities. This would be a great tool for implementing approaches that may not follow the normal Section 106 process. This can be done to streamline and enhance historic preservation and project delivery efforts.

35. Comment from the Town of Auburn

Section 1.9.2 dealing with Historic Properties is unchanged from the 2003 permit; however, what has changed is the mapping and reporting requirements. The 2003 permit focused on outfalls, while with the new permit we will be documenting all drainage structures within our MS4 system. This potentially opens the Town up to onerous Section 106 reviews for each and every catch basin, detention pond and drainage swale that we need to work on.

EPA response to Comments 32 - 35

As part of the NHPA, a federal agency is required to consult with the SHPO if it carries out an undertaking that has the potential to affect a historic property. EPA's scope for NHPA review is limited to stormwater controls and discharges. EPA does not expect that the requirements related to section 106 of the National Historic Preservation Act, as outlined in Appendix D to the permit, will cause undue burden to permittees. Permittees should follow the Appendix D screening procedure. EPA does not expect that SWMP implementation will require consultation with the SHPO. Individual NOI submissions are not federal undertakings that trigger section 106 review.

The New Hampshire Division of Historical Resources (NHDHR) attempts to simplify the consultation process for operators by providing a short form on their website[5] that can be filled out and mailed to request a project review by NHDHR. In addition, EPA has recommended a 30-day timeline for the SHPO to respond to a request for consultation regarding mitigation or prevention of adverse effects to historic properties from a permittee's actions under the small MS4 permit. EPA believes that this timeline provides adequate time for review by the SHPO's office and does not significantly delay the municipal permittee's planned projects to comply with the terms of the permit.

In response to comments suggesting a programmatic agreement, EPA does not believe it will be practical and effective to pre-arrange an agreement with NHDHR regarding the permit, which covers stormwater discharges and related permit activities in 44 municipalities across the state. Based on the scope of the permit and the range of potential activities covered, the most efficient and effective evaluation of the permit's effects on historic properties can be accomplished by the municipalities that will be directly implementing the terms of the permit in their MS4s.

Change to Permit: Information regarding NHDHR's Request for Project Review form was added to Appendix.

1.10 STORMWATER MANAGEMENT PROGRAM (SWMP)

36. Comment from the City of Rochester

The requirement to complete and enforce a stormwater management program within one year of permit issuance is unreasonable. EPA does not explain how its determination took into account the varying sizes and complexities of the MS4s covered, nor the level and extent of activities that may have to undertake especially in regards to the requirements of sections 2.1 and 2.3. The final schedule for compliance cannot be determined when the scope of work is unknown. The City of Rochester is the third largest city, based on land area in New Hampshire with hundreds of stormwater discharge points, and many are from private or State owned properties. The scope of work to develop and enforce a SWMP cannot be completed in one year, nor can most if not all of the other scheduled requirements be reasonably met. The schedule for compliance cannot be determined when the scope of work is unknown.

EPA response to Comment 36

EPA finds that a deadline of one year from the permit effective date to complete the SWMP is sufficient time to update a program that is already being implemented in most communities (additional time extensions are provided in part 1.10.3. for certain components of the SWMP for new permittees) and updated annually. However, EPA has clarified the timeline in the final permit. EPA has clarified that the SWMP does not have to incorporate certain components until such components are required to be completed following the timeline of the rest of the permit. The permit is not intended to require that towns have completely planned out their SWMP for the entire permit term at the end of year one. Additionally, the delay between permit finalization and the effective date of the permit (at least 12 months) will allow for additional planning time to update the SWMP.

[5] http://www.nh.gov/nhdhr/review/rpr.htm, Accessed January 2, 2017

EPA intends to develop a detailed SWMP template to aid municipalities in the development of their SWMP. Please note that the permit does not require submission of the SWMP to EPA or NHDES, but that it be available for these agencies as needed (see part 1.10.1.a of the permit).

Changes to Permit: Permit part 1.10 has been changed accordingly.

37. Comment from the City of Manchester

"Listing of all interconnected MS4s and other separate storm sewer systems receiving a discharge from the permitted MS4... ": The concern that we have is that MS4s are interconnected with other MS4s and other non-permitted separate storm sewer systems. This makes it difficult to administer certain requirements of this permit as a water body can be in one community and receive discharges from other communities and entities that make it difficult to have them share the costs of their share of the loadings.

EPA response to Comment 37

EPA recognizes the challenges of implementing the permit in interconnected MS4s. Cities and Towns operating MS4 systems under the general permit are responsible for catchments in regulated areas that contribute discharges to waters of the United States. Because one of the minimum control measures of the MS4 program focuses on preventing pollution from entering the MS4, permittees are responsible for their contributing areas and should be aware of the ultimate receiving water for their discharge (whether it passes through their own MS4 or a neighboring operator's). The Stormwater Management Plan should include a listing of all separate storm sewer systems receiving a discharge from the permitted MS4. EPA acknowledges that there may be great system complexities at interconnections, however, this also offers the opportunity for municipalities to collaborate and create efficiencies where they must both implement the same requirements of the permit within the same watershed. Regulated MS4 operators may share responsibility of implementing the minimum control measures with other entities in certain circumstances. *See* 40 CFR 122.35.

38. Comment from the Charles River Watershed Association

1.10.2 - This section should contain language requiring the permittee to use (or at a minimum demonstrate that they have considered using) Low Impact Development (LID) and Green Infrastructure (GI) techniques as part of their program to comply with 2.0, 2.1 and 2.2, as has been required to demonstrate compliance in 2.3.5. If they do not use LID or GI techniques as part of their program to comply with water quality standards (section 2.1) and discharges to impaired waters (section 2.2), they should discuss why they have been determined not to be feasible. Current best practice in stormwater management in urbanized areas clearly includes the use of LID and GI, and many EPA approved programs including CSO Control Plans, Settlement Agreements and Consent Decrees require LID and GI practices. EPA states on its own website: "Since 2007, EPA's Office of Water has released four policy memos supporting the integration of green infrastructure into NPDES permits and CSO remedies. The LID and GI requirements should also be specified in sections 2.2.1.g and 2.2.2.a.ii.

EPA response to Comment 38

EPA agrees that low impact development (LID) and green infrastructure (GI) will be important components of a successful stormwater management program. Many of the requirements in Appendix F and H related to water quality limited waters and TMDL waters already involve considering the use of GI/LID. In order to avoid duplicating permit requirements and to provide flexibility within the permit for various best management practices, especially during the initial stage of the permit term, EPA has not included additional GI/LID requirements in the stormwater

management plan requirements of the permit. Some municipalities have various barriers to implementing LID/GI which should be addressed before such measures could become permit requirements; see the local ordinance evaluation requirements of part 2.3.6. in the final permit.

39. Comment from the Town of Newmarket

In addition to the other timeline extensions afforded in Section 1.10.3 for "new permittees", additional time of at least two years should be allowed to develop the first written Stormwater Management Plan. Given the number and extent of the major plan components that are required, new permittees will need additional time to complete the analysis and system assessments required to address the various SWMP components. Additional time is also needed to allow for the time needed to conduct to the inter-departmental coordination and communications to establish new roles, responsibilities and protocols to include in the various components of a SWMP.

EPA response to Comment 39

EPA declines to provide an additional time extension for the SWMP for new Small MS4 permittees given that this plan is an important first document for determining the direction of permit compliance over the permit term. Certain deadlines for specific components of the SWMP have been extended based on comments on the unique situation that new Small MS4 permittees face in implementing the permit.

EPA plans to provide a SWMP template and additional permit compliance planning advice to new permittees to the extent that resources allow in order to aid in developing the plan. In addition, EPA has added clarification that the SWMP does not have to incorporate certain components until such components are required to be completed following the timeline of the rest of the permit. Therefore, the initial stormwater management plan for new Small MS4 permittees will contain fewer elements than the initial deliverable for currently-covered permittees.

Changes to the Permit: part 1.10.3. has been updated in accordance with the above response.

40. Comment from the Town of Stratham

The Town of Stratham was not a covered by the 2003 NH Small MS4 NPDES General Permit. Consequently, Stratham is new to this process and has not implemented any of the Phase I activities required under that permit. In reviewing the draft 2013 Permit, it is difficult at times to discern if communities newly covered by the Permit are recognized and differentiated from those communities who have already accomplished their Phase I objectives. To that end, a concerted effort should be made to designate which Phase II Permit conditions are applicable to all MS4 communities immediately and which are delayed for a certain period for the newly enrolled in the program. Although some effort has been made to make the distinction, it is not clear throughout the draft Permit.

EPA response to Comment 40

The additional extension of timelines to plan for and implement the permit requirements for new permittees can be found in part 1.10.3 of the final permit (see EPA response to Comment 39).

41. Comment from the Town of Wilton

The Town of Wilton has been named as a New Permittee under the 2013 Draft MS4.NPDES permit which brings with it significant mandated expenses. Every aspect of the NOI plan and testing brings an added expense to the Town. The Town of Wilton had applied for a waiver in April, 2013 but was denied in May,

2013 due to fact-that 40 CFR 122.32 or CFR 123.35(d) does not allow for interpretation of the amount of urbanization in Census. According to data provided by the 2010 Census there are greater than 1,000 but fewer than 10,000 within the Urbanized Area.

The 2013 Draft Permit will require the Town of Wilton to quickly come up to speed with the permit even though most of the Towns have been involved since 2003 thus putting a further financial burden on the already strapped, limited, Town finances. Under section 1.10.3 New Permittees are given some additional time extensions however upon closer review most the 6 control items only add an additional year to the time limits while still bringing the Town into total compliance with all of the other Towns who have been in the program for 10 or more years.

It would appear from laying out this time line, that as a first time permittee, the Town of Wilton will need to catch up to and be on the same footing as all of the other much larger Towns by the end of the permitting process in 5 years. We will be required to File the NOI, create the Stormwater Management Program (SWMP), document Endangered Species, and Historic properties, broaden Public Education and Outreach, List all discharges, map the entire separate Storm Sewer System all the way back to the Town maintained buildings, create Water Quality Response Plans (WQRP), achieve compliance and create an Illicit Discharge Detection and Elimination Program (lDDE) to name just a few. We will then have to meet Water Quality Standards, under Phase 1 to Evaluate and identify MS4 discharges and under Phase 2 to Implement BMP's with the finalized source identified and assessed. It appears that for the first time permittee the final phase of the WQRP, plans to assess the implemented BMP's can come after the first 5 years of the effective date of the plan.

The Town of Wilton is a small rural community that would appreciate having a greater time extension to be able to come into compliance with the Clean Water Act. Even with the time extensions allowed under Part 1.10.3, the Town will be brought up to date with all of the other communities within the 5 year time constraint. Please compare this with the fact that the larger Towns have had 10 years to get all of the base information into place and we are starting from ground zero. Not only will we be dealing with the new 2013 regulations but the Town will be required to develop and implement all of the previous plans required of the larger Towns.

EPA response to Comment 41

EPA notes that this general permit is not a regulation, as the commenter states. *See* EPA Response to Comments 46 - 54, EPA Response to Comments 55 - 60, and EPA Response to Comments 227 - 233. On September 1, 2015 EPA reopened the comment period on updated language in Parts 2.1.1, 2.2, 2.3.6, Appendix F, and Appendix H and removed the requirements related to the Water Quality Response Plan. Certain deadlines for specific components of the SWMP have been extended based on comments on the unique situation that new Small MS4 permittees face in implementing the permit. EPA and NHDES intend to continue to provide technical assistance on permitting matters, including for new Small MS4 permittees that require more extensive guidance. In addition, EPA has added clarification that the SWMP does not have to incorporate certain components until such components are required to be completed following the timeline of the rest of the permit.

Changes to the Permit: part 1.10.3. has been updated in accordance with the above response.

42. Comment from the Charles River Watershed Association

We suggest 1.10 c. be either modified or eliminated. By providing a permit condition that encourages but does not require adequate funding for the program, EPA provides the appearance of a potential loophole for permit compliance. If the permit cannot be modified to require adequate funding, this section should

be removed. The development of a compliant program is a requirement of the permit and failure to identify sources of funding cannot be used as an excuse not to do so.

EPA response to Comment 42

EPA does not have the authority under the Phase II stormwater regulations to require small MS4s to maintain a funding source similar to the Phase I requirements for large and medium MS4s. EPA recognizes that there will be costs associated with the permit requirements, which we have deemed necessary to protect and restore water quality. See EPA response to Comments 592-593

It has become clear through municipalities' comments and public meetings that cost is a primary concern of permittees, and we believe the conversations at public meetings as well as information on funding on our website have been sufficient to convey our general recommendations on funding a stormwater program. For this reason, the encouragement to maintain an adequate funding source has been removed from the permit. In an effort to provide more concrete guidance on this matter, EPA plans to continue to provide up-to-date cost estimates for the permit as well as information on potential funding resources on our website.

Change to Permit: part 1.10.c. of the Permit has been deleted.

43. Comment from the Durham/UNH Integrated Watershed Partnership

Page 12 of 60. Existing Part 1.10.3. This Part should be renumbered since it does not relate specifically to a stormwater management program like other subsections of Part 1.1 0.

EPA response to Comment 43

EPA has determined the stormwater management program, which details how permittees will comply with the water quality requirements and the minimum control measures of the MS4 permit, is an appropriate place to summarize the deadline extensions for new Small MS4 permittees across the required elements of the SWMP throughout the permit. The deadlines for new permittees have been summarized in one place for clarity and convenience rather than distributed throughout the permit.

44. Comment from Durham/UNH Integrated Watershed Partnership

A new Part 1.10.d should be added. Suggested language:

"The SWMP may be developed jointly with other MS4 permittees in a watershed and may be part of a integrated planning document established in conformance with EPA's Integrated Planning Approach Framework."

EPA response to Comment 44

See EPA response to Comment 1.

45. Comment from the Town of Wilton

The ordinances, by-laws or other regulatory mechanisms required by Parts 2.3.4, 2.3.5 and 2.3.6 shall be completed as soon as possible but no later than 3 years from the effective date of the permit. Presently the Town of Wilton has Construction Site Stormwater Regulations in place; however, these along with all of the other required ordinances and regulations will have to be updated and put into place. This takes time since each one of these has to be prepared and placed before the voters, who ultimately make the decision. If

they were to turn any one of these down then it would take another whole year before anything could be passed.

EPA response to Comment 45

EPA recognizes the challenges that municipalities face in passing new municipal regulatory mechanisms. Ordinances and regulatory mechanisms are an important part of preventing pollution from entering the MS4 that the town is responsible for operating. MS4 operators are expected to provide updates on their progress in each annual report on how the permit requirements are being implemented. The town of Wilton is encouraged to look to other communities that have been implementing a permitted MS4 program for the past 13 years for regulatory language and programs.

2.0 NON-NUMERIC EFFLUENT LIMITATIONS

46. Comment from Barnes and Thornburg (on behalf of Atkinson, Kingston, Newton, and Plaistow) (on behalf of Atkinson, Kingston, Newton, and Plaistow)

EPA Region 1's authority to develop and implement any MS4 permit is limited to the authorities granted to the federal government in the U.S. Constitution, and to EPA through specific delegation of certain powers that Congress sets forth in the Clean Water Act (and related statutes). While the goals of the Draft MS4 Permit are entirely laudable, many of its requirements and mandates encroach unnecessarily upon many state and local issues, in contravention of EPA's CWA authority. As described above, these towns have taken their own actions to protect local resources apart from any federal mandates. Hence, while the Represented Towns support environmental protection, they cannot support many of the provisions contained in the Draft MS4 Permit that exceed EPA Region 1's authority to promulgate or that infringe on local land use control.

47. Comment from Barnes and Thornburg (on behalf of Atkinson, Kingston, Newton, and Plaistow) (on behalf of Atkinson, Kingston, Newton, and Plaistow)

In 1987, Congress added section 402(p) to the Clean Water Act to resolve years of litigation and confusion regarding EPA's authority to require National Pollutant Discharge Elimination System ("NPDES") permits for discharges composed entirely of stormwater. 33 U.S.C. § 1342(p). Section 402(p)(l) essentially exempts most stormwater discharges from NPDES permitting requirements. Section 402(p)(2) lists several exceptions to that broad exemption, including stormwater discharges from industrial activity, discharges from large and medium MS4s (serving populations of 100,000 persons or greater), and other specific sources that permitting authorities may designate for permitting because they are significant contributors of pollutants to U.S. waters. The industrial and MS4 sources were considered "Phase I" sources.

Congress also provided a process for EPA to expand the NPDES stormwater program to other classes and categories of dischargers on a regional or national basis through studying those sources, reporting back to Congress, and promulgating new national regulations. See CWA Sections 402(p)(5)-(6). Pursuant to Section 402(p)(6), "the Administrator ...shall issue regulations....which designate stormwater discharges to be regulated to protect water quality and shall establish a comprehensive program to regulate such designated sources." It is important to note that the CWA clarifies that the term '"discharge' when used without qualification includes a discharge of a pollutant and a discharge of pollutants." See CWA Section 502(16). [footnote: To further clarify and avoid any confusion regarding the limited scope Congress placed on the NPDES permitting program and authority, "[t]he term 'discharge of a pollutant' and the term 'discharge of

pollutants' each means (A) any addition of any pollutant to navigable waters from any point source, (B) any addition of any pollutant to the waters of the contiguous zone or the ocean from any point source other than a vessel or other floating craft." CWA Section 502(12)].

Pursuant to CWA Sections 402(p)(5)-(6), EPA expanded the Phase I stormwater program to include smaller MS4s and to expand the construction stormwater program to include active land disturbing construction sites of greater than or equal to one acre. This action is referred to as EPA's "Phase II" stormwater program. But EPA's stormwater program expansion only includes additional point sources for NPDES permitting. EPA's CWA authority is still bound by the limitation that the NPDES permit program regulates the discharge of pollutants discharged from point sources to waters of the U.S. [footnote: The NPDES permit program is necessitated by the Clean Water Act's general prohibition against the discharge of pollutants unless authorized by permit. CWA Section 30 I. The discharge of water (absent pollutants) is not prohibited.] See Waterkeeper Alliance et al. v. EPA, 399 F.3d 486 (2d Cir. 2005)("In other words, unless there is a 'discharge of any pollutant,' there is no violation of the Act, and point sources are, accordingly, neither statutorily obligated to comply with EPA regulations for point source discharges, nor are they statutorily obligated to seek or obtain an NPDES permit.")

When it expanded the MS4 permitting program through the Phase II program, EPA recognized that the new MS4 general permit program to be less onerous and more flexible than the Phase I MS4 permitting program. Thus, EPA established the "six minimum control measures" as the basis for its small MS4 permitting program. [footnote: The minimum control measures are: Public Education and Outreach; Public Participation/Involvement; Illicit Discharge Detection and Elimination; Construction Site Runoff Control; Post-Construction Runoff Control; and Pollution Prevention/Good Housekeeping] EPA also has expressly stated its priority for using non-numeric effluent limitations in stormwater permits and to implement approved Total Maximum Daily Loads ("TMDL"). See Interim Permitting Approach for Water Quality-Based Effluent Limitations in Stormwater Permits (www.epa.gov/npdes/pubs/swpol.pdt) ("1996 Interim Permitting Approach") and Establishing Total Maximum Daily Load (TMDL) Wasteload Allocations (WLAs) for Storm Water Sources and NPDES Permit Requirements Based on Those WLAs (www.epa.gov/npdes/pubs/final-wwtmdl.pdt) ("TMDL Stormwater Memo"). [footnote: 6 According to EPA's TMDL Stormwater Memo: The policy outlined in this memorandum affirms the appropriateness of an iterative, adaptive management BMP approach, whereby permits include effluent limits (e.g, a combination of structural and non-structural BMPs) that address stormwater discharges, implement mechanisms to evaluate the performance of such controls, and make adjustments (i.e., more stringent controls or specific BMPs) as necessary to protect water quality.]

The Draft MS4 Permit must be analyzed against these CWA authorities and EPA's own rulemakings and related guidance.

48. Comment from NH Stormwater Coalition:

The Draft Permit Requirements Should Not Be More Stringent than the Existing Permit Requirements Pending EPA's Adoption of Revised Small MS4 Program Regulations

Since the issuance of the New Hampshire small MS4 general permit in 2003 ("2003 General Permit"), there has been no change in federal regulations applicable to small MS4s. EPA‟s regulation at 40 C.F.R. § 122.37 states that "EPA will evaluate the small MS4 regulations at §§122.32 through 122.36 and § 123.36 of this chapter after December 10, 2012 and make any necessary revisions." Furthermore, EPA‟s regulations specifically provide:

> EPA strongly recommends that until evaluation of the storm water program in § 122.37, no additional requirements beyond the minimum control measures be imposed on regulated small MS4s without the agreement of the operator of the affected small MS4, except where an approved

> TMDL or equivalent analysis provides adequate information to develop more specific measures to protect water quality.

40 C.F.R. § 122.34(e). It is highly unusual for EPA to promulgate a regulation codifying that additional requirements should not be imposed, [footnote: In fact, the Coalition has been unable to identify any other EPA regulation under the NPDES program or other environmental programs that has gone to such extremes.] and, as such, substantial weight must be provided to such position. As explained by EPA, "[t]his approach addresses the concern for protecting water resources from the threat posed by storm water discharges with the important qualification that there must be adequate information on the watershed or a specific site as a basis for requiring tailored storm water controls beyond the minimum control measures." 64 Fed. Reg. 68,788 (Dec. 8, 1999). For this very reason it was particularly inappropriate for EPA to base the need for new permit requirements or expanded coverage of small communities on *presumptions* that MS4s are causing or contributing to the impairment, as occurred extensively through EPA"s Draft Permit. Presumptions do not constitute "adequate information" and certainly do not provide a basis to conclude that expanded MS4 regulation is necessary to ensure adequate environmental protection.

The changes in the Draft Permit (from the pre-existing 2003 General Permit) go far beyond that set forth in § 122.34(e). The number of pages addressing New Hampshire Cities/Towns in the 2003 General Permit was a total of 33 pages of the 56 page permit.[footnote: The 2003 General Permit contained the following 33 pages applicable to New Hampshire MS4s (of which 12 pages were Endangered Species Act guidance):• Upfront verbiage/authorization (2 pp)• Part 1 General Requirements (6 pp)• Part 3 NH Small MS4 (6 pp)• Part VI – Standard Permit Conditions. (4 pp)• Part VI – Definitions (3 pp)• Addendum A – ESA (12 pp)] In contrast, the Draft Permit contains an incredible 202 pages (*i.e.,* a six hundred percent increase) of the 217 page document that would apply to New Hampshire Cities/Towns. [footnote: 3 The Draft Permit contains 202 pages applicable to New Hampshire MS4s which includes: • Upfront verbiage/TOC (3 pp) • Part 1 - General Requirements (9 pp) Part 2 - Non-Numeric Effluent Limitations (38 pp) • Part 3 - Additional State Requirements (2 pp) • Part 4 - Program, Evaluation, Record Keeping and Reporting (4 pp) • Appendix A – Definitions (6 pp) • Appendix B – Standard Permit Conditions (10 pp) • Appendix C – ESA Guidance (12 pp) • Appendix D – Historic Properties Preservation Procedures (5 pp) • Appendix E – NOI Form (14 pp) • Appendix F – Requirements for Approved TMDLs (73 pp) • Appendix G - Monitoring Requirements for Discharges to Impaired Waters (2 pp) • Appendix H – Requirements Pertaining to Nitrogen-Impaired Waters in the Great Bay Estuary and Chloride-Impaired Waters (20 pp) In addition, Section 2.3.6.3 of the Draft Permit purports to incorporate by reference requirements in the New Hampshire Stormwater Manual, a document several hundred pages in length.] This increase is not the byproduct of a new "TMDL or equivalent" analysis that is justified based on case-specific considerations. [footnote: EPA acknowledges, for example, that the Draft Permit contains an entirely different approach:

> EPA also agrees with the comment . . . that the approach to stormwater management in MS4s required under this [2013] permit [is so significant that it] may require a "paradigm shift" in many communities. . . . Low impact design, green infrastructure and other approaches encouraged and required by the permit treat rain as a resource – an entirely different approach that may require a paradigm shift among both the public and public works personnel.

Fact Sheet, at 35; *see also id.* at 86 ("EPA expects that most if not all permittees will need to revise and update aspects of their programs to meet the requirements of this permit."); *id.* ("The revision and updating of existing IDDE programs will be necessary because this permit requires the implementation of a far more detailed and thorough IDDE program than that adopted by most communities. EPA has prescribed these detailed requirements . …"); *id.* at 87 ("EPA is requiring a number of elements that go beyond the level of program commonly adopted under the MS4-2003."); *id.* at 120 ("EPA agrees that the SWPPP requirements

applicable to maintenance garages, public works facilities, transfer stations and other waste handling facilities are significantly more complex than previously required and reasonably require additional time to develop."); *id.* at 125 ("EPA has determined . . . than an extensive IDDE program, going beyond the targeted areas that have typically been a focus, is to be a priority under this reissued permit."); *id.* at 143 ("The reissued permit is specifically intended to set higher standards and increase EPA‟s ability to track activities under the SEMPs."); *id.* at 144 ("EPA recognizes that the reissued permit takes an approach that is both more detailed and more protective than the MS4-2003.").

Furthermore, while the regulated community and EPA can debate whether EPA cost-estimates are artificially low, at a minimum, it is readily acknowledged by EPA that the annual costs to implement the draft MS4 requirements will range from $106,000 to $1,149,000 per year in 2010 dollars. *Id.* at 149. This does not include EPA‟s breakdown of monitoring costs per outfall, which is set forth in Table II.B.4 on page 159 of the Fact Sheet. As reflected in Table II.B.1 on page 151 of the Fact Sheet, these costs significantly exceed costs under the 2003 General Permit. As concluded by EPA, "EPA recognizes that compliance with this permit will require substantial investment by permittees to reduce the discharge of pollutants from their system . . . ." *Id.* at 148.] end footnote.

This 600% increase in pages of permitting requirements is clearly in contravention of the standard set forth in 40 C.F.R. § 122.34(e). [footnote: While there are a number of things that various EPA personnel would like to see established as new regulatory requirements in the forthcoming MS4 rulemaking, the New Hampshire small MS4 general permit is not the appropriate vehicle for establishing such new requirements.]

EPA purports to justify this approach by claiming that the "small MS4 permit from its inception was intended to be iterative in nature, with increasingly stringent requirements as permits are reissued." EPA totally ignores its own regulation which states the very opposite is intended to occur unless specific analyses confirm the need for more restrictive requirements. As stated in *Leather Industries v. EPA*, 40 F.3d 392 (D.C. Cir. 1994), the Clean Water Act ("CWA") "does not give EPA blanket, one way ratchet authority to tighten standards." As discussed above, it is extremely unusual for an EPA regulation to specify that requirements in reissued permits should not be more stringent except upon the existence of specific conditions. *Supra,* at n.1. Yet EPA acts as if 40 C.F.R. §§ 122.34 and 122.37 do not exist. As provided by these regulations, now is not the time to start imposing a "paradigm shift" based on presumptions of impairment contributions from MS4 communities. These circumstances are not TMDLs or an equivalent analysis.

To impose additional requirements under the existing rules, EPA must produce an analysis to show where the MS4 communities are documented to be a significant component of any alleged impairments. The CWA and implementing regulations do not allow EPA to simply presume a source is significant such that reductions must be mandated via a permit (*see, e.g.,* 40 C.F.R. 122.44(d) requiring EPA to complete a "reasonable potential" analysis to justify the imposition of more restrictive water quality-based requirements). Thus, the permit should remain the same (with some limited exceptions) pending EPA's re-evaluation of the MS4 rules and completion of the necessary analyses.

49. Comment from NH Stormwater Coalition:

The Draft Permit Attempts to Restrict Municipalities' Flexibility in Designing an MS4 Program Tailored to Its Needs and Conditions

The Draft Permit contains an approach that significantly decreases the inherent flexibility that municipalities are intended to have under the MS4 program. The requirements in the Draft Permit are essentially a one-size fits all approach that EPA is unilaterally dictating to the regulated community. EPA acknowledges the effect of its new permitting approach:

> However, EPA has found that the extremely flexible approach embodied in the MS4-2003 had a number of negative consequences. . . . The reissued permit is specifically intended to set higher standards and increase EPA's ability to track activities under the SEMPs, consistent with the national approach [footnote: As the regulated community is still awaiting EPA‟s promulgation of the MS4 regulations, there is no new national approach. Based upon EPA‟s failure to meet the schedule for the proposal of new national stormwater regulations, it is likely that the final regulations will not be released in December 2014 as original thought. EPA is in the midst of negotiating a new schedule. Accordingly, any purported new approach is illegal without the requisite due process rulemaking.] as stormwaterpermits are issued.

Fact Sheet, at 143.

Municipalities, however, are intended to be provided significant flexibility in the development of an MS4 program and should not be subjected to a "one size fits all" approach. Moreover, EPA lacks authority to dictate, through NPDES permits, the means by which compliance is achieved. *Iowa League of Cities v. EPA,* 711 F. 3d 844 (8th Cir. 2013). The intent is for the municipality to develop a program based upon its specific needs and the actual conditions causing excessive runoff of a pollutant of concern. *See, e.g.,* 40 C.F.R. § 122.34(e). Such conclusions are clearly reflected by, amongst other things, EPA's preamble statement in the promulgation of the Phase II MS4 regulations:

> 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.*

64 Fed. Reg. 68,754 (Dec. 8, 1999) (emphasis added).

Moreover, at this time, there are scant MS4 regulations. As EPA is currently in the process of developing proposed regulations, the current MS4 regulations, as described by EPA, provide municipalities a great degree of flexibility to tailor the MS4 program to their site-specific needs. If mandatory requirements are to be established, EPA has made it clear that rulemaking is required:

> EPA disagrees with the notion that this regulation, which addressed permit application requirements, should create mandatory permit requirements which may have no legitimate application to a particular municipality. The whole point of the permit scheme for these discharges is to avoid inflexibility in the types and levels of control. Further, to the degree that such mandatory requirements may be appropriate, these requirements should be established under the authority of section 402(p)(6) of the CWA and not in this rulemaking, which addresses permit application requirements.

55 Fed. Reg. 47,990, 48,053 (Nov. 16, 1990).

Instead of EPA dictating what all MS4 communities must do, it is clear that the program is intended to allow the municipality to tailor the program based upon its perceived needs and professional judgment:

> Permits for different municipalities will place different emphasis on controlling various components of discharges from municipal storm sewers. For example, the potential for cross-connections (such as municipal sewage or industrial process wastewater discharges to a municipal separate storm sewer) is generally expected to be greater in municipalities with older developed areas. On the other hand, municipalities with larger areas of new development will have a greater opportunity to focus controls to reduce pollutants in storm water generated by the area after it is developed, discharges from construction sites, and other planning activities.

Id. Consistent with the letter and intent of the MS4 regulations, the permit should provide significant additional flexibility to New Hampshire MS4 communities to reflect only case specific circumstances necessitating more intense methods. [footnote: See also 55 Fed. Reg. 47,990, 48,001 (Nov. 16, 1990) ("EPA notes that each municipal program will be tailored to the conditions in that city."); id. at 48,052 ("[A]pplicants should be given the opportunity to identify and propose the components of the program that they believe are appropriate for first preventing or controlling discharges of pollutants."); id. ("Flexibility in developing permit conditions will be encouraged . . . . ").] The program should not be creating broad presumptions of significant contributions to alleged impairment problems or creating new requirements to undertake detailed studies based on triggers that nowhere appear in state or federal law (*e.g.*, a single instream measurement of bacteria above the state's standard). These universally applicable changes and new permit requirements constitute unlawful rule amendments because they are not based on case-specific facts. These amendments should therefore be withdrawn

50. Comment from Barnes and Thornburg (on behalf of Atkinson, Kingston, Newton, and Plaistow)

When Congress added Section 402(p) to the CWA in 1987, it differentiated the technology-based effluent limitations standard for MS4s relative to the rest of the NPDES permit program by creating a new standard called "maximum extent practicable" ("MEP"), as opposed to the more traditional BAT/BCT standard applied to industrial stormwater and other wastewater discharges. However, Congress did not specifically define the MEP standard.

51. Comment from Barnes and Thornburg (on behalf of Atkinson, Kingston, Newton, and Plaistow)

The essence of the MEP standard is explained best, perhaps, by EPA's NPDES Permit Writer's Manual (cited above) in its discussion of EPA's Phase II rulemaking and small MS4 program (at 2-9):

Phase II of the stormwater program extended the NPDES permitting program to small MS4s in urbanized areas (64 FR 68722, December 8, 1999). The Phase II MS4 regulations require small MS4s to develop a program to address six minimum control measures that include BMPs and measurable goals for each BMP. Permit writers have the option of permitting regulated small MS4 operators using an individual permit, a general permit, or a modification of an existing Phase I MS4's individual permit (although the vast majority of small MS4s have been covered under general permits).

MEP is not precisely defined so as to allow maximum flexibility in MS4 permitting to optimize reductions in stormwater pollutants on a location-by location basis (64 FR 68754, December 8, 1999). Therefore, permit writers must rely on application requirements specified in the regulations and the applicant's proposed management program when developing appropriate permit conditions. The stormwater Phase II rule was challenged in the courts, with the U.S. Court of Appeals for the Ninth Circuit generally upholding the Phase II rule but remanding three issues back to EPA. EPA issued guidance on April 16, 2004 for how new general permits should address the remanded issues of public availability of notices of intent (NOIs), opportunity for public hearings, and permitting authority reviews of NOIs....

The remanded portion generally is not relevant to these comments, recognizing that EPA Region 1 has adequately included appropriate public review and hearing opportunities. However, the Draft MS4 Permit's expansion of the basic six minimum control measures is problematic and unjustified. EPA Region 1 has added extraneous and unjustified complexity to the MEP requirements, contravening the type of flexibility envisioned by EPA Headquarters' NPDES Permit Writer's Manual and raising significant legal concerns. Hence, the Draft MS4 Permit should be significantly curtailed and, if EPA Region 1 is so inclined, it should develop appropriate guidance documents to provide NH MS4s assistance with various methods for

achieving the goals of the six minimum control measures. In fact, much of the excessive verbiage and discussion in the permit- and particularly the draft Fact Sheet (including the 2008 Fact Sheet) read more like guidance than typical NPDES general permits.

52. Comment from Barnes and Thornburg (on behalf of Atkinson, Kingston, Newton, and Plaistow)

The Draft MS4 Permit's construction stormwater provisions (Section 2.3.5) generally are consistent with the six minimum control measures intent. However, EPA Region 1 should note that EPA has proposed significant revisions to the Construction & Development Effluent Limitations Guidelines that will affect EPA's Construction General Permit ("CGP"). [footnote: 7 The C&D ELG revisions were necessitated by litigation and EPA's subsequent admission that it had exceeded its authority in adopting certain provisions in its earlier ELG rulemaking. See 78 Fed. Reg. 19,434 (April, 2013) for EPA's discussion regarding the litigation history and reasons for revising its earlier C&D ELG. These issues are directly relevant to the Draft MS4 Permit.] Hence, holding out the current CGP as a model must be accompanied by a disclaimer regarding changes to the BMPs and other provisions that underlie that permit. In addition, the 2008 Fact Sheet (at 51) discusses requirements for regulating materials "on" construction sites, and the Draft MS4 Permit implies requiring controls regarding activities and operations on the site. As illustrated in the Federal Register notice cited in the footnote on this page, EPA has no authority to regulate activities on a site, only those activities that lead directly to the discharge of pollutants from a point source to a water of the U.S.

53. Comment from Barnes and Thornburg (on behalf of Atkinson, Kingston, Newton, and Plaistow)

The Draft MS4 Permit's Post Construction Stormwater Management mandates (Section 2.3.6) are illegal and exceed EPA's CWA authority. EPA cannot require any site to mirror the pre-development hydrology, control stormwater flow or volume absent pollutant discharges, or in any way regulate impervious surface through the NPDES permit program. The section appears to be based on a National Stormwater Rulemaking that EPA has been unable to even propose on a national basis, and its attempts to insert its unproven program into the Draft MS4 Permit is illegal and unreasonable. Until EPA can demonstrate its legal authority and economic justification for such mandates, it should not attempt to force them upon small New Hampshire MS4 operators. Further, as set forth above, any expansion of the stormwater program must follow the CWA Sections 402(p)(5)-(6) process, including a report to Congress. EPA has not yet completed any such process even though it has separately committed to doing so. This entire section must be redrafted.

Stormwater (i.e. precipitation leading to runoff) is not a "pollutant" under the CWA and, therefore, the flow of stormwater- in and of itself- cannot be regulated as a "pollutant" under the Act. Recently, the Eastern District of Virginia held just that. In Virginia Department of Transportation et al. v. EPA, the court held that the CWA did not confer authority to regulate stormwater flow because stormwater is not a "pollutant," under that term's statutory definition. 1:12-CV-775, at *5 (E.D. Va. Jan. 1, 2013) (see attached slip opinion). The court rejected EPA's argument that stormwater flow could be regulated as "proxy" or "surrogate" to effect levels of pollutants already present within a water body, though it may be appropriate, in different circumstances, to impose stormwater flow restrictions as a means to regulate specific pollutant levels demonstrated as being discharged within the same stormwater flow. Id. at *5-*6.

Aspects of EPA's effort to regulate "flow" raise additional legal issues. In its efforts to regulate stormwater flow, EPA creates significant data collection and assessment burdens, and also mandates that the permittees impose a range of local land use restrictions, regardless of whether or not the permittees are the entities vested with the authority to do so under local law. EPA Region 1 wants to tell New Hampshire towns how to approve projects that include impervious surfaces (roads, parking lots, roofs, etc.), collect

data, conduct assessments and file reports about land-use, attempting to force green infrastructure and other requirements that may not be appropriate for such towns.

The Supreme Court has repeatedly rejected finding federal authority under the CWA to go so far as to usurp the "quintessential state and local power" that is the "[r]egulation of land use." Rapanos v. US 547 U.S. 715,738 (2006) (Scalia, 1. plurality) (citations omitted). See also Solid Waste Agency. US Army Corps of Eng'rs, 531 U.S.l59, 174(2001)(rejecting expansive reading of CWA jurisdiction because of "significant constitutional questions raised" by "impingement of the States' traditional and primary power over land and water use"). These cases turned on the interpretation of the jurisdictional phrases "the waters of the United States" and "navigable waters," and held that even by using those terms to broadly define the proper subject matter of federal jurisdiction under the CWA, Congress did not authorize federal regulators to supplant local land use decision-making. Rapanos, 547 U.S. at 738-39 ("We ordinarily expect a 'clear and manifest' statement from Congress to authorize an unprecedented intrusion into traditional state authority. The phrase 'the waters of the United States' hardly qualifies." (citation omitted)); Solid Waste Agency, 531 U.S. at 174 ("We thus read the statute as written to avoid the significant constitutional and federalism questions raised by respondents' interpretation.").

The net result of this section of the Draft MS4 Permit is to impose actual federal regulation of land use in small New Hampshire towns. The NPDES permitting program is bound by its focus on the "diescharge of pollutants," a term that is statutorily defined as the "addition of any pollutant to navigable waters." 33. U.S.C. § 1362(12). Thus, the NPDES permitting program is- as it must be- directly limited in its reach by the jurisdictional limits applicable to the CWA as a whole, which bar the federal regulation of local land use.

EPA's efforts to regulate impervious surfaces also raise legal issues about whether such surfaces actually qualify as "point sources" under the NPDES permit program. Impervious surface, on its own, cannot be subject to regulation under the NPDES permit program because impervious surface is neither a point source nor a pollutant. Rather, it is a feature of the landscape that indirectly influences how water is carried on and off the land. Congress predicated the stormwater permitting program in CWA Section 402(p) on point source discharges of pollutants from certain categories of dischargers, including MS4s and industrial activities.

Congress defined "point source" to mean "any discernible, confined and discrete conveyance, including but not limited to any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container, rolling stock, concentrated animal feeding operation, or vessel or other floating craft, from which pollutants are or may be discharged." 33 U.S. C. § 1362(14). Impervious surfaces such as roofs, parking lots, and roads clearly are not point sources. Impervious surfaces do not channelize water. Instead, sheet flow that travels across impervious surfaces is considered non-point runoff, which is not regulated under the stormwater permitting program or subject to enforceable wasteload allocations under the TMDL program.

If EPA now interprets "point source" to include impervious surfaces, it renders that term meaningless and clearly contradicts Congressional intent to define the term and differentiate "point sources" from "non-point sources." As noted by the Second Circuit Court of Appeals, "the phrase 'discernible, confined, and discrete conveyance' cannot be interpreted so broadly as to read the point source requirement out of the statute." Cordiano v. Metacon Gun Club, Inc., 575 F.3d 199, 219 (2d Cir. 2009). Such a broad interpretation would be contrary to the structure of the CWA. The Act defines the term "point source," and all other flows of water are nonpoint sources, the regulation of which is left to the states. !d. at 219-220.

EPA's NPDES regulations define the extent to which surface runoff can in certain circumstances constitute point source pollution. The definition of "Discharge of a pollutant" includes "additions of pollutants into waters of the United States from: surface runoff which is collected or channeled by man." 40 CFR § 122.2 (emphasis added). By implication, surface water runoff which is neither collected nor channeled constitutes

nonpoint source pollution and consequentially is not subject to the CWA permit requirement. See Hardy v. N.Y City Health & Hasps. Corp., 164 F.3d 789, 794 (2d Cir.1999) (relying on "the familiar principle of expressio unius est exclusio alterius, the mention of one thing implies the exclusion of the other").

54. Comment from Barnes and Thornburg (on behalf of Atkinson, Kingston, Newton, and Plaistow)

Note also that for many of these same reasons, the Draft MS4 Permit's requirements related to ground water recharge and infiltration (Section 3.1) also exceed EPA's authority. Again, this is not to say that the four Represented Towns objects to certain of these environmental controls and the resulting benefits; in fact they have passed similar ordinances without being mandated by EPA. But the key issue is that individual towns or the State of New Hampshire (if appropriate) take responsibility for determining their own appropriate controls to achieve their ends using their own legal mechanisms that are different from and independent of the Clean Water Act. Conversely, EPA's Draft MS4 Permit represents an ill-conceived attempt to mandate these practices through the heavy-handed NPDES permit program, where no authority for such mandates exists.

EPA Response to Comments 46 - 54

EPA's authority to regulate stormwater

This response addresses various comments EPA received challenging EPA's legal authority for this permit's limits and conditions. This response addresses commenters' mischaracterization of this permit as a rule or regulation, and reviews EPA's statutory and regulatory authority to include certain best management practices (BMPs) and other effluent limitations in this final permit. It also responds to comments regarding impervious surfaces, land use, and retention. This response explains the various flexibilities available to permittees, including the option to seek coverage under an individual permit instead of seeking coverage under this general permit. It also responds to comments on the validity of the requirements to reduce pollutants to the maximum extent practicable (MEP), and justifies the changes between the 2003 Small MS4 Permit and this final permit. This response replies to selected comments on the 2013 Notice of Availability of Draft NPDES General Permit for Stormwater Discharges from Small Municipal Separate Storm Sewer Systems in New Hampshire ("2013 Draft Permit") (78 FR 9908) (Feb. 12, 2013) and the 2015 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 ("2015 Renotice") (80 FR 52751) (Sept. 1, 2015). This response addresses comments above as well as portions of comments 55-60 and 227-233. This response must be read in conjunction with responses to comments regarding specific water quality-based effluent limitations (WQBELS) EPA Response to Comments 55 - 60 and EPA Response to Comments 227 - 233, as well as a number of other comments concerning EPA's legal authorities for the effluent limitations and conditions included in this final permit.

The Clean Water Act (CWA) provides statutory authority for EPA to establish the effluent limitations and conditions included in this permit. Section 301(a) of the Act, 33 USC § 1311(a), makes it unlawful for point sources to discharge pollutants to waters of the United States except in compliance with specified sections of the Clean Water Act, including section 402. Section 402 of the Act, 33 USC 1342, authorizes EPA to issue National Pollutant Discharge Elimination System (NPDES) permits allowing discharges that will meet certain specified requirements. Section 402(p) of the Act specifically addresses stormwater discharges. Under section 402(p)(2), certain stormwater discharges require NPDES permits. Among those discharges requiring permits are discharges from

municipal separate storm sewer systems (MS4s) serving populations of 100,000 or more. In addition, section 402(p)(6) authorizes EPA to designate for regulation other stormwater discharges in addition to those named in section 402(p)(2) "to protect water quality." Under this provision, EPA designated and required NPDES permits for discharges from "small" MS4s located in urbanized area as determined by the latest Decennial Census and other small MS4 discharges specifically designated by the EPA or the state. 40 CFR § 122.32(a). CWA sections 402(p)(3)(B)(ii) and (iii) and implementing regulations in 40 CFR §§ 122.26 and 122.34 require NPDES permits for stormwater discharges from MS4s to effectively prohibit non-stormwater discharges into the storm sewer system; and to require controls to reduce pollutant discharges to the maximum extent practicable (MEP) including BMPs, and other provisions as EPA determines to be appropriate for the control of such pollutants. This latter clause authorizes the imposition of water quality based effluent limitations (WQBELs). *Defenders of Wildlife v. Browner*, 191 F.3d 1159, 1166 (9th Cir. 1999). 40 CFR 122.44(k) provides for BMPs to be required to control or abate the discharge of pollutants from stormwater sources as authorized by CWA section 402(p).

The Requirements in this Permit Are Consistent with the Statute and Regulations

Some commenters expressed the view that this permit is inconsistent with the requirements of the CWA and the NPDES regulations. One commenter on the 2015 Renotice stated that "EPA is proposing a permitting approach in revised permit provisions. . . that are (1) not authorized by Section 402(p) . . ., (2) not authorized by the adopted storm water permitting rules [sic] 40 CFR 122.26 *et seq*, *** In essence, EPA is acting beyond its statutory and regulatory authority in seeking to enact these provisions." *See* Comment 256. EPA notes that this commenter characterized this portion of its comments as "Comments on Stormwater Rule Amendments." *Id.* at 1. As discussed in EPA Response to Comments 227 - 233, this general permit is not a rule or regulation.

EPA disagrees that this permit is inconsistent with the CWA and NPDES regulations. MS4 permits are governed by CWA Section 402(p)(3)(B), which provides that "permits for discharges from municipal storm sewers…shall include a requirement to effectively prohibit non-stormwater discharges into the storm sewers; and require controls to reduce the discharge of pollutants to the maximum extent practicable, including management practices, control techniques and system, design and engineering methods, and such other provisions as the Administrator or State determines appropriate for the control of such pollutants." CWA Section 402(p)(3)(B)(ii) and (iii).

Pursuant to CWA Sections 402(p)(2) and 402(p)(4), EPA promulgated regulations for large and medium MS4s in 1990. *See* Stormwater Phase I Rule, 40 CFR 122.26. EPA noted that when enacting Section 402(p)(3)(B)(iii) of the CWA, "Congress was aware of the difficulties in regulating discharges from municipal separate storm sewers solely through traditional end-of-pipe treatment and intended for EPA and NPDES States to develop permit requirements that were much broader in nature." 55 Fed. Reg. 44990, 48037-8 (November 16, 1990). The Agency further noted that "[a] shift towards comprehensive storm water quality management programs to reduce the discharge of pollutants from municipal separate storm sewer systems is appropriate for a number of reasons." *Id.* at 48038. EPA explained the rationale underlying such an approach, as follows: "A shift towards comprehensive storm water quality management programs to reduce the discharge of pollutants from municipal separate storm sewer systems is appropriate for a number of reasons. First, discharges from municipal storm sewers are highly intermittent, and are usually characterized by very high flows occurring over relatively short time intervals; for this reason, municipal storm sewer systems are usually designed with an extremely high number of outfalls within a given municipality to reduce potential flooding. Traditional end-of-pipe controls are limited by the materials

management problems that arise with high volume, intermittent flows occurring at a large number of outfalls. Second, the nature and extent of pollutants in discharges from municipal systems will depend on the activities occurring on the lands which contribute runoff to the system. Municipal separate storm sewers tend to discharge runoff drained from lands used for a wide variety of activities. Given the material management problems associated with end-of-pipe controls, management programs that are directed at pollutant sources are often more practical than relying solely on end-of-pipe controls." *Id.*

CWA Section 402(p)(6) directed EPA to promulgate regulations to implement the stormwater program for small MS4s:

> "Not later than October 1, 1993, the Administrator, in consultation with State and local officials, shall issue regulations (based on the results of the studies conducted under paragraph (5)) which designate stormwater discharges, other than those discharges described in paragraph (2), to be regulated to protect water quality and shall establish a comprehensive program to regulate such designated sources. The program shall, at a minimum, (A) establish priorities, (B) establish requirements for State stormwater management programs, and (C) establish expeditious deadlines. The program may include performance standards, guidelines, guidance, and management practices and treatment requirements, as appropriate."
>
> CWA 402(p)(6).

EPA thus promulgated the Stormwater Phase II Rule. *See* 64 Fed. Reg. 68,722 (Dec. 8, 1999), codified at 40 CFR 122.30 – 122.37. EPA recently revised the Phase II Rule, but the revisions insofar as this permit are concerned were procedural in nature and did not change the underlying substantive requirements of the program, except to clarify that the permitting authority is responsible for determining "what permit requirements are needed to reduce pollutants from each permitted small MS4 'to the maximum extent practicable (MEP), to protect water quality, and to satisfy the appropriate water quality requirements of the Clean Water Act (CWA)' (referred to hereinafter as the 'MS4 permit standard')." See 81 Fed. Reg. 89,320, 89,323 (Dec. 9, 2016) ("2016 Phase II Remand Rule").

As originally promulgated, the Stormwater Phase II rule required that NPDES permits for regulated small MS4s developed in accordance with 40 CFR 122.34(a) require the MS4 operator to "develop, implement, and enforce a stormwater management program ('SWMP') that is designed to reduce the discharge of pollutants from the MS4 to the MEP, protect water quality, and satisfy the appropriate water quality requirements of the Clean Water Act." 64 Fed. Reg. 68,722, 68,843; *see also* 64 Fed. Reg. at 68,752-53. As revised in the 2016 Phase II Remand Rule, section 122.34(a) requires that any permit issued to a regulated small MS4 must include "permit terms and conditions to reduce the discharge of pollutants from the MS4 to the maximum extent practicable (MEP), to protect water quality, and to satisfy the appropriate water quality requirements of the Clean Water Act." 40 CFR 122.34(a). For all permitted MS4s, 40 CFR 122.34 requires a written storm water management program (SWMP), that includes the following six minimum control measures: (1) public education and outreach on stormwater impacts; (2) public involvement and participation; (3) illicit discharge detection and elimination; (4) construction site stormwater runoff control; (5) post construction stormwater management in new development and redevelopment; and (6) pollution prevention/good housekeeping for municipal operations. 40 CFR 122.34(b).

One commenter claimed that this permit should comply with "adopted storm water permitting rules [sic] 40 CFR 122.26 *et seq.*" *See* Comment from New Hampshire Stormwater Coalition. This commenter's claim that this small MS4 permit should comply with large and medium MS4 regulations at 122.26 is incorrect. This general permit is designed in accordance with the CWA, the 1999 Phase II Rule, and the 2016 Phase II Remand Rule, and allows flexibility, as appropriate, for regulated small MS4s.

Some commenters expressed the view that this permit goes beyond the minimum control measures of section 122.34. In these commenters' view, EPA improperly expanded the stormwater program for regulated small MS4s without adequate justification for doing so. EPA does not agree. As stated in the 2016 Phase II Remand Rule preamble:

> Some commenters confuse ''minimum permit requirements'' with the specified elements of the minimum control measures described in § 122.34(b). In a related manner, a number of permitting authorities have shared with EPA their experiences in encountering resistance to a proposed permit requirement on the basis that it is not explicitly required in the federal regulations. In addition, some commenters asked EPA to clarify that suggestions made in the ''guidance'' paragraphs that are unique to the small MS4 regulations are not mandatory permit terms.
>
> The regulations specify the elements that must be addressed in a permit. It is up to the permitting authority to establish the specific terms and conditions to meet the MS4 permit standard for each of these elements. The minimum control measures set forth in § 122.34(b), for instance, are not intended as minimum permit requirements, but rather areas of municipal stormwater management that must be addressed in permits through terms and conditions that are determined adequate to meet the MS4 permit standard. For that matter, if a permitting authority were to merely use the minimum control measure language from § 122.34(b) word-for-word and include no further enforceable permit terms and conditions, this permit would not satisfactorily meet the requirement to establish clear, specific, and measurable requirements that together ensure permittees will comply with the MS4 permit standard. EPA emphasizes that what constitutes compliance with the MS4 permit standard continues to evolve. The need to reevaluate what is meant by ''maximum extent practicable'' for each permit term, as well as the need to determine what is necessary to protect water quality and satisfy the appropriate water quality requirements of the CWA, means that what constitutes compliance will by necessity change over time. Therefore, in EPA's view, those that argue that the minimum federal requirements are what is included in the regulations' wording of the minimum control measures, are misconstruing the intent of the regulations and are handicapping permits by artificially tying the MS4 permit standard to the minimum control measures.
>
> EPA emphasizes that the minimum control measures do not restrict the permitting authority from regulating additional sources of stormwater pollutant discharges, not specifically mentioned in the minimum control measure language. For example, some states require small MS4s with very large populations to implement a program that addresses industrial sites due to the concentration of industrial sites in many of their larger urban areas. (Consider that some small MS4s can be the same size as ''medium'' MS4s, which are required to have a program for addressing stormwater discharges from industrial sites.) Such a requirement represents what is necessary, for those small MS4s, to reduce pollutants as necessary to meet the MS4 permit standard. This does not mean that the

> requirement is more stringent than the minimum control measures, but rather it constitutes what is needed in the permitting authority's view to satisfy the MS4 permit standard."
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> 81 Fed. Reg. at 89,341-2.

This permit principally uses narrative effluent limitations requiring the implementation of BMPs as the means for achieving the regulatory requirements. The NPDES regulations governing small MS4 permits expressly recognize that a permit for small MS4s may include "narrative, numeric, or other types of requirements (*e.g.,* implementation of specific tasks or best management practices (BMPs), BMP design requirements, performance requirements, adaptive management requirements, schedules for implementation and maintenance, and frequency of actions)." 40 CFR 122.34(a) (as revised by 2016 Phase II Remand Rule; *see also* 40 CFR 122.34(a) as codified prior to the 2016 revisions). Additionally, 40 CFR 122.44(k)(2) expressly authorizes BMPs to control or abate the discharge of pollutants when authorized under section 402(p) for the control of stormwater discharges. In this case, EPA has determined that the BMPs in this permit are reasonably necessary to carry out the purposes and intent of the CWA. *See also* Fact Sheet to the draft permit, Attachment 1 to the Fact Sheet to the 2013 Draft Permit and statement of basis for the 2015 Renotice.

One commenter focused on "Guidance" included in the Phase II rule at 40 CFR 122.34(e)(2) that states, "EPA strongly recommends that until the evaluation of the storm water program in § 122.37, no additional requirements beyond the minimum control measures be imposed on regulated small MS4s without the agreement of the operator of the affected small MS4, except where an approved TMDL or equivalent analysis provides adequate information to develop more specific measures to protect water quality." EPA disagrees with commenters' assertions that EPA exceeded the minimum measure requirements of section 122.34 in Part 2.3 of the Draft Permit.

In the 2016 Phase II Remand Rule, EPA deleted the existing § 122.34(e)(2). In doing so, the Agency noted the following:

> As explained in the preamble to the proposed rule, the guidance in existing §122.34(e)(2) reflects EPA's recommendation for the initial round of permit issuance, which has already occurred for all permitting authorities. The phrasing of the guidance language no longer represents EPA policy with respect to including additional requirements. EPA has found that an increasing number of permitting authorities are already including specific requirements in their small MS4 permits that address not only wasteload allocations in TMDLs, but also other requirements that are in addition to permit provisions implementing the six minimum control measures irrespective of the status of EPA's § 122.37 evaluation. See EPA's *Compendium of MS4 Permitting Approaches—Part 3: Water Quality-Based Requirements* (EPA, 2016). *** Based on the advancements made by specific permitting programs, and information that points to stormwater discharges continuing to cause waterbody impairments around the country, prior to the promulgation of this final rule, EPA has advised in guidance that permitting authorities write MS4 permits with provisions that are ''clear, specific, measurable, and enforceable,'' incorporating such requirements as clear performance standards, and including measurable goals or quantifiable targets for implementation."
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> 81 Fed Reg 89320, 89343-89344 (Dec. 9, 2016).

Thus, as noted above, it is the responsibility of the permitting authority to determine the permitting requirements needed "to reduce the discharge of pollutants from the MS4 to the maximum extent practicable (MEP), to protect water quality, and to satisfy the appropriate water quality requirements of the Clean Water Act." 40 CFR 122.34(a). The requirements of this permit were designed to be consistent with the provisions of the Phase II Rule, both prior to and following the promulgation of the 2016 Phase II Remand Rule. As explained in this Response to Comments document [and in other parts of the permit record], EPA has obtained a great deal of information concerning MS4 programs since the Phase II rule was promulgated in 1999 (National Research Council, 2008) (Pitt, et al., 2005) (US EPA, 2014) (USEPA, 2010) and information on program administration submitted to EPA in annual reports by permittees covered under the previous New Hampshire small MS4 permit, issued in 2003. While New Hampshire permittees have been implementing stormwater management programs with varying degrees of success across New Hampshire, stormwater is contributing to over 80% of the water quality impairments in New Hampshire (New Hampshire House Bill 1295 Chapter 71 Laws of 2008 Stormwater Study Commission, 2010). In light of this considerable additional information and the ongoing water quality problems associated with stormwater discharges in New Hampshire, the requirements of the 2003 permit no longer represent MEP for permittees in New Hampshire. The greater specificity of this permit for implementation of the minimum measures is appropriate and in keeping with the requirements of the Phase II regulations.

Comments related to limitations on point source discharges, flow, imperviousness, and retention requirements

Several commenters challenged EPA's authority to set permit limitations as the Agency has done in this Permit. These commenters asserted that EPA was inappropriately controlling contributions to MS4s rather than the discharges from MS4s. One Commenter claimed: "EPA cannot require any site to mirror the pre-development hydrology, control stormwater flow or volume absent pollutant discharges, or in any way regulate impervious surface through the NPDES permit program" [B&T 53]. Although EPA disagrees with commenters' assertions concerning what the permit actually requires, EPA is responding to the points made in comments concerning regulation of stormwater flows, impervious surfaces, and mandating retention requirements as comments on the 2013 Draft Permit.

These comments mischaracterize the requirements that EPA has established in this permit, because EPA has not specifically limited stormwater flows or impervious cover. The permit does not require permittees to mirror pre-development hydrology, control stormwater flow or volume in the absence of discharges, or regulate impervious surface. See also EPA Response to Comment 358 and EPA Response to Comments 386 - 388. The permit, nevertheless, recognizes that an effective means to control stormwater discharges from the MS4 is for MS4s to reduce the volume of discharged stormwater by reducing impervious cover. Thus, the permit includes retention of stormwater on-site as one, but only one, option for reducing pollutants in post-construction runoff discharged by the MS4.

Some commenters argue that impervious surfaces and other contributing sources are not themselves point sources and cannot be subject to permitting requirements. These comments are beyond the scope of this permit, because the permit regulates discharges from MS4s and does not regulate third parties. In any case, these comments do not accurately state what is defined as a "point source." As stated in the preamble for the Phase I rule, EPA has taken a broad view of what constitutes a point source, consistent with established case law, as follows:

> One industry argued that the definition of "point source" should be modified for storm water discharges so as to exclude discharges from land that is not artificially graded and which has a propensity to form channels where precipitation runs off. EPA intends to embrace the broadest possible definition of point source consistent with the legislative intent of the CWA and court interpretations to include any identifiable conveyance from which pollutants might enter the waters of the United States. In most court cases interpreting the term "point source", the term has been interpreted broadly. For example, the holding in *Sierra Club* v. *Abston Construction Co, Inc.*, 620 F2d 41 (5th Cir. 1980) indicates that changing the surface of land or establishing grading patterns on land will result in a point source where the runoff from the site is ultimately discharged to waters of the United States ***." 55 Fed. Reg. 44990, 47997 (November 16, 1990).

One commenter asserted that the permit can only include requirements that relate directly to the discharge of pollutants from point sources to waters of the United States. The effluent limitations established in this permit are all directly related to the reduction of pollutants from the MS4's discharges to waters of the U.S. Under this permit, the only entities to be permitted are regulated small MS4s, as defined in 40 CFR 122.26(b)(16) and 122.32(a), that are eligible for coverage, as specified in the permit in parts 1.1 and 1.2. Small MS4s are point source dischargers and are subject to the statutory and regulatory requirements articulated above. This general permit requires each permitted MS4 to institute controls to reduce pollutants in the MS4's discharge. Pollutants discharged from the MS4 are to be reduced by controls that limit the contribution of pollutants to the MS4. In other words, the requirements in the permit for MS4s to implement measures to reduce pollutants in the stormwater entering the MS4, such as construction site stormwater, relate directly to discharges from the MS4s themselves. Compliance with this permit will significantly reduce the amount of sediment and other pollutants (e.g., nutrients, bacteria, metals, chloride, oil and grease, and other toxic and nonconventional pollutants) discharged from MS4s. *See also* [EPA response to Comments 98-110 and EPA Response to Comments 61-83.

Some commenters argued that the permit regulates "flow" rather than pollutants, and that only pollutants may be controlled by an NPDES permit. Commenters stated that "stormwater (i.e. precipitation leading to runoff) is not a 'pollutant' under the CWA and, therefore, the flow of stormwater - in and of itself- cannot be regulated as a 'pollutant' under the Act," that flow could not be a surrogate for pollutants, and that impervious surfaces are "neither a point source nor a pollutant." See comment 53. These comments mischaracterize the permit by claiming that stormwater is being regulated as a pollutant. Rather, the permit implements three CWA provisions and their implementing regulations in 40 CFR Part 122, which provide authority for including requirements to limit stormwater discharges. Section 402(p)(1) specifically authorizes and requires NPDES permits for certain "discharges composed entirely of stormwater," recognizing that all stormwater contains pollutants. Section 402(p)(3)(B)(iii) specifically authorizes the inclusion of various types of controls, including "management practices" and "control techniques" to reduce the discharge of pollutants to the maximum extent practicable, and further authorizes "such other provisions as the Administrator or the State determines appropriate for the control of such pollutants." This places substantial discretion with the permitting agency to determine what controls are necessary, including controls such as the retention requirements at issue here. Further, section 402(p)(6), under which small MS4s are regulated, authorizes EPA to designate "stormwater discharges . . . to be regulated to protect water quality and [to] establish a comprehensive program to regulate such designated sources." In EPA's view, a comprehensive program can include limitations on the volume of stormwater discharged as a means of reducing the discharge of

pollutants. Therefore, under section 402(p), there are three bases for limitations on the volume of stormwater to reduce pollutants discharged by an MS4.

In issuing the Phase II stormwater regulations to implement these statutory requirements, EPA echoed section 402(p)(3)(b)(iii)'s assumption that stormwater discharges will contain pollutants. "Stormwater runoff may contain or mobilize high levels of contaminants, such as sediment, suspended solids, nutrients, heavy metals, pathogens, toxins, oxygen-demanding substances, and floatables." § 122.30(c). EPA's permitting requirements thus comprehensively address discharges of stormwater and reduce pollutant loads through provisions for small MS4s to, *inter alia*, eliminate illicit discharges, and reduce contributions from construction and development and from municipal operations. See 40 CFR 122.34.

Some commenters argued that EPA lacks authority to regulate stormwater flow based on *Virginia Department of Transportation v. U.S. Environmental Protection Agency*, 2013 U.S. Dist. LEXIS 981 (E.D.Va. Jan. 3, 2013) ("*Accotink*"). They stated that EPA cannot use flow as a surrogate, regulate impervious surfaces, or mandate on-site retention. EPA disagrees with commenters' characterization of the *Accotink* case and its applicability to this permit, since that case relates to a different statutory provision. The *Accotink* decision struck down a TMDL that expressed a load allocation and wasteload allocations for sediment in terms of stormwater flow rate based on EPA's view that the flow rate from storm events served as a surrogate for sediment pollutant loads. The court held that this was not authorized because the statutory section authorizing TMDLs, CWA Section 303(d)(1)(C), specifically requires the setting of a total maximum daily load "for those pollutants which the Administrator identifies . . . as suitable for such calculation." Since the court's decision turned on the specific language of Section 303(d)(1)(C), it has no bearing on EPA's authority to regulate "stormwater discharges," as expressly required under CWA Section 402(p), or to require various types of controls under CWA Section 402(p)(3)(B)(iii).

This permit does not establish permit requirements regulating flow or impervious cover as asserted by commenters. See comment 53. EPA establishes parameters for on-site retention of stormwater as one option for meeting post-construction stormwater control requirements. Based on comments received on the 2015 Renotice, EPA added pollutant removal requirements as an alternative means for controlling post-construction stormwater discharges from the MS4 (see EPA Response to Comments 386 - 388), thereby providing additional flexibility for permitted MS4s. The purpose of these requirements in the Final Permit is to reduce pollutant discharges from the permitted MS4s to the maximum extent practicable in accordance with the statute and regulations. As noted above, Section 402(p)(3)(B)(iii) of the CWA lists a variety of ways for MS4 permits to regulate the discharge of pollutants in stormwater, including "management practices, control techniques and system, design and engineering methods," and further authorizes "such other provisions as the Administrator or the State determines appropriate for the control of such pollutants." See also 40 CFR 122.34(a). The post-construction requirements in the permit are consistent with this statutory provision authorizing the imposition of practices for reducing the discharge of pollutants. For this permit, EPA determined that these requirements are appropriate based on post-construction stormwater retention requirements already being implemented in New Hampshire and in neighboring states. *See also* EPA Response to Comment 358 and EPA Response to Comments 386 - 388.

The Permit Allows Flexibility to MS4s and MS4s May Choose to Seek NPDES Permit Coverage under This General Permit or under an Individual NPDES Permit

Some commenters expressed the view that the 2013 Draft Permit improperly limited the options of the MS4s to be covered by the permit. One comment stated that "[t]he requirements in the Draft Permit are essentially a one-size fits all approach that EPA is unilaterally dictating to the regulated community." [NHC I.2] The same comment argues that "the permit should provide significant additional flexibility to New Hampshire MS4 communities." *Id.*

These comments seek to apply the flexibility that MS4 permittees have in developing their stormwater management programs to the establishment of permit requirements. The flexibility that the commenters advocate was expressly rejected by the U.S. Court of Appeals for the Ninth Circuit in *Environmental Defense Center v. U.S. Environmental Protection Agency*, 344 F.3d. 832, 855-56 (9th Cir. 2003) (*EDC*). The court remanded the MS4 general permit provisions in the Phase II rule because the rule provided for the MS4s to state in their notices of intent to be covered by the general permit what their proposed best management practices and measurable goals for each of the six minimum measures in the permit without any oversight. The court stated:

> [U]nder the Phase II Rule, nothing prevents the operator of a small MS4 from misunderstanding or misrepresenting its own stormwater situation and proposing a set of minimum measures for itself that would reduce discharges by far less than the maximum extent practicable.
>
> In fact, under the Phase II Rule, in order to receive the protection of a general permit, the operator of a small MS4 needs to do nothing more than decide for itself what reduction in discharges would be the maximum practical reduction. No one will review that operator's decision to make sure that it was reasonable, or even good faith. [footnote omitted.] Therefore, as the Phase II Rule stands, EPA would allow permits to issue that would do less than require controls to reduce the discharge of pollutants to the maximum extent practicable. [footnote omitted] *See* 64 Fed. Reg. at 68753 (explaining that the minimum control measures will protect water quality if they are "properly implemented"). We therefore must reject this aspect of the Phase II Rule as contrary to the clear intent of Congress.

The court went on to say, "Our holding does not preclude regulated parties from designing aspects of their own stormwater management programs, as contemplated under the Phase II Rule. However, stormwater management programs that are designed by regulated parties must, in every instance, be subject to meaningful review by an appropriate regulating entity to ensure that each such program reduces the discharge of pollutants to the maximum extent practicable." *Id.* at 856.

Thus, since the *EDC* decision, it has been clear that the permitting authority must establish in the MS4s' permits what is required of regulated small MS4s to reduce the discharge of pollutants "to the maximum extent practicable (MEP), to protect water quality, and to satisfy the appropriate water quality requirements of the Clean Water Act" 40 C.F.R. §122.34(a). In December 2016, EPA amended the Phase II rule to respond to the EDC remand. See 81 Fed. Reg. 89,320, 89,323 (Dec. 9, 2016). As explained in the preamble to the proposed rule responding to the remand, the MS4 permitting program has continued to recognize the flexibility inherent in the stormwater management program component of the MS4 requirements:

> EPA continues to view MEP as iterative, in that each successive permit needs to define what is required to meet the MEP standard for that permit term. The Traditional General Permit

> Approach would clarify that the requirements for meeting MEP (and to protect water quality and satisfy CWA water quality requirements) would be required to be established in each successive permit by the permitting authority, while the SWMP implemented by the MS4 would be a planning and programmatic document that the MS4 would be able to update and revise during the permit term as necessary to comply with the terms of the permit.
>
> 81 Fed. Reg 415, 421 (Jan. 6 2016).

In other words, the fundamental flaw in the Phase II rule identified by the 9th Circuit is addressed by clearly establishing the permit requirements in the permit, and providing flexibility for MS4s permittees under the permit to determine how best to comply with those requirements, taking into account local conditions.

Commenters' references to the Stormwater Phase I rule preamble are misplaced in the context of a permit written under the Phase II regulations, because the cited passages relate to the permit application requirements established for Phase I MS4s. The Agency contemplated that the Phase I requirements would afford MS4s the flexibility to design a program appropriate to their jurisdiction. As stated in the preamble, "[c]onsistent with the intent of Congress, this rule sets out permit application requirements that are sufficiently flexible to allow the development of site-specific permit conditions." 55 Fed. Reg. 44990, 48038 (November 16, 1990). Although the approach taken in the Phase I rule was based on the individual permit applications submitted by each Phase I MS4, EPA did not think that such flexibility should be unbounded. As the preamble states, "EPA agrees that as much flexibility as possible should be incorporated into the program. However, flexibility should not be built into the program to such an extent that all municipalities do not face essentially the same responsibilities and commitment for achieving the goals of the CWA." *Id.* Indeed, the Phase I rule lays out what the MS4's proposed stormwater management program must include, but also states, "Proposed programs will be considered by the Director when developing permit conditions to reduce pollutants in discharges to the maximum extent practicable." 40 C.F.R. §122.26(d)(2)(iv).

Similarly, commenters misread the statement in the Phase II rule preamble regarding EPA's decision not to define "maximum extent practicable" in the rule: "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. 64 Fed. Reg. 68,754 (Dec. 8, 1999) (emphasis added)." While the comment emphasizes the second sentence in this excerpt, the context is stated in the first sentence: "MS4 permitting." As required by the *EDC* decision, the permitting authority must determine what is required to meet the MEP standard, and this has now been clearly incorporated into the small MS4 permitting regulations in 40 C.F.R. §122.34. See 81 Fed. Reg. at 89333-34.

The 2016 Phase II Remand Rule provides for two approaches for general permitting for small MS4s; i.e., a "comprehensive general permit," in which the Director "includes all required permit terms and conditions in the general permit" (40 CFR 122.28(d)(1)), or a "two-step general permit," in which the MS4 submits proposed terms and conditions for review by the Director, and which contemplates review and an opportunity for the Director to request additional information, as well as an opportunity for the public to comment and request a hearing, etc. prior to approval by the Director (40 CFR 122.28(d)(2)). While this permit was developed before these options were specified in the NPDES regulations, EPA has followed the "comprehensive general permit" approach

now set forth in 40 CFR 122.28(d)(1). This general permit allows great flexibility in meeting permit requirements as long as the minimum requirements in the permit are met. The permit provides flexibility in several ways, including, for example:

- Allowing for the permittee to determine the particular means to compliance for certain permit requirements. For instance, Part 2.3.2 of the permit (Public Education and Outreach) identifies four target audiences (residents, businesses/commercial facilities, developers/construction, and industrial facilities) and requires each permittee to direct education messages of stormwater impacts and controls to each of these audiences. Part 2.3.2 of the permit does not require the use of any specific message and allows each permittee to tailor their educational program to each audience according to local needs and priorities.

- Establishing alternative requirements and allowing the permittee to select from among the alternatives. For example, Part 2.3.6 (Post Construction Stormwater Management) provides permittees with options as to how they would like to manage stormwater following development and re- development projects within their jurisdictions. In particular, Part 2.3.6. allows the permittee to adopt the post construction stormwater management standards developed by the Southeast Watershed Alliance specifically for New Hampshire Communities in place of adopting an ordinance consistent with the requirements of Part2.3.6.a.ii(a)-(f).

- Allowing the permittee to develop a pollutant reduction plan as an alternative to the plan described in the permit. For example, Appendix F (TMDL Implementation) allows the permittee the option to work with NHDES to develop alternative pollutant reduction plans consistent with the applicable TMDLs in place of adhering to the specific TMDL requirements for each pollutant in Appendix F. In this case the permittee is afforded the opportunity to create its own pollutant reduction plans with NHDES and submit the plan for approval with their NOI for coverage under this permit. See EPA Response to Comment 22.

The availability of a general permit does not mean that an MS4 eligible for coverage under the general permit must seek coverage under that permit. General permit requirements are only binding on permittees that seek coverage under that permit. Any point source eligible for coverage under a general permit may seek to obtain general permit coverage under that permit or apply for an individual permit. 40 CFR 122.28(b)(3)(iii). In addition to this generally applicable regulation concerning the options available to all point sources, the NPDES regulations for small MS4s specifically allow individual MS4s to seek coverage under an individual stormwater permit. 40 CFR 122.33(b)(2). Thus, the NPDES regulations allow small MS4s multiple options for permit coverage. Although the regulations for small MS4s support the use of general permits for small MS4, they contemplate that small MS4s might prefer to develop their own program consistent with the requirements of 40 CFR 122.34 under an individual permit, rather than a general permit. Further, the regulations contemplate that a small MS4 might even prefer an approach other than the program set forth in section 122.34. Thus, the Phase II preamble stated, “As an alternative to implementing a program that addresses each of the six minimum measures according to the requirements of § 122.34(b), today’s rule provides the operators of regulated small MS4s with the option of applying for an individual permit under existing § 122.26(d). See § 122.33(b)(2)(ii). If a system operator does not want to be held accountable for implementation of each of the minimum measures, an individual permit option under § 122.33(b)(2)(ii) remains available. * * * EPA

originally drafted the individual permit application requirements in § 122.26(d) to apply to medium and large MS4s. Today's rule abbreviates the individual permit application requirements for small MS4s. Although EPA believes that the storm water management program requirements of § 122.34, including the minimum measures, provide the most appropriate means to control pollutants from most small MS4s, the Agency does recognize that the operators of some small MS4s may prefer more individualized permit requirements. Among other possible reasons, an operator may seek to avoid having to "regulate" third parties discharging into the separate storm sewer system. Alternatively, an operator may determine that structural controls, such as constructed wetlands, are more appropriate or effective to address the discharges that would otherwise be addressed under the construction and/or development/ redevelopment measures." *Id.* at 68765. Thus, several concerns raised by some commenters may best be addressed by allowing MS4s the option of an individual permit that is contoured to the particular issues and interests of that MS4.

Other commenters expressed concern that the draft requirements were not based on site specific discharge data from the MS4s to be authorized by the permit. In developing this permit, EPA based the requirements of the permit on water quality data collected by permittees in New Hampshire and Massachusetts covered by the 2003 MS4 general permit (e.g. annual reports submitted by permittees covered under the 2003 MS4 Permit) as well as assumptions extrapolated from stormwater water quality data collected from other stormwater discharges, modelling, studies, and other sources of information (see EPA Response to Comments 61-83 regarding general stormwater quality in New England). EPA believes that the assumptions on which the permit's requirements were based are valid and provide a sufficient basis for these requirements. Moreover, the requirements are adaptable to the particular circumstances associated with each MS4's stormwater program. In particular instances where MS4s do not feel the provisions of this permit provide adequate flexibility, the individual permitting approach contemplated by 40 CRF 122.33(b) would allow an MS4's permit to be based on site-specific data and other information provided by the MS4. Thus, if an MS4 wishes to have permit requirements based on actual discharge data, the regulations provide MS4s the option to take such an approach, as discussed above. See 40 CFR 122.33(b)(2).

This permit does not mandate land use control and does not violate the 10th Amendment

A group of commenters stated that the 2013 Draft Permit would improperly mandate certain local land uses and "infringe on local land use control." See comment 46. The same commenters argued that EPA "mandates that the permittees impose a range of local land use restrictions, regardless of whether or not the permittees are the entities vested with the authority to do so under local law. EPA Region 1 wants to tell New Hampshire towns how to approve projects that include impervious surfaces (roads, parking lots, roofs, etc.), collect data, conduct assessments and file reports about land-use, attempting to force green infrastructure and other requirements that may not be appropriate for such towns." Id. EPA disagrees with these commenters' assertions.

This NPDES general permit does not mandate that municipalities make particular land use choices for implementing the permit requirements or any of the other points asserted in these comments. Rather, this permit provides permitted MS4s options for meeting post construction requirements and does not prescribe a specific technology, treatment technique or site design in order to comply with the post construction requirements. There are various options for site design and stormwater treatment technologies that can be used to meet the post construction requirements contained in this permit. As discussed above, consistent with post construction stormwater management requirements across the Nation and the approach laid out in the CWA, the permit merely sets requirements that EPA finds is practicable for all permittees and protective of water quality. The

permit requirements leave the permittees flexibility in how they want to implement this provision on the local level. Nevertheless, it is the MS4's decision whether or not to seek coverage under this general permit. If an MS4 would like tailored post construction requirements to their particular circumstances the MS4 may seek coverage under an individual permit under 40 CFR § 122.33(b)(2)(ii) that could include more prescriptive post construction requirements tailored to the MS4.

Courts have upheld EPA's Phase II stormwater rule and its approach to offering individual stormwater NPDES permits in place of otherwise applicable MS4 general permits. In *Environmental Defense Center v. EPA*, 344 F.3d 832 (9th Cir. 2003), the court found that the Phase II stormwater rule did not "compel operators of small MS4s to regulate third parties in contravention of the Tenth Amendment." *Id.* at 835. Operators may opt to avoid the Minimum Measures contained in a MS4 general permit by seeking an individual permit under 40 CFR § 122.33(b)(2)(ii). In *City of Abilene v. EPA*, 325 F.3d 657 (5th Cir. 2003), the court held that because EPA offered Abilene the option to be covered under an individual permit instead of a general permit, EPA was not coercing Abilene to impose federal requirements on third parties in violation of the Tenth Amendment. If a municipality that would otherwise be covered by this general permit would prefer to be covered by an individual stormwater permit, the permittee may submit an individual permit application. See Permit Section 1.8.b; see also 40 CFR 122.28(b)(3), 122.33(b)(2)(i) and (iii).

MEP comments / differences between 2003 MS4 permit and this Permit

EPA received other comments concerning the validity of the Requirements to Reduce Pollutants to the Maximum Extent Practicable (MEP). Commenters stated that the 2013 Draft Permit was more stringent than the MS4 permit issued for New Hampshire in 2003 ("2003 MS4 Permit"), citing a statement made in the 1999 Federal Register notice that MEP is not precisely defined so as "to allow maximum flexibility in MS4 permitting," and that EPA added extraneous and unjustified complexity to the MEP requirements, "contravening the flexibility envisioned" by the NPDES Permit Writers' Manual. *See* Barnes and Thornburg (on behalf of Atkinson, Kingston, Newton, and Plaistow) comments. The same commenter also objected to the "excessive verbiage" and discussion in the Draft Permit and Fact Sheet, stating that they "read more like guidance than typical NPDES general permits." *Id.*

EPA agrees that this permit includes requirements that were not included in the 2003 MS4 Permit. As with any permit reissuance, the Agency is required to evaluate the best available information at the time of reissuance and determine whether additional limitations are necessary to meet the requirements of the CWA.

As discussed above, since the *EDC* decision, it has been clear that the permitting authority must establish in the MS4s' permits what is required of regulated small MS4s to reduce pollutants the discharge of pollutants "to the maximum extent practicable (MEP), to protect water quality, and to satisfy the appropriate water quality requirements of the Clean Water Act" 40 C.F.R. §122.34(a). In December 2016, EPA amended the Phase II rule to respond to the EDC remand. See 81 Fed. Reg. 89,320, 89,323 (Dec. 9, 2016). As explained in the preamble to the proposed rule responding to the remand, the MS4 permitting program has continued to recognize the flexibility inherent in the stormwater management program component of the MS4 requirements:

> EPA continues to view MEP as iterative, in that each successive permit needs to define what is required to meet the MEP standard for that permit term. The Traditional General Permit

> Approach would clarify that the requirements for meeting MEP (and to protect water quality and satisfy CWA water quality requirements) would be required to be established in each successive permit by the permitting authority, while the SWMP implemented by the MS4 would be a planning and programmatic document that the MS4 would be able to update and revise during the permit term as necessary to comply with the terms of the permit.
>
> 81 Fed. Reg 415, 421 (Jan. 6, 2016).

Also as discussed above, in the 2016 Phase II Remand Rule EPA has explicitly clarified that the permitting authority must establish permit limits and requirements that fulfill the MEP standard and protect water quality. In the preamble, EPA states: "Under the proposed Traditional General Permit Approach, the permitting authority must establish in any small MS4 general permit the full set of requirements that are deemed necessary to meet the MS4 permit standard ('reduce pollutants to the maximum extent practicable, protect water quality and satisfy the appropriate water quality requirements of the Clean Water Act'), and the administrative record would include an explanation of the rationale for its determination. (This approach contrasts with the original regulations, which appeared to the court to provide the permittee with the ability to establish its own requirements.)" 81 FR 89320. In other words, it is the responsibility of the permitting authority to ensure that the permit requirements adequately meet the applicable MS4 standards. The Final Permit is consistent with the approach taken in the latest revisions to the Phase II MS4 regulations.

In the development of this permit, EPA has ensured that the permit requirements adequately meet the applicable MS4 standard, as discussed in the 2013 Fact Sheet pp. 72-108, the 2013 Fact Sheet Attachment 1pp. 37-58, the Statement of Basis for the 2015 reopened sections of the 2013 Draft Permit and part 2.3.2 – part 2.3.7 of this response to comments document. As stated in the Fact Sheet, "In implementing the statutory requirement to reduce pollutants to the maximum extent practicable (MEP), EPA has interpreted the MEP requirement as representing an iterative approach that requires that standards be raised each permit term so that progress will be made toward the attainment of water quality standards and towards the goals of the Clean Water Act established by Congress. Fact Sheet, p. 144. " EPA has reviewed MS4 data collected over the last permit term (since the 2003 MS4 Permit was issued) and is strengthening the permit conditions in this permit to reflect EPA's determination of the current maximum "practicable" pollutant reductions. Again, as noted in the Fact Sheet, "EPA has also used the knowledge gained from its experience under the MS4-2003 to establish detailed requirements where appropriate." Fact Sheet, p. 145 The 2013 Fact Sheet pp. 72-108, 2013 Fact Sheet Attachment 1 pp. 37-58, and part 2.3.2 – part 2.3.7 of this Response to Comments document provide the rationale for the MEP provisions included in this permit.

The NPDES Permit Writers' Manual does not specify how flexibility is to be provided. As discussed above and in Part 2.3.2 through 2.3.7 of this Response to Comments document, the permit allows a great deal of flexibility for permittees in deciding how to meet the requirements of the permit. Further, also as discussed above, the regulations allow MS4s seeking to take approaches for limiting stormwater discharges that are different from those specified in this permit to seek coverage under an individual permit.

Regarding the comment concerning the verbiage of the permit, EPA has eliminated some of the discussion in the permit and appendices that is not binding on permittees, but takes the view that the permit needs to thoroughly explain the permit requirements, when they must be implemented,

and, particularly in the case of a general permit, who is subject to various requirements. Given the complexities of stormwater management for a statewide permit, there is a need to provide sufficient information, for example, so as to avoid confusion or indiscriminate blanket requirements that may not be appropriate for all permittees. Similarly, because the purpose of a Fact Sheet is to describe and explain the draft permit and the basis for its requirements, the Fact Sheets developed for each of the drafts of this permit were written to serve that function. See 40 CFR sections 124.8 and 124.56.

2.1 Water Quality Based Effluent Limitations

55. Comment from Barnes and Thornburg (on behalf of Atkinson, Kingston, Newton, and Plaistow)

The Draft MS4 Permit contains unnecessarily complex and overly burdensome water quality-based effluent limitations ("WQBELs"). In fact, EPA arguably has turned the typical NPDES permit development and implementation processes on their head and shifted the bulk of the WQBEL responsibilities to the permittee. The Draft MS4 Permit Sections 2.1 and 2.2 set forth a far too complex, expensive, and unjustified process -particularly with the mandates contained in the Water Quality Response Plan ("WQRP")- that places the responsibility on the permittee (MS4 operator) to prove a negative; that the MS4 is not causing or contributing to a water quality violation. More typically, the permit writer is responsible for assessing and analyzing the nature of the permittee's discharge, reasonable potential to violate a water quality standard, and then to develop appropriate effluent limitations. See NPDES Permit Writers' Manual (http://cfpub.epa.gov/npdes/writermanual.cfm) at 6-1 et seq.

That approach keeps the proper focus on the permitting authority to identify discharges that are causing water quality impacts, not the permittee to jump through hoops to prove that it is not causing such impacts. Obviously, well-drafted TMDLs with properly developed wasteload allocations could be directly applicable to MS4s within such watersheds (depending upon the specific requirements of the TMDL and discharges from the MS4), but the MSGP approach helps to address and resolve the other complexities associated with impaired waters without approved TMDLs. Once EPA approves a TMDL, it obviously is in the most appropriate situation to alert affected MS4s regarding its approval of a TMDL and its applicability to the MS4.

In the real world situations, these issues get even more complicated and EPA's prior efforts and guidance related to applying WQBELs to MS4 discharges reflect a much more flexible and iterative approach than the Draft MS4 Permit, which places unjust responsibility on the MS4 operator to prove a lack of impact rather than EPA identifying the impact. Hence, as proposed in the Draft MS4 Permit, EPA's approach to water quality standards compliance is arbitrary and capricious and overly burdensome. The Agency has not provided an adequate legal or technical basis for many (if not most) of the mandates contained in Sections 2.1 and 2.2. Conversely, EPA has successfully adopted a more simplified and rational approach to water quality compliance in its prior MSGP.

56. Comment From MCWRS

Section 2.1 Water Quality Based Effluent Limitations and 2.1.1 Requirement to Meet Water Quality Standards: Section 2.1 (page 13) states that “Pursuant to Clean Water Act Section 402(p)(3)(B)(iii), this permit includes provisions to ensure that discharges from the permittee’s small MS4 do not cause or contribute to exceedances of water quality standards…”. The cited section of the Clean Water Act makes no mention of water quality standards. Instead, it establishes Maximum Extent Practicable (MEP) as the

standard to which pollutants must be removed from municipal MS4s. The language in section 402(p)(3)(B)(iii) of the Act is clear that MEP governs pollution control requirements for municipal stormwater discharges. Section

402(p)(3)(B)(iii) of the Act states that controls to reduce the discharge of pollutants to the MEP include management practices, control techniques and systems, design and engineering methods, and such other provisions as the Administrator determines appropriate for the control of pollutants. The "such other provisions" clause is within the broader context of the MEP standard, not separate from it as EPA tries to imply. The proper wording throughout the permit that would be consistent with the Act would be for the permittee to meet water quality standards to the maximum extent practicable. For Congress to bother to include such language in the Act is clear and unassailable evidence that lawmakers understood that there are limitations in the ability of municipalities to meet water quality standards in stormwater discharges. These limitations are spelled out in the statutory standard of MEP applied only to municipal stormwater discharges. NPDES stormwater permits for municipalities will continue to be contentious as long as EPA refuses to recognize that the MEP standard applies as the only mandate for pollutant removal from MS4s. Water quality standards and TMDL waste load allocations may be goals but are not the required standards that must be achieved in municipal stormwater.

57. Comment from Barnes and Thornburg (on behalf of Atkinson, Kingston, Newton, and Plaistow)

This exercise becomes even more difficult when the permittee attempts to use the EPA's or New Hampshire's water quality standards documents cited at Section 2.1.1 (b). Neither of these standards regulations was developed for wet weather discharges, like those subject to the Draft MS4 Permit. Instead, they were derived for low-flow receiving stream conditions and continuous, steady-state discharge scenarios, neither of which is relevant to precipitation-related wet weather discharges, let alone snow melt. EPA raised this particular concern in its 1996 Interim Permitting Approach (at 6):

Potential problems of incorporating inappropriate numeric water quality based effluent limitations rather than BMPs in storm water permits at this time are significant in some cases. Deriving numeric water quality-based effluent limitations for any NPDES permit without an adequate effluent characterization, or an adequate receiving water exposure assessment (which could include the use of dynamic modeling or continuous simulations) may result in the imposition of inappropriate numeric limitations on a discharge. Examples of this include the imposition of numeric water quality criteria as end-of-pipe limitations without properly accounting for the receiving water assimilation of the pollutant or failure to account for a mixing zone (if allowed by applicable State or Tribal WQS). This could lead to overly stringent permit requirements, and excessive and expensive controls on storm water discharges, not necessary to provide for attainment of WQS.

EPA's water quality standards approach contained in its Multi-Sector General Permit (2008)(http://cfpub.epa.gov/npdes/stormwater/msgp.cfm) adequately fixes and resolves this issue. In that general permit, EPA relies extensively on the implementation of technology-based controls to meet water quality-based requirements, but reserves the right to require the permittee to do more if the permitting authority can identify a particular need. As explained in the MSGP Fact Sheet (http://www.epa.gov/npdes/pubs/msgp2008finalfs.pdf)(at 55):

Each permittee is required to control its discharge as necessary to meet applicable water quality standards. EPA expects that compliance with the other conditions in this permit (e.g., the technology-based limits, corrective actions, etc.) will result in discharges that are controlled as necessary to meet applicable water quality standards. If the permittee becomes aware, or EPA determines, that the discharge causes or contributes to a water quality standards exceedance, corrective actions and EPA notification are required. In addition, at any time EPA may impose additional, more stringent WQBELs on a site-specific basis, or require

an individual permit, if information suggests that the discharge is not controlled as necessary to meet applicable water quality standards.

58. Comment from NH Stormwater Coalition:

Determining MEP Requirements is an Iterative Process Ultimately Providing for Compliance With WQS; Not a Program that Demands Immediate Compliance

The Draft Permit is based upon the legal standard that "pollutant discharge be reduced to the maximum extent practicable and not cause or contribute to an exceedance of water quality standards." Fact Sheet, at 117. This, however, is the wrong legal standard applicable to MS4s, let alone small MS4s, which are intended to be treated in less restrictive more flexible manner. *See* CWA § 402(p). The "shall not cause or contribute" standard is only applicable to new discharges to impaired waters (40 C.F.R. § 122.4(i)) and an MS4 discharge is certainly not a "new" discharge. Stormwater abatement is to be required "to the extent necessary to mitigate impacts on water quality." CWA § 402(p)(5). EPA is not authorized, via the permit process, to create new regulatory obligations or amend those established by statute. This permit must be withdrawn or amended to allow application of the correct regulatory standards.

Likewise, while a permit may contain some controls associated with progress towards attainment of water quality standards, it should not require compliance with water quality standards at this time, nor hold the permittee liable for "causing or contributing to an exceedance of water quality standards." As EPA explained in the MS4 rulemaking:

> At this time, EPA determines that water quality-based controls, implemented through the iterative processes described today are appropriate for the control of such pollutants and will result in reasonable further progress towards attainment of water quality standards.

64 Fed. Reg. 68,731 (Dec. 8, 1999). Particularly for those MS4 communities now being subject to MS4 permitting for the first time, immediate compliance with water quality standards is not appropriate, nor legally required. Even communities with preexisting MS4 permits will need additional time for compliance with water quality standards. [footnote: The draft MS4 fact sheet recognizes that municipalities cannot reasonably be expected to meet water quality standards at this permitting juncture. *See, e.g.,* Fact Sheet, at 49 ("EPA is also aware that many permittees, especially those in highly urbanized areas, likely will be challenged to attain all applicable water quality standards within this MS4 permit cycle."); *id.*, at 50 ("EPA has long recognized that it may take decades or longer to address the water quality impacts of existing municipal stormwater discharges. See EPA's Preamble to the Phase II regulations, 64 Fed. Reg. 687822 (Dec. 8, 1999).").] EPA explained:

> 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. *If, after implementing the six minimum control measures there is still water quality impairment associated with discharges from the MS4, after successive permit terms the permittee will need to expand or better tailor its BMPs within the scope of the six minimum control measures for each subsequent permit. EPA envisions that this process may take two to three permit terms.*

64 Fed. Reg. 68,754 (Dec. 8, 1999) (emphasis added).

In October 2011, EPA as the NPDES permitting authority, issued an MS4 permit in the District of Columbia. In responding to comments and explaining its permitting decision, EPA specifically recognized the legal standard applicable to MS4 permitting as an iterative permitting process and that the existing permit would

be a step toward ultimately achieving water quality standard objectives. Citing, amongst other things, the preamble statements (referenced above), EPA‟s response to comments specifically recognized that compliance with water quality standards is not required at this time:

> Section 301(b)(1)(C) of the CWA, 33 U.S.C. § 1311(b)(1)(C), requires the achievement of limitations, including those necessary to meet applicable water quality standards (WQS). Section 402(p)(3)(B) of the CWA, 33 U.S.C. §1342(p)(3)(B)(iii), provides that Permits for discharges from municipal storm sewers shall require controls to reduce the discharge of pollutants to the maximum extent practicable, including management practices, control techniques and system, design and engineering methods, and such other provisions as the Administrator or the State determines appropriate for the control of such pollutants.‟*When read together, these two sections suggest that municipal sources control their discharges to the MEP, with the ultimate achievement of WQS which is expected to occur over several permit cycles.* This is consistent with the construct of EPA‟s Final Phase II Stormwater Rule, *National Pollutant Discharge Elimination System – Regulations for Revision of the Water Pollution Control Program Addressing Stormwater Discharge*, 64 Fed. Reg. 68722, 68731 (Dec. 8, 1999) [website reference omitted]. („At this time, EPA determines that water quality-based controls, implemented through the iterative process described today are appropriate for the control of such pollutants and will result in reasonable further progress towards attainment of water quality standards. . . . ‟); *id.* at 68753 („EPA envisions application of the MEP standards as an iterative process.‟); *id.* at 68754 („EPA also believes the iterative approach toward attainment of water quality standards represents a reasonable interpretation of CWA section 402(p)(3)(B)(iii).‟).

USEPA, Responsiveness Summary, National Pollutant Discharge Elimination System (NPDES) Permit Renewal for Government of the District of Columbia, at 65 (emphasis added). As such, “EPA acknowledges that such standards [*i.e.,* water quality standards] attainment may not occur in its entirety during this Permit cycle.” *Id.* at 80. Accordingly, EPA included a condition in the DC NPDES permit specifically recognizing that water quality standards and wasteload allocations (developed as part of a TMDL) would be achieved as part of the iterative process. [footnote: Section 4.1 of the EPA-issued permit provides:

> Compliance with the performance standards and provisions contained in Parts 2 through 8 of this Permit shall constitute adequate progress toward compliance with DCWQS and WLAs for this Permit term.

NPDES Permit issued by USEPA to Government of the District of Columbia, NPDES Permit No. DC000021, (Oct. 21, 2011) at 6, ¶ 4.1.]

In contrast to the EPA-recognized legal standard, the Draft Permit imposes liability on the permittees for failure to meet water quality standards immediately. Section 2.1 of the draft MS4 permit provides, in part:

> 3.1.1 Water Quality Based Effluent Limitation
>
> Pursuant to Clean Water Act 402(p)(3)(B)(iii), this permit includes provisions to ensure that the discharges from the permittee’s small MS4 do not cause or contribute to an exceedance of water quality standards, in addition to requirements to reduce the discharge of pollutants to the maximum extent practicable. The requirements found in this Part and Part 2.2 constitutes the water quality based effluent limits of this permit. Requirements to reduce the discharge of pollutants to the maximum extent practicable are set forth in Part 2.3.
>
> 3.1.2 Requirement to Meet Water Quality Standards

> a. Discharges shall not cause or contribute to an exceedance of applicable water quality standards (including numeric and narrative water quality criteria) for the receiving water. Applicable water quality standards are the State standards that have been federally approved as of the effective date of this permit.

Draft Permit, at 13. [footnote: *See also* Fact Sheet, at 50 ("Even where a permittee is in compliance with the requirements of Part 2.2 of the permit, it may still be in violation of Part 2.1.1 of the permit if its discharge causes or contributes to an exceedance of water quality standards.").] Such provisions are not authorized by the adopted NPDES rules or the statutory language. Consistent with the applicable legal interpretation, NPDES permit conditions imposing liability upon a failure to meet water quality standards should be deleted.

59. Comment from NH Stormwater Coalition:

The draft permit should not require immediate compliance with TMDLs but instead should provide an iterative process.

TMDLs are merely one means of implementing a water quality standard. According to EPA, a wasteload allocation ("WLA") derived from a TMDL "constitute[s] a type of water quality-based effluent limitation." 40 C.F.R. § 130.2(h). [footnote: *See also* 64 Fed. Reg. 68,789 (1999) ("The development and implementation of total maximum daily loads (TMDLs) provide a link between water quality standards and effluent limitations.").] A case specific water quality-based effluent limit may also be derived under the procedures specified in 40 C.F.R. § 122.44(d).

As the juxtaposition of MEP and CWA water quality requirements, as discussed above, provides for an iterative process over several rounds of MS4 permitting for meeting water quality standards, such iterative process is equally applicable to those requirements set forth in TMDLs. This is not to say that TMDL requirements are ignored. Where an approved TMDL provides adequate information to develop more specific measures to protect water quality, then measures can start to be developed and implemented with the ultimate goal, similar to any other water quality standard, of attainment of that standard through the iterative process. Nonetheless, the process is iterative, not immediate as the degree of and effectiveness of MS4 controls is not apparent.

In fact, it was that type of approach that was approved in *Tualatin Riverkeepers v. Or. Dep't of Envtl. Quality*, 235 Ore. App. 132, 146-148 (Or. Ct. App. 2010). In *Tualatin*, the court specifically endorsed the adaptive management approach of implementing MEP in making progress toward achieving the WLA:

> The permits provide in the "adaptive management" section that, "[w]here TMDL wasteload allocations have been established for pollutant parameters associated with the permittee's [municipal separate storm sewer system] discharges, the permittee must use the estimated pollutant load reductions (benchmarks) established in the [storm water management plan] to guide the adaptive management process." Furthermore, they include a section that specifically addresses the TMDL wasteload allocations. The section is intended to "ensure pollutant discharges for those parameters listed in the TMDL are reduced to the [maximum extent practicable]. Adequate progress toward achieving assigned wasteload allocations * * * will be demonstrated through the implementation of best management practices that are targeted at TMDL-related pollutants. [footnote: *Tualatin,* 235 Ore. App. At 147.]

The Draft Permit, however, in contrast, would require compliance with the TMDL immediately, or no later than the date set forth in the TMDL. Such approach is inconsistent with the CWA provisions governing MS4 programs as well as the adopted rules. The TMDL requirements in the Draft Permit should be modified to

provide an iterative process associated with compliance with TMDLs, not to create immediate non-compliance.

60. Comment from NH Stormwater Coalition:

The Draft Permit Inappropriately Shifts the Burden To the MS4 To Demonstrate It Is Not Causing or Contributing to an Impairment

The Draft Permit inappropriately presumes that the permittees are causing or contributing to an impairment. Section 2.2.2.a(i)(a) of the draft permit specifically states that:

> EPA presumes that MS4 discharges are potential contributors to impairments due to nutrients (phosphorus or nitrogen), bacteria, suspended solids, metals, or oil and grease.

Draft Permit, at 19. [footnote: Similarly, the Fact Sheet provides: There are cases where a receiving water is impaired for reasons other than stormwater runoff, and MS4 discharges are not contributing to the problem, the revised permit language allows for an MS4 operator to make that determination, subject to review by EPA. However, for common stormwater pollutants, including nutrients, bacteria, suspended sediments, metals and oil and grease, urban stormwater is likely to be a source and EPA presumes MS4 discharges have potential to contribute to the impairment. The mere presence of other sources, including upstream communities (MS4 or otherwise), is not a sufficient basis for concluding that a permittee‟s discharges do not contribute to an impairment. Similarly, in receiving waters impacted by CSOs, MS4s may still contribute bacteria even if to a lesser extent than CSO discharges. Fact Sheet, at 52-53]while EPA clearly recognizes that the permittee may not be the underlying cause of the impairment, [footnote: EPA states:

EPA recognizes that there are impairments that are not related to stormwater discharges, either because they are not present in the discharge or because they are not related to pollutants (e.g. non-native aquatic plants). MS4 permittees are not responsible for impairments that are due to

natural occurrence and not present in discharges from outfalls, as in the iron example cited by the

Town of Derry. Fact Sheet, at 51.]the permit, nevertheless, shifts the burden on the permittee to demonstrate that it is not the cause of the impairment in order to avoid implementing the BMPs:

> The revisions to Part 2.2.2 make provisions for these situations by allowing permittees to demonstrate that their discharges are not potential contributors and thereby be excused from developing BMPs. See Part 2.2.2.a(iii).

Fact Sheet, at 51. The Fact Sheet further provides:

> The Permit provides an opportunity for permittees to demonstrate that their discharges do not cause or contribute to an impairment and that BMP implementation is therefore not required. . . . However, for common stormwaterpollutants, including nutrients, bacteria, suspended sediments, metals and oil and grease, urban stormwater is likely to be a source and EPA presumes MS4 discharges have potential to contribute to the impairment.

Fact Sheet, at 52-53. As such, the permit requires the permittee to implement BMPs unless it can demonstrate, to the satisfaction of EPA, that it is not the cause of the underlying impairment.

EPA‟s approach (*i.e.,* presume a MS4 contributes to an impairment and make the MS4 prove it does not) violates the basic structure of the Act and the relevant implementing regulations. Under 40 C.F.R. § 122.44(d)(1)(ii), a *permitting authority* determines whether a discharge "causes, has the reasonable potential to cause, or contributes to" an excursion of water quality standards. The "reasonable potential analysis is required to account for dilution, the various sources of the pollutant of concern and current/proposed treatment improvements affecting pollutant levels in rendering a decision on the need to control a particular facility." *Id*. Once such a determination is made, the permitting authority determines whether a pollutant reduction is required. Likewise, under Section 303(c), the state (or EPA) determines which sources require control under the TMDL program. Neither the CWA nor EPA‟s regulations provide a basis to presume an impairment contribution or to transfer the assessment procedure to the permittee.

Such an approach was recently struck down by the District Court for the District of Columbia as an unlawful attempt to amend existing regulations. As explained by the court in *Nat'l Mining Ass'n v. Jackson*, 880 F. Supp. 2d 119, 139 (D.D.C. 2012), EPA cannot assume that reasonable potential exists for imposing limits and, thereby, shift the burden to the permittee to show that a reasonable potential does not exist. The court reasoned that by EPA presuming that, "based on the scientific studies regarding conductivity, it is likely that all discharges will lead to an excursion or that the conductivity studies will be instructive on the matter, [EPA] removes the reasonable potential analysis from the realm of state regulators." *Id.* Shifting the burden is not allowed by the CWA. The court stated: "Should the EPA wish to alter the manner by which a reasonable potential analysis is conducted, it is of course free to amend the regulation in a manner consistent with the APA [Administrative Procedures Act] and its own statutory authority." *Id.* at 141-142. However, until then, EPA cannot assume certain conditions exist resulting in new permit requirements. In effect, EPA is declaring cities to be in violation of the law without the opportunity (afforded by the CWA and APA) to appeal such a determination. That approach is also unlawful. *Sackett v. EPA*, 132 S. Ct. 1367 (2012).

Accordingly, the permit should delete any and all requirements that are based upon presumptions that the MS4 is "causing or contributing" to impairments as well as any provisions that place the responsibility to conduct "reasonable potential" analyses on the permittee. In particular, this includes removal of BMP requirements that are based upon the presumption that the discharger is a cause or contributes to impairments.

EPA Response to Comments 55 - 60

Several commenters questioned EPA's authority to include water quality based effluent limitations (WQBELs) in this permit. One commenter stated that the WQBELs were "unnecessarily complex and overly burdensome" (comment 55) and several commenters suggested that the permit improperly required permittees to show that their discharges did not have the reasonable potential to cause or contribute to violations of water quality standards. One commenter wrote that "the 'shall not cause or contribute' standard is only applicable to new discharges to impaired waters…and an MS4 discharge is certainly not a 'new' discharge." (see comment 58). One commenter also objected to using New Hampshire's water quality standards to set WQBELs in a stormwater permit because the standards did not consider intermittent stormwater flows when developed. Some commenters recommended removing the WQBELs included in the 2013 Draft Permit from the Final Permit entirely.

In *Defenders of Wildlife v. Browner*, the court explained that CWA Section 402(p)(3)(B)(iii) allows a permitting authority the discretion to require less than strict compliance with state water quality standards as well as the "authority to determine that ensuring strict compliance with state water quality standards is necessary to control pollutants." *Defenders of Wildlife v. Browner*, 191 F.3d 1159, 1166 (9th Cir. 1999). Thus, whereas the NPDES permitting authority must include provisions

that reduce the MS4's discharge of pollutants to the MEP, it may also include additional provisions that ensure compliance with state water quality standards where necessary to control pollutants. Consistent with the *Defenders of Wildlife* decision, EPA has previously stated that, where the NPDES permitting authority determines that MS4 discharges have the reasonable potential to cause or contribute to a water quality standard exceedance, the permitting authority should "exercise its discretion" to include the necessary requirements to meet water quality standards. See *Revisions to the November 22, 2010 Memorandum "Establishing Total Maximum Daily Load (TMDL) Wasteload Allocations (WLAs) for Storm Water Sources and NPDES Permit Requirements Based on Those WLAs"* (November 26, 2014) ("2014 Guidance"), page 4 (USEPA, 2014).

In exercising its discretion as the permitting authority, consistent with the holding in *Defenders of Wildlife v. Browner*, EPA has determined that it is necessary to include WQBELs in this permit in order to ensure that discharges from the permitted MS4s do not cause or contribute to exceedances of state water quality standards. See Fact Sheet Section B Part 2.0 and EPA Response to Comments 61-83. Moreover, the 2003 permit included WQBELs, and it would be inconsistent with antibacksliding provisions of the CWA to now withdraw such provisions from this permit.

Some commenters took issue with the timeframes set forth in the 2013 Draft Permit for meeting WQBELs. The 2013 Draft Permit was written to comply with the New Hampshire Water Quality standards in effect at the time of permit drafting, which did not allow the use of compliance schedules in NPDES permits to meet WQS. On November 22, 2014, The New Hampshire Code of Administrative Rules was updated to include the adoption of N.H. Code Admin. R. Env-Wq 1701.03 "Compliance Schedules in NPDES Permits" into rule, and Env-Wq 1701.03 became effective on the same date. Env-Wq 1701.03 allows compliance schedules to be included in WQBELs to be put into NPDES permits. Accordingly, and in response to many comments, EPA amended the language in Parts 2.1.1 and 2.2 and Appendix F and H of the permit and added specified schedules and actions leading to compliance with water quality standards where appropriate. These revisions are consistent with Env-Wq 1701.03 and 40 CFR § 122.47. EPA reopened the public comment period to comment on these draft revisions on September 1, 2015. See also EPA Response to Comment 254.

Some commenters asserted that Part 2.2.2. was overly burdensome and "places the responsibility on the permittee (MS4 operator) to prove a negative; that the MS4 is not causing or contributing to a water quality violation. More typically, the permit writer is responsible for assessing and analyzing the nature of the permittee's discharge, reasonable potential to violate a water quality standard, and then to develop appropriate effluent limitations" (see comments from Barnes and Thornburg (on behalf of Atkinson, Kingston, Newton, and Plaistow)) and the permit "place[s] the responsibility to conduct 'reasonable potential' analyses on the permittee." *See* comments from New Hampshire Stormwater Coalition. One commenter recommended aligning the WQBELs in the Draft Permit with the approach taken by the Multi Sector General Permit (MSGP) and striking the requirement to conduct a WQRP (see comments from Barnes and Thornburg (on behalf of Atkinson, Kingston, Newton, and Plaistow)). EPA notes that the regulations governing the requirements of the MSGP and MS4 permits are distinct, and this permit is written in compliance with the requirements applicable to MS4s; specifically, the requirements pursuant to CWA § 402(p)(3)(B). In response to these comments, EPA narrowed the scope of part 2.2.2. to those discharges EPA found to have the reasonable potential to cause or contribute to a water quality standards violation and re-opened the comment period in 2015 to take comments on the revised approach. The Final Permit includes requirements to ensure that the permitted MS4 discharges will not cause or contribute to exceedances of water quality standards (see EPA Response to Comments 227 - 233). Water quality standards are those State Water Quality Standards that are approved by EPA by the date of permit

issuance. The requirement that discharges do not cause or contribute to a water quality standards violation apply to all NPDES permit holders, not just new dischargers (as one commenter asserted). EPA notes that the States adopt water quality standards based on allowable concentrations of pollutants that will allow waterbodies to meet designated uses, and are not written for particular kinds of discharges or based on whether flows are continuous or intermittent.

Some commenters appear to misunderstand the relationship between TMDLs and permits, suggesting that TMDLs have requirements and timelines with which this permit conflicts. One commenter believed that the permit should not require immediate compliance with TMDLs but should provide time to comply with TMDLs, not create immediate non-compliance with TMDLs.

TMDLs include wasteload allocations (WLAs) for point sources (and load allocations for other sources), but TMDLs do not themselves prescribe effluent limitations or other permit requirements. Thus, this permit does not impose conflicting requirements where TMDLs have been completed and approved. On the contrary, the permit requirements represent EPA's determination of the limits that are necessary to be consistent with the assumptions and requirements of the pertinent TMDLs.

Some commenters asserted that the 2013 draft permit improperly placed the burden to conduct reasonable potential analyses on the permittee. In the final permit EPA is only imposing WQBELs in this permit to the extent that there has been a determination that an MS4 is discharging to impaired waters and is causing or has a reasonable potential for causing or contributing to the impairment (*i.e.,* the violation of water quality standards), and when the MS4 becomes aware or should be aware (as the result of a Section 303(d) listing, for example) of such determination. See EPA Response to Comments 61-83While the 2013 Draft Permit did require permittees to determine the requirements necessary not to cause or contribute to a water quality standards violation, the 2015 Renotice Part 2.1.1. removed the Water Quality Response Plan at issue. The final permit does not require permitted MS4s to make that determination themselves, nor does it in any other way impose a burden on permittees to conduct reasonable potential analyses. A permittee may become aware of an exceedance of water quality standards in various ways, including as the result of a listing on the Section 303(d) list, or as a result of monitoring done by EPA, by another entity (e.g., the State of New Hampshire), or by the MS4 itself. However, it is only once an MS4 is made aware that a discharge of pollutants is causing or contributing to an exceedance of a water quality standard, that the permittee must take appropriate measures to limit the discharge of such pollutants, as required by part 2.1.1.b and 2.1.1.c, or to eliminate the cause of the exceedance, as required by 2.1.1.d.SeeEPA Response to Comments 227 - 233 for a discussion of EPAs approach in setting WQBELs in the final permit and all other issues raised in the above comments.

See EPA Response to Comments 46 - 54 and EPA Response to Comments 227 - 233

61. Comment from the Town of Derry

Sections 2.1 and 3.1 of the draft permit includes provisions to ensure discharges from the MS4 do not cause or contribute to an exceedance of water quality standards, in additional to requirements to reduce the discharge to the maximum extent practicable specifically stating that discharges shall not cause or contribute to an exceedance of applicable water quality standards for the receiving water. This raises the concern that for many of the impairments, the pollutants of concern are universally present in rain/runoff or groundwater discharge due to natural sources, including mercury, phosphorus, bacteria, and various metals and that mere presence can be interpreted by EPA as contributing to the exceedance or impairment.

62. Comment from the Durham/UNH Integrated Watershed Partnership

Page 13 or 60. Parts 2.0 and 2.1 of the 2013 proposed permit constitute new, more stringent, water quality-based effluent limitations. As such, a compliance schedule may be established (if authorized under state law) to allow sufficient time for compliance. In its Response to Comments on the 2008 draft permit, EPA notes that "New Hampshire's water quality standards do not provide for compliance schedules." (Footnote 23, p.50) However, New Hampshire statutes appear to allow compliance schedules "consistent with the purposes and requirements of applicable federal law." See Chapter 485-A:13.

It is the Partnership's understanding that the New Hampshire Department of Environmental Services ("NHDES") will be proposing a clarifying rule specifically authorizing compliance schedules for new water quality-based effluent limitations. The Partnership requests that EPA either determine that New Hampshire's current statute satisfies the requirements of In re Star- Kist Caribe, Inc., 3 E.A.D. 172 (1990) or alternatively that EPA defer action on the requirements to meet water quality standards (Parts 2.1 and 2.2) until the NHDES rule is adopted and available to MS4 permittees, particularly in light of the prohibitions in Parts 1.5 and 2.1.1 (a).

63. Comment from the Town of Goffstown

In EPA's response to comments to the 2008 draft permit EPA states "Section 301 of the CWA prohibits discharge of a pollutant without, or contrary to the requirements of the permit that authorize its discharge, and failure to meet those requirements is addressed through compliance and enforcement actions within the scope of the permit, not through the denial of authorization. Indeed, since most of the MS4s potentially subject to authorization under this permit are already discharging storm water, the purposes of the CWA would not be well-served by excluding permittees from all the more stringent requirements of the reissued permit until such time as they resolve every specific water quality issue."(page 29 of the Fact Sheet) This statement recognizes that MS4 systems predate the CWA and this MS4 Permit, however, the language in Section 2.1.1 states "If at any time the permittee determines or EPA or the state agency determines that a discharge causes or contributes to an exceedance of applicable water quality standard, the permittee shall within 60 days of becoming aware of the situation eliminate the conditions causing or contributing to an exceedance..." This again seems to be a contrary approach taken in this permit as compared to the 2003 Permit.

64. Comment from the Durham/UNH Integrated Watershed Partnership

Page 13 of 60. Part 2.1.1 (a) mandates that discharges "shall not cause or contribute to an exceedance of applicable water quality standards (including numeric and narrative water quality criteria for the receiving water)''. Part 2.1.1 (c) further stipulates that "even though 60 days have been given to the permittee to eliminate the conditions causing or contributing to an exceedance of applicable water quality standards" the 60 day period is not a grace period; a violation remains "until eliminated." The 60 day period provided in the proposed permit "does not excuse or otherwise constitute a defense to a violation of Part 2.1.1 (a)." In essence, the permit requires that the permittee comply with water quality standards immediately upon issuance.

This provision does not make sense in the context of Clean Water Act permitting or other provisions of the proposed permit. Typically, when permits are issued authorizing discharges to receiving waters that are not in attainment, the permit contains limitations and conditions which assure that the water quality standards will be attained within the term of the permit or longer if a compliance schedule beyond the term is warranted. EPA acknowledges that it "may take decades or longer to address the water quality impacts of existing stormwater discharges." Yet it is unwilling to give an MS4 permittee one day to achieve compliance. The NH MS4 permittee will be subject to enforcement immediately even though it complies with all permit conditions.

65. Comment from the Town of Salem

Section 2.1.1.c- The Town of Salem, NH believes the 60 day time frame in which to eliminate a discharge that "causes or contributes to an exceedance of applicable water quality standards" is overly burdensome. In dealing with this requirement, it may take substantial time just to detect the source of the discharge, let alone eliminate it. In a municipal environment where communities are faced with budgeting for MS4 requirements on an annual basis based on speculation of what may or may not be encountered, the broader priorities (and budgetary limitations) of the MS4 may necessitate the diversion of resources to higher priority activities.

---Further, the Town is concerned that the 60 day period is a 'grace period' and that preparation of a WQRP is not identified as any particular show of good faith by the Town. Rather, it is clearly indicated that anything short of an immediate removal of the discharge constitutes a violation of the permit, leaving the potential enforcement action a possibility. Essentially, the Town will be in non-compliance from the day the permit is issued.

---The Town requests that the EPA recognize the fiscal and technical limitations of municipalities as it relates to elimination of discharges that cause or contribute to an exceedance, that the 60 day time frame be extended to 365 days to facilitate proper budgeting for identified problems, and that the preparation of a WQRP to deal with such a discharge is, in fact, a show of good faith effort by the Town/MS4.

66. Comment from Town of Newmarket

Section 2.1.1 Water Quality Based Effluent Limitations

The language in Part 2.1.1 (c) suggests that communities would be considered in violation and could be faced with subsequent enforcement actions for "Any discharge that is contributing to an exceedance of applicable water quality standards violates Part 2.1.1 (a) of this permit and remains in violation until eliminated. " ..... " the permittee shall within 60 days of becoming aware of the situation eliminate the conditions causing the exceedance...."

---On face value this suggests that any stormwater discharge to an impaired water body (presumably with a known water quality standard exceedance) would be considered an immediate permit violation. This appears to inconsistent with the provisions of Part 2.2.2(a)(l), which allows the permittee one year to evaluate its discharges to impaired waters in order to (1) "assess whether MS4 discharges are potential contributors to the identified impairment" and (2) "identify sources of pollutant(s) of concern in the MS4 area draining to the impaired waters." We suggest that this section be clarified in terms what discharges may be considered in violation and the timelines to rectify known violations or impairments.

67. Comment from the Town of Auburn

Section 2.1.1.c establishes the requirement to remedy any conditions causing an exceedance of water quality standards within 60 days of a determination that our discharge is causing an exceedance. The section specifically spells out that the compliance clock begins to accrue immediately and continues until the source is remedied. There is no grace period. This, coupled with the fact that we have to conduct dry weather sampling of all of our outfalls at the same time, could put the Town into almost immediate non-compliance. The Town is asking for time to evaluate the water quality data NHDES has used to determine the 303 (d) list. Our initial suggestion is that within the first three years of the permit, we could prioritize our outfalls based on the use of the receiving water value (as determined by NHDES) and risk to the public. We can then implement a sampling program of the high value/high priority water bodies in Auburn that may not already be taking place by the Manchester Water Works and develop plans to remedy any sources of contaminants specifically from our MS4.

68. Comment from the City of Dover

This provision states that within 60 days of determining that a discharge causes or contributes to an exceedance of applicable water quality standards, the MS4 must eliminate the source or if it can't be eliminated in 60 days prepare a WQRP. Dover has 20 years of experience identifying and eliminating illicit discharges from the storm water system. It will be impossible to comply with this provision within 60 days. Most illicit discharges are sewer services erroneously connect to the storm system. Many of the connections are difficult to locate and once found the remediation often requires easements from private parties, utility conflicts and often require considerable time to complete the process. The 60 day requirement is not usually possible and the MS4 should not have to prepare a plan explaining why it hasn't completed the correction and what it intends to do to resolve the problem. Simply make it a requirement of the annual report when a violation is found, what the MS4 has done to resolve the situation, and intends to do during the coming year if not resolved. Preparing a WQRP is a waste of effort and won't get the problem resolved any more quickly.

69. Comment from the Town of Merrimack

7. 60 Day Rule: We feel that the 60 days in which the permittee must come into compliance is limiting and also should not be considered a violation of the Clean Water Act as noted in Section 2.1.1. c. of the 2013 MS4 Draft General Permit Requirements. Tracing a potential source of contamination through possibly dozens of manholes and stormwater structures will take more than 60 days and involve much staff, lab services and time. There should be more flexibility depending on the situation and its complexity and the Town should determine how long it may take. Also, the permittee should not be in violation since the source of the discharge may be outside the MS4 area and possibly in another jurisdiction.

70. Comment from the Town of Exeter

Section 2.1.l.c establishes the requirement to remedy any conditions causing an exceedance of water quality standards within 60 days of a determination that our discharge is causing an exceedance. The section specifically spells out that the compliance clock begins to accrue immediately and continues until the source is remedied and that there is not a grace period. This coupled with the fact that we have to conduct dry weather sampling of all of our outfalls at the same time will put the Town into almost immediate non-compliance. Finding a high reading of a contaminant, conducting additional sampling along the drainage system, dye testing of sewer and drain systems, smoke testing of sewer and drain systems and finally finding a potential source, then contacting the source, issuing notice to private source and providing time for the private source to remedy the issue, will take longer than 60 days. Older larger drainage systems could take 6 months or longer to find the illicit discharge.

71. Comment from the Town of Derry

This also implies that regardless of how small a concentration is in the MS4 discharge, the Permittee is considered responsible for causing the impairment. Even though the cause of the impairment may be from a non-MS4 discharger, the liability for the violation of water quality standards rests with the permittee if it "contributes" to a violation but is not "causing" the violation. This all-inclusive interpretation would create automatic noncompliance and mandate excessive and expensive treatment above and beyond any contribution by the MS4 or private dischargers with little, if any, realized benefit or improvement of water quality.

72. Comment from Town of Wilton

Water Quality Standards (WQS) as required by 40 CRF 124.35(d)(2)(iv) have not been reviewed and verified to determine any potential exceedance.

73. Comment from the Durham/UNH Integrated Watershed Partnership

The proposed permit gives a 60 day period to eliminate discharges causing or contributing to an exceedance of applicable water quality standards and then takes away the 60 day period. It is possible that an MS4 permittee may be able to eliminate a discharge in certain circumstances within the specified 60 day period of time but there is little likelihood and certainly no guarantee that the conditions causing or contributing to an exceedance of applicable water quality standards such as aquatic life in Great Bay can be achieved within 60 days. There may be instream conditions or other conditions not immediately remedied by the elimination or reduction of a specific pollutant in the discharge that continue the non-attainment.

As drafted, Part 2.1.1 also creates inconsistency with other provisions of the proposed permit. For example, Part 2.2.2(a)(1) allows the permittee one year to evaluate its discharges to impaired waters in order to (1) "assess whether MS4 discharges are potential contributors to the identified impairment" and (2) "identify sources of pollutant(s) of concern in the MS4 area draining to the impaired waters." This leads to the absurd situation where a permittee has one year to evaluate discharges to impaired waters to determine whether they are impacting water quality standards under Part 2.2.2.a.1.a, three years to implement necessary BMPs, under Part 2.2.2.a.11.3, a two year reassessment process under 2.2.2.c but no time under 2.1.1 (a) to come into compliance with standards.

74. Comment from the City of Nashua

Part 2.1./.c - " ... within 60 days of becoming aware of the situation eliminate the conditions causing or contributing to an exceedance of water quality standards." and "Any discharge causing or contributing to an exceedance of applicable water quality standards violates Part 2.1.1.a of this permit and remains a violation until eliminated." Comment: The requirements in Part 2.3 of the permit, including the Water Quality Response Plan (WQRP) (Part 2.2.2.a.ii), adequately address discharges that are a concern to water quality. It is important to note that as part of the City's SWMP and/or future WQRPs, the reduction or elimination of all pollutants from all stormwater discharges may not be necessary to meet water quality standards. As written, this part implies that permittees will be in violation of the permit for discharges that are being addressed as part of a WQRP. In addition, 60 days may be an unrealistic time frame, depending upon the cause of the exceedance and time of year when the exceedance is discovered. Request: Remove Part 2.1.1.c from the permit and rely upon the requirements under Parts 2.2 and 2.3 to meet water quality standards.

75. Comment from the Durham/UNH Integrated Watershed Partnership

Notwithstanding EPA's Response to Comments which suggest that the 2013 permit has addressed concerns about the 60 day time period to eliminate the conditions causing non-attainment of water quality standards (Response to Comments, P.40), this is not the case. A permittee who is not be able to eliminate a discharge causing or contributing to non-attainment within 60 days is now required to develop a Water Quality Response Plan. The preparation of a plan may toll the 60 day elimination requirement but does provide a defense to the requirements of Part 2.1.1 (a) relating to water quality attainment.

76. Comment from the City of Nashua

Part 2.1.1.a Requirement to Meet Water Quality Standards - "Discharges shall not cause or contribute to an exceedance of applicable water quality standards (including numeric and narrative water quality criteria) for the receiving water." Comment: The reason for the permit is to develop procedures to ensure that stormwater discharges do not negatively impact receiving waters to the Maximum Extent Practicable. The language above should be clarified to reflect the intent of the permit process. Request: Revise this part of the permit to clarify that "Discharges shall not cause or contribute to an exceedance of applicable water quality standards (including numeric and narrative water quality criteria) for the receiving water to the

maximum extent practicable based on the measures outlined in the MS4's SWMP to meet Part 2.3 of the permit."

77. Comment from the Durham/UNH Integrated Watershed Partnership

In the 2008 proposed draft this issue was properly addressed by including the following presumption: "In the absence of information suggesting otherwise, discharges will be presumed to meet the applicable water quality standards if the permittee fully satisfies the provision of this permit." This presumption was removed because it had "no meaningful purpose in the permit." (Response to Comments, P.39.) On the contrary, the 2008 presumption is vitally important and meaningful given the lack of information associated with the new WQBELs. WQBELs are generally based on an extensive reasonable potential analyses, which incorporate flow, dilution factors, mixing zones, water quality modeling and instream and discharge data. Most of these factors are unknown in the case of intermittent MS4 discharges. The permit writer, rather than the permittee, develops and considers these factors. The 2013 permit shifts the burden of obtaining all this information onto the permittee. More importantly, it also has imposed a presumption of immediate non-compliance onto the discharger.

78. Comment from the Durham/UNH Integrated Watershed Partnership

The Partnership requests that additional time be given for the elimination of discharges causing or contributing to an exceedance of applicable water quality standards, particularly where multiple sources contribute to the discharge. The Partnership also requests that if a Water Quality Response Plan is timely prepared and other permit terms complied with, that there be a presumption that water quality standards will be achieved.

EPA indicates that it will use its discretion to and "take into a permittees good faith efforts to comply" when considering enforcement action for exceedances of water quality standards. However, EPA's intentions are not relevant if a permittee is sued by a third party for failure to comply with Part 2.1.1 because it discharges a measurable amount of pollutant contributing to non-attainment. No matter how thorough or efficient a Partnership is when implementing its MS4 permit obligations it could be considered to be in violation of the permit condition contained in Part 2.1.1.

79. Comment from the Durham/UNH Integrated Watershed Partnership

Under Section 1342(k) of the Clean Water Act (the Permit Shield provision), compliance with a permit's terms and conditions is deemed to be in compliance with water quality-based effluent limitations ("WQBELs") (Section 1312) which are in turn designed to achieve water quality standards. See 40 CFR 122.44(d). Yet, even if the permittee complies with all WQBELs, the proposed permit terms "do not excuse or otherwise constitute a defense to a violation of Part 2.1.1 (a)." In addition, EPA now presumes that MS4 discharges, such as the Partnership of Durham, are "potential contributors" to nutrient impaired waters. Part 2.2.2.a.1.a.

80. Comment from the City of Manchester

"Discharges shall not cause or contribute to an exceedance of applicable water quality standards (including numeric and narrative water quality criteria) for the receiving water." Compliance with this requirement can be challenging for any community, because according to the TMDLs and impairments communities are already not in compliance with water quality standards and will be in non-compliance with this permit once it becomes effective. The community will then need to prove through sampling requirements and BMP implementation that they are in compliance. Unfortunately some of the target goals are not realistically attainable and will keep the community from being compliant with this permit over its term.

81. Comment from the City of Manchester

The City will be in Intermediate Noncompliance: If this permit is implemented; because of wording "Discharges shall not cause or contribute to an exceedance of applicable water quality standards (including numeric and narrative water quality criteria) for the receiving water." The City, because of its combined sewer overflow (CSO) system, will be in non-compliance the day the permit is issued. This will put the City at risk to fines and regulatory compliance actions. We recommend the permit be modified in several areas to allow communities to work towards compliance in a practical, realistic, and cost effective manner.

82. Comment From NH Stormwater Coalition:

A number of requirements contained in the proposed permit are confusing and require further clarification to allow for the submission of comments. Coalition members have included questions regarding the draft permit requirements on many issues. With respect to these general comments, the Coalition and its individual members require clarification on the following questions:

- Whether Response Plans (Draft Permit Part 2.2.2) submitted by permittees will be subject to the public comment process;
- Whether once applicable TMDLs are updated, the requirements of the new TMDL will replace those found in Appendix F of the Draft Permit;
- Whether a reasonable potential analysis will be conducted to show more restrictive limits are necessary; and,
- The extent to which the state's Stormwater Manual establishes minimum requirements or the presumed approaches that are needed to ensure compliance with this draft permit.

When the Coalition and/or its individual members receives EPA's response to these matters (and other questions raised in the individual comment letters), the Coalition intends to supplement these preliminary comments if necessary.

83. Comment from the Town of Merrimack

Water Quality Based Effluent Limitations: In Section 2.1 of Part 1 of the 2013 MS4 Draft General Permit requirements it is stated that the "permit includes provisions to ensure that discharges from the permittee's small MS4 do not cause or contribute to an exceedance of water quality standards". We understand that the Town should not be the cause of an exceedance, but a contribution may be possible and numerically may not always be a violation. For example, if a MS4 discharge with a flow of 10 gallons or less per day is in exceedance of the water quality standard for bacteria, this may have no additive effect on the millions of gallons of water that are in a receiving stream such as the Merrimack (Merrimack River has a flow of 420 million gallons per day in the Town of Merrimack) and Souhegan Rivers. The EPA and NHDES must show that the Town MS4 system is causing the violations and not that we are just contributing. EPA should have the burden of demonstrating that a particular discharge is causing or contributing to impairment and not the Town.

EPA Response to Comments 61-83

A number of the issues raised in these comments are addressed elsewhere in this Response to Comments document. See EPA Response to Comments 46 - 54, EPA Response to Comments 55 - 60, and EPA Response to Comments 227 - 233 for all comments related to EPA's authority to regulate stormwater and water quality based effluent limitations.

Several commenters objected to the requirement to eliminate the condition causing or contributing to an impairment within 60 days, and objected to the requirements of the water quality response plan.

On November 22, 2014, The New Hampshire Code of Administrative Rules was updated to include the adoption of Env-Wq 1701.03 "Compliance Schedules in NPDES Permits" and Env-Wq 1701.03 became effective on the same date. Env-Wq 1701.03 allows compliance schedules to be put into NPDES permits. Accordingly, and in response to many comments raised above, EPA amended the language in Parts 2.1.1 and 2.2 and Appendix F and H of the permit and added schedules and actions leading to compliance with water quality standards where appropriate which are consistent with Env-Wq 1701.03 and 40 CFR §122.47. On September 1, 2015 EPA reopened the comment period on updated language in Parts 2.1.1, 2.2, 2.3.6, Appendix F, and Appendix H in response to multiple comments received on the reopened parts and appendices of the 2013 draft permit and in order to comply with the recently effective New Hampshire Code of Administrative Rules Env-Wq 1701.03 and to address concerns raised by commenters above. The updated Parts 2.1.1, 2.2, 2.3.6 Appendix F and Appendix H fully replaced the same parts or appendices of the 2013 draft permit. See the Statement of Basis on the proposed modifications to the reopened sections of the 2013 draft permit for more information[6]. The comment period for the reopened permit sections ended November 20, 2015. For responses related to the reopened section see sections: RENOTICE 2.1.1 Requirement to Meet Water Quality Standards (comments 89-97), RENOTICE: 2.2 Discharges to Impaired Waters (comments 227 - 266), RENOTICE 2.3.6 Stormwater Management in New Development and Redevelopment (Post Construction Stormwater Management) (comments 372-389), RENOTICE Appendix F (466-489), and RENOTICE Appendix H (comments 498-514) of this document. The requirements to meet water quality standards and remove conditions causing or contributing to a water quality standard violation within 60 days remain in the final permit but have been clarified regarding applicability. See EPA Response to comments 308 - 309, EPA response to Comments 91 - 93, EPA Response to Comments 46 - 54, EPA Response to Comments 55 - 60, EPA Response to Comments 227 - 233 and EPA Response to Comment 254.

The requirement to conduct a Water Quality Response Plan (WQRP) was removed in the 2015 Renotice and replaced with required actions on pollutants found in stormwater (see below).

Pollution from urban stormwater runoff is well documented as a leading cause of impairment of freshwater lakes, rivers, and estuaries (US EPA, 2009); (National Research Council, 2008). A study in 2010 by a special commission to study stormwater reported stormwater as contributing to over 80% of the surface water quality impairments in the State (New Hampshire House Bill 1295 Chapter 71 Laws of 2008 Stormwater Study Commission, 2010). Now six years since study finalization, most of these water quality impairments have yet to be resolved as indicated by the most recent Section 303(d) list prepared by NHDES. EPA finds it is appropriate to include additional requirements for MS4 discharges to waters that are not meeting water quality standards due to one or more of the pollutants typically found in urban stormwater.

For certain pollutants, where there is an impaired water, but no applicable TMDL at the time of permit issuance, this permit establishes limits in the form of specific BMPs to address those impairments, in parts 2.1.1.c and 2.2.2, and Appendix H. Part 2.1.1.c covers a very specific set of pollutants: nitrogen, phosphorus, certain metals (cadmium, copper, iron, lead and zinc), solids,

[6] https://www3.epa.gov/region1/npdes/stormwater/nh/nhms4-renotice-statement-of-basis.pdf, Accessed January 2, 2017

bacteria/pathogens, chloride, and oil and grease (hydrocarbons). These are ubiquitous pollutants found in municipal stormwater discharges (see discussion below). EPA disagrees with the assertion that EPA and NHDES "must show that the Town MS4 system is causing the violations and not that we are just contributing" to impose water quality based effluent limitations as one commenter suggests. EPA recognizes that in many instances receiving water impairments are caused by multiple sources, which may or may not include MS4 discharges. In these cases the Clean Water Act requires action by all permittees that contribute to the impairment (regardless of relative level of contribution), even where their actions alone may be insufficient to meet standards in the receiving water. EPA determined that the most straightforward and fair way to identify those permittees whose discharges have the potential to cause or contribute to the known impairment is by identifying permittees whose discharges include the pollutants known to be found in stormwater along with New Hampshire's Section 303(d) and 305(b) lists identifying water quality limited waters that are impaired due to common stormwater pollutants. EPA is also aware that the 303(d) and 305(b) lists do not represent an exhaustive list of those waters that may be experiencing excursions above water quality standards and took this information into account when determining the definition of "water-quality limited waters," see EPA Response to Comment 247 - 252. In addition, the final permit provides relief from the additional requirements when certain conditions are met (see EPA Response to Comments 162- 167 and EPA Response to Comment 130).

A number of harmful pollutants are contained in urban stormwater runoff, including the following common constituents: Nutrients (nitrogen and phosphorus), Bacteria/Pathogens, Chloride, Solids, Oil & Grease (Hydrocarbons), and Metals (Center For Watershed Protection, 2003); (US EPA, 1999); (Shaver, et al., 2007); (Lin, 2004); (Schueler, 2011); (Pitt, et al., 2005) (Clark & Pitt, 2012); (National Research Council, 2008). The occurrence of these common pollutants in stormwater runoff was also evaluated through use of the data available in the National Stormwater Quality Database (NSQD) Version 3. NSQD Version 3 is the most recent update available; it contains 8,602 rain events from 104 cities throughout the continental United States, and represents all 9 EPA Rain Zones and 12 land use categories. Data from EPA Rain Zones 1 and 2 were utilized as these areas cover the New England region, and cover areas with similar rainfall patterns to New England (mid-atlantic region). Data was selected from composite samples only in order to eliminate sample timing-specific bias. The table below presents results from this analysis, and only includes results above sample detection limits. These results demonstrate the prevalence of nutrients (nitrogen and phosphorus), bacteria/pathogens, chloride, solids, oil & grease, and metals in urban stormwater in New England. A more detailed description of each major pollutant category and their sources in stormwater runoff is included below.

Parameter	Count	Median	Geometric Mean	Minimum	Maximum	25%	75%
Phosphorus Total (mg/l)	1967	0.25	0.26	0.02	10	0.15	0.42
Total Nitrogen (mg/L)	1763	2.0	2.0	1.0	7.0	1.0	3.0
Fecal Coliform (colonies/100 ml)	524	4500	3578	2.0	5230000	800	26000

Total E Coli (colonies/100 ml)	25	1100	1366	10	35000	460	8500
Chloride (mg/l)	57	6.0	7.0	1.0	350	4.0	10
Turbidity (NTU)	12	106	98	16	630	43	176
Total Suspended Solids (mg/l)	2046	45	46	1.0	2405	22	95
Oil and Grease Total (mg/l)	390	5.0	4.8	0.2	570	2.5	8.5
Zinc Total (ug/l)	1592	105	89	1.4	3050	50	190

Nutrients

In both marine and freshwater systems, an excess of nutrients results in degraded water quality, adverse impacts to ecosystems and limits on the use of water resources (Center For Watershed Protection, 2003) (Shaver, et al., 2007) . The most common forms of nutrient pollution are nitrogen and phosphorus. Nutrient loading to waterbodies is often characterized not only through event mean concentrations (EMCs) but also through export coefficients from land uses with similar characteristics and represent the total amount of either nitrogen or phosphorus loaded annually to a system from a defined area. Annual export coefficients for nutrients are particularly useful at characterizing urban stormwater because of the cumulative effects nutrients have on receiving water bodies, including effects on downstream receiving waters. Receiving waters respond to the overall annual load of nutrients they receive, not just a snapshot in time of the urban stormwater nutrient concentration. It is well documented that discharges of nutrients (specifically nitrogen and phosphorus) in stormwater not only affect the point at which the discharge enters the receiving waterbody but also affect downstream waterbodies (CTDEEP, NYDEC, 2000) (Carpenter, et al., 1998) (Charles River Watershed Association, May 2011) (Massachusetts Department of Environmental Protection , 2007) (New England Interstate Water Pollution Control Commission, 2014) (NHDES, 2014) (Piscataqua Region Estuaries Partnership, 2015) (Browman, et al., 1979) (Mattson & Issac, 1999) (National Research Council, 2000). Below is a further discussion of nitrogen and phosphorus in urban stormwater.

<u>Nitrogen</u>

Nitrogen loading is one of the important drivers of coastal eutrophication (Driscoll, et al., 2003) (Ryther & Dunstan, 1971) (US EPA, 2008) (National Research Council, 2000). Eutrophic waters often exhibit dense growths of algae or other nuisance aquatic plants, depressed levels of dissolved oxygen, loss of fish and submerged aquatic vegetation and foul odors (Moore, et al., 2011). The primary sources of nitrogen in urban stormwater are:

- Atmospheric deposition including mobile source deposition (deposition from combustion engines)

- Wash-off of fertilizers
- Nitrogen attached to eroded soils and stream banks
- Organic matter (such as pollen and leaves) and pet wastes that are deposited on impervious surfaces
- Leaching of nitrate from functioning septic systems

Residential lawns and turf areas (e.g., sports fields, golf courses, and parks) in urbanizing watersheds have been shown to be "hot spots" for nutrient input into urban runoff (Center For Watershed Protection, 2003). Research suggests that nitrogen concentrations in runoff from lawns and turf areas can be as much as four times greater than those from other urban nutrient source areas (Bannerman & Fries, 1993) (Waschbusch, 2000) (Garn, 2002) (Center For Watershed Protection, 2003). Runoff carries nitrogen from lawn areas and other pervious areas onto impervious surfaces, combines with nitrogen on impervious areas from other sources, and is eventually discharged to waterbodies via direct runoff or an MS4 system. The median nutrient EMC of total nitrogen seen in urban stormwater is 2.0 mg/l across the New England Region, based on the data available in NSQD. Similar levels of total nitrogen were seen in stormwater runoff in the Chesapeake region (Schueler, 2011) as well as across the nation, with Lin reporting a national average event mean concentration of 2.415 mg/L for nitrogen (TKN +NO_2 and NO_3) (Lin, 2004). In New England, an EMC of 2.0 mg/l nitrogen in urban stormwater would lead to an average yearly nitrogen loading of between 12 and 17 lb/acre/year of total nitrogen from impervious surfaces.

Phosphorus

Phosphorus is often the limiting nutrient in freshwater bodies, and can cause algal blooms and subsequent eutrophication to receiving water bodies (Mihelcic, 1999) (Schueler, 2011) (Shaver, et al., 2007). Orthophosphate is the form of phosphorus most readily available to aquatic life and is the most common form occurring in stormwater. The primary sources of phosphorus in urban stormwater are:

- Wash-off of phosphorus based lawn fertilizers used in residential areas, parks, cemeteries, and golf courses and fertilizers used by agriculture
- Wash-off of organic matter (such as pollen and leaves) and pet wastes that are deposited on impervious surfaces
- Atmospheric deposition
- Soil erosion
- Leaching from failed or inadequate septic systems

Data analysis in the Chesapeake region found that the total phosphorus concentration in lawn runoff is greater than other urban land areas (Center For Watershed Protection, 2003). Urban areas are cited as one of the two most (agriculture being the other) important contributors to stormwater pollution (Carpenter, et al., 1998). The median nutrient concentration of total phosphorus in urban stormwater was 0.25 mg/l across the New England Region, based on data available in NSQD (See table above). An analysis of data nationwide found the concentration of phosphorus during storms is very consistent with a mean EMC of 0.30 mg/l (Center For Watershed Protection, 2003).

Bacteria/Pathogens

Where stormwater runoff is discharged to recreational waters such as beaches and lakes, or comes into contact with shellfish beds, there is a potential public health risk associated with pathogen

contamination. There are a number of indicator organisms that have been used to evaluate the presence of harmful pathogens in stormwater runoff; fecal coliform has been frequently used as well as Escherichia coli (E. coli), streptococci and enterococci (US EPA, 1999). Primary sources of pathogens in urban stormwater runoff include:

- Leaky sanitary sewer lines,
- Sanitary sewer cross-connections,
- Wash-off of wildlife and pet excrement,
- Failing septic systems.

Bacteria and pathogen concentrations in urban stormwater vary greatly with total E. coli concentrations ranging from 10 colonies per 100ml to 35,000 colonies per 100ml across the New England Region, based on data available in NSQD. As a point of reference, a sample of a Class B water in New Hampshire with designated beach areas for swimming cannot exceed 88 E. coli colonies per 100 mL due to the threat to human health. Generally, bacteria and pathogen concentrations increase with increased impervious and increased urbanization (Mallin, et al., 2009). The increased impervious area within a watershed reduces infiltration of stormwater, a practice that would mitigate bacteria/pathogen concentrations.

Chloride

Chlorides are salt components found in runoff that result primarily from road deicer applications during winter months. Small amounts of chloride are essential for life, but high chloride levels can cause human illness and can be toxic to plants and animals (Shaver et al., 2007). The primary sources of chloride in urban stormwater are:

- Chloride based road deicing chemical application on roadways
- Chloride based road deicing chemical application on parking lots and other impervious surface
- Atmospheric deposition
- Chloride based road deicing stockpile runoff

Chloride is toxic to fresh water species. In surface waters, EPA's aquatic life national recommended water quality criteria for chloride are 860mg/l (acute criteria) and 230 mg/l (chronic criteria). In addition, excess chloride can cause density stratification in lakes and ponds which results in oxygen depletion and potential fish kills. While the geometric mean EMC for chloride in New England is 7.0 mg/l based on data available in NSQD, this includes data collected during all seasons; the highest concentration of chloride in stormwater discharges would be during winter months during the application of deicers on impervious surfaces. Granato and Smith have recorded chloride concentrations in highway runoff in Massachusetts exceeding 10,000 mg/l (Granato & Smith, 1999) and while that may be an extreme case, chloride concentrations in urban runoff during the deicing season can cause urban streams to violate acute water quality criteria (Heath & Belaval, 2011) (Tedder, 2009).

Solids/Sediment

Sediment, measured as total suspended solids (TSS) and/or turbidity, is one of the most common and potentially damaging pollutants found in urban runoff. TSS is a measure of the total mass suspended sediment particles in water and provides an estimate of sediment load transported to

local and downstream receiving waters. Turbidity is a measure of how suspended solids present in water reduce the ability of light to penetrate the water column. The primary sources of sediment in stormwater runoff include:

- Wash-off of particulate material from impervious surfaces, including streets, parking lots, and rooftops
- Wash-off from lawns and landscaped areas
- Wash-off from construction activities
- Stream bank erosion

Sediment also provides a medium for the accumulation, transport, and storage of other pollutants, such as nutrients and metals (US EPA, 1999) (Center For Watershed Protection, 2003). Solids contribute to many water quality, habitat and aesthetic problems in urban waterways. Elevated levels of solids increase turbidity, reduce the penetration of light at depth within the water column, and limit the growth of desirable aquatic plants. Solids that settle out as bottom deposits contribute to sedimentation and can alter and eventually destroy habitat for fish and bottom-dwelling organisms Turbidity can exert impacts on aquatic biota, such as the ability of submerged aquatic vegetation to receive light and the ability of fish and aquatic insects to use their gills. The geometric mean EMC for total suspended solids in New England is 46 mg/l based on data available in NSQD (see table above). This is slightly lower than the national EMC for TSS of 78.4 mg/l (Lin, 2004). For reference the TSS 30 day average secondary treatment standard for Publically Owned Treatment Works is 30mg/L (40 CFR §133.102).

Oil & Grease (Hydrocarbons) and Metals

Metals are among the most common stormwater pollutant components. Many trace metals can often be found at potentially harmful concentrations in urban stormwater runoff (Center For Watershed Protection, 2003). Metals like lead, zinc, copper, and cadmium get into runoff from impervious areas that are trafficked by vehicles, such as roadways, driveways and parking lots, from vehicle wear, tire wear, motor oil, grease and rust. Zinc was used in EPA's analysis as a surrogate for other metals found in stormwater runoff because it is the most ubiquitous of all metals found in urban runoff, and concentrations of metals like copper, chromium, and lead generally correlate with zinc concentrations. The primary sources of metals in stormwater include:

- Wash-off of material deposited on impervious surfaces from corrosion of automobiles and bridges
- Atmospheric deposition
- Wash off from industrial areas
- Soil erosion

The geometric mean EMC for zinc in New England is 89 ug/l based on data available in NSQD (see above table), this is lower than the national average EMC for zinc of 162 ug/l reported by Lin (2004), Lin also reported average EMCs for copper and lead of 13.5 ug/l and 67.5 ug/l respectively (Lin, 2004). Dissolved metals in waterbodies are readily assimilated by plants and animals living in the waters and while they are considered micronutrients, increased concentrations can cause hazardous and toxic effects. The current EPA recommended water quality criteria for zinc is 120 ug/l for both acute and chronic exposure with lead having recommended water quality criteria of 65 ug/l (acute) and 2.5 ug/l (chronic). Copper criteria are calculated using the Biotic Ligand Model (a predictive tool that can account for variations in metal toxicity using local water chemistry) and its

toxicity varies with respect to additional water quality parameters (e.g., pH, ionic composition, presence of natural organic matter, etc).

Oil and grease and hydrocarbons (PAHs) associated with oil and grease contain carcinogenic compounds and may be toxic to plants and animals (Center For Watershed Protection, 2003). Hydrocarbons adhere to sediments and are flushed into rivers and streams during storm events. Highest concentrations of hydrocarbons in stormwater runoff are generally associated with similar source areas as high metals concentrations. The sources of hydrocarbons in urban stormwater include:

- Wash-off of particulate material from impervious surfaces, including streets, parking lots
- Wash-off from vehicle maintenance areas
- Wash-off from gas stations
- Illicit dumping to storm drains

Oil and grease is used as a surrogate for all hydrocarbons because it is the most often measured hydrocarbon parameter. The geometric mean EMC for oil and grease in New England is 4.8 mg/l based on data available in NSQD (see table above).

Literature review and analysis of NSQD data of urban stormwater constituents indicates that stormwater discharges from urban areas in New England contain bacteria/pathogens, nutrients, chloride, sediments, metals, and oil and grease (hydrocarbons) at varying concentrations. This is not to say that every grab sample of stormwater will contain each of the aforementioned stormwater constituents at the concentrations expressed in the above table. However, if statistically representative numbers of samples were gathered on any single urban stormwater discharge, the average concentrations of bacteria/pathogens, nutrients, chloride, sediments, zinc (metals), and oil and grease (hydrocarbons) will likely be in the range of concentrations presented in the above table. When a waterbody is found to be impaired pursuant to Section 303(d) or 305(b) of the CWA for a particular pollutant, or the receiving water is experiencing an excursion above water quality standards due to the presence of a particular pollutant, it indicates that the waterbody has no assimilative capacity for the pollutant in question. See EPA Response to Comments 46 - 54, EPA Response to Comments 55 - 60, and EPA Response to Comments 227 - 233 for a discussion of why EPA has determined that it is appropriate to require additional controls on such discharges to protect water quality.

The NSQD report found that general characterization of urban stormwater quality is no longer warranted and “is not likely to provide any additional value beyond the data and information contained in the NSQD” (Pitt, et al., 2005). EPA supports this assessment. If further characterization is needed, the National Research Council recommends a minimum of 30 flow weighted composite samples collected over the course of 2-3 years on a variety of storm sizes to properly characterize the discharge from an outfall. This is a costly and onerous undertaking. Despite the cost, the final permit does include a mechanism for permittees who believe their discharge is not contributing to a water quality limitation in the receiving water. EPA will review the sampling effort and may relieve the permittee of the requirements of Appendix H that are applicable to it. The permittee is expected to adequately characterize their discharge by conducting a rigorous sampling effort equivalent to the recommendations of the National Research Council. See EPA Response to Comments 162- 167 for a discussion of relief from additional permit requirements related to impaired waters.

Where a receiving water is impaired for at least one of these pollutants, it is reasonable to determine that an MS4 discharge to that receiving water will be causing or contributing to the impairment. Because these pollutants are so ubiquitous, the final permit does not require their elimination in MS4 discharges, but rather requires MS4s subject to additional requirements in Appendix H to take measures to reduce those pollutants in their discharges. The measures vary from one pollutant type to another, because they are generated by different types of activities, and thus the measures required are specifically tailored to the reduction of each particular pollutant. Further, the permit allows permitted MS4s to select the BMPs they choose to implement to meet those requirements.

Discharges that are causing or contributing to an exceedance of water quality standards not due to bacteria/pathogens, nutrients, chloride, metals, sediment, and oil and grease (hydrocarbons, PAHs) are subject to part 2.1.1.d. of the Permit. See EPA response to Comments 91 - 93.

84. Comment from the Neponset River Watershed Association

Section 2.1 Water Quality Based Effluent Limitations and 2.2 Discharges to Impaired Waters. We strongly believe that EPA should identify in the permit or in guidance those BMPs that are effective at reducing various pollutants of concern. See, for example, our organization's draft Guidance on effective bacteria BMPs (attached). We don't believe that the requirements of 2.1 and 2.2. (although excellent additions to the 2003 permit) will necessarily reduce pollutants to the "maximum extent practicable" in every case.

EPA response to comment 84

See EPA Response to Comments 61-83. EPA plans to update pollutant removal efficiencies of various pollutants for stormwater BMPs as new information becomes available. EPA acknowledges that BMPs that promote infiltration of have a filter mechanism perform the best at removing bacteria/pathogens, however a statistically valid dataset on BMP performance of bacteria/pathogen removal for particular BMPs does not yet exist. The Guidance provided by the permittee can be a valuable tool for permittees when choosing which BMPs to implement to reduce bacteria/pathogens and EPA plans to provide additional guidance on pollutant removal performance of stormwater BMPs as information becomes available.

2.1.1 Requirement to Meet Water Quality Standards

85. Comment from the Town of Litchfield

Section 2.1.1.c establishes the requirement to remedy any conditions causing an exceedance of water quality standards within 60 days of a determination that our discharge is causing an exceedance. The section specifically spells out that the compliance clock begins immediately and continues until the source is remedied and that there is not a grace period. This, coupled with the fact that we have to conduct dry weather sampling of all of our outfalls at the same time, will put the Town into almost immediate non-compliance. To help deter the stringent requirements of the water quality exceedance, the Town is asking for time to evaluate the water quality data that NHDES has used to determine the 303 (d) list. Within the first 3 years of the permit we could prioritize our outfalls based on the use of the receiving water value (as determined by NHDES) and risk to the public. Then, a targeted sampling program of those high value/high priority water bodies can inform plans to remedy any sources of contaminants specifically from our MS4.

86. Comment from the Town of Londonderry

Section 2.1.1.c establishes the requirement to remedy any conditions causing an exceedance of water quality standards within 60 days of a determination that our discharge is causing an exceedance. The section specifically spells out that the compliance clock begins to accrue immediately and continues until the source is remedied and that there is not a grace period. This, coupled with the fact that we have to conduct dry weather sampling of all of our outfalls at the same time will put the Town into almost immediate non-compliance. To help deter the stringent requirements of the water quality exceedance, the Town is asking for time to evaluate the water quality data that NHDES has used to determine the 303 (d) list. Within the first 3 years of the permit we could prioritize our outfalls based on the use of the receiving water value (as determined by NHDES) and risk to the public. We can then implement a rigorous sampling program of the high value/high priority water bodies and develop plans to remedy any sources of contaminants specifically from our MS4.

EPA response to Comments 85 -86

See EPA Response to Comments 61-83, EPA Response to Comments 285 - 287. NHDES updates its impaired waters list (Section 303(d) list) every two years and each Section 303(d) list has a public comment period. The commenter should provide NHDES any data or information concerning impaired waters to facilitate and inform the Section 303(d) consistent with the NHDES Consolidated Assessment Listing Methodology, not during the issuance of a NPDES permit which contains its own public process. Nothing precludes municipalities from using the existing Section 303(d) list or the underlying data used in the Section 303(d) listings in setting priorities for outfall sampling. With more than 12 months before the effective date if the permit, EPA does not see the need for additional time for this purpose as requested by the commenters. In addition, see EPA Response to Comments 116 - 120.

87. Comment from the City of Dover

In the case of nitrogen the NHDES denies that it has adopted a numeric water quality standard despite establishing a threshold value of 0.3 mg/l in stream TN concentration for the tidal rivers which NHDES uses in the NH Consolidated Assessment and Listing Methodology to determine whether a water body is impaired for nitrogen. If 0.3 mg/l is not a water quality standard then what is the target value that MS4 communities should use to determine if a discharge is causing or contributing to the nitrogen impairment?

EPA should withdraw the nitrogen requirements from Appendix H of the draft MS4 permit until such time that an appropriate nitrogen water quality threshold is determined. It should also be noted that the communities have submitted comment to NHDES on the 2012 303(d) listing objecting to the proposed nitrogen impairment listings.

EPA response to Comment 87

On September 24, 2015 EPA approved the NHDES 2012 Section 303(d) list and included a technical support document (Appendix A to the approval document) which concludes that there is sufficient evidence to support the State's determination of nitrogen impairments (USEPA, 2015). In addition, NHDES responded to all comments concerning the listing of impaired waters on the 2012 Section 303(d) list. EPA declines to postpone requirements that ensure permittees' discharges are not causing or contributing to an impairment until numeric targets and thresholds have been established for all waterbodies. The requirements contained in Appendix H are based on the fact that the receiving water is impaired due to a pollutant commonly found in stormwater and stormwater discharges from the MS4 have the reasonable potential to cause or contribute to the impairment, not on numerical thresholds. For more information see EPA Response to Comments 46

- 54, EPA Response to Comments 55 - 60, and EPA Response to Comments 227 - 233. For a discussion of relief from additional permit requirements related to impaired waters see EPA Response to Comments 162- 167.

88. Comment from Conservation Law Foundation

The Draft Permit Should Be Amended to Include Performance Standards Reflecting Low-Impact Development ("LID") and Green Infrastructure as a Mandatory Requirement of Ensuring that Discharges Do Not Cause or Contribute to the Violation of Water Quality Standards.

Parts 2.1 and 2.2 of the draft permit contain numerous requirements for purposes of ensuring that regulated MS4 discharges do not cause or contribute to the violation of water quality standards. See Draft Permit, Part 2.1 (pertaining to water quality based effluent limitations, including the requirement to meet water quality standards); Part 2.2 (pertaining to discharges to impaired waters). In light of all the information set forth in Part II of these comments, which CLF hereby incorporates within this Part III as if fully set forth herein, EPA should amend the draft permit to require the use of LID and green infrastructure as part of permittees' strategies and actions to ensure that discharges from the MS4s do not cause or contribute to the violation of water quality standards. Indeed, absent such a requirement, the permit will perpetuate discharges that cause or contribute to water quality violations, in violation of the Clean Water Act.

EPA response to Comment 88

EPA agrees that low impact development (LID) and green infrastructure (GI) will be important components of a successful stormwater management program. Many of the requirements in Appendix F and H related to water quality limited waters and TMDL waters already involve considering the use of GI/LID. In order to avoid duplicating permit requirements and to provide flexibility within the permit for various best management practices, especially during the initial stage of the permit term, EPA does not believe additional GI/LID requirements are necessary in the permit language In addition the final permit contains the requirement to use LID where feasible in post construction stormwater requirements of Part 2.3.6, see EPA Response to Romments 355 - and EPA Response to Comments 386 - 388.

RENOTICE 2.1.1 Requirement to Meet Water Quality Standards

89. Comment from the City of Dover

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.

90. Comment from the City of Portsmouth

Portsmouth objects to this section to the extent that is 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.

EPA response to Comments 89 - 90

The draft permit and the final permit contain requirements that, when fully implemented, will lead to the reduction of pollutants in stormwater discharges such that the discharge does not cause or contribute to a violation of water quality standards. The NPDES regulations do not contain a concept of “de minimus” as the commenters would like to see and EPA declines to include this in the final permit. See EPA Response to Comments 61-83. Relief from additional water quality based requirements is provided in certain cases. See EPA Response to Comments 162- 167. It should be noted that this permit does not contemplate mandatory retrofits on all stormwater outfalls as the commenter suggests and instead contains requirements that target specific pollutants found in stormwater and EPA finds that once the conditions of this permit are fully implemented MS4 discharges will not cause or contribute to a water quality standards violation.

EPA Response to Comments 46 - 54, EPA Response to Comments 55 - 60, and EPA Response to Comments 227 - 233.

91. Comment from the City of Dover

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.

92. Comment from the City of Manchester

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.l (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.l (d) is so important.

93. Comment from the City of Rochester

§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.

EPA response to Comments 91 - 93

2.1.1.d has been updated to include discharges being addressed under 2.3.4 (illicit discharge detection and elimination) as well as discharges addressed under 2.2.1. and 2.2.2 (discharges to TMDL waters and impaired waters, respectively). EPA believes these situations will cover the most ubiquitous stormwater pollution and appropriate schedules are provided in the permit and appendices for elimination of this pollution. Appendices F and H are not specifically referenced in the section because it would be duplicative. Part 2.1.1.d essentially states that the MS4 operator is responsible for eliminating other pollution (such as a spill or chemical leak that reaches the MS4) as quickly as possible but within 60 days. See EPA Response to Comments 46 - 54, EPA Response to Comments 55 - 60, and EPA Response to Comments 227 - 233. The final permit contains relief from permit requirements related to water quality limited waters under certain circumstances. See EPA Response to Comment 130 and EPA Response to Comments 162- 167.

94. Comment from Tighe & Bond

(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?

95. Comment from the City of Portsmouth

Portsmouth requests that the agency clarify the regulation of "tributaries" which is referred to in several sections including Sec. 2.1.1 b 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.

96. Comment from NH Stormwater Coalition:

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)(l)(vii).

97. Comment from the City of Dover

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?

EPA response to Comments 94-97

Discharges to nutrient-impaired waters and their tributaries require additional controls under part 2.2, as specified in Part 2.2.1. and 2.2.2. for each pollutant. For all other pollutants subject to part 2.2 of the permit, the permit contains requirements for those discharges directly to the impaired

waterbody and does not contain requirements for discharges to tributary waters, unless that tributary water is also impaired or water quality limited due to a pollutant covered in part 2.2.

It is well documented that discharges of nutrients (specifically nitrogen and phosphorus) in stormwater not only affect the point at which the discharge enters the receiving waterbody but also affect downstream waterbodies. See EPA Response to Comments 61-83. Nutrient TMDLs covered by this permit and elsewhere require nutrient reductions watershed wide; (e.g.: (USEPA, 2010) (CTDEEP, NYDEC, 2000) (USEPA, 2015) (Vadeboncoeur, Hamburg, & Pryor, 2010) (Correll, 1998) (Charles River Watershed Association, May 2011) (Mattson & Issac, 1999) (Browman, Harris, Ryden, & Syers, 1979) (Carpenter, et al., 1998)). As such, the permit contains requirements for discharges that occur upstream of nutrient impaired waterbodies, recognizing that nutrient impairments are caused by discharges directly to the impaired waterbody as well as discharges from upstream sources.

One commenter asserted that no requirements to a lake with an approved phosphorus TMDL should be required. EPA disagrees with this assertion and notes that the TMDLs themselves contain an extensive modeling analysis that concludes reductions in phosphorus from all watershed sources are necessary to meet water quality standards, not just direct dischargers.

Part 2.2. of the permit identifies which permittees have discharges upstream of nutrient impaired waterbodies as determined by EPA or an approved TMDL and are subject to additional requirements to reduce nitrogen or phosphorus from their discharges. However, the final permit contains language providing relief from the additional requirements in the event that the permittees do not have discharges to nutrient impaired waterbodies or their tributaries. In such a case, the permit requires the permittees subject to part 2.2. to document the determination that they do not discharge to a waterbody impaired due to excess nitrogen or phosphorus or a tributary of such an impaired water in their NOI and they are relived of any additional applicable requirements upon permit authorization.

See EPA Response to Comments 46 - 54, EPA Response to Comments 55 - 60, and EPA Response to Comments 227 - 233.

2.1.2 Increased Discharges

98. Comment from the City of Portsmouth

Section 2.1.2.b.iii New or Increased Discharges to Impaired Waters: This provision states that there is no net increase in loading allowed from an MS4 to impaired waters of any pollutant for which the water body is impaired. A large portion of the City of Portsmouth discharges storm water to the tidal waters such as the Piscataqua River, Sagamore Creek, Back Channel, North Mill Pond, South Mill Pond, and Great Bay Estuary and non-tidal waters including Pickering Brook, Hodgson Brook, Newfields Ditch, and Berry's Brook which are all water bodies presently identified as impaired. This provision in the new draft permit could cripple future development, bringing a halt to growth and redevelopment within the City. Unreasonable and unrealistic restrictions that stifle growth only harm a municipality's ability to make future investments in environmental improvements. The City of Portsmouth has protective and thorough site review regulations relative to stormwater management (See Appendix A) and a well-established technical process for review of new developments, but as a practical matter, even the installation of the latest technology and the use of

best management practices to limit loadings, are not l00% efficient. Increased loadings to impaired water bodies are likely in any growth/redevelopment scenario.

99. Comment from the Town of Londonderry

Section 2.1.2 prohibits any new or increased discharges (including pollutant loadings). Does this mean that the Town needs to notify NHDES every time we issue a driveway permit or add a catch basin to our drainage system? Do we also have to provide a waste load analysis for every driveway? This provision seems administratively burdensome and the Town doubts that NHDES has the resources to respond to such a requirement.

100. Comment from the City of Portsmouth

5. New and additional stormwater flow to impaired waters regardless of concentration would be prohibited under this draft permit. This requirement presumes that the added discharge causes or increases the impairment without any sampling or confirmation of the possible impairment. There may be instances where additional stormwater flow might be better than the receiving water body especially if it's from in-place BMPs.

101. Comment from MCWRS

New and additional stormwater flow to impaired waters regardless of concentration would be prohibited under this draft permit. This requirement presumes that the added discharge causes or increases the impairment without any sampling or confirmation of the possible impairment.

102. Comment from the City of Dover

This provision states that there is no net increase in loading allowed from an MS4 to impaired waters of any pollutant for which water body is impaired. EPA presumes that the MS4 is causing and or contributing to an impairment. It is Dover's understanding that EPA is not entitled to make that presumption.

A large portion of the City of Dover discharges storm water to the tidal portion of the Cocheco, Piscataqua, and Bellamy Rivers which are listed as impaired for numerous contaminants including nitrogen. While proposed new development can install best management practices to reduce nitrogen, the BMP's are not 100% efficient and the resultant development would increase nitrogen loading and therefore not be approved. This proposed section is overly restrictive and would cripple the City's ability to grow and generate additional revenue that would support water quality improvements.

103. Comment from the Town of Derry

Section 2.1.2.iii states that there shall be no new or increased discharges from the MS4 to impaired waters unless the permittee demonstrates that there is no net increase in loading from the MS4 to the impaired water of the pollutant(s) for the waterbody is impaired. Does EPA intend to apply this to private entities as well that may discharge through privately owned outfalls for which the permittee has no control?

104. Comment from NHDES

Given that DES programs are resource-constrained and likely to experience additional funding reductions, DES is concerned that the subject permit creates an additional workload for DES programs that is non-productive. For example, DES has an effective program to deal with antidegradation, but the very specific requirements in Section 2.1.2.b will likely result in DES needing to unnecessarily review every change in land use, regardless of how small (e.g., paving of a driveway), in every MS4 community. Section 2.1.2.b could simply read: "b. Permittees must comply with the provisions of the NH antidegradation provisions", allowing DES the flexibility to implement programs in the most effective way possible.

105. Comment from the City of Manchester

"There shall be no new or increased discharges from the MS4 to impaired waters unless the permittee demonstrates that there is no net increase in loading from the MS4 to the impaired water of the pollutant(s) for which the water body is impaired" The City of Manchester is a Combined Sewer Overflow (CSO) community and is required to separate our sanitary and storm sewers. Through this separation program, stormwater is being directed to water bodies such as the Merrimack River, combine this with the change in climate and it is not feasible to not increase discharges to impaired water bodies. In this case compliance with one EPA requirement will cause non-compliance with this draft permit.

106. Comment from the Town of Litchfield

Section 2.1.2 prohibits any new or increased discharges (including pollutant loadings). Does this mean that the Town needs to notify NHDES every time we issue a driveway permit or add a catch basin to our drainage system? Do we also have to provide a waste load analysis for every driveway? This provision seems administratively burdensome and the Town doubts that NHDES has the resources to respond to such a requirement.

107. Comment from the City of Nashua

Part 2. 1.2 New or Increased Discharges - This part holds the MS4 responsible for compliance with the NH antidegradation regulations. Comment: All development has an incremental impact to stormwater that is not fully mitigated through even the best management practices available. Therefore, 100% compliance with the antidegradation regulations cannot be guaranteed. Request: The City requests that the EPA require compliance with the antidegradation regulations to the Maximum Extent Practicable.

108. Comment from the Town of Auburn

Section 2.1.2 prohibits any new or increased discharges (including pollutant loadings). It is not clear to us whether this mean the Town needs to notify NHDES every time we issue a driveway permit or add a catch basin to our drainage system? Do we also have to provide a waste load analysis for every driveway? This provision seems administratively burdensome to our small community, and we doubt NHDES has the resources to respond to such a requirement.

109. Comment from the Town of Londonderry

Section 2.1.2 prohibits any new or increased discharges (including pollutant loadings). Does this mean that the Town needs to notify NHDES every time we issue a driveway permit or add a catch basin to our drainage system? Do we also have to provide a waste load analysis for every driveway? This provision seems administratively burdensome and the Town doubts that NHDES has the resources to respond to such a requirement.

110. Comment from NH Stormwater Coalition:

2.1.2.b.iii -- New or Increased Discharges to Impaired Waters

This provision provides that “[t]here shall be no new or increased discharges from the MS4 to impaired waters unless the permittee demonstrates that there is no net increase in loading from the MS4 to the impaired water of the pollutants(s) for which the waterbody is impaired.” Draft Permit, at 14.

This requirement would, in essence, prohibit any new/additional flow of stormwater runoff regardless of the effluent concentration, as any measureable concentration would constitute an increase in the load. For instance, whenever the concentration in the MS4 discharge is less than the water quality standard, the discharge improves water quality in the impaired water body. Moreover, this restriction would apply even if

the impairment is not stormwater related (e.g., caused by conditions occurring during drought flows). Therefore, such discharges do not cause or contribute to an exceedance of the water quality standard and consequently should not be prohibited by this provision.

Moreover, this requirement presumes that the discharge is beyond de minimis levels and is a significant cause of the impairment without any demonstration, as required by federal law and applicable NPDES rules, that this requirement is necessary to restore designated uses. There are certainly instances where an impairment source is identified (e.g., CSO discharge of bacteria) whose limitation will bring the waters back into compliance. The fact that some other source is the cause of an impairment does not give EPA carte blanche to regulate all other sources. This limitation should be deleted or, at a minimum, restricted to where EPA has determined that the MS4 is significantly contributing to the impairment.

EPA response to Comments 98-110

See EPA Response to Comments 46 - 54, EPA Response to Comments 61-83, EPA Response to Comments 55 - 60, and EPA Response to Comments 227 - 233 for further information on impaired waters and water quality based effluent limitations in this permit.

EPA has written this permit to meet New Hampshire state water quality standards. Antidegradation provisions at NH Env-Wq 1708 are part of the current EPA-approved water quality standards for New Hampshire. As such, this permit must require compliance with Env-Wq 1708.05 and 1708.07. EPA recommends permittees contact NHDES for guidance on how compliance with Env-Wq 1708.05 and 1708.07 will affect their MS4.

EPA has updated part 2.1.2. in order to address many of the above concerns regarding the burden the increased discharge requirement could create for the towns and to clarify the agency's goals of this requirement. With respect to increased discharges to impaired waters listed in category 5 or 4b on the most recent New Hampshire Section 303(d) list, Part 2.1.2. has been revised to include language that (unless otherwise determined by the permittee, EPA or NHDES) compliance with Permit parts 2.2.2 and 2.3.6, including all reporting requirements, will constitute a demonstration that the associated project will not increase the discharge of pollutants from the MS4. This also applies to discharges that are part of development or sewer separation within the MS4. Absent evidence to the contrary, EPA presumes that sewer separation projects will not increase the pollutant load to the receiving water bodies.

The requirements of part 2.2.2, Appendix F and Appendix H focus on decreasing pollutants found in stormwater to those waterbodies impaired due to stormwater constituents, and EPA finds that full implementation of the requirements will result in a net decrease of the pollutants of concern. In addition, the requirements of part 2.3.6 (post construction stormwater requirements) will decrease the overall pollutant loading to all receiving waters over time. EPA is aware that new development (despite meeting the requirements of part 2.3.6) may likely increase pollutant loadings slightly above what was exported from undeveloped land. However, redevelopment throughout the jurisdiction of the permittee will result in a decrease in the overall load of pollutants to receiving water bodies since the pollutant load reduction resulting from redevelopment is likely much higher than any increased load from new development (when part 2.3.6 is adhered to fully).

The updated language in part 2.1.2. also allows EPA, NHDES or the permittee (if they become aware of a situation where an increased load outpaces those reductions seen by implementing 2.2.2 or 2.3.6 of the Permit) to determine that additional analysis and determination of loading is needed for any increased discharge received by the permittees MS4 system. Until such a time when the permittee is required to (or decides on their own to) undertake additional determinations, full

compliance with part 2.2.2 and part 2.3.6 is considered sufficient for the determination that increased discharges are not increasing stormwater pollutant loading to impaired waters.

Changes to Permit: Part 2.1.2. has been updated accordingly.

2.2 DISCHARGES TO CERTAIN IMPAIRED WATERS

111. Comment from the City of Manchester

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.

EPA Response to Comment 111

See EPA Response to Comments 61-83 and EPA response to Comments 85 -86.

It is not clear what the commenter is referring to when they question the sample date, sufficiency and quality of the water quality data, nor does the commenter provide any evidence or information to support these statements.

EPA disagrees with the assertion that data verification is necessary in order to establish the limits included in this permit. The permit includes requirements consistant with the assumptions and requirements of all applicable EPA approved TMDLs consistent with EPA regulations. See EPA Response to Comments 46 - 54, EPA Response to Comments 55 - 60, and EPA Response to Comments 227 - 233. Moreover, development of Category 5, which is the "List of Impaired Waters" mandated in Section 303(d) of the CWA (the 303(d) List), includes a rigorous public review and comment process and the final version of this List must be formally approved by the EPA. EPA Region 1 reviews each 303(d) list submitted for approval by NHDES and evaluates the adequacy for compliance with the regulatory requirements.

If a permittee has evidence that an impairment has been incorrectly assessed for a waterbody segment, EPA recommends the permittee submit such evidence to NHDES to be used to make decisions regarding surface water quality assessments as required by Sections 305(b) and 303(d) of the CWA. See NHDES Guidance (NHDES, 2015).

112. Comment from the City of Portsmouth

Section 2.2 Discharge to Impaired Waters: Many of the current impairment listings for water bodies to which Portsmouth discharges are based on sample data that is limited or that is aged and may not represent current conditions. Some of the data, for example, was collected in 2006, a period of record-setting precipitation events for the seacoast area. Consequently, data may be atypical due to the extreme amount of rainfall and increase in erosion and runoff into the storm drain system. Sampling in years prior or post 2006 may more accurately reflect conditions. Below are a few examples of inconsistencies or inadequacies in the sample data:

• Borthwick Ave. Brook/Tributary -No sample data for pH since 2008.

• Upper Hodgson Brook - No sample data for Manganese.

• North Mill Pond - Repairs to failing sewer line have been completed (2009) and several IDDE have been removed.

For the impairment listings where there is a lack of sufficient or current data, and where remedial activity may have improved water quality, Portsmouth suggests that NHDES actively review the listing and work with the community to obtain the most up to date and accurate data for reevaluation.

EPA Response to Comment 112

See EPA Response to Comments 61-83and EPA response to Comments 85 -86.

EPA disagrees with commenter's claims about the adequacy of the water quality assessments conducted by the NHDES that EPA has used as a basis for including water quality limited segments in the permit. As detailed in the New Hampshire Consolidated Assessment and Listing Methodology Guidance Manual (NHDES, 2015), when too little current data/information exist or no reliable data are available, the designated use for that water body segment is not assessed and is listed in *Category 3: Insufficient or no data and information are available to determine if any designated use is attained, impaired, or threatened (i.e., more monitoring is needed to assess any use)*. NHDES also provides the following sub-categories within Category 3 for waterbodies:

- 3-PAS: There is some but insufficient data to assess the parameter per the CALM, however, the data that is available suggests that the parameter is Potentially Attaining Standards (PAS)

- 3-PNS: There is some but insufficient data to assess the parameter per the CALM, however, the data that is available suggests that the parameter is Potentially Not Supporting (PNS) water quality standards (e.g., there is one exceedance).

- 3-ND: There is no data available for the parameter.

Moreover, development of Category 5, which is the "List of Impaired Waters" mandated in Section 303(d) of the CWA (the 303(d) List), includes a rigorous public review and comment process and the final version of this List must be formally approved by the EPA. EPA Region 1 reviews each 303(d) list submitted for approval by NHDES and evaluates the adequacy for compliance with the regulatory requirements.

With respect to questioning the assessment and listing decisions made by NHDES, the time for such an analysis would be during the public comment period for the NHDES Integrated Report. If a permittee has evidence that an impairment has been incorrectly assessed for a waterbody segment, EPA recommends the permittee submit such evidence to NHDES to be used to make decisions regarding surface water quality assessments as required by Sections 305(b) and 303(d) of the CWA (see: http://des.nh.gov/organization/divisions/water/wmb/swqa/index.htm).

With respect to Borthwick Brook and Upper Hoddgson Brook, it is important to note that there are no additional requirements for permittees that discharge to a waterbody impaired for pH or manganese.

113. Comment from the Town of Wilton

Additionally, since runoff and drainage occur within a watershed and not just within the jurisdictional boundaries of a Town it is difficult controlling the flows from neighboring communities, who could also be contributing to the overall water quality impairments. Water Quality lmprovements need to be done on a watershed basis and beginning at the head waters of the basin not just along the way. Could the regulations be changed so that each watershed be assessed and all stakeholders within that system contribute a fair and equal share all along the way instead of forcing individual communities to assume full implementation and financial responsibility? This way each watershed could be assessed, prioritized and plans developed solving all of the issues along the entire way and not burdening just a few. If clean water is the final goal then this would seem to be a better approach. Prioritize watersheds first then achieve clean water right from the headwaters.

EPA Response to Comment 113

See EPA Response to Comments 46 - 54, EPA Response to Comments 55 - 60, EPA Response to Comments 61-83 and EPA Response to Comments 227 - 233. EPA notes that the permit does not preclude permittees within the same watershed from working together to meet permit requirements, and in fact, EPA encourages this effort. MS4 operators under the permit are responsible for meeting the requirements of Appendices F and/or H for discharges from their own MS4 to an impaired waterbody (or its tributaries, in the case of nutrients).

114. Comment from the Town of Wilton

The determination/distinction had not been made as to whether the Municipality is causing or contributing to any violation. There are sections within the regulated area that might be excluded once they are mapped. These areas don't contain any municipal buildings. Drainage consists of cross culverts under the roadway where there are natural swales, and there is land higher in elevation contributing to the drainage that doesn't fall within the jurisdictional area. The New Hampshire Department of Transportation (NHDOT) Highway system also bisects the urbanized areas from the impaired surface waters. Thus they are a major contributor to the degradation of the water quality especially for Chlorides. The Town has absolutely no control over the amounts and types of deicing materials that the NHDOT uses.

EPA Response to Comment 114

As part of their NOI submittal each permittee will evaluate their receiving waters to determine if the waters are impaired and will therefore determine if they are subject to the requirements outlined in Part 2.2. If, while developing their NOI, a permittee determines that all of their discharges from the regulated MS4 areas are outside of the water quality limited watershed the permittee should summarize the results of this determination in their NOI. If EPA agrees that the information provided by the permittee is accurate and demonstrates that the permittee should no longer be subject to the applicable requirements, the permittee would then be relieved from the requirements of the applicable section of part 2.2.2 and Appendix H. For example, if the permittee is listed in part 2.2.2.a.i.1 and subject to part 2.2.2.a.i and Appendix H part I, but determines that all of their discharges from the regulated MS4 areas are outside of the nitrogen impaired watershed or tributary to the nitrogen impaired watershed, the permittee would submit their determination as part of the NOI, and upon authorization, the permittee would be relieved of the requirements in part 2.2.2.a.i and Appendix H Part I.

However, if the permittee does determine that their MS4 regulated areas discharges into a water quality limited segment (or a tributary to one in the case of nutrients), then the permittee would be

subject to the requirements of Part 2.2, regardless of the contribution of NHDOT, which is also a Small MS4 covered by this permit. See EPA response to Comment 19.

See also EPA Response to Comments 46 - 54, EPA Response to Comments 55 - 60, and EPA Response to Comments 227 - 233.

Changes to Permit: Part 2.2.2 has been updated accordingly.

115. Comment from the Town of Amherst

We want to be crystal clear; the Town of Amherst supports clean water. However requirements must be based on solid data not limited testing and "good engineering assumptions". Baboosic Lake is included in the 2010 list of threatened or impaired waters that require a TMDL. A report prepared and presented to EPA in January of 2011 (Project: EPA-SMP-07-002) does not acknowledge the existence of the town's Community Septic serving forty-four homes (dating back to 2005). The report assumes each one of these has their own individual septic within one hundred fifty feet of the lake. We question the prosperous conclusions that have been made. It is extremely important that water sampling information used as a basis for the impairment requirements are up to date and reflect current EPA guidelines.

EPA Response to Comment 115

Please see EPA Response to EPA Response to Comments 61-83 and EPA Response to Comment 111. The Town is correct that a TMDL was approved by EPA in May 2011 for Baboosic Lake due to impairments for primary contact recreation because of high chlorophyll a concentrations and the presence of hepatotoxic cyanobacteria. Questions regarding the data used in the TMDLs to establish the TMDL targets and reduction values should be raised during the public comment period for each TMDL. The TMDL development and approval process as specified in Section 303(d) of the CWA and the implementing regulations at 40 CFR 130.7 require a public review and comment period prior to submission for EPA approval; this permit does not reopen any TMDL for comment or modification. The public comment period for Baboosic Lake TMDL was March 15, 2010 through April 23, 2010. On March 15, 2010, a public notice announcing the availability of the draft TMDL for public review and comment was posted on the DES website[7]. On this date, three copies of the draft report and two copies of the public notice were also mailed to the Town of Amherst's Board of Selectman for distribution. One copy of the draft report was kept at Town Hall and the public notices were posted on the public bulletin boards at Town Hall. In addition, copies of the draft report and the public notice were also provided to the President and Vice President of the Baboosic Lake Association. NHDES did not receive any written comments on the Draft Report, therefore no substantive changes were made to the report.

If the town believes the allocations in the TMDL are no longer applicable, the town should work with NHDES and can be relieved of permit requirements under certain circumstances. See Appendix F Part III.2, EPA Response to Comment 130, and EPA Response to Comment 131-132, for discussion of relief provisions for requirements for dischargers where TMDLs identify stormwater as a source of a pollutant of concern.

116. Comment from NHDES

2. Section 2.2 is arguably the section of the draft permit that is most open-ended as far as community expense is concerned, particularly with the large number of impaired water listings and TMDLs in New

[7] www.des.state.nh.us/wmb/TMDL/, Accessed January 2, 2017

Hampshire. Restoring impaired waters is as complicated and time- consuming as it is important, and TMDLs provide a valuable tool in their restoration. However, although MS4 communities can do their part, they cannot do it alone. Watershed-wide participation in integrated adaptive management approaches are necessary if water quality objectives are to be met. For the reasons below, DES suggests that EPA delay the effective date of Section 2.2 of the Permit for as long as 3 years after the date of signature and final release to the public. In addition, DES supports a longer time frame for the communities in New Hampshire to achieve compliance with the Permit. DES is committed to working with EPA and the New Hampshire legislature to modify administrative rules to enable the use of compliance schedules in general permits to allow for longer timeframes to meet the more challenging requirements of the permit. The permit should assure that the permittees take action to solve confirmed water quality problems but not put them in a position of immediate non-compliance, with no ability to comply within the permit term.

117. Comment from NHDES

2b. As discussed above, because of the large number of water bodies in New Hampshire with listings and TMDLs, including some for which additional and updated data are needed, the new requirements in Section 2.2 are magnified for the MS4 communities in New Hampshire. In the draft permit, DES would like to see the addition of a data verification step prior to the creation of water quality response plans or investments in more costly best management practices (BMPs). This is especially true for impaired waters for which there are few data, that have not been sampled in many years, or for which better sampling techniques are now available.

118. Comment from NHDES

2c. Further, for TMDL requirements and Water Quality Response Plans (WQRPs), it should be clear that the firm deadlines to conduct investigations and begin installing BMPs are only the first step in the "adaptive management" and “reasonable further progress" processes that may require several years beyond the permit term to complete. It would be helpful in moving this critical program forward if the Permit clarified if, and how, MS4 communities can stay in compliance with Permit requirements during the time the adaptive management approach to meeting water quality standards is being implemented.

119. Comment from NHDES

2d. Given the expansive nature of the permit, the number of listings and TMDLs in New Hampshire, other NPDES issues within MS4 communities, and resource issues, triage should be an important concept in the final permit. Communities should, with input from state and federal agencies, be able to prioritize water bodies for restoration and protection. While all surface waters are important, some characteristics, such as public health, recovery potential, and relative severity of impact, make certain waters higher priorities. It seems unusual that the Permit requirements for listed water bodies without TMDLs are more arduous than for those where TMDLs have already been developed. A prioritization step, perhaps even on a watershed basis, should be an important part of the implementation of section 2.2 and perhaps other sections requiring expensive monitoring or investigation. Ultimately, we look forward to discussing integrated permitting options that would allow all of us to focus on projects with the highest water quality benefit, particularly in watersheds with CSO discharges.

120. Comment from NHDES

3. The requirements related to compliance with TMDLs are confusing. Permittees need to know exactly what they are responsible for to be in compliance. It should be made clear that permittees are only responsible for pollutants derived from human activities conducted within their own MS4 boundaries. For example, if CSOs in an upstream community are listed as the cause of impairment in the 303(d) list, and a downstream community that does not have CSOs discharges to the same water body, then the downstream

community should not need to take actions other than the 6 minimum control measures described in section 2.3. Further, it should be made clear that the only TMDL that requires "relative percent reductions" is that for phosphorus, and that for the other TMDLs, there are no specific allocations that apply at the outfalls. With regard to the phosphorus TMDLs, the permit seems to focus TMDL compliance on achieving phosphorus reduction targets. As stated in the implementation sections of the TMDLs, compliance with the TMDL will be based on compliance with water quality criteria and/or thresholds for the response parameters (i.e., dissolved oxygen, chlorophyll-a and cyanobacteria) and not on meeting the phosphorus reduction targets. In addition, the TMDL states that it is anticipated that the phosphorus reductions will be conducted in phases. To be consistent with how the phosphorus TMDLs were intended to be implemented, and to avoid spending public funds on BMPs that may not be necessary to achieve water quality standards, the permit should promote, and allow time for, an adaptive implementation approach consisting of phased BMP implementation followed by ambient monitoring after each phase, to confirm if additional phosphorus control measures are warranted.

EPA Response to Comments 116 - 120

On November 22, 2014, The New Hampshire Code of Administrative Rules was updated to include the adoption of N.H. Code Admin. R. Env-Wq 1701.03 “Compliance Schedules in NPDES Permits” into rule and Env-Wq 1701.03 became effective on the same date. Env-Wq 1701.03 allows compliance schedules to be put into NPDES permits. Accordingly, and in response to many comments such as those raised above by NHDES, EPA amended the language in Parts 2.1.1 and 2.2 and Appendix F and H of the permit and added specified schedules and actions leading to compliance with water quality standards where appropriate which are consistent with Env-Wq 1701.03 and 40 CFR §122.47. On September 1, 2015 EPA reopened the comment period on updated language in Parts 2.1.1, 2.2, 2.3.6, Appendix F, and Appendix H in response to multiple comments received on the reopened parts and appendices of the 2013 draft permit and in order to comply with the recently effective New Hampshire Code of Administrative Rules Env-Wq 1701.03 and to address concerns raised by commenters above. The updated Parts 2.1.1, 2.2, 2.3.6 Appendix F and Appendix H fully replaced same parts or appendices of the 2013 draft permit. See the Statement of Basis on the proposed modifications to the reopened sections of the 2013 draft permit for more information[8].

As described, the updates to the Draft Permit included significant changes to Section 2.2 to provide clarity of permit requirements and certainty on applicability of permit provisions. These changes include the requirements and schedule cited in the above comments. The amended language altered the requirements under Section 2.2.1 and Appendix F for permittees subject to an approved TMDL, including changes to Tables F-1 and F-2. Section 2.2.1.e and Appendix F Part II outline the requirements for permittees subject to an approved bacteria TMDL; these requirements made clear that the requirements do not specify a required percent reduction but instead are comprised of additional or enhanced BMPs. Section 2.2.1.f and Appendix F Part III outline the requirements for permittees subject to an approved Lake or Pond Phosphorus TMDL; these requirements include a schedule that extends for 15 years after the effective date of the permit.

Also, EPA does not agree that the permit should include a specific prioritization step for the requirements under Parts 2.2.1 and 2.2.2. As part of the permit re-notice, the requirements under

[8] https://www3.epa.gov/region1/npdes/stormwater/nh/nhms4-renotice-statement-of-basis.pdf, Accessed January 2, 2017

Parts 2.2.1 and 2.2.2 were developed with inherent flexibility such that the permittee could prioritize their work provided they continue to meet the permit schedule.

EPA also declines to incorporate a data verification step into the permit timeline. Please see EPA response to Comments 85 -86, EPA Response to Comment 111, EPA Response to Comments 128 - 129 and EPA Response to Comment 554. It should be noted that the requirements to complete a WQRP were removed from Appendix H and the requirements of Part 2.2.2. and Appendix H of the permit have been narrowed to apply to only a subset of impaired waters, which should alleviate the need for a verification step as NHDES requests.

If a permittee is discharging to an impaired water body that is covered under Part 2.2 regardless of upstream impairment cause or cause of impairment listed on the Section 303(d) list, EPA finds it is appropriate to include such additional requirements as those specified in Part 2.2 and Appendices F and H. See EPA Response to Comments 61-83 and EPA Response to Comment 254 for further explanation of compliance schedules.

For a discussion of WQBELs and EPAs authority also EPA Response to Comments 46 - 54, EPA Response to Comments 55 - 60, and EPA Response to Comments 227 - 233.

121. Comment from Dr. Robert M. Roseen

Another significant element of the draft permit is the linkage to impaired waters and the TMDL program. Water quality improvements will not occur unless permits are grounded in the application of TMDLs. Arguably, a municipality could be in compliance with the first round of MS4 permits conditions, and still show no measurable improvements in water quality. For this reason, some type of wet weather monitoring should be required. There needs to be data demonstrating impacts and results from the MS4 activities. Water quality data needs to play an important role in the verification of permit efforts. A strong example for why this is needed is the Chesapeake Bay. While many important substantive challenges exist for the management of the Chesapeake Bay, some very poor guidance was given for years detailing improperly the success of nutrient control measures. The success was gauged on modeling results, and not based on water quality monitoring, which showed the opposite. Successful permit implementation must be based on water quality monitoring results.

EPA Response to Comment 121

As efforts continue to be underway (e.g., Chesapeake Bay Region, UNH Stormwater Center) to further evaluate the effectiveness of various BMPs at reducing nutrient loads, EPA will continue to monitor progress in these evaluations and, if warranted, revise and/or add credits and/or approaches to calculate credits accordingly in the future as new information becomes available. EPA agrees that using ambient surface water monitoring to verify the water quality improvements expected to be achieved by this permit is important in the long term and for a successful adaptive management approach. However, EPA currently is not looking to the permittees to provide this ambient monitoring under the terms of this permit, but rather looks primarily to the State for conducting ambient surface water monitoring.

122. Comment from the Town of Goffstown

This permit represents an increase in administrative and technical effort that would be impossible for any municipality to absorb. It is not necessarily the permit conditions themselves but rather the sheer volume of the impaired water bodies. According to EPA's website; New Hampshire ranks 7th in the nation in the number of impaired water bodies. New Hampshire also ranks 2nd in the nation in the number of TMDL's

with over 6,000. The state response to this is that most of those TMDL's (approx. 5,000) are for mercury, however, even if the mercury TMDL is taken off the list it still leaves 882 TMDL's which would still have NH in the top 15 states by number of TMDL's. Most of Goffstown's outfalls discharge to impaired water bodies. This coupled with the age of Goffstown's sewer system limits our ability to prioritize our outfalls. The town cannot afford to tackle all of the outfalls simultaneously and meet the 5 year deadline spelled out in this draft permit.

123. Comment from the Town of Auburn

In total, this permit represents an increase in administrative and technical effort that likely will be difficult to impossible for any municipality to absorb, but particularly a small community such as Auburn. It is not necessarily the permit conditions themselves but rather the sheer volume of the impaired water bodies. According to EPA's website; New Hampshire ranks seventh in the nation in the number of impaired water bodies. New Hampshire also ranks second in the nation in the number of TMDL's with over 6,000. The state response to this is that most of those TMDL's (approx. 5,000) are for mercury, however, even if the mercury TMDL is taken off the list it still leaves 882 TMDL's which would still have New Hampshire in the top 15 states by number of TMDL's. Most of Auburn's outfalls discharge to impaired water bodies. The town cannot afford to tackle all of the outfalls simultaneously and meet the five year deadline spelled out in this draft permit.

EPA Response to Comments 122 - 123

EPA acknowledges these comments regarding the compliance schedule for Part 2.2 in the Draft Permit. On November 22, 2014, The New Hampshire Code of Administrative Rules was updated to include the adoption of Env-Wq 1701.03 “Compliance Schedules in NPDES Permits” into rule and Env-Wq 1701.03 became effective on the same date. Env-Wq 1701.03 allows compliance schedules to be put into NPDES permits. Accordingly, EPA amended the language in Parts 2.1.1 and 2.2 and Appendix F of the permit and added specified schedules leading to compliance with water quality standards where appropriate which are consistent with Env-Wq 1701.03 and 40 CFR §122.47. On September 1, 2015 EPA reopened the comment period on updated language in Parts 2.1.1, 2.2, 2.3.6, Appendix F, and Appendix H in response to multiple comments received on the reopened parts and appendices of the 2013 draft permit and in order to comply with the recently effective N.H. Code Admin. R. Env-Wq 1701.03. The updated Parts 2.1.1, 2.2, 2.3.6 Appendix F and Appendix H fully replaced same parts or appendices of the 2013 draft permit. See the Statement of Basis on the proposed modifications to the reopened sections of the 2013 draft permit for more information[9]. EPA plans to provide additional materials, to the extent that resources allow, to aid permittees in determining their receiving waters and the status of those receiving waters. Permittees should check EPA’s website periodically for updates and new resources pertaining to the permit.

As described, the updates to the Draft Permit included significant changes to Section 2.2 to provide clarity of permit requirements and the applicability to permittees. These changes include the requirements and schedule cited in the above comments.

See EPA response to Comments 576-586 for a discussion of extended timeframes containined in the final permit.

[9] https://www3.epa.gov/region1/npdes/stormwater/nh/nhms4-renotice-statement-of-basis.pdf, Accessed January 2, 2017

124. Comment From NH Stormwater Coalition:

The Draft Permit presumes that controls beyond the standard requirements are necessary for MS4s discharging into impaired waters. This assumption needs to be assessed before municipalities are forced to implement expensive controls. In assessing whether the receiving waters are impaired for the particular parameter in question, the factors that should be considered include whether the data exhibit existing water quality standard exceedances, the amount of data available, the age of the data, the return frequency of any observed exceedances, and whether the impairment status will change if the criteria are updated. Thus, the following factors must be assessed before MS4 provisions and additional requirements are imposed:

Existing Water Quality Standard Exceedances

The provisions of 40 C.F.R. § 122.44(d) mandate that permit decisions for more restrictive water quality based limits be based on current data and facility performance. In some cases, impaired water listings in New Hampshire are based upon outdated data and the impairment listings need to be updated to reflect current conditions. For example, data collected prior to 2003 may not reflect the current conditions in the receiving water since municipalities have implemented requirements under the 2003 General Permit and may have implemented additional CSO controls, other collection system improvements, or mitigated illicit discharges. Therefore, the impairment listings do not reflect the waters current condition. The status of the receiving water should be confirmed before needless BMPs are implemented or small communities are subject to Draft Permit provisions.

Insufficient Data

The available data, upon which the original assessment was made or upon which a current assessment is being considered, must be sufficient to confirm that an impairment actually exists. This is particularly a concern for parameters with an extended averaging period (*e.g.*, bacteria –60 day averaging period for the geometric mean; nutrients – typically considered a growing season average). If the available data are over-represented by wet weather conditions, the resulting impairment assessment will not reflect ambient conditions for the relevant averaging period of the criteria.

Age of Data

The data upon which impairment assessments are made must reflect current conditions to characterize existing conditions, particularly where point sources have been mitigated or where stormwater management practices have been implemented. 40 C.F.R. § 122.44(d)(2). If the only available data is five years or older or if there significant watershed improvements have been made, then current data must be obtained to confirm that impairments still exist before additional BMP requirements are imposed.

Return Frequency

Water quality criteria are based on magnitude, duration, and frequency of exceedances. Individual exceedances of the magnitude and duration components of a water quality standard are acceptable provided the return frequency of these exceedances does not exceed once in three years on average. The impairment assessment data must be sufficient to demonstrate that the return frequency of the water quality criterion is exceeded before declaring waters impaired. If these data are not available, additional data must be collected before additional BMP requirements are imposed.

If the waters are confirmed to be impaired, an assessment must be made to determine whether stormwater runoff is significantly causing or contributing to the impairment and whether the targeted BMPs will address this impairment. Definitive answers may not always be available, and prudence suggests that before extra BMPs be implemented, an “adaptive management” approach be used to confirm whether such controls will address the existing impairment. However, where data is available, it should be used to decide whether the

extra BMPs must be implemented. This information can include data demonstrating that the observed impairment is due to natural conditions, or that the impairment is caused by point sources (non-MS4 sources), illicit discharges through MS4s, or non-MS4 runoff. Thus, the following issues must be assessed before MS4 provisions and additional requirements are imposed:

Natural Conditions

Surface waters are not considered to be impaired if the water quality criteria exceedances are due to natural conditions. For example, Env-Wq 1703.21(a) (Water Quality Criteria for Toxic Substances) provides, "*[u]nless naturally occurring* or allowed under part Env-Wq 1707, all surface water shall be free from toxic substances or chemical constituents …" (emphasis added). This consideration applies to all waters of the state and, in particular, to the following

parameters: aluminum (natural weathering), bacteria (warm-blooded animals), dissolved oxygen (natural hydrodynamic conditions), and nutrients (natural weathering, seasonal leaf litter). A water quality criteria exceedance and therefore, an impairment, cannot be caused by a natural condition.

Point Sources

If an impairment is caused by a point source discharge and could be mitigated by point source control, then the extra MS4 BMPs referenced in Section 2.2 of the Draft Permit are unwarranted and should not apply. In this case, point sources include failing septic systems.

Illicit Connections/Other Sources

If an impairment is due to an illicit discharge through the MS4, the Draft Permit already includes ample provisions for addressing illicit discharges (*i.e.,* Section 2.3.4) and the extra MS4 BMPs referenced at Section 2.2 are not warranted. Similarly, if other sources are identified and control of these sources is sufficient to restore compliance with the State water quality criteria, the extra BMPs would not be warranted.

Non-MS4 Runoff

Runoff from agricultural fields that have been fertilized with manure can yield exceedingly high concentrations of *E. coli*. The extra MS4 BMPs referenced at Section 2.2 cannot mitigate agricultural runoff; consequently, imposition of these extra BMPs is not warranted.

EPA Response to Comment 124

For a detailed discussion of EPAs authority and approach for WQBELs in the final permit see EPA Response to Comments 46 - 54, EPA Response to Comments 55 - 60, and EPA Response to Comments 227 - 233.

See also, EPA Response to Comments 61-83 and EPA Response to Comments 116 - 120.

EPA recognizes that in many instances, receiving water impairments may be caused by multiple sources, which may or may not include MS4s discharges. In these cases, the Clean Water Act requires action by all permittees that contribute to the impairment (regardless of relative level of contribution), even where the actions of one permittee alone may not be sufficient to result in the receiving water meeting standards. EPA encourages permittees to work together based on receiving waters and watersheds in order to efficiently address permit requirements and work to resolve water quality impairments.

125. Comment from the City of Rochester

General Comment 1: The final 2012 303(d) list for waters that require a TMDL includes several impaired waters within the City of Rochester. In the 2013 NH Small MS4 Draft General Permit with the exception of those listed in Appendix F, Tables F-1 and F-2 there is no information on how these impairments should be addressed. The EPA should provide guidance on how these impaired waters will be dealt with.

EPA Response to Comment 125

Please see EPA Response to Comments 122 - 123. The updated Part 2.2.2 of the Draft permit identifies the permittees that are required to comply with the requirements outlined in Part 2.2.2 and Appendix H. The City of Rochester is identified in Section Part 2.2.2.a and Part 2.2.2.c for nitrogen and bacteria impairments, respectively. Appendix H of the final permit contains detailed requirements for each impairment that stormwater may be causing or contributing to.

2.2.1 Discharges Subject to an Approved TMDL

126. Comment from the Town of Londonderry

Another concern is that mercury, though it is clearly established is the result of air disposition not storm water runoff is still a concern based on the increased requirements to manage sediment removed from the roadways that could have mercury contaminants present.

127. Comment from the Town of Goffstown

Another concern is that mercury, though it is clearly established is the result of air disposition not storm water runoff is still a concern based on the increased requirements to manage sediment removed from the roadways that could have mercury contaminants present.

EPA Response to Comments 126-127

Language in the permit has been updated to clarify that no additional stormwater control measures are required for pollutants that are the result of atmospheric deposition: The “TMDL for 158 Acid Impaired Ponds and 21 Aluminum Impaired Lakes” and the “Northeast Regional Mercury TMDL” do not specify wasteload allocations or other requirements either individually or categorically for the MS4 discharges and specify that load reductions are to be achieved through reduction in atmospheric deposition sources. No requirements related to these TMDLs are imposed on MS4 discharges under this Part. However, if the permittee becomes aware, or EPA or NHDES determines, that an MS4 discharge is causing or contributing to such impairments to an extent that cannot be explained by atmospheric deposition (e.g. chemical spill, acid landfill leachate or other sources), the permittee shall comply with the requirements of Part 2.1.1.d.

Changes to the permit: Part 2.2.1.c have been updated accordingly.

128. Comment from the Town of Sandown

Under Section 2.2.1 of the 2013 General Permit specifies "Approved Total Maximum Daily Load (TMDL)" values for bacteria and phosphorous applicable to the Exeter River and Showell Pond. Appendix F to the Permit specifies the following reduction percentages, required to in order to achieve the EPA "approved" TMDL limits, to be as follows: (a) Bacteria at the Exeter River- 82%; and (b) Phosphorous at Showell Pond- 69%. While the levels of desired TMDL reduction may be desirable, from the perspective of the Town of Sandown we have the following concerns: 1) What is the level of confidence in data used to establish TMDL limits and target reduction values? How current is it? Where did it come from? Is it accurate? 2) When one

considers the limited volumes of stormwater directly tributary to each of the two water bodies from land and facilities actually owned and managed by the Town of Sandown rather than private parties, we suspect it may not be possible for the municipality to achieve the reductions in TMDL loading sought by the EPA. In the case of bacteria loading to the Exeter River and phosphorous loading to Showell Pond, we suspect the source of excess TMDL levels are likely privately owned septic systems, agriculture, lawn maintenance and other "homeowner" activity rather than stormwater runoff from the municipal highway system. Do the prescribed TMDL limits cited in Appendix F set the town up to fail? We are concerned they do.

129. Comment from the City of Rochester

The permit should allow for confirmation that the receiving waters are:

• Actually impaired by the specific parameter

• The small MS4 is a significant contributor

• The appropriateness of the waterbody being listed on the 303(d) list

No source data was provided in Appendix F to support the information presented in Tables F-1 and F-2. It is unknown how many water samples the TMDL is based on, how long ago the samples were taken, the appropriateness of the methodology used and the accuracy of the data. Additionally, it appears that headings in Tables F-1 and F-2 are incorrectly placed, which brings into question the validity of all the information presented. The City of Rochester should be provided all source data used to develop the TMDLs along with clear and simplified explanations of the information, and be given ample time to review the information to confirm that the 303(d) listing is appropriate before the permit is implemented. It is the responsibility of the NHDES and EPA to determine whether the City of Rochester is a significant contributor to the pollutant in question.

EPA Response to Comments 128 - 129

See EPA Response to Comments 61-83, EPA response to Comments 85 -86 and EPA Response to Comments 116 - 120.

See also EPA Response to Comments 46 - 54, EPA Response to Comments 55 - 60, and EPA Response to Comments 227 - 233.

EPA amended the language in Parts 2.1.1 and 2.2 and Appendix F and H of the Draft Permit and on September 1, 2015, EPA reopened the comment period on the updated language in Parts 2.1.1, 2.2, 2.3.6, Appendix F, and Appendix H in response to multiple comments received and in order to comply with the recently effective New Hampshire Code of Administrative Rules Env-Wq 1701.03. The updated Parts 2.1.1, 2.2, 2.3.6 Appendix F and Appendix H fully replaced same parts or appendices of the 2013 draft permit. See the Statement of Basis on the proposed modifications to the reopened sections of the 2013 draft permit for more information[10] (https://www3.epa.gov/region1/npdes/stormwater/nh/nhms4-renotice-statement-of-basis.pdf).

The amended language altered the requirements under Section 2.2.1 and Appendix F for permittees subject to an approved TMDL, including changes to Tables F-1 and F-2. Section 2.2.1.e and Appendix F Part II outline the requirements for permittees subject to an approved bacteria TMDL; these requirements make clear that the permit does not require a specified percent reduction in

[10] https://www3.epa.gov/region1/npdes/stormwater/nh/nhms4-renotice-statement-of-basis.pdf, Accessed January 2,2017

bacteria concentration but instead are comprised of additional or enhanced BMPs. Section 2.2.1.f and Appendix F Part III outline the requirements for permittees subject to an approved Lake or Pond Phosphorus TMDL; these requirements include a schedule that extends for 15 years after the effective date of the permit. EPA believes the clarification of requirements and the extended schedule to implement the TMDL-related requirements will aid permittees in complying with part 2.2.1 of the permit.

Moreover, the time for questions regarding the data used in the TMDLs to establish the TMDL targets and reduction values was during the public comment period for each TMDL. The TMDL development and approval process as specified in Section 303(d) of the CWA and the implementing regulations at 40 CFR 130.7 require a public review and comment period prior to submission for EPA approval; this permit does not reopen any TMDL for comment or modification. EPA Region 1 reviews each TMDL submitted for approval by NHDES and evaluates the adequacy of the TMDL for compliance with the regulatory requirements. Each of the TMDLs identified in the draft permit and used to develop permit requirements was found to satisfy all of the TMDL regulatory requirements.

130. Comment from the Town of Exeter

The Town of Exeter will be dealing with the Statewide Bacteria TMDL. Is there a method for the town to conduct water sampling over the course of the permit for possible removal of some streams listed as impaired under the statewide bacteria TMDL and other impaired waterways?

EPA Response to Comment 130

See EPA Response to Comments 128 - 129.

The final permit contains language providing relief from additional requirements in each part of Appendix F. Since the permit contains requirements for those discharges where TMDLs identify stormwater as a source of a pollutant of concern, the permit's relief provisions are tied to the status of the particular TMDL and the continued implementation of those controls that are in place when the TMDL status changes, rather than the results of end-of-pipe sampling.

Specifically, when the TMDL applicable to the receiving water has been modified, revised or updated, and EPA has approved a new TMDL that indicates no stormwater controls for addressing the associated pollutant(s) are necessary for the permittee's discharge, then, based on wasteload allocations approved in the new TMDL, the permittee may be relieved from the additional requirements in Appendix F associated with the previously approved TMDL, as of the date of the new TMDL approval by EPA. The existing EPA-approved TMDL and related permit requirements remain in effect until a new TMDL is approved by EPA.

For bacteria TMDLs, permittees must comply with either Appendix F Part II.1.b or Appendix F Part II.2. Under Appendix F Part II.2, the permittee shall work with NHDES and EPA to develop a bacteria/pathogen reduction plan consistent with the applicable TMDL submit the alternative pollutant reduction plan with their NOI. See EPA Response to Comment 22.

See also EPA Response to Comment 114. The final permit contains language providing relief from the additional requirements in Appendix F in the event that the permittees does not have discharges to bacteria/pathogen impaired waterbodies. In such a case, the permit requires the permittees subject to part 2.2. to document the determination that they do not discharge to a waterbody impaired due to excess bacteria/pathogen in their NOI and are relieved of any additional applicable requirements upon permit authorization.

Changes to the Permit: Appendix F has been updated accordingly.

131. Comment from the Town of Derry

Section 2.2.1 and Table F-3 states that the Town of Derry is subject to an approved TMDL for Phosphorus at Hood Pond, however the link included in the draft permit directed the reader to the May 2010 draft TMDL on which the Town submitted comments. A Final phosphorus TMDL was not available for review either through USEPA or NHDES websites. Upon further inquiry, the Town became aware of the final TMDL dated May 2012, a copy of which was provided to the Town on April 2, 2013 along with USEPA's approval letter dated June 2012. The draft TMDL was based on a grab sample from 1997 with a concentration of 54 ug/L, however collection of a more recent sample in 2011 prior to the final TMDL report indicated a concentration of 27 ug/L (50% reduction). This is only slightly above the atmospheric deposition concentration calculated for the loading estimate. In EPA's approval of the TMDL, EPA states: In this watershed, nonpoint sources of pollution may include diffuse stormwater runoff and overland flow, surface water base flow and groundwater seepage, septic systems, internal cycling of nutrients, waterfowl, and atmospheric deposition. Because there are little available data in this watershed to determine how much of the nonpoint sources are attributable to regulated vs. unregulated sources, DES has chosen to allocate unregulated stormwater and other nonpoint source runoff to the waste load allocation (WLA), which EPA has said is an acceptable approach when insufficient data are available. This places a more conservative endpoint than what could feasibly be achieved as is emphasized in EPA's approval letter: The allocation calls for significant reductions from the major contributing tributary watershed and from direct drainage of between 49-76% (TMDL, Section 4.6). DES acknowledges that it is likely that the final allocations, which reduce overall loading by 75% in total, will be challenging to achieve.

The Final TMDL [for Phosphorus] further states that *"successful implementation of this TMDL will be based on compliance with water quality criteria for cyanobacteria scums as well as thresholds for other nutrient related response parameters such as dissolved oxygen and chi a. These water quality variables should be the focus of the VLAP or LLMP. It is recommended that prior to initiating any expensive phosphorus control measures, monitoring should be conducted to confirm that nutrient related water quality violations exist.*" This contrasts with the draft permit requirements to go through the exercise of preparing a phosphorus reduction plan with an aggressive implementation schedule.

132. Comment from the Town of Derry

The Town of Derry met with NHDES and other MS4 communities to discuss various stormwater issues and TMDLs. Detailed review by NHDES indicated that Hood Pond was erroneously listed in 2006 for cyanobacteria. On July 30, 2013, NHDES released "Impairments Removed From the 303(D) list of Threatened or Impaired Waters" in which it was concluded that Hood Pond should be placed in a Category 2 for cyanobacteria instead of Category 5. The Town of Derry wants to emphasize that even though Hood Pond is removed from the 303(D) list for the identified impairment, the Town will not in any way relax its efforts to improving stormwater quality relative to nutrients within the watershed. In addition, the reduction in phosphorus detected between the 2011 and 1997 sampling events, though data is limited, may be a demonstration of the efforts taken since the implementation of the 2003 MS4 permit. As such, collection of more recent data for all TMDLs and impairments along with continued periodic monitoring may further demonstrate improvements in other impaired waters.

EPA Response to Comment 131-132

This permit does not re-open any previously approved TMDL for comment. See EPA Response to Comments 128 - 129. As Hood Pond (NHLAK700061203-03-01) is covered by an approved

phosphorus TMDL (NHDES, 2012), the Town of Derry is subject to the requirements under Part 2.2.1 of the permit, regardless of the status of the waterbody on the NH 303(d) list.

See EPA Response to Comment 130 for discussion of relief provisions for requirements for dischargers where TMDL's identify stormwater as a source of a pollutant of concern. EPA has also added further flexibility in how permittees may comply with the requirements of part 2.2.1. in Appendix F. For nutrient TMDLs, permittees must comply with either Appendix F Part III.1.d or Appendix F Part III.2. Under Appendix F Part III.2, the permittee can work with NHDES to develop a phosphorus reduction plan consistent with the applicable TMDL and submit that plan with their NOI. See EPA Response to Comment 22. Upon permit authorization EPA will either provide authorization to discharge under the operator specific permit terms derived from the phosphorus reduction plan submitted with their NOI or require the operator to comply with the requirements described in Appendix F part III.1.a-c.

See also EPA Response to Comment 114. The final permit also contains language providing relief from the additional requirements in Appendix F in the event that the permittees does not discharge to waterbodies listed on Table F-2 in Appendix F or their tributaries. In such a case, the permit requires the permittees subject to Part 2.2.f to document the determination that they do not discharge to waterbodies listed on Table F-2 in Appendix F or their tributaries, in their NOI, and are relieved of any additional applicable requirements upon permit authorization.

Changes to the Permit: Appendix F has been updated accordingly.

133. Comment from the Town of Derry

Section 2.2.l.b - Discharges subject to an approved TMDL that specify a wasteload allocation must satisfy the appropriate requirements of Appendix F for Chloride TMDLs. Appendix F specifies that measures to address the TMDL shall include the development of a Salt Reduction Plan that includes specific actions designed to achieve salt reduction on private facilities that drain to the MS4 including requirements for private parking lot and private street owners and operators to use trained and certified commercial salt applicators with reporting of annual salt usage within municipal boundaries. The chloride TMDL and NHDES studies recognize that approximately 50% of the salt imports in the affected watersheds are from the private and commercial sector and obviously contributors to the chloride impairments. The Salt Reduction Workgroup (SRW) made up of representatives from USEPA, FHWA, NHDES, NHDOT and the four affected communities (Derry, Londonderry, Salem, and Windham) have had extensive discussions on approaches to addressing the private/commercial sector. It was generally agreed that regulating and enforcing allocation of the private sector was practically impossible to do. To reiterate concerns expressed previously to USEPA and the SRW, watershed boundaries do not follow municipal boundaries and the majority of commercial salt applicators are transient in that they treat numerous sites during a deicing event that spans many watersheds and municipalities. For instance, a commercial applicator covers several properties for a major retailer from Derry to Nashua. The SRW has chosen to address the private sector through certification, training, outreach, and state legislative changes at the state regulatory level. Even though the permit allows a permittee to rely on the state programs in compliance with the requirements, establishing local requirements for use of state-certified applicators by the private sector is impossible to enforce.

EPA Response to Comment 133

See EPA Response to Comments 212 - 217 and EPA Response to Comment 130. EPA has updated Appendix F to include flexibility for permittees to work with NHDES on an alternate plan to meet the waste load allocations in the TMDL and the MS4 TMDL provisions.

134. Comment from Neponset River Watershed Association

2.2.1 and Appendix F; Discharges Subject to an Approved TMDL. We are not familiar with the data on which the bacteria discharge limits and percentage reductions contained Table F-1 of Appendix F are based, so we cannot comment on them. We would note that Section 2.2.1.(b) states that discharges subject to a TMDL must comply with Part 2.2 (which includes 2.2.2 on "discharges to waters without TMDLs"). Appendix F also says that MS4s subject to a Bacteria TMDLs must comply with 2.2.2. Therefore we believe that the title of Section 2.2.2. needs to be changed to "Discharges to all Impaired Waters." Without a different title it is unlikely that all MS4s subject to Bacteria TMDLs (which is most MS4s in NH) will think the section applies to them.

EPA Response to Comment 134

EPA agrees that the language in Section 2.2.1(b) creates a circular reference and could be confusing as to applicability of permit requirements.

Changes to Permit: Part 2.2.1(b) has been updated accordingly.

135. Comment from the Town of Merrimack

III. TMDL REQUIREMENTS – HORSESHOE POND:

1. Impairments Removed from the 303 (D) List of Threatened of Impaired Waters In the NHDES document entitled Impairments Removed (i.e. delisted) from the 303 (D) list of threatened or impaired waters dated April 20, 2012, it states in Group 21 (Horseshoe Pond (NHLAK700060302-02) Chlorophyll-a for Aquatic Life Use (1), that: ".....In 2010 the assessor accidently set Chlorophyll a as impaired when they should have set Chloride (one row down in the database) as impaired. In 2010 there was only one sample available for comparison to the Trophic Class based criteria for Chlorophyll a to protect Aquatic Life Use. Subsequent data collections have determined the median chlorophyll-a of 7.6 ug/L (n=13) is well below the 11 ug/L criteria for chlorophyll a and the median total phosphorous of 22.8 ug/L (n=8) is well below the 28 ug/L criteria for total phosphorous for a eurotrophic lake. The 2010 listing was in error and since sampling indicates that the waterbody meets the chlorophyll a criteria to protect aquatic life for its trophic class, this assessment unit has been removed from the 303(d) List and placed in category 2 (Full Support) for impairment of Aquatic Life due to Chlorophyll-a. Chloride has been added to the 2012 303(d) as an impairment to Aquatic Life Use."

It is important to note that although Horseshoe Pond has been removed from the 2012 Final 303(d) List to the EPA dated July 16, 2013 that a chlorophyll-a listing remains for Horseshoe Pond in the 2012 List of All Impaired or Threatened Waters List dated July 16, 2013. It is clear from this example that NHDES needs to review all TMDLs proposed in the NPDES MS4 Draft permit for current and accurate data. Proceeding otherwise will cause municipalities to spend millions of dollars, perhaps needlessly, trying to meet reduction load limits (the Horseshoe Pond TMDL listed in the Draft Permit requires 76% phosphorous removal).

EPA Response to Comment 135

The commenter is correct that chloride has been added to the Horseshoe Pond segment (NHLAK700061002-03) as an impairment to the Aquatic Life Use. However, it is also true that the Horseshoe Pond segment was listed as impaired for Primary Contact Recreation Use due to excessive chlorophyll a and the presence of hepatotoxic cyanobacteria. It was this primary contact recreation impairment that lead to the development of the Horseshoe Pond TMDL by NHDES. As Horseshoe Pond is covered by an approved phosphorus TMDL (NHDES, 2012), the Town of

Merrimack MS4 is subject to the requirements under Part 2.2.1 of the permit for any discharges to this waterbody or its tributaries.

The TMDL development and approval process as specified in Section 303(d) of the CWA and the implementing regulations at 40 CFR 130.7 require a public review and comment period prior to submission for EPA approval; this permit does not reopen any TMDL for comment or modification. EPA Region 1 reviews each TMDL submitted for approval by NHDES and evaluates the adequacy of the TMDL for compliance with the regulatory requirements. Each of the TMDLs identified in the draft permit and used to develop permit requirements was found through EPA's review process to satisfy all of the TMDL regulatory requirements.

Therefore, the time for questions regarding the data used in the TMDLs to establish the TMDL targets and reduction values was during the public comment period for the TMDL, which for the Horseshoe Pond TMDL Draft Report was Feb. 1, 2010 through March 12, 2010. According to the Final Horseshoe Pond TMDL Report, NHDES provided three copies of the draft report and two copies of the public notice to the Merrimack Town Hall.

See EPA Response to Comments 128 - 129.

See EPA Response to Comment 130 and EPA Response to Comment 131-132 for discussion of relief provisions for dischargers where TMDL's identify stormwater as a source of a pollutant of concern.

136. Comment from the Town of Merrimack

III. TMDL REQUIREMENTS – HORSESHOE POND:

2. Past MS4 Accomplishments and TMDLs:

The 2013 MS4 Draft General Permit imposes Total Maximum Daily Limits (TMDL) on Horseshoe Pond through the Horseshoe Pond Report by AECOM for Phosphorus, based on samples taken from 1996-1999. Given that the Town of Merrimack has been working on the objectives outlined in the 2003 MS4 General Permit for 10 years, it would be fiscally prudent to obtain current data prior to requiring non-structural and structural measures to be put in place and have evaluated performance on the measures by the end of year 5 of the Permit, especially with the millions of dollars that could be required to meet the draft 2013 MS4 Draft General Permit requirements.

3. Limited Data Used to Determine Phosphorus TMDL

The limited data used for the TMDL developed by AECOM entitled Horseshoe Pond Report Merrimack, NH, (January 2011) relied on data collected from 1996 – 1999 (see Table 2.1 in the TMDL for Horseshoe Pond, Merrimack, NH 2011). In this table it is noted (bottom of table) that "Water quality statistics are calculated from 1996 – 1999 data". In Table 2-2 of the TMDL for Horseshoe Pond, Merrimack, NH 2011, it notes in the table and the body of text in Section 2.1 that the Pond summer water quality summary table utilizes data from 1996 - 1999. Current, extensive and seasonal Phosphorus testing should be crucial to establishing appropriate and accurate TMDL requirements. If there is current data, then that data should be part of the TMDL that was included in the 2013 MS4 Draft General Permit. If there is none then the TMDL process needs to start over with data collection. How legitimate are these chlorophyll tests and cyanobacteria observations that were performed over 13 to 14 years ago? What is the validity for the sampling techniques, sample holding times, quality control measures, analysis methods and chains of custody? Were they appropriate at the time of the tests and observations?

4. Limitations to the Phosphorus Analysis

In section 3.4 on page 3.6 of the HP TMDL it is noted that there is “reasonable accounting of P sources” but that there are “several limitations to the analysis”. The limitations to the analysis include precipitation variability, spatial analysis limitations, total phosphorus coefficients that are regional estimates, total internal loading lack of data and restrictions to the model based on limited available data. Clearly, all of these factors place a great burden of doubt on the estimations of the final phosphorus analysis and the resultant TMDL. How can the EPA and the NHDES mandate that a set reduction in total phosphorus be achieved when there are very questionable limitations to the phosphorus analysis presented in the report and no hard phosphorus data?

5. Dissolved Oxygen (DO) Depletion and Total Phosphorus Reduction

It is noted in Section 2.6 of the 2013 MS4 Draft General Permit that “Reducing algal productivity through control of Total Phosphorus should also reduce hypolimnetic DO depletion although Horseshoe Pond is not currently listed as impaired with respect to DO. Why state that there is no issue with DO depletion in Horseshoe Pond but that the goal of Phosphorus reduction in to reduce DO depletion. This is implying a need and requirement for the Town that is beyond the scope of the Horseshoe Pond TMDL Report by AECOM.

6. Lack of Hard Data and Models to Establish TMDL Requirements

Instead of actual current data for establishing the TMDL requirement in the Horseshoe Pond TMDL Report it relies on several models to determine the epilimnion mean for the Pond. The model has been fed data from the 1996 – 1999 testing period. The models assume that the MS4 system in Merrimack is responsible for the impairment and that all of the loading is coming from the MS4 system. There is no concrete evidence that the MS4 system is causing the impairment. In Section 3.2 of the Horseshoe Pond TMDL Report it states that the “Annual areal loading of TP from the watershed is estimated to be 41.5 kg/yr which represents 90% of the total load to the Pond. Using an estimate and then developing requirements for the Town is wrong. Viewing the stormwater layer in the Town's GIS system shows four outfalls 'near' Horseshoe Pond. The distances from the end of the pipe to the Pond are 247', 131', 218' and 356' (running south to north). The stormwater runs through forested area before having a chance to reach the Pond.

7. No Loading Quantification for Establishing TMDL Requirements

Internal loads of TP and waterfowl numbers are not listed because there is reportedly no data available as noted in Section 3.2 of the Horseshoe Pond TMDL Report. In Section 3.4 it is stated that “Water quality data for Horseshoe Pond and its tributaries are limited, restricting calibration of the model” Also in Section 3.2 it is noted that “TP loading estimates from water fowl and internal loading could not be made due to the lack of data although the contributions from these sources as expected to be small relative to the watershed sources”. This is another example of how the loading quantification through current sampling needs to be completed if this TMDL is to be accurate and appropriate.

8. Use of Several Models to Predict In-Pond Total Phosphorus Concentrations

In Table 3.4 of the Horseshoe Pond TMDL Report five different empirical equation models and a mass balance are used to predict in-Pond concentrations of TP. The results of this table show variations of results from 81 ug/l to as low as 17 ug/l. The mean of these results (38 ug/L) is then used to determine the final TMDL for the Pond. This is another example of how loading quantification through current sampling needs to be completed if this TMDL is to be accurate and appropriate. In addition to Phosphorus loading, the in Pond concentrations of mean and peak chlorophyll-a, bloom probability and transparency (Secchi Disk Transparency) are also predicted. In Section 4.1 the Report notes that the target in-Pond TP concentration of 12ug/l needs to be achieved to meet water quality standards. Actual current data needs to be the basis for the assumptions make in this TMDL, taking into account the seasons, various Pond layers, overturn, and

loading sources (natural, water fowl, internal). Only then will this be a defensible TMDL. No town will be able to convince elected officials that a report, largely based on predictions and modeling is worth spending tax payers dollars on.

9. Waste Load Allocations for Phosphorus are Questionable - In Section 5.1 of the Horseshoe Pond TMDL Report it is noted that "Waste load allocations identify the portion of the loading capacity that is allocated to point sources (such as MS4s) and load allocations identify the portion of the loading capacity that is allocated to non-point sources (such as fields) and natural background" It also notes that " in order to accurately develop allocations for these two categories of sources it is essential to have not only a complete accounting of each point source, but also a delineation of the associated drainage area and an estimate of the existing loading." It goes on to say that the real challenge in splitting out point sources from non-point sources resides with the available data." There is limited data used in this report for determining loading for point and non-point sources. The waste load allocation is being estimated along with the load allocation. It would seem that the report should have generated more current, appropriate and extensive sampling data (Phosphorus & Chlorophyll a) before the waste load and load allocations were fully developed. Section 5.1 also notes that "because sufficient information at the parcel level was simply not available in this watershed, it is infeasible to draw a distinction between stormwater from existing or future regulated point sources, non regulated point sources and non point sources". This is used as the reason in the Permit as to why there is a single waste load allocation figure (expressed in a percent reduction) which has been set for the entire watershed.

EPA Response to Comment 136

EPA disagrees with commenters' claims about the adequacy of TMDLs that EPA has used as a basis for developing phosphorus reduction requirements in the draft permit. See EPA Response to Comments 46 - 54, EPA Response to Comments 55 - 60, EPA Response to Comments 227 - 233, EPA Response to Comment 135, EPA Response to Comments 128 - 129, EPA Response to Comments 61-83, and EPA response to Comments 85 -86.

EPA is not aware of additional technical analyses that indicate that any of the original TMDLs approved by EPA and identified in the draft permit are technically flawed, are inadequate for deriving permit phosphorus load reduction requirements, or have been modified through the required regulatory process. Consequently, EPA continues to consider the percent reductions developed in the TMDLs that are identified in the 2015 Renotice to be the best available information for deriving permit requirements for stormwater discharges of phosphorus that will ultimately be sufficient to not cause exceedances of related NH Surface Water Quality Standards.

Given the phased nature of the permit requirements for planning and implementing controls to achieve phosphorus reductions in the renotice draft permit, it is possible that revised TMDL analyses could be done by NHDES and submitted for EPA approval in the earlier portion of the long-term LPCP schedule. If a TMDL is revised and approved by EPA, then the applicable permittee's phosphorus reduction requirements would be revised in the next permit issuance. See EPA Response to Comment 130 for a discussion of relief provisions of requirements for discharges where a TMDL identifies stormwater as a source of a pollutant of concern while covered under this permit.

The commenter indicates that because some of the data and loading information used to develop some of the TMDLs is 13-14 years old or older it is no longer valid or representative, simply because of the data's age. The commenter has provided no basis to support this statement. EPA has reviewed considerable recent stormwater quality nutrient data and has found that the data are generally of similar magnitude to data reported 2 to 3 decades ago. There is no compelling

evidence that the physical, chemical and biological processes associated with the generation of stormwater runoff and associated nutrient loads would be different today than they were in the relatively recent past of 2 to 3 decades ago, and in fact may have increased due to the expansion of impervious cover through development.

EPA recognizes that many communities have already invested time and money towards voluntary implementation of BMPs. If the Town has installed structural BMPs for phosphorus reduction, EPA's intention is to allow phosphorus load reduction credits for existing structural stormwater controls that are being properly maintained. To achieve credits for existing structural controls, the permittee shall document the type and actual hydraulic/hydrologic design capacity of each control, and verify through annual reporting that each control is being adequately operated and maintained to ensure proper functioning and operation. With this documentation as well as with accounting for phosphorous load increases during the same period, permittees can claim credit for pre-TMDL controls. This may be an opportunity and incentive to restore and even enhance existing and possibly outdated controls to more effectively capture phosphorus load reductions. While older controls may have been installed pre-TMDL, EPA suspects that most of the older controls have not been adequately maintained to function as intended. Therefore, EPA sees allowing permittees to claim credit for pre-TMDL controls to be an opportunity to restore and even enhance existing and possibly outdated controls to more effectively capture phosphorus load reductions.

Documentation of existing BMPs will be captured in the Phosphorus Control Plans Performance Evaluation, as stated in Description of Phase 1 planned structural controls (detailed in Appendix F Part III). Phosphorus reductions shall be calculated consistent with Attachment 2 to Appendix F (non-structural BMP performance) and Attachment 3 to Appendix F (structural BMP performance) for all BMPs implemented to date. In addition, the permittee must estimate any phosphorus load increases due to development in the performance evaluation.

137. Comment from the Town of Merrimack

III. TMDL REQUIREMENTS – HORSESHOE POND:

10. Meeting Phosphorus Target of 12ug/L -

Based on the Phosphorus target of 12 ug/L it may be impossible and will be very expensive for the Town of Merrimack to meet the targeted reduction of Phosphorus for two reasons as noted below:

a. The percent reduction that is expected for TP is extremely difficult to achieve based on current literature as cited in the Report. The Horseshoe Pond TMDL Report cautions in Section 6.2 that "A reduction of 76% (from 38ug/L to 12ug/L) will be difficult to achieve without very aggressive action as it is greater that the maximum estimated achievable reduction of approximately 60 – 70 % (Center for Watershed Protection)." In Section 7.0 it also states that "Since the watershed load reduction required for Horseshoe Pond is 76%, the goal will be difficult to obtain."

b. Also, the topography (steep wooded inclines to the Pond) and the lack of open space (due to concentrated residences/backyards) at Horseshoe Pond will greatly limit the options available to the Town for effective and reasonable best management practices (structural BMPs). The Report supports this conclusion as noted in Section 7.0 when it states that "Reductions greater than 70% are possible, but consideration of costs, space requirements, and legal ramifications (e.g. land acquisitions, jurisdictional issues), limit attainment of such reductions.

There needs to be an incremental approach to reduction of Phosphorus, if needed, that includes extensive sampling and a process of logical steps utilizing first non-structural BMPs and then structural BMPs (if

necessary) with evaluations of progress made in meeting water quality standards at various steps in the process.

EPA Response to Comment 137

See EPA Response to Comment 135and EPA Response to Comment 136.

See also EPA Response to Comments 128 - 129. Section 2.2.1.f and Appendix F Part III outline the requirements for permittees subject to an approved Lake or Pond Phosphorus TMDL; these requirements include a schedule that extends for 15 years after the effective date of the permit.

EPA recognizes that achieving large phosphorus load reductions from developed watershed areas can be challenging. However, the level of difficulty and expenditure will depend on numerous factors related to characteristics of the drainage area to be controlled and, very importantly, the analysis approach used to develop the LPCP. Also, the 15-year implementation timeframe will play an important role in the overall technical feasibility and affordability of achieving the reductions.

EPA agrees that stormwater phosphorus load reductions can be achieved by non-structural measures, such as those described in Attachment 2 to Appendix F to the permit, which could, in effect, reduce the total load reduction needed by structural stormwater controls.

With respect to technical feasibility, some of the more critical factors include soils, extent of impervious cover and the availability of space to install controls. As shown in Attachment 3 to Appendix F, EPA Region 1 has developed long-term cumulative performance estimates for numerous stormwater controls types with varying design capacities (ranging from very small to large). Most of the storm water controls practices that involve infiltration can readily achieve phosphorus load reductions in excess of 90%. Even small design capacities for controls that rely on infiltration and filtering (e.g., capacities ranging from 0.2 to 0.4 inches of runoff depth from contributing impervious area) can achieve substantial phosphorus load reductions ranging from over 30% to more than 70%. Consideration of including small capacity controls as part of the LPCP will increase technical feasibility and lover overall costs. Much of the underlying work used to develop the cumulative performance estimates shown in Attachment 3 has been ongoing and was not readily available at the time the TMDL document was prepared. As a result of this work, EPA considers that the Center of Watershed Protection's estimate of 60-70% maximum achievable phosphorus load reduction is a generality and is not reflective of the most current information needed to develop a site-specific LPCP.

Regarding the analysis approach, EPA has found that the use of optimization techniques and comprehensive planning to develop the most cost effective LPCP could help to avoid significant cost expenditures at meeting the specified reduction target. EPA has developed a modelling tool referred to as the Opti-Tool to assist permittees in developing the most cost effective and optimized LPCPs.

Extended timeframes for implementing the LPCP (e.g., 15 years for effective date of permit) will offer opportunities for permittees to make best use of emerging stormwater control technologies with enhanced phosphorus removal capabilities and to achieve load reductions as part of future redevelopment, urban renewal, and repairs/upgrades to infrastructure at much lower costs than stand-alone projects.

Lastly, nutrient conditions in Horseshoe Pond are such that future reduction in ambient phosphorus concentrations will reduce algal biomass and improve associated water quality conditions in the pond. EPA expects that permittees will do their best to develop and implement technically sound and affordable LPCPs that will make substantial progress at reducing phosphorus loads to phosphorus-impaired lakes and ponds and improving water quality conditions.

Finally, EPA recognizes that there is uncertainty associated with future program costs and with how well and efficiently communities and other regulated entities can expand stormwater management programs to reduce phosphorus loadings in stormwater runoff from inadequately treated developed areas. Prior to issuing future MS4 permits, EPA plans to consider new information developed by permittees as they develop and implement their LPCPs and, if warranted, make necessary refinements to the permit's compliance schedules.

138. Comment from the Town of Wilton

If the TMDL data was to be verified and prioritized within the first five years it would help to ensure that our limited funds are used appropriately in the most cost effective manner to achieve the successful mitigation measures that are being requested. After the first five years, once a priority list has been established then the highest prioritized outlet can be dealt with first, then subsequent outfalls could be addressed in the years following without driving the Town into financial ruin. Even with the extension to 7 years from the effective date of the permit, the Town of Wilton still has to come into compliance with all of other aspects of the law which doesn't seem practical.

EPA Response to Comment 138

See EPA Response to Comments 46 - 54, EPA Response to Comments 55 - 60, EPA Response to Comments 227 - 233, EPA Response to Comments 128 - 129, EPA Response to Comments 61-83 and EPA response to Comments 85 -86.

EPA disagrees with the assertion that data verification is necessary in order to establish the limits included in this permit. Each of the TMDLs was produced in a scienfically sound manner and followed the required public involvement and comment process. The time to question data used in TMDL development is during the respective TMDL's public comment periods; not through MS4 permit issuance process.

139. Comment from the Town of Hampton

2.2.1.e Hampton is listed as a Town with a TMDL for bacteria.

The Town is listed as having waters in our community impaired by bacteria in Attachment F of the Draft permit. It is our understanding that this requirement is based upon the 2010 TMDL study and report that the NHDES submitted to your office. Since the drafting of the permit the State has issued the 2012 TMDL study in its final format and as a result Hampton is no longer listed as having water bodies impaired due to bacteria. We also take issue with how Hampton was listed in 2010 and the benchmark for that TMDL. The State of NH Department of Environmental Services used a very small data set to determine what the State wide limit for bacteria should be. We feel that the State should collect more samples from around the state to determine the TMDL. If the State had known that a whole Federal program was going to be based on the data in the TMDL they may have taken the time to collect many samples over several years.

---At this time we request that Hampton be dropped from having to test for bacteria because the State 2012 TMDL listing no longer shows our water bodies impaired for bacteria. A second reason for dropping this requirement as to Hampton is that the headwaters of the Taylor River lie totally within the Town of

Hampton Falls, which has been granted a waiver from your office. The issue is further complicated in that the Taylor River is the boundary between three (3) Towns. Any efforts to clean boundary waters would require the Towns of Seabrook, Hampton Falls and Hampton to develop rules and ordinances to address any response.

140. Comment from the Town of Hampton

Waiver Granted to Hampton Falls

We note for the record that the EPA granted the Town of Hampton Falls a waiver from the MS4 requirements on April 30, 2013. The Taylor River begins in Hampton Falls and flows along our common town boundary until the river becomes the Hampton and Seabrook common line. It appears from our review of the 2010 TMDL Report prepared by the State that the two (2) locations tested on the Taylor River are as follows.

---NHEST600031003-02 where the Taylor River passes under NH Route 1

---NHEST600031003-03 just southeast of where the river passed under the former Boston & Maine railroad trestle. The former rail bed is now owned by the State of NH Department of Transportation.

Our point is that both of these locations are strongly influenced by the land that lies within the Hampton Falls boundary. We expect to take additional water samples further up the river to determine what effect, if any, the flow from other areas has on these locations.

141. Comment from the Town of Hampton

Taylor River Watershed Issues

The Town is very familiar with the water quality of the Taylor River and potential causes of pollution and contamination in the watershed. Since 2006 the Town has been working with the State Department of Transportation on removal of a dam on the north side of Interstate 95. At issue is the 77,000 cu.yds. of silt behind the dam and the chemicals held within this silt, such as the pesticide DDT and its breakdown products, DDE and DDD. Please refer to the attached external memorandum prepared by ExPonent dated December 10, 2009. The second issue is that the pond held behind the dam has a low oxygen count at its lower depths. While we have not specifically tested this water body for bacteria we assume that what is occurring in this section of the river has a direct impact upon the bacteria results the State DES obtained and reported in the 2010 TMDL listing.

---We also suspect that along with the DDT that possibly came from the apple orchards in the abutting community that bacteria also comes into the water body because that community does not have a municipal sewer system. It is possible that older failing septic systems in the land area along the upper tributary of the Taylor River contribute to the bacteria. Without further testing and analysis the effect of the residential development along the river cannot be determined with any certainty.

---As you can see the issues and our concern for the Taylor River go far beyond bacteria in the lower section of the river. We request that you allow the Town the time to work out a solution for this dam with the State Departments of Transportation, Environmental Services, Dam Bureau, Fish and Game and US Coast Guard. These issues are complex and take time.

EPA Response to Comments 139 - 141

Please see EPA Response to Comments 128 - 129, EPA Response to Comments 46 - 54, EPA Response to Comments 55 - 60, and EPA Response to Comments 227 - 233.

Table F-1 outlines the segments covered under approved bacteria TMDLs. There are five segments located primarily in Hampton that are covered by the NH Statewide Bacteria TMDL (NHDES , 2010):

HAMPTON	HAMPTON RIVER MARINA SZ	NHEST600031004-09-08
HAMPTON	TAYLOR RIVER	NHEST600031003-03
HAMPTON	HAMPTON FALLS RIVER	NHEST600031004-01-03
HAMPTON	TAYLOR RIVER (LOWER)	NHEST600031004-02-02
HAMPTON	ATLANTIC OCEAN - HAMPTON BEACH STATE PARK BEACH	NHOCN000000000-02-10

Therefore, if the Town of Hampton's regulated area discharges to these segments, the Town is subject to the requirements under Part 2.2.1 of the permit.

With respect to stormwater from an MS4 as a source of bacteria, please see EPA Response to Comments 61-83.

The final permit provides updated language for relief from requirements of Appendix F. See EPA Response to Comment 130 for discussion of relief provisions for requirements for dischargers where TMDL's identify stormwater as a source of a pollutant of concern. The commenter may also work with NHDES to develop a bacteria reduction plan consistent with the TMDL and submit that plan with their NOI to be relieved of Appendix F Part I.1 and authorized to discharge under operator specific permit terms. See EPA Response to Comment 22.

142. Comment from the City of Portsmouth

3. The draft Permit would require compliance with Total Maximum Daily Load (TMDL) immediately, or no later than the date set forth in the TMDL. This approach is not consistent with the CWA provisions relating to the MS4 general permit and would likely result in immediate non-compliance upon issuance of the permit.

EPA Response to Comment 142

See EPA Response to Comments 46 - 54, EPA Response to Comments 55 - 60, EPA Response to Comments 227 - 233, and EPA Response to Comments 128 - 129.

143. Comment from the City of Portsmouth

Section 2.2.1 and Appendix F Discharge to an Impaired Water with an Approved TMDL: The City of Portsmouth has a combined collection system and is regulated under a separate NPDES permit for discharges of combined sewer overflow during wet weather events. The combined sewer overflows (CSOs) discharge to South Mill Pond and Lower Piscataqua River - South and are being addressed as part of a Consent Decree to reduce combined sewer overflows from these outfalls. The primary source of bacteria in these water bodies is likely due to point source combined sewer overflows and reporting obligations should be handled under the NPDES permit. This requirement for additional reporting is redundant. The City of Portsmouth recommends it be removed or modified for communities with combined sewer systems.

EPA Response to Comment 143

Discharges covered under a CSO permit are not subject to the requirements of this permit. EPA acknowledges the work being done by the City under the Consent Decree; this work will likely result in improvements to the water quality of the impaired waters of the South Mill Pond and the Lower Piscataqua River-South. However, urban stormwater is generally also a source of bacteria for a

variety of reasons (see EPA Response to Comments 61-83), such that in addition to this work and the CSO permit, the requirements outlined in the NH MS4 permit for permittees discharging to waterbodies covered by approved TMDLs are still applicable to the City of Portsmouth.

See EPA Response to Comments 46 - 54, EPA Response to Comments 55 - 60, EPA Response to Comments 227 - 233, and EPA Response to Comments 128 - 129.

144. Comment from the Town of Merrimack

IV. TMDL REQUIREMENTS - BACTERIA; 2. Watershed Loadings Unfairly Applied in the Bacteria TMDL for Merrimack - The TMDL for Merrimack expects that certain percentages of bacterial reduction are now the responsibility of the Town. Merrimack is responsible for the Merrimack River. This is wrong in that on the other side of the Merrimack River is the Town of Litchfield. Litchfield is not covered under the 2013 MS4 Draft General Permit even though they clearly must have some point source and especially some non-point source discharge of bacteria into the Merrimack River. The Town of Merrimack is given the whole burden of reducing the bacteria loading to the River while other communities have no responsibility. In addition, bacteria loading upstream of Merrimack from some other communities such as Manchester (a CSO community and Concord (not covered by the 2013 MS4 Draft General Permit) may be the most significant contributors to the impairment of the River in Merrimack. Why should Merrimack be penalized for the loadings from other communities and non-point sources? It would be most prudent to have the State be the lead agency to correct deficiencies in State waters as it is inherently unfair to select which communities will bear the cost and which will not. Choosing the current method because of a defined tax source (property tax) instead of working through the State Legislature to secure appropriate funding is the wrong way to achieve clean water (which we all want) as it will lead to inefficient use of scarce funds. The State working at a more global watershed level would allow for efficiencies and economies of scale that cannot be obtained at the local level.

145. Comment from the Town of Merrimack

IV. TMDL REQUIREMENTS - BACTERIA; 3. No Evidence that the MS4 Communities Need to Control Bacteria -There is no hard factual data or evidence that the MS4 control is necessary to achieve compliance with the applicable water quality standard or that the allocation in the TMDL when correctly applied (see previous note regarding Litchfield) will result in compliance with Clean Water Standards. We would like to see how this TMDL process was determined so that a discharge causes or contributes an exceedance of the bacteria standards. Before expensive controls are forced on the Town a thorough review of the data used to produce the TMDL is accomplished and that there is no uncertainty that the MS4 system in Merrimack is to blame for any exceedance in ambient river quality.

EPA Response to Comments 144 - 145

See EPA Response to Comments 46 - 54, EPA Response to Comments 55 - 60, EPA Response to Comments 227 - 233 EPA Response to Comments 116 - 120, EPA Response to Comments 61-83, and EPA Response to Comments 128 - 129. The changes to the permit as a result of the 2015 Renotice included significant changes to Section 2.2 to provide clarity of permit requirements and certainty on applicability of permit provisions. The amended language altered the requirements under Section 2.2.1 and Appendix F for permittees subject to an approved TMDL, including changes to Tables F-1 and F-2. Section 2.2.1.e and Appendix F Part II outline the requirements for permittees subject to an approved bacteria TMDL; these requirements make clear that the draft permit and the final permit do not specify required percent reductions in bacteria concentration but instead require additional or enhanced BMP to address bacteria. In addition, the bacteria TMDL in question specifically names stormwater as a source of bacteria to the impaired waterbodies.

146. Comment from the City of Dover

Many of the current impairment listings in Dover are based on the data that in some cases are older and in other cases are only one or two samples. A number of listings are based on the data collected during 2006, during years in which precipitation was at the highest levels ever recorded.(see annual precipitation record chart obtained from NOAA database) During this type of weather, bacteria levels spike as a result of non point run off. It would be prudent to sample these segments during more representative rainfall conditions to determine whether the stream is really impaired. Examples:

-Indian Brook Bact. 3 Samples 2006, 1 sample in 2007.

-Varney Brook: no new data - City abandoned, leaking sewer force main and obvious major bacteria source and removed one illicit discharge to storm system in the watershed.

-Garrison Brook: no new bacteria data

-Cocheco River 608-04: IDDE removals and recent calculated geometric means of 27 ct/100ml bacteria suggest this segment may no longer be impaired for bacteria

-Bellamy River @ Sawyers Mill: numerous samples and calculated geometric means for bacteria between 2003 and 2007 suggest this segment is not impaired. One sample in September 2002 had high bacteria counts/. A significant cross connection was radiated where a leaky clay sewer main was draining into a nearby storm drain line.

- Bellamy 903-09: no new data –a significant multi year Inflow and Infiltration remediation project which included sealing sewer manholes, relining and replacing leaking sewer mains has been completed which may have improved water quality enough to warrant delisting and should be sampled.

As some of the impairment listed sites relying on the older data remedial activities have taken place which could have improved water quality resulting in potentially delisting the stream segment. The City of Dover proposes that initial efforts focus on segments where available data is sufficient and current to support the impairment listings. For the segments where there is a lack of sufficient and current data, or where remedial work may have improved water quality to delist a water body, Dover suggests that the MS4 communities and NHDES work cooperatively to review the suspect listing by collecting additional sampling data in the proposed permit period before expending resources that will be needed in known problem areas.

EPA Response to Comment 146

EPA appreciates the work being done by the City of Dover to remove illicit discharges and remediate inflow and infiltration; this work will likely result in improvements to the water quality of the impaired waters.

See EPA response to Comments 85 -86, EPA Response to Comment 111, EPA Response , and EPA Response to Comments 128 - 129. The changes to the permit as a result of the re-notice included significant changes to Section 2.2 to provide clarity of permit requirements and certainty on applicability of permit provisions. The amended language altered the requirements under Section 2.2.1 and Appendix F for permittees subject to an approved TMDL, including changes to Tables F-1 and F-2. Section 2.2.1.e and Appendix F Part II outline the requirements for permittees subject to an approved bacteria TMDL; the requirements of the draft permit did not require a percent reduction of bacteria and the renoticed Appendix F made it clear that the requirements consist of additional or enhanced BMP requirements.

With respect to stormwater from an MS4 as a source of bacteria, please see EPA Response to Comments 61-83.

See EPA Response to Comment 130 for discussion of relief provisions for requirements for dischargers where TMDL's identify stormwater as a source of a pollutant of concern contained in the final permit, and EPA encourages permittees to work with NHDES to collect data on the status of waterbodies to which they discharge. Regarding the commenter's suggestion to phase implementation of TMDL-related requirements to allow for data validation, EPA is not making that change to the permit. Such a change would in effect negate the intended result of an approved TMDL. This permit does not reopen any TMDL for comment or modification. However, EPA encourages permittees to work with NHDES to collect data on the status of waterbodies to which they discharge. See EPA Response to Comments 116 - 120 and EPA Response to Comments 128 - 129.

147. Comment from the Town of Milford

Water Quality/ Bacteria TMDL (2.2):

Additional detail and effort anticipated by the draft permit is largely due to the incorporation of TMDL's into the permit. Currently, it is proposed that Milford is to be held subject to the bacteria TMDL. We object to this on several technical grounds.

We understand that the NPDES permit process is not the source for the TMDL for bacteria. However, expecting the town to expend significant effort and dollars based upon the bacteria TMDL as it currently has been formulated and exists is inappropriate. It is well understood that this TMDL, at least as it relates to the Souhegan River in Milford, is based upon limited and outdated data obtained by a much appreciated lay-monitoring group whose work has not been quality controlled for this purpose. While we commend the group for its efforts and appreciate the work of the individual volunteers, we note that the group has not worked with the DES Volunteer River Assessment Program (VRAP) for training and QA/QC certification. The level of data thus obtained does not rise to the scientific levels typically required by EPA.

Further, the application of the TMDL fails to consider the tenants of Water Quality Standards incorporated with the Clean Water Act and New Hampshire statute which emphasize "naturally occurring conditions" as being beyond the reach of regulation. 40 CFR 130.2(i) defines a TMDL as the sum of the waste load allocation (WLA), the load allocation (LA), and a margin of safety (MOS). This requires that major sources, including natural sources, are understood and incorporated into the TMDL. A quick modeling of the Souhegan River reveals that the water quality criterion for bacteria is not met during low flow or 7Q10 and greater flow conditions due to inputs from natural sources, such as birds and other resident wildlife. Further, other unregulated watershed sources, such as agriculture and privately owned commercial and industrial outfalls, contribute bacteria. The watershed includes several agricultural operations with hundreds of acres of managed land with likely contributions that are not incorporated into the conceptual model being applied. It is known that agricultural operations within Milford as well as in upstream communities commonly apply manure to cultivated soils as normal agricultural activity. Yet this is a largely unregulated activity. The data used in the development of the TMDL, further, does not support stormwater as being the unique source of bacteria in that most in-stream samples are obtained during lower flow conditions and often without precursor rainfalls occurring within 24 to 48 hours of the sampling.

The permit is silent on the means of implementing controls or expending resources based upon naturally occurring watershed sources or sources that are not regulated. In fact, the water quality standard for bacteria is not applicable as a result of naturally occurring sources (NHRSA 485-A:8 -II. "Class B waters shall be of the second highest quality and shall have no objectionable physical characteristics, shall contain a

dissolved oxygen content of at least 75 percent of saturation, and shall contain not more than either a geometric mean based on at least 3 samples obtained over a 60-day period of 126 Escherichia coli per 100 milliliters, or greater than 406 Escherichia coli per 100 milliliters in any one sample; and for designated beach areas shall contain not more than a geometric mean based on at least 3 samples obtained over a 60-day period of 47 Escherichia coli per 100 milliliters, or 88 Escherichia coli per 100 milliliters in any one sample; unless naturally occurring" (emphasis added)). In concept, DES has addressed naturally occurring bacteria as part of the TMDL "MOS". However, given the current NH statute and water quality standards, naturally occurring bacteria are exempted from determination of attainment of water quality standards. Given the broad occurrence of naturally occurring bacteria, a generalized MOS is not sufficient for establishment of a TMDL requiring a percentage reduction of bacteria. This is a critical flaw.

Since there is little or no specific data regarding watershed sources of bacteria, NHDES and EPA have elected to develop a TMDL based upon raw sampling data and Water Quality Standards. While undefined as to how to implement the necessary controls, EPA and NHDES have elected to incorporate the equivalent of the "Percent Reduction Method". However, the percent reduction method is based upon the assumption that there is a 1:1 relationship between the reduction in pollution loading from the source and the resulting water column water quality. This is not the case for bacteria which cannot be modeled as a conservative pollutant. Bacteria have a natural die-off rate which must be recognized in a loading assessment. In-stream sampling and assessment attempts to address this issue. However, communities are expected to incur significant costs based upon this approximation which provides minimal control guidance. This represents a flaw in applying the percent reduction methodology.

Another requirement of the application of the "Percent Reduction" approach is that sources must be identified so that there is knowledge as to the practical effectiveness of the TMDL. Reasonable and practicable controls cannot be defined without respect for all significant sources with due consideration to naturally occurring contributions, unregulated sources, and watershed inputs that are outside of corporate boundaries of the town. The TMDL for bacteria, therefore, presents unattainable goals which potentially place the Town of Milford in immediate violation of the proposed permit, and the permit does not provide a shield from enforcement.

Again, we appreciate the difficulty of addressing bacteria TMDL's and the limited quantity and quality of data that DES had at its disposal during the development of the TMDL. However, the TMDL presented for bacteria has the following flaws: 1) It fails to meet EPA's TMDL definitions (40 CFR 130.2(i)) and requirements by not adequately assessing WLA, LA, and MOS; 2) It is not based upon adequate data; 3) It does not recognize "naturally occurring" sources or non-regulated watershed sources; 4) It treats bacteria as a conservative pollutant thereby ignoring die-off; 5} It does not define watershed Inputs that initiate from outside of Milford's corporate bounds; 6) It establishes specific percent reduction goals for stormwater management that are not sufficiently defined or supported to allow planning and implementation of successful management strategies. Basic BMP implementation may not be sufficient to attain in-stream standards and the identification of these as "minimum" leaves open the possibility for the requirement of extreme and expensive measures and enforcement actions... We understand EPA's need to issue NPDES permits with emphasis on assuring that discharges do not result in further degradation of non-attainment segments. Since this presumes an accurate understanding of in-situ water quality, we believe that implementing water quality based permits is not reasonable until the water quality is sufficiently understood. Clean Water Act 303(b) Reports to Congress have presented estimates of non-attainment water bodies since the 1970's. Most of these have been based upon the best judgments of state water quality staff. To the extent that this has been a traditional approach, there has been little or no input into the process by the public. Without appropriate public input the value of the 303(d) lists are limited. While useful as planning tools, without sufficient technical basis, these reports and the 303(d) lists may not rise to the level required for implementation of costly regulations. The limited data along with quality questions

furthers the practice of using available information for assessing the Souhegan River that is not substantially different than the "best judgment" or best guess approach. It is EPA's and DES's responsibility to obtain the needed water quality information. Insufficient funding of these agencies does not translate into the requirement for the regulated permittees to expend funds without sufficient basis.

We therefore request that references to the bacteria TMDL be removed from the permit until the above TMDL issues are resolved.

EPA Response to Comment 147

See EPA response to Comments 85 -86, EPA Response to Comment 111, EPA Response to Comments 116 - 120, and EPA Response to Comments 128 - 129 for details regarding the re-opening of specific sections of the Draft Permit for comment. The changes to the permit as a result of the renotice included significant changes to Section 2.2 to provide clarity of permit requirements and certainty on applicability of permit provisions. The amended language altered the requirements under Section 2.2.1 and Appendix F for permittees subject to an approved TMDL, including changes to Tables F-1 and F-2. Section 2.2.1.e and Appendix F Part II outline the requirements for permittees subject to an approved bacteria TMDL; these requirements make clear that the draft and final permit does not require a specified percent reduction in bacteria concentration but instead are comprised of additional or enhanced BMPs.

EPA disagrees with the commenter's claims about the adequacy of TMDLs that EPA has used as a basis for developing bacteria requirements in the draft permit. The TMDL development and approval process as specified in Section 303(d) of the CWA and the implementing regulations at 40 CFR 130.7 require a public review and comment period prior to submission for EPA approval; this permit does not reopen any TMDL for comment or modification. EPA Region 1 reviews each TMDL submitted for approval by NHDES and evaluates the adequacy of the TMDL for compliance with the regulatory requirements. Each of the TMDLs identified in the draft permit and used to develop permit requirements was found through EPA's review process to satisfy all of the TMDL regulatory requirements.

With respect to stormwater from an MS4 as a source of bacteria, please see EPA Response to Comments 61-83.

See EPA Response to Comment 130 for discussion of relief provisions for requirements for dischargers where TMDL's identify stormwater as a source of a pollutant of concern.

148. Comment from the Town of Milford

NHDES is currently finalizing its 2012 -303(d) list. This process could allow many of the above issues to be further explored and possibly resolved. However, the comment period on the 2012 list has expired and DES will be finalizing the list without the benefit of further comments. Accordingly, Milford requests that EPA not approve the list until these issues are resolved. EPA has 30 days to reject the list once it is submitted by DES during which time EPA should remand the list to DES for reconsideration and DES should reopen the comment period upon its reconsideration and revision of the list. Whether this suggestion is followed or not, EPA should not issue the permit with specific TMDL's incorporated until the TMDL's are properly established -even if this means that the TMDL for the Souhegan River in Milford is not incorporated in the MS4 permit until the next permitting cycle.

EPA Response to Comment 148

See EPA Response to Comment 147.

EPA approved the Final 2012 Section 303(d) list on September 24, 2015. However, the tables of municipalities in part 2.2.1 identifying MS4s subject to the applicable permit requirements were developed by EPA through review and analysis of EPA approved TMDLs. Therefore, if the Town of Milford's regulated area discharges to segments listed in Table F-1, the Town is subject to the requirements under Part 2.2.1 of the permit.

The final permit provides updated language for relief from requirements of Appendix F. See EPA Response to Comment 130 and EPA Response to Comment 131-132 for discussion of relief provisions for requirements for dischargers where a TMDL identifies stormwater as a source of a pollutant of concern.

149. Comment from the City of Manchester

In the State of New Hampshire there are approved TMDLs for chlorides, bacteria, and phosphorous. For bacteria there is an approved statewide Bacteria TMDL and the Beach Bacteria TMDL. The City of Manchester is included in this TMDL. The Merrimack River, Cohas Brook, and Crystal Lake Beach are under this TMDL. Some of the requirements including needing to prepare a Water Quality Response Plan (WQRP) and proposed BMPs to meet the load reductions. The load reductions range from 56% to 94%. As stated earlier, the City will not be able to meet compliance with this requirement because we still are a CSO community ($165 million Phase II separation program ongoing) and the separation schedule is beyond the five year term of this permit. It is also important to note that sources of bacteria include wildlife and waterfowl that we cannot control. The cost alone to prepare a WQRP is approximately $65,000 per plan per water body to study sources and develop BMPs, this does not include actual implementation of the BMPs.

There are ten communities including City of Manchester that must comply with Approved Phosphorous TMDLs. We have four water bodies that have a TMDL. These include Dorrs Pond, Nutt Pond, Pine Island Pond, and Stevens Pond. To comply with this TMDL we must develop Phosphorous Control Plans (PCP) for each pond and implement the BMPs within five years. The BMPs include both structural and non-structural BMPs. The load reductions range from 50 to 73% based on a limit of 12 ug/l of Total Phosphorous (TP). The cost for the PCPs are $60,000 per plan per water body to study the sources of the phosphorous and develop BMPs, this does not include actual implementation of the BMPs.

The TMDLs are based on a Waste Load Allocation (WTA) +Load Allocation (LA) + Margin of Safety (MOS). The MOS is 20%. WLA +LA+ MOS = 12 ug/l of TP. These TMDLs were based on models and did take into account recent sampling showing current reduction trends.

The City has been sampling our urban ponds through the NHDES Volunteer Lake Assessment Program (VLAP). Sampling is done during the summer months from the hours of 10 AM to 2 PM when the sunlight is the strongest to test for many parameters including TP and Chlorophyll-A. We have seen reductions in TP that was not accounted for in the required reductions of 50 to 73%.

In the Nutt Pond Watershed the City of Manchester has completed many projects to remove both sediment and TP from reaching the pond. This work was done through both City of Manchester and EPA 319 Grant funds. A Watershed Restoration Plan (WRP) was developed and approved by the NHDES. In that plan the target goal for TP was 15 ug/1 in 2010 and in 2012 the average sampling result for TP was 15 ug/1. Based on the WRP we achieved our goal of reducing TP to the target goal of 15 ug/l. Please note that the watershed for this pond is 60% impervious and we spent over $1.1 Million to achieve this goal and we are going to spend approximately another $350,000 to install to construct a gravel wetland, bioretention cell, tree box filters, and a new boat ramp to further reduce our loadings to the pond. These costs do not include any of the annual operation and maintenance costs associated with this work. Even though we will have spent approximately $1.5 Million we do not feel that the limit of 12 ug/l is attainable and that the EPA needs to

work with the NHDES to revise the Phosphorous TMDLs to include actual sampling results and develop a realistic timeframe to study the ponds, develop PCPs, select and implement BMPs. A five year timeframe is not realistic to do these activities.

The other issue for these TMDLs is that even if a water body is located in a community, due to the fact of interconnected MS4s that community might not be the only one discharging to that water body. An example is Dorrs Pond that is located in the northern part of the city. Dorrs Pond receives from the community of Hooksett and from the NH Department of Transportation (NHDOT). To help distribute the costs evenly a study would need to be done to determine the contribution each discharger has to Dorrs Pond and an intergovernmental agreement would need to be drafted to help distribute the allocation of costs associated with the BMPs. Because of these and other concerns this requirement should be revised to only include the development of the plans and the associated studies to develop the plans. Implementation of BMPs can be during the next permit period. This permit requirement is realistically a twenty year requirement that can be developed in phases during subsequent permit cycles.

150. Comment from the City of Manchester

TMDL Public Notice and Expectations: Manchester was complying with a 'Watershed Restoration Plan' at the time Public Notice for the TMDLs in New Hampshire were issued. As we were following an approved plan, the expectation was the outline and premise of that plan would supersede any subsequent TMDL. Manchester had received notice of the new TMDLs via the 'Public Notice' process in late 2009 early 2010. The Executive Summaries of all four pond TMDLs outline the following sentences, "The load allocation puts primary emphasis on reducing watershed phosphorus sources over other sources due to the relative load contribution from the watershed and practical implementation considerations. It is expected that these reductions would be phased in over a period of several years."

At the time of the TMDLs public comment Manchester had a well established viable 'Urban Ponds Program' as a consequence of a CSO Administrative Order of 1999 and the 2003 MS4 Permit. In April of 2008, Manchester had completed a "Restoration Plan" for Nutt Pond as prepared by CEI and agreed upon in scope; modeling and engineering calculations by both the NHDES and EPA (see Attachment 1). Manchester had fully anticipated that this same process would be the condition for the other ponds so no comment was put forth on the TMDLs.

By the end of 2009 and early 2010, when the comment period was in place, there was an overall understanding between both the NHDES and the City of Manchester that our Urban Pond program was working very well and that the Stormwater annual report submissions were more than what was required. Manchester has never heard any concerns from either the EPA, or the NHDES with the progress of our program and Manchester was led to believe, through the development of the Nutt's Pond Watershed Restoration Plan, that a target TMDL for our ponds was 15 ug/l for phosphorus. At that time of the TMDL notice, the program had been in existence for 10 years. Manchester had been making steady progress with compliance and the indication provided by the regulatory community was that everything was going well. The expectation was that the Restoration plan, agreed to by all parties a year previous, was the controlling document and the basis for Manchester moving forward on the Urban Pond Program.

151. Comment from the City of Manchester

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. Our 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. CEI used one model (Reckhow) and AECOM used an average of five models... 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.

Even though Manchester has questions regarding the accuracy of the modeling there are now established TMDLs for these four ponds. The models for Dorr's and Nutt Pond state an algal bloom probability of 37.6% for Nutt Pond and 28.3% for Dorr's Pond. In 13 years of observation an algal bloom has never been witnessed on Dorr's Pond and only one small bloom at Nutt's Pond in October 2007 that covered less than 1% of the total water surface area (see photo in attachment No. 2). This puts the actual algal bloom probability over the past 13 years at 0% for the Dorr's Pond and 7.6% for Nutt Pond. This is significantly lower than the bloom rate calculated in the models.

The last bullet on page 7 of the MS4 draft permit states, "The NI IDES policy for interim nutrient threshold for primary contact recreation (i.e. swimming) in NH lakes is 15 ug/L chi-a. Lakes were also listed as impaired for swimming if surface blooms (or "scums") of cyanobacteria were present. A lake was listed even if scums were present only along a downwind shore." This cyanobacteria bloom was on the downwind shore of Nutt Pond (see pictures in Attachment 3).

The north inlet is where the pictures were taken. The area of bloom is roughly calculated as 150 feet along the shore to about 10 feet from the shore (1,500 square feet). Nutt Pond has 7.1 hectares or 17.5 acres. The total surface area is 762,300 sq. ft. That is 2/10th of 1% of surface area covered in October. No other visual verification on either of the two ponds was noted in 13 years of sampling events or pond visits. This is hardly a justifiable recreational impairment when it happens only once in 13 years and in October when the swimming season has ended. Also note on Attachment 4 (CEI Table 2-6) the total phosphorus levels for 2002 (average 25.5 ug/1 TP with a maximum of29 ug/1), 2003 (average 30 ug/1 for TP with a maximum of 46 ug/1) and 2004 (average 33 ug/1 TP with a maximum of 39 ugll) yet none of these years had any evidence of algal bloom. This is significant field information as the TMDL models indicate there should be algal blooms on Nutt Pond 37.6% of the time (once every three years at a minimum). Even the models have significant variations in their predictive data output.

152. Comment from the City of Manchester

Watershed Modeling Specifics: The CEI report, page 2-11 states, "Direct application of the calculated loads using the unadjusted pollutant loading values provided in Table 20-3 results in a predicted in-pond concentration of 282 ug/l, compared to the observed of 28 ugll. Significant decreases to the literature based land use loading values were needed (91% reduction) to achieve calibration. " Table 2-3 uses both Northern Virginia and Reckhow land use TP loadings. This language outlines issues encountered with model calibration. The AECOM report (page 3-4) implies that there were no such issues with their modeling efforts. The third bullet on page 3-4 indicates that, "Areal loading estimates were attenuated based on natural features and implemented BMPs that would decrease loading. It was determined in the modeling that sub watersheds were attenuated by 58% and that a portion of the load to Nutt Pond is in particulate form and likely settles before it is available for phytoplankton. Using these levels of attenuation, we were able to predict annual average concentrations in the pond that were within the range of recent monitoring data."

Refer to Table C-4 of the AECOM report you find they also used Reckhow for land use TP loadings and Schloss rather than Northern Virginia in others.

Manchester has concerns with the modeling efforts done by AECOM. If Reckhow modeling indicated a needed model reduction of 91% to meet the most liberal modeling effort (28 ug/L predicted at a 15ug/L in-pond limit) then the AECOM modeling that used higher average figures was surely over a 91% reduction with the average predicted 34 ug/L at a 12 ug/L in-pond limit. Manchester is requesting that the AECOM modeling assumptions for Nutt Pond be forwarded for further review and comparison to the CEI modeling before we can accept these loading conditions or agree to any MS4 permitting language. Manchester is assuming the error(s)/adjustments that needed to be made in the Nutt Pond modeling effort would be similar to representations made in the Dorr's Pond, Stevens Pond and Pine Island Pond TMDL modeling effort. This will provide Manchester with the magnitude of variation that is built into the AECOM TMDL Reports.

Both reports elaborate on concerns for the phosphorus trapped in the hypolinmion (bottom) layer that may, or may not, be available for phytoplankton uptake. The CEI report, page 2-6, indicated that Nutt Pond is stratified between April and October and that bottom TP concentrations from the hypolimnion layer arc available between June and October. The calculation CEI uses (page 2-6) sets the hypolinmion layer at 130 ug/1. The AECOM report sets the hypolimnetic TP at 29 ug/1 (Table 2-1).

This becomes a major concern as the AECOM TMDL requires a 70% reduction in TP loading (without potentially accounting appropriately for the hypolinmion TP contribution)....It is well established that the maximum TP reduction that can be expected with all structural and non-structural BMPs put in place in any watershed is between 60% and 70%. In essence, Nutt Pond will never meet the TMDL target of 12 ug/1 if you factor in hypolimnic TP contribution outlined in the AECOM TMDL. As pointed out in both documents, Manchester has been sampling the Urban Ponds since 2000 with a few earlier tests taken at Nutt Pond. The sampling data is included in Attachment 4 (Table 2-6 from the CEI report). Manchester has only observed one incidence of cyanobactcria (algal bloom) on Nutt Pond during that time (October 2007).

It is evident that 12 ug/1 TP in the epilinmion layer is an ultra conservative concentration standard that increases total abatement costs tremendously without need.

It takes a specific required interplay of hypolimnion layer consistently depleted of oxygen rereleasing TP, the metalimnion layer of TP concentration steadily increasing, and subsequently providing a steady availability of TP to the epilimnion layer to produce an algal bloom. These three factors came together in 2007 at Nutt Pond. From what Manchester views within the dataset of Table 2-6 and has visually evidenced by one algal bloom, a simple step of placing supplemental aeration at the bottom of Nutt Pond and keeping the hypolimnion layer from going anaerobic and releasing TP may negate the need to spend countless millions of dollars on structural and non structural BMPs that may, or again may not, improve the water quality to a point where the 12 ug/l TP limit is met.

It is imperative we move away from the 'one size fits all' approach of 12 ug/l TP (that is only guidance and not a WQ concentration limit) reduction strategy concentration limit in all subsequent issued MS4 permits. Data verification, high level QA/QC and sampling protocols and annual pond physical condition should be the primary focus for the first five year permit cycle to accurately define the water quality improvements needed.

When Manchester looks at the other three TMDLs, and has had no visual verification of any algal blooms on either of these three ponds, it further supports that the 12 ug/l TP limit with 15 ugll for chlorophyll-a as over restrictive and potentially very costly to the MS4 communities to comply with....

In close review of the data, the indication is that no one concentration parameter is a good indicator of overall compliance with WQ. It is an intricate interplay of Phosphorus, Chlorophyll- a, dissolved oxygen, water temperature, rain events etc. As can be seen from the above tables, all ponds were in non-compliance with the proposed 12 ug/l limit for TP, yet there was only one October incidence of algal bloom in one pond over a 12 year period....With only one month of non-compliance (Nutt Pond in October of 2007) that displays a non-compliance rate of < 1/2 of 1% which is well within the compliance ratio as laid out in the NHDES CALM. This visual evidence over the 12 year period demonstrates that there is indeed compliance with WQ targets (no visible algal mats) and that the concentration targets are very conservative and do not serve MS4 communities best interests.

EPA Response to Comment 149 - 152

See EPA response to Comments 85 -86, EPA Response to Comment 111, EPA Response to Comments 116 - 120, and EPA Response to Comments 128 - 129 for details regarding the re-opening of specific sections of the Draft Permit for comment. The changes to the permit as a result of the re-notice included significant changes to Section 2.2 to provide clarity of permit requirements and certainty on applicability of permit provisions. The amended language altered the requirements under Section 2.2.1 and Appendix F for permittees subject to an approved TMDL, including changes to Tables F-1 and F-2. Section 2.2.1.e and Appendix F Part II outline the requirements for permittees subject to an approved bacteria TMDL; these requirements make clear that a specified percent reduction is not required but instead are comprised of additional or enhanced BMP requirements. Section 2.2.1.f and Appendix F Part III outline the requirements for permittees subject to an approved Lake or Pond Phosphorus TMDL; these requirements include a schedule that extends for 15 years after the effective date of the permit. It should be noted that the permit makes the permittee responsible for the contributions of phosphorus to the phosphorus impaired lake or pond from their regulated area (or jurisdiction) only and does not require the town that contains the lake or pond to be responsible for all phosphorus reductions to meet the TMDL requirements as the commenter suggests.

EPA disagrees with the commenter's claims about the adequacy of TMDLs that EPA has used as a basis for developing the requirements in the draft permit. The TMDL development and approval process as specified in Section 303(d) of the CWA and the implementing regulations at 40 CFR 130.7 require a public review and comment period prior to submission for EPA approval; this permit does not reopen any TMDL for comment or modification. EPA Region 1 reviews each TMDL submitted for approval by NHDES and evaluates the adequacy of the TMDL for compliance with the regulatory requirements. See also EPA Response to Comments 461 - 462.

EPA appreciates the work the City of Manchester has done in the Nutt Pond watershed to restore the waterbody, including efforts under the Urban Pond Program; see EPA Response to Comment 130 and EPA Response to Comment 131-132 for discussion of relief provisions from the TMDL requirements of the permit that have been added to Appendix F. In particular, Appendix F Part III.2 allows the MS4s to work with NHDES to create an alternative pollutant reduction plan to meet the phosphorus TMDL WLAs. These plans can be submitted to EPA with the NOI for permit coverage and EPA may authorize the MS4 operator to discharge under operator specific permit terms for TMDL compliance. See EPA Response to Comment 22.

See also EPA Response to Comments 46 - 54, EPA Response to Comments 55 - 60, and EPA Response to Comments 227 - 233.

153. Comment from the City of Manchester

A concern regarding key pollutants is that the NHDES has only focused on nutrient WQ impacts while keeping silent on metals. In review of CEI's Table 2-8 of their restoration plan, it determined during a wet weather sampling event in 2002 that lead had been measured between 9 ug/1 and 147 ug/1, zinc was measured between 189 and 750 ug/l zinc and copper was measured between 220 and 680 ug/1. The new TMDLs give a false hope that if a City or town takes care of the nutrient problem, then everything else will be in compliance... The Nutt Pond testing demonstrates that this may indeed be the case and that a second round of structural BMP installations will need to be completed to achieve metals WQ compliance once the nutrient issues is resolved. That is why it is imperative that the next 5-year MS4 permit cycle be focused entirely on characterizing the water bodies within each affected community for WQ compliance before any structural implementation begins.

EPA Response to Comment 153

The Draft and Final permit includes requirements for permittees that discharge to waterbodies impaired for metals (See Part 2.2.2). See EPA response to Comments 85 -86 and EPA Response to Comment 111. Through other regional efforts and the study of BMP performance, the Region has determined that effective nutrient management will likely go a long way towards addressing sources of other impairments (Tetra Tech Inc., 2010). See also EPA Response to Comments 61-83. The 2015 Renotice and the final permit contain a 15-year schedule to meet the requirements of the nutrient TMDL for Nutt pond. This extended schedule allows for careful planning and implementation. EPA encourages the City to consider implementation of those BMPs that have the potential of address the metals impairments as well as the phosphorus impairment. In addition, Appendix F Part III.2 allows the MS4 to work with NHDES to create an alternative pollutant reduction plan to meet the phosphorus TMDL WLAs. These plans can be submitted to EPA with the NOI for permit coverage and EPA may authorize the MS4 operator to discharge under operator specific permit terms for TMDL compliance. See EPA Response to Comment 22.

154. Comment from the City of Manchester

Attachment 15 looks at an Assay Grade chemical manufacturer's certificate of impurities for these acids that are used to fix field samples. As can be seen from the information provided, three drops of nitric acid have a probability of adding up to 15 ug/l of phosphate to a sample. Manchester does not use assay grade acids for fixing sample containers and we are wondering if this is a practice that the NHDES labs undertakes to prepare samples.

EPA Response to Comment 154

NHDES utilizes sulfuric acid for preservation of water samples for nutrients analysis. Please see NH Department of Environmental Services Volunteer Lake Assessment Program Quality Assurance Project Plan (QAPP) (NHDES, 2014), Table B2-1 page 25.

155. Comment from the City of Nashua

Part 2.2.1.g. Discharges Subject to an Approved TMDL- "The Year 5 annual report shall include a quantitative assessment of load reductions achieved through the implemented controls demonstrating that such reductions are consistent with the load reductions identified in the WLA..." Comment: The EPA needs to provide guidance on calculating estimated load reductions for bacteria from structural and non-structural BMPs, such as education and housekeeping activities, similar to those provided in Appendix F for the phosphorus TMDLs. Otherwise, the quantitative assessment should be limited to the monitoring program to evaluate the water quality at receiving waters as a measure of load reduction. In addition, the eastern

and northern political boundaries of Nashua are the approximate center line in waterways. The "Primary Town" is listed as only one community, even when the source of the pollutant in unknown. It is difficult for one community to address the "quantitative assessment of load reductions achieved through the implemented controls" when only one community on a shared waterway is implementing BMPs. Request: Please revise Part 2.2.1.g to allow MS4s to meet the quantitative assessment requirements related to TMDLs through in-stream monitoring and not just load reductions. For example, this could also incorporate the strategy for meeting Part 2.2.2.a.ii.(b) 4, as discussed under Item 26 above. Also, please explain the "Primary Town" listing and the responsibility of an adjacent community on a shared impaired waterway.

EPA Response to Comment 155

See EPA response to Comments 85 -86, EPA Response to Comment 111, EPA Response to Comments 116 - 120, and EPA Response to Comments 128 - 129 for details regarding the re-opening of specific sections of the Draft Permit for additional comment. The changes to the permit as a result of the re-notice included significant changes to Section 2.2 to provide clarity of permit requirements and certainty on applicability of permit provisions. The amended language altered the requirements under Section 2.2.1 and Appendix F for permittees subject to an approved TMDL, including changes to Tables F-1 and F-2. Section 2.2.1.e and Appendix F Part II outline the requirements for permittees subject to an approved bacteria TMDL; these requirements make clear that percent reductions are not required but requirements instead are comprised of additional or enhanced BMPs.

The “Primary Town” column heading in the tables in Appendix F of the Draft Permit was taken from the NHDES Section 303(d) listing for the specific assessment unit. The tables in Appendix F in the Final Permit have all been updated so that the column heading is now “Town”. This column contains all towns that the waterbody segment passes through that may discharge to the segment, as determined through a GIS analysis. However, as stated in both part 2.2.1 and Appendix F, if a permittee determines through development of their NOI that it discharges to any waterbody listed in Table F-1, the permittee shall comply with the applicable requirements. See EPA Response to Comment 114. These changes in Appendix F address the concerns that are the basis for the commenter’s suggestion that in-stream monitoring rather than load reductions be used in quantitative assessemnts. See also EPA Response to Comments 116 - 120, EPA Response to Comment 121, and EPA Response to Comments 128 - 129.

Changes to Permit: Appendix F has been updated accordingly

156. Comment from Conservation Law Foundation

CLF supports the draft permit provision expressly stating that, in addition to specific requirements set forth in the permit relative to compliance with approved TMDLs, "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)." Draft Permit, Part 2.2.1.b.

CLF urges EPA to amend the first sentence of Part 2.2. l.g as follows: "Permittees identified in Appendix F, or above, shall document in their annual report all control measures implemented during the reporting period and planned to be implemented in the next reporting period to control pollutants identified in the approved TMDLs and provide an assessment of the effectiveness of the implemented BMPs, **and of the projected effectiveness of any additional BMPs to be implemented in the next reporting period, in terms of complying with the applicable TMDLs."** *See* Draft Permit, Part 2.2.1.g (bold-face type indicates proposed new language).

EPA Response to Comment 156

EPA amended the language in Parts 2.1.1 and 2.2 and Appendix F and H of the Draft Permit and on September 1, 2015, EPA reopened the comment period on the updated language in Parts 2.1.1, 2.2, 2.3.6, Appendix F, and Appendix H in response to multiple comments received on the reopened parts and appendices of the 2013 draft permit and in order to comply with the recently effective New Hampshire Code of Administrative Rules Env-Wq 1701.03 and to address concerns raised by commenters above. The updated Parts 2.1.1, 2.2, 2.3.6 Appendix F and Appendix H fully replaced same parts or appendices of the 2013 draft permit. See the Statement of Basis on the proposed modifications to the reopened sections of the 2013 draft permit for more information[11].

The amended language altered the requirements under Section 2.2.1 and Appendix F for permittees subject to an approved TMDL, including changes to Tables F-1 and F-2. Section 2.2.1.e and Appendix F Part II outline the requirements for permittees subject to an approved bacteria TMDL; these requirements make clear that percent reductions are not required but requirements instead are comprised of additional or enhanced BMPs. Section 2.2.1.f and Appendix F Part III outline the requirements for permittees subject to an approved Lake or Pond Phosphorus TMDL; these requirements include a schedule that extends for 15 years after the effective date of the permit. Therefore, the language addressed in the comment above is no longer applicable.

157. Comment from NH Stormwater Coalition:

2.2.1.b -- Discharges Subject to an Approved TMDL with a MS4 Wasteload Allocation

This provision provides that: "For those TMDLs that specify a wasteload allocation or other requirements either individually or categorically for MS4 discharges, the permittee shall comply with the terms of Part 2.1 and 2.2 and satisfy the appropriate requirements of Appendix F. … In addition …, 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)." (Draft Permit, at 15). This requirement could impose significant BMP requirements for MS4 discharges that do not adversely influence the TMDL, particularly discharges that meet the New Hampshire water quality standards at end-of-pipe or discharges mitigated through the control of illicit discharges. In the latter case, the additional BMP requirements set forth in Appendix F should not be a requirement for compliance with the Draft Permit because the MS4 is already in compliance. Many of these TMDLs are seriously out of date or use TMDL derivation methods that do not comply with the CWA or implementing rules (*e.g.,* the methods do not determine the relative sources of the pollutants or document that a narrative criteria violation actually exists). Several of the TMDLs applied un-adopted standards to derive limitations. The permittees are seeking to revise/withdrawal these TMDLs and the proposed permit should acknowledge that if the TMDL is amended, the MS4 requirements are no longer applicable. (*See, e.g.* discussion below regarding the Statewide TMDL for Bacteria). [see Appendix F]

Finally, it is arbitrary and capricious for EPA to include a permit requirement allowing EPA to impose some as-of-yet unspecified condition without giving communities the opportunity to review the condition, comment on it, and, if necessary, appeal it. This violates the communities due process rights and is a form of self-executing permit modifications not allowed under the NPDES rules. Therefore, the final sentence of this section should be deleted.

[11] https://www3.epa.gov/region1/npdes/stormwater/nh/nhms4-renotice-statement-of-basis.pdf, Accessed January 2, 2017

EPA Response to Comment 157

EPA disagrees with commenters' claims about the adequacy of TMDLs that EPA has used as a basis for developing the requirements in the draft permit. See EPA Response to Comments 61-83, EPA Response to Comment 135, EPA Response to Comments 128 - 129, EPA Response to Comments 46 - 54, EPA Response to Comments 55 - 60, and EPA Response to Comments 227 - 233..

The final permit provides updated language for relief from requirements of Appendix F if a TMDL is revised by NHDES and approved by EPA. See EPA Response to Comment 130 and EPA Response to Comment 131-132 for discussion of relief provisions for requirements for dischargers where TMDL's identify stormwater as a source of a pollutant of concern.

EPA re-noticed Part 2.2.1.b. of the draft permit on September 1, 2015 and all language relating to the imposition of additional requirements had been removed, and the final permit does not contain the clause mentioned by the commenter.

158. Comment from NH Stormwater Coalition:

2.2.1.c -- Discharges Subject to an Approved TMDL without a MS4 WLA

This provision provides that for TMDLs that do not specify a WLA for the MS4 discharge, if EPA determines that the "MS4 discharge is causing or contributing to such impairment to an extent that cannot be explained by atmospheric deposition (e.g., chemical spill, acid landfill leachate or other sources), the permittee shall comply with the requirements of Part 2.1.1.c." Draft Permit, at 15-16. This requirement is unnecessary and completely unlawful. EPA does not possess statutory authority to unilaterally amend the conclusions of an approved TMDL, where an MS4 contributor was not identified as a significant component of the TMDL. Due process requirements apply to such actions and it is the State, not EPA that has the authority to set or amend TMDLs in the first instance. Moreover, any determination that the MS4 is causing or contributing to an impairment covered by a TMDL must be made through an amendment to the TMDL with the opportunity for public notice and comment.

EPA Response to Comment 158

The language that the commenter is referring to in Part 2.2.1.c refers specifically to the "TMDL for 158 Acid Impaired Ponds and 21 Aluminum Impaired Lakes" and the "Northeast Regional Mercury TMDL". As written in the permit, the permittee would be responsible for discharges out of their regulated area that are above those concentrations contemplated by the TMDL for stormwater sources and that cause or contributes to the impairments covered by those two TMDLs. EPA does not expect this to be the case for most discharges unless there is an illicit source of those pollutants within the regulated area, in which case the discharge would be subject to Part 2.3.4 of the final permit and the source must be removed. See EPA Response to Comment 160, EPA Response to Comments 46 - 54, EPA Response to Comments 55 - 60, and EPA Response to Comments 227 - 233.

159. Comment from NH Stormwater Coalition:

Small MS4s subject to an approved TMDL are subject to additional requirements specified in Appendix F (*e.g.,* bacteria TMDLs; phosphorus TMDLs). Prior to implementing the onerous additional requirements specified in Appendix F, the permit should allow for confirmation that the (1) receiving waters are actually impaired by the specific parameter and (2) that the small MS4 is a significant contributor. As draft EPA guidance[30] states it may be appropriate to revise or withdraw an approved TMDL when (1) changes in water quality standards leading to a determination that the water body is no longer impaired and (2) water that was incorrectly placed on the Section 303(d) List. Draft EPA Guidance, at 13. The Draft Permit should

incorporate provisions (*e.g.,* an extended compliance schedule) that allow the permittee to evaluate whether either of these two situations apply to their receiving waters prior to imposing stringent BMP requirements on the permittee.

A number of the TMDLs referenced in the Draft Permit were all prepared under the *assumption* that the designated receiving waters were impaired. These impairment listings are not always accurate for a number of reasons. For example, waters may have been assessed as impaired due to a limited amount of data or unrepresentative data for the waterbody. Unidentified natural sources may have been responsible for the impairment listing but as no assessment occurred, the actual cause of the condition is unknown. Or, the listing may simply have been in error as was the case for the nutrient impairment listing for Paxton Creek in Pennsylvania (*i.e.*, the waters are simply not exhibiting a nutrient impairment). The Coalition has brought these issues to the attention of DES. The permit should provide an off-ramp that postpones compliance deadlines.

Additionally, EPA is simply presuming that the MS4 contribution is significant, not rendering a demonstration, as required by federal law and applicable NPDES rules, that the MS4 is a significant contributor. The Draft Permit also imposes a moratorium on any development that creates a new discharge or increased discharge, as illustrated by the requirement at Section 2.1.2.b.iii as discussed above. The additional BMP requirements in Appendix F focus on runoff as causing or contributing to the impairment. However, as part of this permit, the permittee must identify and correct prohibited non-stormwater discharges which may correct the impairment. Moreover, the impairment may be attributed to other point sources or even natural conditions.

There are several problems with EPA's proposed approach. First, EPA may not hold the MS4 discharger presumptively responsible for an impairment occurrence or require the MS4 to investigate the cause of such impairment. That is the responsibility of the State and EPA under CWA § 303(d). *See* 40 C.F.R. Part 130. In any case, the additional BMP requirements are not necessary and the permit should provide an off-ramp to exempt the permittee from compliance with Appendix F requirements if the TMDL does not identify the MS4 as a significant contributor. Alternatively, the off-ramp should also apply if the permittee can demonstrate that the TMDL improperly characterized the MS4 as a significant contributor or some other non-MS4 source is the root cause of a particular impairment condition. These presumptions must all be eliminated from the permit as inconsistent with the statutory framework and adopted rules. *See* CWA §§ 301(b)(1)(C), 303(d); 40 C.F.R. §§ 122.44(d), 130.7.

EPA Response to Comment 159

See EPA Response to Comments 128 - 129, EPA Response to Comments 61-83, EPA response to Comments 85 -86, and EPA Response to Comment 111. See also EPA Response to Comments 46 - 54, EPA Response to Comments 55 - 60, and EPA Response to Comments 227 - 233.

The final permit provides updated language for relief from requirements of Appendix F if a TMDL is revised by NHDES and approved by EPA. See EPA Response to Comment 130and EPA Response to Comment 131-132 for discussion of relief provisions for requirements for dischargers where a TMDL identifies stormwater as a source of a pollutant of concern.

160. Comment from NH Stormwater Coalition:

The Draft Permit specifically addresses Aluminum impaired lakes with TMDLs. *See* Draft Permit Section 2.2.1.c. Wasteload allocations are not specified for MS4s in the TMDLs since atmospheric deposition was determined to be the cause of impairment. However, this Permit section provides the following caveat:

However, if the permittee becomes aware, or EPA or NHDES determines, that an MS4 discharge is causing or contributing to such impairment to an extent that cannot be explained by atmospheric deposition (e.g. chemical spill, acid landfill leachate or other sources), the permittee shall comply with the requirements of Part 2.1.1.c.

Draft Permit, at 15. The two specific examples given (chemical spill and acid landfill leachate) represent illicit discharges that are not under the control of the MS4 and it is inappropriate to make the MS4 operator pay for the illegal actions of others. In the event that other sources are responsible, EPA or DES must determine that these sources are not natural and that the discharge is significant before imposing the requirements of Part 2.1.1.c on the MS4. Moreover, in assessing whether the MS4 is causing or contributing to an exceedance of the aluminum criteria, the DES criteria for aluminum should be corrected to account for site-specific conditions of the receiving water.

The DES criteria for aluminum (Env-Wq 1703.1) are the National Recommended Water Quality Criteria developed by EPA in 1986. Those criteria specifically caution that they may be overprotective for the following reasons:

1. The value of 87 µg/L is based on a toxicity test with the striped bass in water with a pH of 6.5 – 6.6 and a hardness < 10 mg/L. Data from a WER submitted to EPA in 1994 indicate that aluminum is substantially less toxic at higher pH and hardness.

2. In tests with brook trout, total recoverable aluminum appears to be more appropriate as an indicator of toxicity than the dissolved form. However, this analysis was based on exposure to aluminum hydroxide particles. In surface waters, total recoverable aluminum may be primarily associated with clay particles, which may be less toxic.

3. EPA is aware of many high quality waters in the U.S. that contain more than 87 µg/L of either total recoverable or dissolved aluminum.[47]

Water quality data for New Hampshire indicate that naturally elevated levels of aluminum are common. These elevated aluminum levels are likely due to the weathering of granitic rock, which yields aluminum in particles, and not the form of aluminum considered in development of the current DES criteria. Given these considerations, identified by EPA in the *National Recommended Water Quality Criteria: 2002*, it is inappropriate to assess waters impaired by aluminum without considering whether the conditions of the receiving water are consistent with the manner in which the criteria were derived.

EPA Response to Comment 160

See EPA Response to Comments 46 - 54, EPA Response to Comments 55 - 60, and EPA Response to Comments 227 - 233.

The Permit provision at issue states the following:

"However, if the permittee becomes aware, or EPA or NHDES determines, that an MS4 discharge is causing or contributing to such impairments to an extent that cannot be explained by atmospheric deposition (e.g. chemical spill, acid landfill leachate or other sources), the permittee shall comply with the requirements of Part 2.1.1.d."

This permit provision acknowledges that under certain circumstances MS4 discharges will contain pollution from non stormwater sources that may contain aluminum and should be eliminated from the MS4. Under these circumstances the permit makes clear that discharges that contain non stormwater sources of aluminum are not allowed under this permit and are not considered in compliance with the aluminum TMDLs. Also, the two examples in the permit (chemical spill and acid

landfill leachate) do not constitute an exhaustive list of potential discharges. This permit does not reopen the New Hampshire Water Quality Standards criteria for aluminum or the basis for Water Quality Standards.

2.2.2 Discharges to Impaired Waters without an Approved TMDL

161. Comment from the Town of Hampstead

Naturally occurring vs. man-made pollutants: PH levels in the Town's ponds may exceed the desired limits. How does the Town determine what is occurring naturally through "acid rain" with an increase in Nitrogen and Sulfur, and what could be the result of stormwater run-off, which, in and of itself would naturally carry a higher PH level because stormwater is rain. Bacteria levels may also be elevated in areas where there are beaches. Beaches attract ducks because ducks comb the beach for food crumbs. How would the Town distinguish between bacteria from ducks or otherwise?

EPA Response to Comment 161

The MS4 permit does not contain additional requirements for permittees that discharge to a waterbody impaired for pH. Moreover, Section 2.2.1.c of the Permit clearly states that there are no requirements associated with the TMDL for 158 Acid Impaired Ponds and 21 Aluminum Impaired Lakes.

Stormwater runoff from an MS4 is well documented as a source of bacteria, please see EPA Response to Comments 61-83. There is no distinction between bacteria sources with respect to the permit requirements. If the town feels that duck waste is an issue contributing to the impairment, there are test methods to determine likely bacteria sources, or the Town could consider tailoring their educational messages around this and/or develop a program to manage the duck waste. In light of the impact that waterfowl may play in bacteria levels as indicated by the commenter, additional requirements have been added to Good Housekeeping to require addressing waterfowl congregation areas at the discretion of the permittee. Permittees should see the following guidance for dealing with waterfowl:
http://wildlifehelp.org/animals/new-hampshire/canada-goose
http://des.nh.gov/organization/commissioner/pip/newsletters/sampler/documents/2014april.pdf

Changes to Permit: Part 2.3.7.1.a. has been updated accordingly

162. Comment from the City of Portsmouth

Section 2.2.2 Discharge to an Impaired Water without an Approved TMDL: The City of Portsmouth believes it is the responsibility of the State of New Hampshire and the USEPA to identify sources of impairments. The requirements of this section to evaluate and identify sources of impairments are not the responsibility of the City. This exemplifies the burden that the proposed permit places on the MS4's, which requires them to address water quality issues where the MS4's are clearly not the source of the impairment. EPA and NHDES should determine the primary sources of the impairments, and not assume that the MS4's are the source and require the MS4 to prove they are not the source of the impairment. This language should be removed from the permit.

163. Comment from the Town of Goffstown

It appears the EPA has accepted and published the NHDES 2012- 303 (d) list. Goffstown would like to point out a few issues in that list in anticipation of it being incorporated into the future permit. The 303 (d) list shows an impairment for lead in the Black Brook. This is clearly (and appropriately referenced in the 303 (d)

list) as having a source of Inappropriate Waste and Contaminated groundwater. This has nothing to do with Goffstown's MS4 but rather a privately owned shooting range in Hooksett.

164. Comment from the Town of Goffstown

The Final- 2012- 303 (d) list includes an impairment for Total Phosphorus and Chlorophyll-a for Kelly Falls Pond (aka Namaske Lake). Nutrient impairments are such a complicated and expensive issue to deal with that Goffstown feels this should not be included in the permit until a TMDL is completed and the sources of the contaminants are clearly identified.

165. Comment from the Town of Goffstown

In response to a comment received from CLF on the 2008 draft permit EPA decided to strike the language in Section 2.1.1.a(ii) "In the absence of information suggesting otherwise, discharges will be presumed to meet the applicable water quality standards if the permittee fully satisfies the provisions of this permit." EPA's rationale in doing this was that the language has no meaningful purpose in the permit EPA then added the language in section 2.2,2 that says "EPA presumes that MS4 discharges are potential contributors to the impairments due to nutrients (phosphorus or nitrogen), bacteria, suspended solids, metals, or oil and grease." This language represents a 180 degree shift in EPA's approach to MS4 compliance and creates and untenable position for a community to meet; especially given the stiff penalties established in the clean water act. The Town respectfully disagrees with EPA's assessment that this language has no meaningful purpose. If this approach is required for storm water by the Clean Water Act then it is obvious that the CWA is not appropriate to manage storm water which is discharging from municipal systems that are hundreds of years old.

166. Comment from the Town of Merrimack

8. Presumption of Contribution to Impairment: In Section 2.2.2 I, of the 2013 MS4 Draft General Permit Requirements the “EPA presumes that MS4 discharges are potential contributors to impairments due to nutrients (phosphorus or nitrogen, bacteria, etc.)”. We would like to see real quantifiable testing results as part of the process. A large portion of the data supporting this permit is outdated and of limited quantity.

167. Comment from the Town of Goffstown

Section 2.2.2 establishes an iterative approach to addressing non-compliant discharges over the course of the 5 year permit. That timeframe is not practical given the far reaching extent of the water quality issues in southern NH. The legal standard of maximum extent possible, which, was in the first permit did not require immediate compliance with water quality standards. This permit deviates from that approach leading to the immediate non- compliance issue. We anticipate that it will take time to prioritize; plan, permit, fund and construct many of the structural BMP's that will be required. We propose allowing the Town to work with NHDES during the first 3 years of the permit to prioritize our receiving waters and develop a plan to concentrate on the high value waters first.

Many of the water quality issues identified for Goffstown, such as, the bacteria in Harry Brook (all samples taken within months of the 2006 flood) and the chloride in Catamount Brook (all samples immediately downstream of a pig farm) are based on very limited data. Before plans are developed for these areas we need to conduct more extensive sampling and study focused on these areas.

EPA Response to Comments 162- 167

See EPA Response to Comments 46 - 54, EPA Response to Comments 55 - 60, EPA Response to Comments 227 - 233, EPA Response to Comments 61-83, EPA response to Comments 85 -86, EPA Response to Comment 111 , and pages 2-3 of the Statement of Basis on the proposed modifications

to the reopened sections of the 2013 draft permit for more information[12]. As part of the reopening, EPA revised section 2.2 and Appendix H to provide clarity of permit requirements and certainty on applicability of permit provisions, including removal of the language cited above that starts with "EPA presumes…" However, although that language has been removed, pollution from urban stormwater runoff is well documented as a leading cause of impairment of freshwater lakes, rivers, and estuaries (US EPA, 2009); (National Research Council, 2008). A number of harmful pollutants are contained in urban stormwater runoff, including the following major constituents: Nutrients (nitrogen and phosphorus), Bacteria/Pathogens, Chloride, Solids, Oil & Grease (Hydrocarbons, PAHs), and Metals (Center For Watershed Protection, 2003); (US EPA, 1999); (Shaver, et al., 2007); (Lin, 2004); (Schueler, 2011); (Pitt, et al., 2004) (Clark & Pitt, 2012); (National Research Council, 2008). Literature review and analysis of National Stormwater Quality Dataset (NSQD) data of urban stormwater constituents indicates that it can be reasonably assumed that stormwater discharges from urban areas in New England contain bacteria/pathogens, nutrients, chloride, sediments, metals, and oil and grease (hydrocarbons, PAHs).

The permit does not reopen any Section 303(d) list for comment or modification. If a permittee has evidence that an impairment has been incorrectly assessed for a waterbody segment, EPA recommends the permittee submit such evidence to NHDES to be used to make decisions regarding surface water quality assessments as required by Sections 305(b) and 303(d) of the CWA (NHDES, 2015).

In the final permit, EPA included language related to relief from additional requirements in Appendix H to provide permittees an opportunity to demonstrate that the stormwater discharge at a particular outfall is not causing or contributing to a water quality impairment or that the waterbody is meeting water quality standards. EPA has revised the language in Appendix H specific to each pollutant to be consistent with the goal of the requirements of Appendix H (i.e., to reduce pollutant concentrations in stormwater discharges such that they do not cause or contribute to a violation of water quality criteria). For nutrients (nitrogen and phosphorus), there are two ways to demonstrate that relief from additional requirements is appropriate for permittees, which acknowledge that nutrient impairments are not always manifested at the point of discharge but overall loading of nutrients can cause downstream impairments. As such, the language in Appendix H part I and II relies on EPA approval of a determination by NHDES that the receiving water and all downstream receiving waters are not impaired due to nitrogen or phosphorus (e.g. a new approved Section 303(d) list) or the approval of a TMDL that indicates stormwater controls are not necessary for the control of nutrients the permittee's discharges. For other pollutants, which have the potential to cause or contribute to a violation of water quality standards at the point of discharge only; i.e., bacteria/pathogens, chloride, oil and grease (hydrocarbons, metals, and solids); Appendix H parts III, IV and V contain both of the relief mechanisms discussed above and an additional option based on characterization of the permittee's discharge when it can be demonstrated that the discharge itself meets water quality criteria. Such characterization would need to contain sufficient data to evaluate the concentration of the pollutant of concern at all points of a storm hydrograph (e.g. first flush, peak runoff, and return to baseflow), as well as data to evaluate the concentration of the pollutant of concern in all seasons.

EPA believes this data collection process will be rigorous and in most cases require the use of auto samplers equipped with flow measurement to capture pollutant concentrations at all points in storm

[12] https://www3.epa.gov/region1/npdes/stormwater/nh/nhms4-renotice-statement-of-basis.pdf, Retrieved Janauary 2, 2017

hydrographs. EPA has determined that, in the absence of other credible reference, the sampling guide provided by The National Research Council (National Research Council, 2008) of 30 flow weighted composite samples collected over the course of 2-3 years on a variety of storm sizes is an appropriate methodology to characterize a discharge properly. However, EPA has updated requirements related to relief from certain requirements and if permittees choose to undertake an outfall characterization, permittees are encouraged to work with EPA throughout the process to ensure adequate sampling. The language in Appendix H also requires that permittees continue to implement actions previously required to address the pollutant of concern after the permittee is relieved of any additional requirements. This is to ensure that the waterbody remains in compliance with water quality criteria and does not return to non-compliance as a result of the permittee's ceasing actions previously implemented to control the pollutant of concern. The goal of the Appendix H requirements is to reduce pollutant concentration in stormwater such that impaired waters achieve water quality criteria and designated uses. Any actions undertaken to control the pollutant of concern, as required by Appendix H, prior to the granting of such relief, must continue to be implemented by all permittees that receive relief from additional requirements in Appendix H to ensure the waterbody continues to meet designated uses and water quality criteria. In all cases, permittees are required to document the date they are relieved of future requirements and all actions (BMPs) implemented to comply with the requirements of Appendix H up until the date of relief. Permittees are then required to continue to implement those BMPs on the same schedules previously used for permit compliance. In addition, any structural BMP installed prior to when relief was granted needs to be maintained and replaced in accordance with manufacturer or design specifications.

See also EPA Response to Comment 114. The final permit also contains language providing relief from the additional requirements in Appendix H in the event that the permittees does not directly discharge to impaired waterbodies or tributaries (for nitrogen and phosphorus). In such a case, the permit requires the permittees subject to Part 2.2.2 to document the determination that they do not discharge to a waterbody impaired due to excess bacteria/pathogen in their NOI and are relieved of any additional applicable requirements upon permit authorization.

Changes to Permit: Appendix H part I, II, III, IV and V have been updated accordingly

168. Comment from the Town of Salem

Further to the above, it is worth noting that the NHDES 2012 "Section 303d list" of "Threatened or Impaired Waters that Require a TMDL" shows all but one of Salem 's impaired waters as a 'LOW TMDL Priority' (the exception being Hedgehog Pond with a 'MED TMDL Priority'). NHDES indicates that the earliest 'TMDL Schedule' for any of the indicated waters in Salem would be in 2019. With that said, Salem objects to the overly burdensome compliance schedule outlined in 2.2.2.c in light of the fact that the earliest TMDL study to be conducted by NHDES on any of the Town's listed impairments will not take place until after the 5 year term of the draft 2013 MS4 General Permit. The Town believes that consistency should be applied across all agencies in relation to impairment priorities. Confirmation of impairment utilizing analysis of current data from reliable sources should be undertaken prior to requiring MS4s to implement expensive mitigation measures. The Town should not be held to a higher performance standard than another agency that establishes impairment priorities.

169. Comment from the City of Rochester

The EPA has failed to consider the impact on the City of Rochester in setting a one-year timeframe for completing the requirements of Phase 1, which includes the requirement for the City of Rochester to

develop a Water Quality Response Plan. It will be extremely difficult if not impossible to complete the scope of work required to comply with Phase 1 in one year. The time requirements should take into account system complexity, land area, funding availability and available resources. It is not apparent that the time frames have been set with a full understanding of the municipality's approval processes. It is the responsibility of the municipality to the public to follow certain procedures including staff and committee reviews, public outreach and comments, full city council reviews etc. prior to allocating funding towards any improvements.

The EPA has failed to consider the impact on the City of Rochester in setting the timeframe for final source identification, assessment and implementation of BMPs. All time requirements to implement BMPs should take into account system complexity, land area, funding availability, available resources and review and approval processes.

It is not clear to what extent the identified source categories reduce the various pollutants of concern. Clear benefits of the structural BMPs and retrofits have not been provided, yet the implementation of the retrofits are required as part of the WQRP.

170. Comment from the Town of Londonderry

Section 2.2.2 lays out a schedule requiring completion of all 3 phases of compliance with the permit within the 5 year term of the permit. Town of Londonderrystormwater program for many years and has already achieved water quality improvements through the implementation of structural and non-structural stormwater Best Management Practices. Based on our experience we believe that to implement many requirements of this draft permit in five year period is not realistic. We also believe that EPA recognizes that storm water compliance needs to be a long- term solution.

171. Comment from the Town of Auburn

Section 2.2.2 establishes an iterative approach to addressing non-compliant discharges over the course of the five year permit. That timeframe is not practical given the far reaching extent of the water quality issues in southern New Hampshire. The legal standard of maximum extent possible, which was in the first permit, did not require immediate compliance with water quality standards. This permit deviates from that approach leading to the concern most communities have about immediate non-compliance issues. We anticipate it will take time to prioritize, plan, permit, fund and construct many of the structural BMP's that will be required. We suggest allowing the Town to work with NHDES during the first three years of the permit to prioritize our receiving waters and develop a plan to concentrate on the high value waters first. Many of the water quality issues identified for communities in our region are based on very limited data such as samples taken within months of the 2006 flood. Before plans are developed for these areas, communities need to conduct more extensive sampling and study focused on these areas.

172. Comment from the Town of Litchfield

We also request clearly stated flexibility regarding implementation and timing. It appears, that this permit is heavily front loaded with requirements in the first few years of the permit. Section 2.2.2 appears to classify all non-compliant discharges as requiring immediate remediation. This timeframe is not practical. It will require additional time to prioritize, plan, fund and construct necessary BWPs. It would be more constructive and realistic to allow the Town to work with NHDES during the first three years of the permit to mutually determine the highest priority waters to address first.

173. Comment from the City of Nashua

Part 2.2.2 Discharge to an Impaired Water without an Approved TMDL - "Phase 1. Preliminary evaluation and source identification for MS4 discharges and identification of additional and/or modified BMPs to address

the pollutant of concern ("Planned BMPs"). Part 2.2.2.a Phase 1 shall be completed 1 year from the effective date of the permit." Comment: In the City of Nashua, these requirements apply to the following water bodies for bacteria impairments:

- Nashua River- Mine Falls Dam Pond
- Lyle Reed Brook
- Muddy Brook
- Unnamed Brooks (2)
- Public Water Supply Ponds & Brooks

This phase requires the development of a Water Quality Response Plan (WQRP) in Year 1 for each impairment. For the City of Nashua, this phase would require the development of at least six WQRPs in one year based on the most recent 303(d) list. The City does not have the data or resources to develop these plans within the requested timeframe. MS4s cannot identify and commit to stormwater BMP retrofits and other capital improvements without supporting data and a sound scientific approach to demonstrate that the proposed solutions will adequately address the problem. Without TMDL guidance, which would include potential source identification, it is unfair to place the burden on MS4s to evaluate all the EPA "presumed" list of numerous sources, especially when the City has not previously been required to evaluate them and has limited available data. The responsibility of developing a sound scientific approach and supporting data for remedial efforts has been pushed to MS4s with limited resources. The EPA should lead efforts to develop scientifically-supported data that will demonstrate the need for, and effectiveness of, stormwater BMPs before requiring such under the permit. In the absence of such support, the schedule for developing a WQRP(s) for impaired waters under the MS4 Permit should be extended.
Request: The City requests that the EPA extend the schedule to complete the WQRPs no earlier than Permit Year 4 to coincide with the completion of additional tasks under the new permit. For example, this includes the catchment assessments within the first 3 years of the MS4 permit and the sanitary sewer mapping efforts within the first 30 months of the CSO & WWTP Permit (refer to Items 8 and 9).

174. Comment from the City of Manchester

Communities that discharge to an impaired water body other than a chloride impaired water body must take a three phased approach. The phases are as follows:

• Phase 1: Preliminary evaluation and source identification. Then develop a WQRP to assess potential sources, identify additional or modified BMPs beyond what is identified in the Stormwater Management Plan (SWMP). This needs to be completed one year from the effective date of the permit.

• Phase 2: Implementation of BMPs and finalization of the source identification and assessment. This needs to be completed three years from the effective date of the permit.

• Phase 3: Assessment BMPs that were implemented under Phase 2 to evaluate if the BMPs are sufficient to reduce the pollutants for the impaired water bodies.

Based on review of the phases it appears that the communities are being tasked with essentially the same requirements as are associated with a TMDL, except that they also need to do some of the studies that are used to develop a TMDL that is normally done by the NHDES. It appears that due to budget constraints the EPA is requiring the communities to do the work of the NHDES under this requirement. The City of Manchester has approximately 16 water bodies that would need WQRPs developed under this requirement at a cost of $65,000 per plan per water body to study sources develop BMPs, this does not include actual implementation of the BMPs.

The five year permit term is not enough time to implement this requirement as currently outlined. It also puts all the burden of the study on the communities and does not place any burden on the EPA or the NHDES. We ask that the EPA takes another look at this requirement and delays its implementation until the NHDES revises the 303 (d) list for impaired waters. The 303 (d) list needs to reflect updated sampling in accordance with a formal QA/QC program. We offer to work with the NHDES to ensure that the sampling is updated and the impairments to the water bodies reflect what are the current conditions observed and not based on old data. We ask that during the first five year permit term that the monitoring is performed and that during the following permit cycles plans are developed in conjunction with the NHDES to work towards minimizing the impairments. This permit requirement is realistically a twenty year requirement that can be developed in phases during subsequent permit cycles.

In regards to this requirement it is also the same as the TMDL (2.2.1) in the fact that loads need to be accounted for from their entities that discharge to the water body such as other Traditional and Non-Traditional MS4s.

175. Comment from MCWRS

This section is particularly onerous and potentially very expensive. It is also open-ended as far as what EPA and NHDES can require. This type of uncertainty is unacceptable for communities that have to be able to plan and budget resources. It should be the responsibility of EPA and the state regulatory agency to evaluate and identify sources of impairments. This language should be removed from the permit.

176. Comment from the City of Dover

While Dover agrees that an iterative approach is appropriate the draft permit attempt to require analysis, implementation, and reanalysis within the 5 year permit is unnecessary and unworkable. The schedule is too compressed and the proposed tracking and reporting in the 3 phase approach is too extensive.

Dover cannot possibly assess, propose BMP's, implement structural BMP's and collect meaningful data to assess effectiveness of BMP's then propose modifications to plans all in the 5 years of the permit.

The city has nearly completed stormwater improvements in the Berry Brook watershed. Berry Brook is a small urbanized sub watershed of the Cocheco River about 165 acres in size that had 30% impervious cover at the beginning of the project in 2003. By the end of 2013, it is projected that through implementing green infrastructure drainage improvements that Berry Brook will have disconnected enough impervious area to result in a 10% effective impervious area. The cost to do that work is over one million dollars. Water quality monitoring has shown mixed results but the trend appears to be improving. The UNH Stormwater Center, Dover's project partner, expects that it will take time for the improvements in water quality to be measurable. Based on our experience in Berry Brook it is unreasonable to have such short schedules to complete the 3 phase approach as proposed in the draft MS4 permit. It has taken a ten year period to assess, plan and implement improvements in the Beery Brook watershed and the results are inconclusive as to water quality improvements. It would be premature to propose modifications or additional BMP's until the additional water quality data has been collected and analyzed. This is presented in the comments to illustrate the unreasonableness of the 3 phase approach schedule and reporting within the 5 year permit.

177. Comment from the Town of Goffstown

Section 2.2.2.a.ii.b.3 states that all planned BMP's shall be fully implemented within three years of the permit effective date. This is not feasible given that almost all of Goffstown's outfalls discharge to impaired waterways and we have to deal with all of them at once. The Town requests the ability to prioritize our outfalls to concentrate on the highest priority outfalls (ie. discharges near the Glen Lake beach) first. Though

at this time we do not have the data to say this for certain, we suspect that some of the BMP's will take longer than 5 years to implement.

Section 2.2.2 lays out a schedule requiring completion of all 3 phases of compliance with the permit within the 5 year term of the permit At an EBC Meeting in Manchester, NH on July 10th Administrator Curt Spalding admitted to the audience that EPA recognized that storm water compliance needed to be a long-term solution.

178. Comment from the Town of Londonderry

Section 2.2.2.a.ii.b.3 states that all planned BMP's shall be fully implemented within three years of the permit effective date. The Town requests the ability to prioritize our outfalls to concentrate on the highest priority outfalls first. We suspect that some of the BMP's will take longer than 5 years to implement.

179. Comment from the Town of Auburn

Section 2.2.2.a.ii.b.3 states that all planned BMP's shall be fully implemented within three years of the permit effective date. This is not feasible given that almost all of Auburn's outfalls discharge ultimately to impaired waterways and we would have to deal with all of them at once. The Town requests the ability to prioritize our outfalls to concentrate on the highest priority outfalls (i.e.-- discharges near Lake Massabesic) first.

180. Comment from the Town of Newmarket

2.2.2 Discharges to Impaired Water Bodies without an Approved TMDL

Part 2.2.2.a.ii.3 indicates that all planned BMPs identified as part of a Water Quality Response Plan "shall be fully implemented within three (3) years of the permit effective date unless the permittee can document that such implementation is infeasible". This expected timeline for BMP implementation is unreasonable and infeasible. Again, permittees should be allowed at minimum of I0 years to fully implement BMPs.

181. Comment from the City of Nashua

Part 2.2.2.c.i. Reassessment of Implemented BMPs - "Within four years of the permit effective date, the permittee shall reassess the implemented BMPs and the MS4's initial evaluation..." Comment: The schedule for reassessing implemented BMPs needs to be extended based on the requested change to the schedule for development and implementation of the WQRPs discussed under Items 23-25 above. Request: The City requests that the EPA revise the schedule for assessing the BMPs implemented under a WQRP to occur during the next permit cycle (i.e., after Permit Year 5).

182. Comment from the Town of Salem

Section 2.2.2.c.(i) and (ii) - The Town of Salem, NH believes that time frames for the 'Reassessment of Implemented BMPs' and 'Prospective BMPs' is overly aggressive. After implementation of the initial set of BMPs the Town feels that a longer period of evaluation (that is, beyond permit year 4) should be provided to assess BMP effectiveness before proposing yet another group ofBMPs (as proposed in permit year 5).

183. Comment from the Town of Wilton

6. Part 2.2.2 Discharge to an Impaired Water without an Approved TMDL has a 2 year extension for a new permittee. Therefore Phase I shall be completed within 3 years, Phase 2 shall be within 5 years and Phase 3 shall be done within 7 years from the effective date of the permit. This extension doesn't apply to Parts 2.l.l.c or 2.2.2.c.i. which shall be completed within the first 3 years after the effective date of the permit.

---The timeframe for Part 2.2.2 doesn't seem practical for the far reaching extent of the water quality issues in southern NH. This permit appears to lead toward an immediate non-compliance issue. Time needs to be given to study, sample and determine what TMDL needs to be considered. Then plan, permit, prioritize, fund and construct many of the structural BMP's which will ultimately be required. The Town of Wilton has many outfalls along the Souhegan River to deal with. Addressing all of them at once would not be financially feasible. Much of the water quality data at this point is dated and in some cases there is insufficient data. The sampling techniques along with time of year and weather conditions during sampling are unknown and can greatly affect the testing results. Considering that this program will cost the Town Wilton at least many hundreds of thousands of dollars if not over a million in the next 5 years It would be prudent to make sure that there all of the data is current and correct prior to putting time, money and efforts into something that might not even exist at this time. Could a partnership be set up with NHDES to make sure all testing was done by specific regulated standards allowing for a better data set?

184. Comment from Durham/UNH Integrated Watershed Partnership

Page 17 of 60. In Part 2.2.2 captioned "Discharge to an Impaired Water Without an Approved TMDL," the permit sets out an iterative approach for addressing such a discharge. The phased approach outlined makes sense and the timeframes specified appear to be sufficient for identifying, implementing and assessing the necessary BMPs. However, what does not make sense is the lack of a defined pollutant reduction target for any pollutant of concern. The MS4 permit is in essence requiring individual municipalities to develop and implement a TMDL because neither the state nor the federal agencies have done so. All that a municipality can do is target pollutant reductions that it is responsible for on a given watershed and try to coordinate, to the best it can, with other municipalities on the watershed. This approach is obviously not as effective as having a TMDL or even a water quality report or model that would provide some target levels for a point and non-point source reduction.

Absent the agencies willingness to conduct a TMDL, the municipalities can identify pollutants of concern and reduce them, but there is no standard by which to evaluate the amount of reduction necessary, the extent of efforts to be taken to reduce pollutant discharges and perhaps most importantly, no basis for assessing the most cost-effective reductions that could be made within a watershed. In short, this iterative approach, while important, could be very counterproductive and costly, requiring an individual municipality to unnecessarily expend effort and money for very little benefit while other sources of the pollutants go unregulated or could be significantly reduced with far less cost.

185. Comment from the City of Dover

The tidal portion of the Cocheco River is impaired for numerous PAH's. Section 2.2.2 would require the City to develop a plan to reduce PAH's from its MS4 under the presumption it is a significant source contributing to the impairment. It is safe to say that Dover's stormwater runoff has no higher a concentration of PAH's than the City of Rochester's stormwater. However, the tidal portion of the Cocheco River is impaired for PAH's while the Cocheco River downstream of Rochester is not impaired for PAH's. Section 2.2.2 of the proposed permit will require Dover to sample all its' outfalls as the permit assumes that the MS4 outfalls are significant sources while ignoring the fact that a former coal gasification plant that operated for more than 100 years on the banks of the Cocheco River was located near the downtown Dover and has been identified as a hazardous waste site by NHDES Waste Management Bureau.

In 2003 and 2004 a remedial clean up was conducted at the former coal gasification site which included an environmental river dredge in the Cocheco River. This site is obviously the primary source of PAH's in the Cocheco and Piscataqua Rivers. To require all Dover storm drains discharging to the tidal Piscataqua, Cocheco and Bellamy Rivers to sample for PAH's and develop Water Quality Response Plans (WQRP) to reduce PAH's from stormwater is unnecessary, expensive and un-protective. This one example illustrates the

unfair burden that the proposed permit places on the MS4's, which requires them to address water quality issues where the MS4's are clearly not the source of the impairment. EPA and NHDES should determine the primary sources of the impairments, and not assume that the MS4's are the source and require the MS4 to prove they are not the source of the impairment. The tidal rivers are also impaired for DDD, DDE, DDT, PCB, dioxin and other legacy compounds which were discharged years ago. Just sampling for these compounds will be very costly for the MS4. Sampling for the above mentioned legacy compounds including PAH's would be $880 per sample for each outfall.

186. Comment from the NHDES

4. It appears that Water Quality Response Plans (WQRPs) are open ended. There is a need for a Phase IV for WQRPs that defines when they can be closed out or suspended. It should be made clear that, except for periodic follow-up monitoring as part of the IDDE program, the water quality response plans can be suspended when the pollutants contributing to impairments are no longer present in significant or measurable quantities in an outfall. Further, if the listed impairments are removed from the 303(d) list due to ongoing monitoring of the applicable assessment unit by DES or the permittee, then the WQRPs can be closed out.

187. Comment from the Town of Danville

Water Quality Response Plan development: We respectfully pose the following three questions and request guidance: How is a water quality response plan created when the preliminary evaluation of discharges to impaired water and water testing results provided to you from NHDES for the Town of Danville are from 5 to 30 plus years old? How is the determination made as to the accuracy of these test results initially? Finally, based on the aged, potentially inaccurate tests results, location of the testing and criteria held at the time, how should baselines be determined?

Water quality response plans provide an interactive process for addressing discharges that have a potential to cause or contribute to impairments. Considering the pollutant available data on states listings of water quality data, many areas could be derived as incorrect or not current due to the aging of test results listed on NHDES water testing results. The process of addressing discharges for initial assessments including things like leaf litter seems rather ineffective as leaf litter is an example of Mother Nature whereby it composts itself to back to the ecosystem. Properly functioning healthy ecosystems will be damaged if we are required to meet baselines that have been set too high/low relative to normal background values. In our town, and throughout the state, the "impaired waters" list as currently structured creates exactly that situation. The magnitude of this request for a small town like Danville is overwhelming and seemingly needless.

188. Comment from Wright-Pierce

(It is our understanding that Phase 1 of this approach shall include the development of a Water Quality Response Plan (WQRP) as outlined in Part 2.2.2.a.ii.) It appears that a WQRP is very similar to elements of a Watershed Management Plan. Is it true that if a regulated Small MS4 Community was planning to develop a Watershed Management Plan, they would be precluded from receiving 319 funding to do so because it would be fulfilling portions of their Small MS4 General Permit requirements? If so, is this an unintended consequence of the permit language and is there anything that can be done to avoid it? It would be a shame to knowingly limit the potential funding sources available to regulated Small MS4 Communities when the cost to implement the Small MS4 General Permit is already a burden on municipal budgets.

189. Comment from the City of Nashua

Part 2.2.2.a.ii.a Water Quality Response Plan Discharge - Additionally, the WQRP is supposed to identify "... additional or modified BMPs the permittee will implement to ensure it will not cause or contribute to

the impairment." Comment: BMP analysis, especially for structural BMPs with high capital costs, requires planning, modeling, design, and approval prior to implementation. This planning process cannot be completed within one year, especially when the evaluation of sources needs to be completed first. The EPA must understand that with the lime constraint of 1 year, the WQRP can only include a conceptual approach with an initial assessment of capital improvements based on insufficient data. Any capital improvement planning would have to be approved at a later date. Request: The City requests that the EPA revise this part of the permit to extend the timeframe for developing specific BMPs in the WQRP once sufficient data is available (refer to Item 23).

190. Comment from the City of Nashua

Part 2.2.2.a.ii.b.3. Water Quality Response Plan -The WQRP requires a schedule from funding through implementation and evaluation, which must begin no later than 18 months after the permit effective dale and be fully implemented within 3 years of the permit effective dale, or 5 years for major projects. Non-structural BMPs are presumed feasible within two years. Comment: The timeline for implementation of BMP retrofits is unreasonable based on the significant investment in planning, design, and construction needed. Given the constraints and the lack of financial assistance to develop this program at the local level, the timeline for comprehensively addressing stormwater issues and water quality standards will be on the order of several decades, not several years. The BMP schedules should be specific to the proposed measure and order of magnitude cost to implement. For example, a modified public education program, since one is already on-going, is feasible within the established time frame. But another non-structural BMP such as more stringent development/redevelopment requirements may require more than the presumed two years. Major projects should be given a longer timeframe to plan and implement based on a prioritized capital improvement plan. The permit does not specify a schedule for EPA to review and approve the WQRPs, once submitted. The City cannot be expected to implement a program based on the WQRPs without formal approval unless a presumptive approval is granted. Request: The City requests that the EPA revise this part of the permit to extend the timeframe for implementation and evaluation of the WQRP to be begin in Year 5 of the permit. This will follow the proposed schedule for developing the WQRP in Permit Year 4, as requested under Item 23 above.

191. Comment from the Town of Merrimack

Non-structural BMPs Scheduling: Enhanced non-structural Best Management Practices (BMPs) should be undertaken and completed to the full extent possible before the determination and expensive planning, designing and construction of the structural BMPs are even contemplated. Additional monitoring and analysis should be undertaken once the non-structural BMPs are in place and have had time to take effect. Only then, should the Towns commit to structural BMPs if the non-structural BMPs are not effective enough to effect water quality. In this manner the towns would have the flexibility to adjust programs, projects and goals to insure the maximum amount of efficiency of time, staffing and costs.

Scheduling of Non-structural and Structural BMPs in Year 2: Why would the non-structural controls and structural controls need to be detailed and described both in year 2? Much more time is needed to have controls in place and this schedule places a big burden to the Town in time and costs. Non-structural controls should be first and when they have been in place for an appropriate period of time and the effects of the non-structural controls have been quantified and verified then the Town would determine if structural BMPs are needed.

192. Comment from the City of Nashua

Part 2.2.2.a.ii.b.4 - Include in the WQRP, "A description of the monitoring or other assessment and evaluation efforts that will be implemented to monitor, assess, or evaluate the effectiveness of the WQRP." Comment: The City submitted a Combined Sewer Overflow Control Program Post Construction

Monitoring Plan dated December 25, 2010 to EPA as required under the Consent Decree (Civil Action No. 05-376-PB) dated December 26, 2005. To date, the City has not received any feedback from EPA on this monitoring plan and additional monitoring is proposed in the draft CSO & WWTP Permit. The City feels that this monitoring program is essential to evaluate the results of the improvements to address the impacts from CSOs and assist in evaluating water quality issues for the Merrimack and Nashua Rivers. The City of Nashua would like to build upon the monitoring efforts under the CSO program to meet the objectives for monitoring under the WQRP requirements in the draft MS4 Permit. Request: The City requests that the EPA revise this part to allow MS4s to incorporate activities under other NPDES permits, as well as the schedule for meeting the WQRP monitoring requirements.

193. Comment from the City of Nashua

Part 2.2.2.c.ii Prospective BMPs - "For discharges identified…after the first year, the WQRP shall be completed within 180 days…" Comment: The WQRP is intended to identify and prioritize BMPs to address the most significant contributors to water quality problems. It is unreasonable to require the City to develop a WQRP for specific discharges when these will be prioritized as part of the overall WQRP for each water body. Request: Please remove this paragraph of Part 2.2.2.c.ii. Also, please note that the City is requesting removal of Part 2.l.l.c (refer to Item 22 above).

EPA Response to Comments 168 - 193

See EPA Response to Comments 46 - 54, EPA Response to Comments 55 - 60, EPA Response to Comments 227 - 233, EPA Response to Comment 111, EPA Response to Comment 254, and EPA Response to Comments 61-83.

On November 22, 2014, The New Hampshire Code of Administrative Rules was updated to include the adoption of Env-Wq 1701.03 “Compliance Schedules in NPDES Permits” into rule and Env-Wq 1701.03 became effective on the same date. Env-Wq 1701.03 allows compliance schedules to be put into NPDES permits. Accordingly, and in response to many comments raised above, EPA amended the language in Parts 2.1.1 and 2.2 and Appendix F and H of the permit and added specified schedules and actions leading to compliance with water quality standards where appropriate which are consistent with Env-Wq 1701.03 and 40 CFR §122.47. On September 1, 2015 EPA reopened the comment period on updated language in Parts 2.1.1, 2.2, 2.3.6, Appendix F, and Appendix H in response to multiple comments received on the reopened parts and appendices of the 2013 draft permit and in order to comply with the recently effective New Hampshire Code of Administrative Rules Env-Wq 1701.03 and to address concerns raised by commenters above. The updated Parts 2.1.1, 2.2, 2.3.6 Appendix F and Appendix H fully replaced same parts or appendices of the 2013 draft permit. See the Statement of Basis on the proposed modifications to the reopened sections of the 2013 draft permit for more information[13].

As described, the updates to the Draft Permit included significant changes to Section 2.2, and specifically Section 2.2.2, to provide clarity of permit requirements and certainty on applicability of permit provisions. These changes include the requirements and schedule cited in the above comments and removed the requirements to complete a WQRP. One commeter requested the ability to prioritize BMP implementation among outfalls. The extended schedules for implimenting the requirements of Part 2.2.2. should allow the permittee the requested ability to prioritize among BMPs within the the revised BMP implementation schedule.

[13] https://www3.epa.gov/region1/npdes/stormwater/nh/nhms4-renotice-statement-of-basis.pdf, Accessed January 2, 2017

With respect to confirming that receiving waters are impaired for inclusion on the Section 303(d) list, the time for such an analysis would be during the public comment period for the NHDES Integrated Report. If a permittee has evidence that an impairment has been incorrectly assessed for a waterbody segment, EPA recommends the permittee submit such evidence to NHDES to be used to make decisions regarding surface water quality assessments as required by Sections 305(b) and 303(d) of the CWA (see NHDES guidance on sampling (NHDES, 2015)). See EPA Response to Comments 162- 167 for a discussion of relief from permit requirements associated with water quality limited waters.

In regard to one commenter's question if a partnership with NHDES could be set up to ensure testing followed specific standards, it is not clear what testing the commenter is referring to. See EPA Response to Comment 121 regarding surface-water sampling.

One commenter mentioned the PAH sampling requirement an impairment is linked to another source. Stormwater is known to contain PAHs and if a permittee is discharging PAHs to an impaired waterbody they are contributing to the impairment. In such a case the permit lays out clear requirements to meet water quality standards however simply knowing a larger source of PAHs does not relieve a permittee of sampling obligations. See also see EPA Response to Comments 61-83.

One commenter noted they would like to coordinate work with other NPDES permits. To the extent that compliance with another NPDES permit meets the requirements of this permit any permittee is free to use work completed for compliance with one NPDES permit to comply with requirements of another NPDES permit as long as both NPDES permit requirements are met fully.

Section 319 of the Clean Water Act provides federal funds for *nonpoint source* pollution prevention and abatement. Small MS4s have been regulated as point sources discharges of pollution since the Phase II stormwater regulations were finalized in 1999. Section 319 funds are provided to support organizations who wish to voluntarily address their nonpoint pollution issues. Section 319 funding may not be used to carry out activities required by any final point source permit, including stormwater permits. EPA has provided information on other funding opportunities and options on our website as well as in the draft permit factsheet. See EPA response to Comments 592-593.

194. Comment from the Neponset River Watershed Association

Because the requirements of Phase 1 must be completed within one year of the permit effective date, EPA should stress to MS4s that work on Phase 1 should begin as soon as their NOIs are submitted for approval. Indeed, a chronological list of all of the permit's requirements would be extremely useful to help MS4s develop implementation schedules.

195. Comment from the Neponset River Watershed Association

The "additional" BMPs in Section 2.2.2.a.ii.(b)2. are not a comprehensive list. Although that subsection only covers the first year (Phase 1) of the permit, even the requirements in the subsections for Phase 2 and 3 do not provide any specific additional BMPs except for retrofit BMPs in Phase 3.

196. Comment from the Neponset River Watershed Association

Section 2.2.2a.ii.(b)2. should be require that permittees, to the maximum extent practicable, implement as many of the listed BMPs as are necessary to demonstrate that they are not contributing to a violation of a water quality standard or a TMDL WLA. In the case of development/ redevelopment requirements (subsection c), we believe that listed BMPs should be mandatory unless the permittee shows in an NOI or

Annual Report why they are not appropriate due to special circumstances. At a minimum, this should apply to MS4s discharging to waters with TMDLs.

197. Comment from the Neponset River Watershed Association

Additional BMPs that we believe should be listed under 2.2.2.a.ii.(b)2 are:

Under c) for development/redevelopment ordinances:

- lists of BMPs which are, in fact, effective at reducing various pollutants of concern; see, for example, the draft guidance complied by NepRWA on effective bacteria BMPs (attached).;
- application of stormwater standards to areas disturbing 5,000 square feet or more (the proposed NH permit says “less than one acre.”);
- larger fines and increased funding for enforcement;
- a bylaw provision establishing a stormwater utility with fees (for new and existing development) based on the amount of impervious surface (fee could be a small, standard amount for single family homes);
- requiring that roof downspouts do not discharge to impervious surfaces;
- a provision forbidding existing large impervious areas (such as shopping centers and supermarkets) to discharge to an MS4 without retrofitting with stormwater BMPs, to the maximum extent practicable.

Under d) for Good Housekeeping and Pollution Prevention, the BMP list should include use of more effective street sweeping technologies such as vacuum or regenerative air.

Under f) Structural BMP retrofits, the list should include requiring businesses with large impervious areas to pay for at least a portion if not all required retrofits that reduce runoff going to an MS4.

EPA Response to Comments 194 - 197

See EPA Response to Comments 61-83 and EPA response to comment 84. The 2015 Renotice removed the requirement to complete WQRPs and replaced the requirements with specific BMPs that the permittees must do to be in compliance with water quality standards and any applicable TMDL. See also EPA Response to Comments 168 - 193. The specific BMPs are tailored to each pollutant of concern and EPA finds that once fully implemented discharges from MS4s will not cause or contribute to a water quality standards violation. EPA finds that the BMPs suggested by the commenter are not suitable for this general permit and the BMPs found in Appendix F and Appendix H are sufficient.

198. Comment from Conservation Law Foundation

As discussed in Part I, supra, CLF supports the more stringent and prescriptive requirements of the draft permit as they relate to discharges to impaired waters. In addition, CLF specifically notes its support for the draft permit’s flexible approach of allowing additional waters to be treated as "impaired" based on water quality or modeling information. See Draft Permit§ 2.2 ("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."). In light of the five-year permit term, we believe this flexibility is critical for addressing impairments that may not be currently known and /or impaired conditions that may not be documented yet in New Hampshire's Section 303(d) list of impaired waters.

EPA Response to Comment 198

EPA appreciates the public support for strong stormwater protections in the new MS4 general permit, and looks forward to the future benefits of reduced pollution and improved water quality in the State of New Hampshire. EPA notes that the definition of "water quality limited waters" includes those waters found to be experiencing excursions above water quality standards at any time and does not put a time limit on when this determination must be made.

199. Comment from Conservation Law Foundation

CLF strongly supports the general requirement set forth in Part 2.2.2 that if there is a discharge from an MS4 to an impaired water without an approved TMDL, "the permittee shall address in the SWMP and annual reports tow the discharge of pollutant(s) identified as causing the impairment (pollutant(s) of concern) will be controlled such that they do not cause or contribute to the impairment." *See* Draft Permit, Part 2.2.2. We trust that the parenthetical language 15 immediately following the above-quoted provision (pertaining to specific requirements pertaining to the Great Bay Estuary watershed) is intended to impose requirements that are supplemental to, and that do not supplant, the above-quoted general requirement. CLF supports the WQRP requirements set forth in Part 2.2.2, with the qualification that such plans should be required to include LID *(see supra* Parts II and Ill) and should be subject to public notice and comment and EPA review and approval prior to authorization of coverage *(see supra* Part IV).

EPA Response to Comment 199

EPA appreciates the public support for strong stormwater protections in the new MS4 general permit, and looks forward to the future benefits of reduced pollution and improved water quality in the State of New Hampshire.

In response to comments received on the draft permit, EPA On November 22, 2014, The New Hampshire Code of Administrative Rules was updated to include the adoption of Env-Wq 1701.03 "Compliance Schedules in NPDES Permits" into rule and Env-Wq 1701.03 became effective on the same date. Env-Wq 1701.03 allows compliance schedules to be put into NPDES permits. Accordingly, and in response to many comments, EPA amended the language in Parts 2.1.1 and 2.2 and Appendix F and H of the permit and added specified schedules and actions leading to compliance with water quality standards where appropriate which are consistent with Env-Wq 1701.03 and 40 CFR §122.47. On September 1, 2015 EPA reopened the comment period on updated language in Parts 2.1.1, 2.2, 2.3.6, Appendix F, and Appendix H in response to multiple comments received on the reopened parts and appendices of the 2013 draft permit and in order to comply with the recently effective New Hampshire Code of Administrative Rules Env-Wq 1701.03 and to address concerns raised by commenters above. The updated Parts 2.1.1, 2.2, 2.3.6 Appendix F and Appendix H fully replaced same parts or appendices of the 2013 draft permit. See the Statement of Basis on the proposed modifications to the reopened sections of the 2013 draft permit for more information[14]. The 2015 Renotice removed the WQRP to provide more clarity of permit provisions and provide clear measurable permit conditions for all permittees.

[14] https://www3.epa.gov/region1/npdes/stormwater/nh/nhms4-renotice-statement-of-basis.pdf, Accessed January 2, 2017

2.2.3 Great Bay Watershed Nitrogen Requirements

200. Comment from the Rockingham Planning Commission

Many of the municipalities in southeastern New Hampshire are dealing within increasingly stringent wastewater discharge permits due to the nitrogen impairment in the Great Bay Watershed. A much more integrated approach that links the MS4 program, NPDES permits, TMDL, and other water quality management programs is called for in this region- as Administrator Spaulding has himself said. We hope that you will support efforts such as those underway in the Oyster River (Durham) and the Exeter-Squamscott (Exeter/Stratham/Newfields) by supporting flexibility in the underlying permitting. We believe such an approach has the best chance of creating cost-effective solutions that have local support and achieve water quality improvements.

EPA Response to Comment 200

EPA is supportive of the efforts for an integrated approach. To that end, EPA is currently working on a draft Integrated Permit for the City of Durham and the University of New Hampshire. EPA also supported the efforts by Exeter/Stratham/Newfields regarding integrated planning. See EPA response to Comment 1. The finalization of this general permit, permitting discharges solely from MS4s, is not counter to these efforts and flexibility in terms of integrated permitting is not warranted in this general permit.

201. Comment from the Town of Sandown

Section 2.2.3 acknowledges Sandown's location in the Great Bay Watershed and goes on to require municipalities that discharge stormwater directly to nitrogen impaired water bodies (Exeter River) in the Great Bay Estuary watershed to develop a three phase plan, through an iterative process, in accordance with the provisions of Section 2.2.2 for the reduction of nitrogen. Section 2.2.2 is a prime example of the "burden shifting" I commented on above. It is very clear to us the Town of Sandown will be forced to seek outside assistance on an annual basis, at great expense, in order to insure compliance with the provisions of Sections 2.3.4.2 through 2.3.4.11 of the General Permit.

202. Comment from the Town of Derry

Section 2.2.3 identifies Derry as being within the Great Bay Estuary watershed and therefore subject to preparation of a Water Quality Response Plan. It is important to note that only about 500 acres (or 0.8 square miles) of the town is actually within the watershed. The majority of this area is undeveloped forest, surface water, or bordering wetlands and is upgradient of the Towns of Chester and Sandown, both of which are rumored to have received waivers from the MS4 permit. The Derry's contribution in the watershed is negligible compared to the area within the downstream towns. Given the natural assimilative capacity of the streams within the Derry portion of the watershed, and the downstream segments within the other referenced communities, implementation of any structural BMPs would be a waste of resources.

203. Comment from the Town of Danville

Water Quality Response Plan to address runoff to the Great Bay Estuary: The percentage of the town in the MS4 area just barely touches the Exeter River area which is part of the Great Bay Estuary. This portion of the Exeter River is the beginning which then flows into Fremont, then to Chester, back into Fremont and out to the seacoast area. It is the position of the Town of Danville that if the testing that has been done, or can be done, to determine that we are not the cause of any impairment we would not need a detailed plan to address this issue. Compliance for discharges into Estuary area/watershed/tributaries from Danville's MS-4 area in this watershed is minimal. Most of the Great Bay Estuary in Danville travels through forest and conservation land areas and does not border roadways or households.

204. Comment from the City of Rochester

The City of Rochester should not have to comply with the provisions related to nitrogen impairment designation for the Great Bay Estuary as detailed in Appendix H. The NHDES and EPA have yet to establish that the City of Rochester is a significant contributor of nitrogen.

The EPA lacks the authority to require the City of Rochester to determine how a discharge of pollutants will be controlled such that it does not cause or contribute to the impairment. It is the responsibility of the state and or EPA to determine the level of control necessary through development of a TMDL.

EPA Response to Comment 201 - 204

See EPA Response to Comments 46 - 54, EPA Response to Comments 55 - 60, EPA Response to Comments 227 - 233, EPA Response to Comments 61-83, EPA response to Comments 85 -86, EPA Response to Comment 111 , and pages 2-3 of the Statement of Basis on the proposed modifications to the reopened sections of the 2013 draft permit for more information[15]. As part of the reopening, EPA revised section 2.2 and Appendix H to provide clarity of permit requirements and certainty on applicability of permit provisions.

It is well documented that discharges of nutrients (specifically nitrogen and phosphorus) in stormwater not only affect the point at which the discharge enters the receiving waterbody but also affect downstream waterbodies and nutrient TMDLs covered by this permit and elsewhere require nutrient reductions watershed wide; (e.g.: (USEPA, 2010) (CTDEEP, NYDEC, 2000) (USEPA, 2015) (Vadeboncoeur, et al., 2010) (Correll, 1998) (Charles River Watershed Association, May 2011) (Mattson & Issac, 1999) (Browman, et al., 1979) (Carpenter, et al., 1998)). As such, the permit contains requirements for discharges that occur upstream of nutrient impaired waterbodies, recognizing that nutrient impairments are caused by discharges directly to the impaired waterbody as well as discharges from upstream sources.

In the final permit, EPA included language related to relief from additional requirements in Appendix H to provide permittees an opportunity to demonstrate that the stormwater discharge at a particular outfall is not causing or contributing to a water quality impairment or that the waterbody is meeting water quality standards. See EPA Response to Comments 162- 167.

The final permit also contains language providing relief from the additional requirements in Appendix H in the event that the permittees does not directly discharge to impaired waterbodies or tributaries (for nitrogen and phosphorus). See EPA Response to Comment 114and EPA Response to Comment 500.

205. Comment from the City of Portsmouth

Section 2.2.3 and Appendices F and H Great Bay Watershed Nitrogen Requirements: The City of Portsmouth and other communities have challenged the scientific basis for NHDES' development of the June 2009 Numeric Nutrient Criteria for the Great Bay Estuary. The June 2009 Numeric Nutrient Criteria for the Great Bay Estuary established 0.3 mg/L Total Nitrogen (TN) as the in-stream water quality threshold on the premise that elevated nitrogen concentrations have caused excessive phytoplankton growth in the water column that reduces light transparency and adversely impacted eel grass growth in the Great Bay Estuary. Portsmouth and other communities have provided NHDES and EPA with numerous documents and affidavits

[15] https://www3.epa.gov/region1/npdes/stormwater/nh/nhms4-renotice-statement-of-basis.pdf, Accessed January 2, 2017

that show NHDES knew that chlorophyll a levels, the measure of suspended algae particles in the water column, has not increased in 30 years and that reducing nitrogen would not improve transparency sufficiently to meet target transparency levels for eelgrass. See for example Trowbridge Deposition excerpts in Appendix A.

206. Comment from the City of Portsmouth

The additional requirements specified in Appendix H for municipalities within the Great Bay Estuary watershed for nitrogen impairment should be withdrawn until the completion of the independent scientific peer review of the 2009 Numeric Nutrient Criteria document scheduled to be performed in the fall of 2013 per an agreement between the cities of Dover, Portsmouth and Rochester, New Hampshire and the New Hampshire Department of Environmental Services. The peer review will be conducted by a panel of independent experts and will consider the methodology, analysis, and conclusions in the 2009 document as well as all the available data and pertinent research not included in the NHDES analysis. See attached Agreement in Appendix A. It should also be noted that the communities have submitted comment to NHDES on the 2012 303(d) listing objecting to the proposed nitrogen impairment listings. It would be prudent for EPA to withdraw nitrogen requirements from Appendix H of the draft MS4 permit until such time that an appropriate nitrogen water quality threshold is determined. It should also be noted that the communities have submitted comment to NHDES on the 2012 303(d) listing objecting to the proposed nitrogen impairment listings.

207. Comment from the City of Portsmouth

The Draft December 2010 Analysis of Nitrogen Loading Reduction for Wastewater Treatment Facilities and Non-Point sources in the Great Bay Estuary Watershed was developed following the 2009 Numeric Nutrient Criteria and was based on the finding of the 2009 Numeric Nutrient Criteria document. This document should be updated once the peer review is completed and should also be withdrawn from the MS4 permit. Portsmouth's stormwater ultimately discharges to the Piscataqua River. The river is known to have extremely high velocity currents and significant dilution. The 2009 Numeric Nutrient Criteria established the in-stream threshold for the entire estuary including Portsmouth Harbor. The numeric criteria was established to support eelgrass habitat. The areas of the Piscataqua to which Portsmouth discharges including Portsmouth Harbor are not areas that would typically support eelgrass habitat due to stream velocities and water depth.

208. Comment from City of Dover

Considering the fact that Dover and other communities have challenged the analysis that NHDES used in the 2009 Numeric Nutrient Criteria document to establish 0.3 mg/l TN as the in stream threshold based on the premise that elevated nitrogen concentrations have caused excessive phytoplankton growth in the water column which reduces light transparency and is adversely impacting eelgrass in the Great Bay estuary.

Dover and other communities have provided NHDES and EPA with numerous documents and affidavits that show NHDES knew that chlorophyll a levels, the measure of suspended algae particles in the water column, has not increased in 30 years and that reducing nitrogen would not improve transparency sufficiently to meet target transparency levels for eelgrass. (Appendix A Deposition Excerpts at page 1 excerpt 2; page 4 excerpt 11; and page 5 excerpt 12)

Two prominent UNH research professors, Drs. Jones and Langan who have worked in the Great Bay estuary for more than 20 years indicated in a response letter to the Mayors of Portsmouth, Dover, and Rochester, that no research has been conducted in the Great Bay estuary that shows nitrogen is the cause of eelgrass loss anywhere in the estuary. (Exhibit 2 Letter from Mayors, at page 5, #2 and #3; and Exhibit 3 Letter from Jones and Langan, at page 3, #2 and #3). Dr Steven Chapra of Tufts University a highly regarded expert prepared a review of the 2009 Nutrient Criteria document and concluded that the 2009 NHDES Nutrient

Criteria document was fundamentally flawed and produced incorrect results. (Exhibit 1 at page 2 and page 15)

EPA should withdraw the nitrogen requirements from Appendix H of the draft MS4 permit until such time that an appropriate nitrogen water quality threshold is determined. It should also be noted that the communities have submitted comment to NHDES on the 2012 303(d) listing objecting to the proposed nitrogen impairment listings.

209. Comment from the NH Stormwater Coalition:

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.

210. Comment from NH Stormwater Coalition:

Small MS4s discharging to impaired waters without an approved TMDL are subject to additional requirements in Section 2.2.2 of the Draft Permit and Appendix H. The application of these additional requirements is predicated on the assumption that the receiving waters are, once again, in fact impaired and that the MS4s are significant contributors to the impairment. Again, like discussed above, this presumption is not authorized by federal law. The federal program does not establish a “guilty until proven innocent” framework. Moreover, as discussed above, if either of these assumptions are shown to be incorrect, the additional requirements specified in Section 2.2.2 should be waived.

The additional requirements specified in Appendix H for municipalities within the Great Bay Estuary watershed should be removed from the Draft Permit as they are unnecessary. The nitrogen impairment designation for this watershed is being contested by the Great Bay Municipal Coalition, as well as the 303(d) listing.[34] The nitrogen impairment designation was based on the New Hampshire Department of Environmental Services 2009 draft document entitled “Numeric Nutrient Criteria for the Great Bay Estuary.” (“2009 Draft Criterion”). This document was never adopted as a final criterion or approved by EPA as required under CWA Section 303(c). Moreover, the Great Bay Municipal Coalition has provided ample documentation to show that the Estuary is not nitrogen-impaired and the 2009 Draft Criterion is not scientifically defensible. See In re Town of Newmarket Appeal No. NPDES 12-05 (Dec. 14, 2012), available at HYPERLINK "http://go.usa.gov/4yYR%3B"h; Attachment D- Affidavit of Dr. Steven Chapra. The loss of eelgrass in the Great Bay system is tied to a major meteorological event not nutrient impairment. University of New Hampshire experts familiar with the system indicated that studies did not confirm nitrogen was the cause of eelgrass declines or low DO in the tidal rivers. (Attachments E and F- Letters to/from Drs. Richard

Langan Stephen Jones; Attachment G- 2013 Piscataqua Region Estuaries Partnership State of the Estuaries Report)). EPA cannot ignore all of this readily available information in issuing this draft permit. See generally 40 C.F.R. § 122.44(d). This matter is currently scheduled to undergo a scientific peer review and it would be arbitrary and capricious for the Agency to impose the Appendix H requirements before this issue is resolved or to fail to respond to the specific information showing that MS4 nutrient contributions from the communities is not the factor controlling eelgrass populations or the transparency level found in the Great Bay system. Attachment D- Affidavit of Dr. Steven Chapra. The loss of eelgrass in the Great Bay system is tied to a major meteorological event not nutrient impairment. University of New Hampshire experts familiar with the system indicated that studies did not confirm nitrogen was the cause of eelgrass declines or low DO in the tidal rivers. (Attachments E and F- Letters to/from Drs. Richard Langan Stephen Jones; Attachment G- 2013 Piscataqua Region Estuaries Partnership State of the Estuaries Report)). EPA cannot ignore all of this readily available information in issuing this draft permit. See generally 40 C.F.R. § 122.44(d). This matter is currently scheduled to undergo a scientific peer review and it would be arbitrary and capricious for the Agency to impose the Appendix H requirements before this issue is resolved or to fail to respond to the specific information showing that MS4 nutrient contributions from the communities is not the factor controlling eelgrass populations or the transparency level found in the Great Bay system.

EPA Response to Comments 205 - 210

EPA approved NHDES's 2012 303(d) list, submitted on February 12, 2014, on September 24, 2015. As a supplement to that approval, EPA prepared a Technical Support Document (TSD): Justification for EPA's Approval of the New Hampshire Department of Environmental Services' (NHDES) Listing of Water Body Segments in the Great Bay Estuary Identified on New Hampshire's 2012 303(d) list as Impaired for the State's Aquatic Life Designated Use and associated with Excess Concentrations of Total Nitrogen as a Pollutant Cause.

The approval documents, including the TSD, are available here: **http://des.nh.gov/organization/divisions/water/wmb/swqa/2012/documents/2012-303d-approval.pdf.**

As described in this TSD, there is substantial evidence that the Great Bay Estuary waters in question are impaired for the State's aquatic life designated use as evidenced by eelgrass loss, poor water clarity, and /or low levels of dissolved oxygen. Furthermore, it is reasonable in light of the available data and other information to conclude that total nitrogen is at least a contributing cause to these impairments. With respect to Portsmouth Harbor and the Lower Piscataqua River segments, there is documented evidence of eelgrass loss, see New Hampshire's 2012 Section 305(b)/303(d) List Technical Support Document Assessments of Aquatic Life Use Support in the Great Bay Estuary for Chlorophyll-a, Dissolved Oxygen, Water Clarity, Eelgrass Habitat, and Nitrogen.

The commenters cite the peer review of the NHDES's 2009 numeric criteria document as reason to remove the requirements for permittees discharging to nitrogen impaired waters and tributaries to those waters in Great Bay. In the TSD, EPA notes that:

> …the peer review was completed after New Hampshire finalized its 2012 303(d) list and submitted the list to EPA for review. NHDES submitted its final 2012 list to EPA on February 12, 2014. The peer review report, dated February 13, 2014, was drafted by a four-person panel and was designed to evaluate NHDES's 2009 numeric criteria document primarily in relation to whether the total nitrogen numeric target values were appropriate as threshold values, to be used in conjunction with other parameters or nitrogen enrichment response variables, for determining attainment or nonattainment of the State's water quality

standards and protection of uses. It is important to note that the February 13, 2014 peer review did not conclude that total nitrogen was not a factor contributing to the symptoms of cultural eutrophication in the Great Bay Estuary.

EPA found that even if the specific numeric total nitrogen values for assessment and listing purposes contained in NHDES's 2009 report are set aside, there is substantial information in the record to support the listing of the Great Bay Estuary as not meeting applicable water quality standards and that excess nitrogen concentrations are at least a cause of the State's aquatic life use impairments in the estuary.

Generally, and as a matter of legal procedure, EPA considers that the public participation process for the draft MS4 permit is not the appropriate forum for providing comments on NH's surface water quality assessments or Integrated Reports, TMDLs or water quality standards.

With respect to the EAB Appeal No. NPDES 12-05, the appeal was denied on December 2, 2013.

See also EPA Response to Comments 46 - 54, EPA Response to Comments 55 - 60, EPA Response to Comments 227 - 233, EPA Response to Comment 201 - 204, EPA Response to Comments 162- 167, and EPA Response to Comments 61-83.

211. Comment from Conservation Law Foundation

The Great Bay estuary is one of New Hampshire's most productive and diverse habitats. Comprised of the Piscataqua River, Little Bay and Great Bay, and receiving freshwater flows from several mall creeks and ~. even major rivers - the Oyster, Bellamy, Lamprey, Squamscott, Winnicutt, Cocheco and Salmon Falls Rivers - the estuary contains a broad diversity of habitat types, and a broad array of wildlife species. Among its dependent wildlife, the Great Bay estuary provides important habitat for numerous fish species.39 Many of these species, such as Atlantic cod, are important commercial fish. Others, such as a variety of herring, are forage fish that support commercial fisheries by serving as an important building block in the marine food chain. Still other species, such as striped bass and bluefish, are important recreational ·fisheries. In addition to finfish, the estuary supports shellfish, such as oyster and blue mussels, and other invertebrates.

Eelgrass is a cornerstone of the Great Bay estuary ecosystem, serving an important role for fish, invertebrates and birds alike. Eelgrass meadows in the estuary provide breeding grounds, nurseries, food, and cover for many fish as well as important habitat for invertebrate species. The abundant aquatic life found in eelgrass meadows, in turn, provides an important food source for birds. Eelgrass meadows also serve a critically important water quality function by stabilizing sediments and filtering contaminant. As the N.H. Estuaries Project has noted: eelgrass is "an essential habitat for the estuary, the loss of which would fundamentally alter the ecosystem of the bay." NHEP, Environmental Indicator Report: Critical Habitats and Species (March 2006) at 8. The Great Bay estuary is in jeopardy as a result of increasing nitrogen concentrations and significant declines in eelgrass haibitat. As a result, assessment units throughout the estuary have been designated as impaired, pursuant to Section 303(d) of the Clean Water Act, for failing to meet aquatic life uses. While a small number of communities in the Great Bay estuary watershed have persistently argued that the science of eutrophic conditions in the estuary somehow has not been sufficiently established, CLF agrees that there is an urgent need to reduce nitrogen discharges into the estuary from MS4s, wastewater treatment facilities, and other sources. CLF agrees with and supports EPA's assessment that "there is sufficient basis to begin addressing nitrogen discharges to the Great Bay notwithstanding any remaining scientific uncertainty regarding the preci3e relative contribution of nitrogen from MS4 discharges." Fact

Sheet at 22; see Co1Tcspondenc-e from Drs. Ivan Valiela and Erin Kinney to Tom Irwin, CLF

(July 28, 2011), provided herewith as Attachment 3. CLF further agrees with the special treatment the draft permit provides for addressing MS4 discharges to impaired waters in the estuary, and tributaries to such waters. We believe, however, that the nitrogen-control elements of the draft permit are not sufficiently detailed and prescriptive to address the significant water quality problems facing the estuary, and that the permit should be amended to model its approach for nitrogen control on the phosphorus control plan requirements set forth in Appendix F, with more detailed requirements and timelines.

With specific regard to requirements and methodologies set forth in Appendix H, Attachment l of the draft permit, CLF has the same concerns with respect to illicit discharges and nitrogen pollution as expressed supra relative to illicit discharges and phosphorus. Specifically, CLF is concerned with the assumption that total nitrogen concentrations in illicit discharges are equivalent to the total nitrogen concentrations found in sewerage - an assumption that may inaccurately overstate the amount of nitrogen reduced by eliminating illicit connections and discharges. See App. H, Attach. 1 at l (using 40 mg/L total nitrogen, the "nitrogen concentration in sewerage," as assumed concentration of total nitrogen in illicit discharges). We also urge EPA to ensure that WQRPs avoid potential double-counting of nitrogen reductions associated with related BMPs (e.g., street-sweeping and organic waste I leaf litter collection programs could lead to double-counting of nitrogen reductions - a scenario which must be avoided to accurately assess the effectiveness of SWMPs and WQRPs).

EPA Response to Comment 211

EPA agrees that the Great Bay estuary is a unique resource in the State of New Hampshire and has designated the estuary, pursuant to §320 of the Clean Water Act, as one of twenty-eight estuaries of national significance. EPA appreciates the public support for strong stormwater protections in the new MS4 general permit, and looks forward to the future benefits of reduced pollution and improved water quality in the State of New Hampshire. However, EPA declines to adjust the requirements for permittees discharging to nitrogen impaired waters to match those in Appendix F for permittees subject to a TMDL. The requirements in Appendix H lay out requirements that EPA finds are reasonable for addressing complex and widespread sources that contribute to impairments in the absence of a TMDL that establishes the necessary load reductions and allocations. However, EPA anticipates that information gathered by permittees during the upcoming permit term and results from ongoing Great Bay related research work will help to refine future permit requirements to address impacts caused by stormwater, including more prescriptive requirements if necessary to meet water quality standards. Lastly, the final permit includes more refined and updated credit accounting information for stormwater nitrogen sources and reduction credits that is similar to the level of detail provided for phosphorus accounting (see Attachments 2 and 3 to Appendix F to the Final permit).

Please see EPA Response to Comment 444 concerning nutrient load reduction credits for eliminating illicit discharges and concerns for the potential for double counting. For the same reasons as discussed for phosphorus, the final permit does not include an explicit nitrogen load reduction credit for eliminating illicit discharges. Also, EPA considers that the above referenced response is equally applicable to the commenter’s stated concerns related to nitrogen as they are for phosphorus.

2.2.4 Discharges to Chloride Impaired Waters

212. Comment from the Town of Londonderry

Beaver Brook is listed with chloride impairment. The goal is to substantially reduce chloride discharges. The majority of chloride discharges are from salt as it is applied to roadways in treatment of icy and snowy conditions. The Town has a primary duty to public safety and has to carefully weigh the salt reduction benefits to the environment with the Town 's legal exposure to provide for safe travel.

Also, the Town feels that adequate time is needed to be built into the schedule to allow the legislature to grant the necessary authority to affected communities to regulate chloride use on private properties with approved site plans. The Town believes that compliance with chloride use will be disastrous to NH's business community. Large organizations such as Supermarkets could potentially have to have its contractors comply with various different chloride management ordinances. This would be accomplished much more efficiently at the state level.

213. Comment from the Town of Goffstown

Also, the Town has asked its Town Attorney to review the assertion that RSA 31:39 gives towns and cities the necessary authority to regulate chloride use on private properties with approved site plans. The Town respectfully disagrees with that assertion and feels that adequate time needs to be built into the schedule to allow the legislature to grant the necessary authority to affected communities. The Town also asserts that town by town compliance with chloride use will be disastrous to NH's business community. A large organization such as Hannaford Supermarket could potentially have to have its contractors comply with 13 different chloride management ordinances. This would be accomplished much more efficiently at the state level.

214. Comment from the Town of Exeter

We question the authority the town has to regulate chloride use and reporting for private properties.

215. Comment from the City of Nashua

Part 2.2.4. Discharges to Chloride-Impaired Waters- "... the permittee shall meet the requirements set forth in Appendix H." From Appendix H: "... the permittee shall develop a Salt Reduction Plan that includes specific actions designed to achieve salt reduction on municipal roads and facilities, and on private facilities that drain to the MS4. The Salt Reduction Plan shall be completed within (3) years of the effective date of the permit. Comment: It appears that the development and implementation of the Salt Reduction Plan under Part 2.2.4 of the permit is sufficient to meet the WQRP requirements under Part 2.2.2. However, the Salt Reduction Plan includes requirements for the City to address the use of salt on private properties. The City does not have the authority or resources to regulate this activity on private properties and this part of the permit places a significant burden on the City. It would be more appropriate for the City to incorporate public education for private properties into the Salt Reduction Plan. Request: Please revise Part 2.2.4 of the permit to state that compliance with this part meets the requirements of Part 2.2.2. Please remove the requirements for privately maintained facilities that drain to the MS4 and regulate these properties as part of a statewide program that is administered and enforced by the EPA and/or NHDES. If the EPA wishes to incorporate requirements for privately maintained facilities as the MS4's responsibility, these requirements should be limited to public education.

216. Comment from the Town of Salem

• Discharge to chloride Impaired Waters, Privately Maintained Facilities that drain to MS4 - Under the draft general permit, the Town is responsible for insuring that salt is not over utilized on private properties. Salem, NH has a broad base of commercial, retail, and industrial properties. At this point, it is not clearly

defined how a Town mandate on private salt usage may manifest itself in issues such as slip and fall claims, insurance, and tort liability. The Town of Salem, NH believes that it should not be held in violation of its MS4 permit for private actions it cannot control directly, and cannot definitively quantify until after the fact (especially when such private actions are solely for the purpose of providing a safe walking/driving condition for customers and/or employees). Further, the Town suggests that the time frame for this aspect of the Salt Reduction Plan be delayed until the NH State Legislature can address the liabilities associated with salt application in response to winter conditions.

217. Comment from the Town of Auburn

The Town is in the process of having its Town Attorney review the representation that RSA 31:39 gives towns and cities the necessary authority to regulate chloride use on private properties with approved site plans. The Town respectfully disagrees with that assertion and feels adequate time needs to be built into the schedule to allow the New Hampshire Legislature to grant the necessary authority to affected communities if that is appropriate. New Hampshire is not a "home rule" state, as a result, municipalities many only do what the Legislature has expressly authorjzed by state statutes. The Town also believes town by town compliance with chloride use will be disastrous to New Hampshire's business community, and perhaps would be accomplished much more effectively and efficiently at the state level.

EPA Response to Comments 212 - 217

There may be several legal avenues available for New Hampshire municipalities to implement the permit's requirements regarding salt application on non-municipal property. First, DES believes that RSA 31:39, I (f) confers authority on municipalities to regulate salt application on private property. Fact sheet pp. 58 – 59. Second, bylaws and ordinances defining and prohibiting illicit discharges to the MS4 may be applicable (or could be amended) to place limits on the discharge of excessive amounts of chloride to the MS4. Finally, as suggested by the Town of Durham in comments on the 2008 draft permit, a stormwater utility or other mechanism with appropriate authority could provide a mechanism to require reporting by private entities that use the municipalities' MS4 system.

EPA also disagrees with the comment that these requirements represent an inappropriate assignment of responsibility to the towns and cities. As the owner and operator of the MS4s, the towns and cities are responsible for discharges of pollutants from those systems and is allowing third parties to use their system. EPA has developed these permit provisions as its interpretation of the necessary steps to be taken by a municipality that is seeking coverage under the general permit to meet its obligation under the Clean Water Act. Furthermore, no municipality is obligated to seek coverage under this general permit as opposed to an individual permit. See EPA Response to Comments 46 - 54, EPA Response to Comments 55 - 60, and EPA Response to Comments 227 - 233. Any municipality that would so prefer (e.g., because it harbors doubts regarding its ability to implement particular conditions of the general permit) has the option to seek an individual permit that would place effluent limits on discharges of chloride from the MS4, and not contain any specific requirements regarding the sources of chloride or particular control measures. In that case, it would be up to the permittee to decide whether to place requirements on private properties that discharge salt to the MS4, or to meet the numeric effluent limits entirely through reductions in municipal usage. If the permittee then chose to allow private property owners to discharge salt to the MS4 without restriction, the permittee could reduce municipal salt usage accordingly to achieve the required reduction, or take any other measures that would achieve the numeric effluent limit.

EPA notes that RSA 508:22 specifically addresses the liability issues regarding salt application raised by some commenters.

Part 2.2.4 was removed from the 2013 draft permit and EPA reopened section 2.2. and Appendix H to take additional comments on chloride requirements contained in draft permit. See part Appendix H of this response to comments document for more information.

218. Comment from the Town of Goffstown

Related to 2012 303(d) list… Also, Catamount Brook shows a chloride impairment. In the sources it lists Shopping Districts, Urbanized High Density and parking lot runoff. This is a very rural area of town with no commercial/industrial activity. There is only the local pig farm. This area needs to be clearly delineated to define the sources of the contaminants. In recent sampling done by Town forces the chloride and specific conductance levels are well below action levels. This should not be listed as an MS4 issue. They also have Catamount Brook listed as a primary contact recreation which it is not.

In Appendix H, Catamount Brook in Goffstown is listed with chloride impairment. The limited amount of chloride data on Catamount Brook is taken in close proximity to a pig farm located in town. This section of town is comparatively rural so the entire listing is suspect. There are many time consuming requirements that would need to be implemented for chloride management in town based on this one limited sample. The town would need time to work with NHDES to establish that this impairment is even valid or that the MS4 is contributing to it. As stated in the Appendix the goal is to substantially reduce chloride discharges. The majority of chloride discharges are from salt as it is applied to roadways in treatment of icy and snowy conditions. The Town has a primary duty to public safety and has to carefully weigh the salt reduction benefits to the environment with the Town's legal exposure to provide for safe travel.

EPA response to comment 218

If a permittee believes a waterbody listed as impaired on the EPA approved section 303(d) list is no longer impaired the permittee should work with NHDES to provide adequate data to update the listing on the State's next section 303(d) list. For information regarding relief from permit requirements during the permit term see EPA Response to Comments 162- 167.

EPA notes that the requirements of Appendix H or 2013 Draft Permit Part 2.2.4. do not mandate a salt application rate and EPA does not expect the permittee to compromise public safety to reduce chloride discharges to receiving waterbodies. However, the permittee may decide based on water quality violations or other information to use salt alternatives where appropriate to reduce chloride impacts on receiving waters and not compromise public safety.

219. Comment from the City of Dover

Chloride: 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. Mangers 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, and the staff is trained in appropriate use of deicing agents. We agree that a private sector salt use accounting program will have educational value to independent contractors and property owners and have a positive benefit. 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, which the storm may be all snow in Rochester. Winter operations utilize different techniques based on type of precipitation and 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.

EPA response to comment 219

Part 2.2.4 was removed from the 2013 Draft Permit and EPA reopened section 2.2. and Appendix H, in part, to take additional comments on chloride requirements contained in draft permit. See RENOTICE Appendix H of this response to comments document for more information. In particular, the reporting requirements were augmented to rely on the UNH Technology Transfer Center tracking system to reduce the burden on permittees.

220. Comment from the Town of Seabrook

11. Discharge to Chloride Impaired Water, General Permit, Section 2.2.4, Page 23 of 60, and Appendix H The MS4 Draft General Permit includes requirements for communities that discharge to chloride impaired waters. It has come to the Town of Seabrook's attention that Cains Brook-Noyes Pond is on the impairment list, which, according to the draft permit, requires the preparation of a Salt Reduction Plan (Appendix H, page 3), and possibly a Water Quality Response Plan (Page 19 of 60). The Town of Seabrook objects to these and all permit requirements pertaining to chloride impairment on the following grounds:

• The Cains Brook watershed encompasses land area that is located in both New Hampshire and Massachusetts, and therefore includes many more sources than just Seabrook, such as but not limited to: other municipalities, private entities, MassDOT and NHDOT. The waterway is the recipient of runoff that Seabrook cannot control; we are a very small percentage of the overall issue. It is unfair to saddle the downstream-most community with any chloride-control requirements. We object to risking the safety of our residents due to problems caused by others;

• The following NHDOT roadways and facilities are located in Seabrook: Route 95, rest area off Route 95, Route 1, Route I 07, Route 286 and Route I A. It is our position that these are the primary sources of the problem, not the few municipal roads located in the watershed. NHDOT must be made the sole entity responsible for addressing chloride impairment of Cains Brook-Noyes Pond.

221. Comment from the City of Manchester

2.2.3 Discharge to a Chloride Impaired Water in New Hampshire: Communities that discharge to a chloride impaired water body that does not have a TMDL must develop a Salt Reduction Plan within three years of the effective date of the permit. There are 13 communities with 27 water bodies that fall under this requirement. In the City Manchester the following water bodies fall under this requirement: Baker Brook, Dorrs Pond, Nutt Pond, Ray Brook, and Stevens Pond. The City has water bodies that receive dischargers from other Traditional and Non-Traditional MS4s. The best example is Stevens Pond that is located under Interstate 93 which is owned by the NHDOT. This pond receives discharges from the City and the NHDOT road networks. In this area the NHDOT road network is much more extensive than Manchester's is and contributes a much higher chloride load to this pond, therefore they should share in the cost of reducing the chloride load.

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.

222. Comment from the Town of Salem

Section 2.2.4 & Appendix H: Chlorides

• Discharge to chloride Impaired Waters, Municipally Maintained Surfaces - the reference documents in Appendix H provide good perspective on the issue of road salt use, however, they provide no specific guidance with respect to municipal obligations within the Town of Salem, NH. Designation of 'no salt' areas cannot provide for public safety in all circumstances, and level of use of de-icing products will vary depending upon weather conditions. If the EPA is suggesting reduction of road salt, the Town requests specific guidelines from EPA that provide appropriate winter maintenance techniques that can both insure public safety and accomplish salt reduction goals.

• Discharge to chloride Impaired Waters, Municipally Maintained Surfaces - the EPA should address the obligation of a municipality to provide safe roads to travel during winter conditions versus its obligations under an MS4 mandated salt reduction plan. Winter operations may, at times, contradict MS4 obligations, and public safety lies in the balance. The Town feels that it should not have to choose between public safety and compliance with their MS4 permit.

223. Comment from NH Stormwater Coalition:

The Draft Permit subjects permittees to additional requirements for limiting the discharge of chloride under Part 2.2 of the draft permit. *See* Part 2.1.1 – Requirements to Meet Water Quality Standards; Part 2.2.1 – Discharges Subject to an Approved TMDL; and, Part 2.2.4 – Discharge to Chloride-Impaired Waters. Part 2.2.1(d) requires permittees subject to an approved TMDL for chlorides to meet the requirements specified in Appendix F. Part 2.2.4 requires municipalities with MS4s located in areas with chloride-impaired waters without a TMDL to comply with the requirements specified in Appendix H. These requirements are technically flawed as each TDML will provide the basis for knowing whether or not MS4 activities are significant (as opposed to regional highway and road authorities). The MS4 community may not be held responsible if it is not the party controlling deicing activities. Moreover, assuming BMPs are required, without assessing the need for and causes of the alleged chloride impairment is legally and technically deficient. Under such circumstances, there is no scientifically defensible basis for choosing and imposing BMPs.

The BMPs specified in Appendix F and Appendix H are essentially identical, which effectively imposes mandatory BMPs whenever chloride is identified as an issue in downstream waters. For waters identified as exceeding the applicable water quality criteria (860 mg/L acute; 230 mg/L chronic), the permittee is required to develop and implement a Salt Reduction Plan. The Salt Reduction Plan includes requirements for surfaces maintained by the municipality as well as requirements for private areas that drain to the MS4s. Many of these requirements seem reasonable, particularly those practices geared toward preventing the over-use of deicing salts. However, public safety cannot be compromised in an effort to mitigate criteria exceedances as provided in the recommended BMPs, especially when the extent of a communities‟ contribution to the alleged chloride impairment is unknown.

For example, the draft permit calls for the development of Salt Reduction Plans that call for the designation of “no salt” and “low salt” zones. While such designations may be acceptable under typical road conditions,

these designations cannot serve as a prohibition on salt use should road conditions become treacherous or beforehand, to prevent that condition. Similarly, public education on the impacts and use of salt on private property is reasonable, but does not ensure that salt loads will be reduced from these sources. Public education on modifications to driving behavior in winter weather is not a substitute for safe driving conditions. In any event, the mandatory application of BMPs must be tied to demonstrated, not presumed needs. CWA §301(b)(1)(C).

EPA response to comments 220 - 223

See EPA response to comments 224 -225, EPA Response to Comments 46 - 54, EPA Response to Comments 55 - 60, and EPA Response to Comments 227 - 233.

Part 2.2.4 was removed from the 2013 draft permit and EPA reopened section 2.2. and Appendix H to take additional comments on chloride requirements contained in draft permit. See part Appendix H of this response to comments document for more information.

EPA notes that the requirements of Appendix H or 2013 Draft Permit Part 2.2.4. do not mandate a salt application rate and EPA does not expect the permittee to compromise public safety to reduce chloride discharges to receiving waterbodies. This is to allow flexibility in salt reduction plan implementation and for permittees to be able to choose application rates suitable for their specific circumstances. However, the permittee may decide, based on water quality violations or other information, to use salt alternatives where appropriate to reduce chloride impacts on receiving waters and not compromise public safety. See RENOTICE Appendix H of this response to comments document for more information on the chloride requirements in the final permit.

Some commenters feel they are responsible for a “very small percentage” and not the “primary source” of chloride and therefore should not be subject to the chloride reduction requirements, however, they provided no factual basis for such claims and no information indicating their discharges were not causing or contributing to the water quality impairments due to chloride. One commenter claimed that requirements of this permit can’t be imposed when the extent of a permittee’s contribution of chloride is unknown. The requirements of this permit address the discharge of pollutants to Waters of the U.S. and include additional requirements addressing the discharge of chloride where the permittee is causing *or contributing* (emphasis added) to the impairment. EPA recognizes that in many instances receiving water impairments are caused by multiple sources, and the Clean Water Act requires action by all permittees that contribute to the impairment (regardless of relative level of contribution), even where their actions alone may be insufficient to results in the receiving water meeting standards.

224. Comment from the City of Portsmouth

Section 2.2.4 and Appendix H Discharges to Chloride-Impaired Waters: If the State does not implement a statewide training, certification, and salt usage reporting program for commercial salt applicators, each MS4 in New Hampshire will need to implement this requirement independently. The requirements of the permittees in this section are excessively burdensome and an unreasonable and unlawful delegation of responsibility. As we commented in 2009, it is not reasonable or lawful for the USEPA to use this General Permit to mandate that the City acquire information about the source of the chloride impairment.

Within the City of Portsmouth, there are 130 privately owned parcels of land within the eight watersheds of the surface waters that are identified as chloride impaired. In addition, a number of the major roadways within the watersheds, including Interstate 95, Routes 1 and lB, and the Spaulding Turnpike are maintained by the State of New Hampshire. Requiring the City to obtain information about the quantity of

chloride-based deicing chemicals applied during each storm event at each of the 130 parcels that contain private or public parking lots or roads is anticipated to cost the City $5,600 annually. Winter operations are a significant public works budget expense and staff are keenly aware of salt use from a cost perspective. Portsmouth has implemented automated equipment to uniformly lay down salt which adjusts to vehicle speed, and the staff has been certified by New Hampshire Green SnowPro program in order to implement salt reduction in the following areas: Equipment Calibration, Anti-Icing, Brine Making, Pre-wetting with Brine and Other Liquids, Efficient Application, Rate Changes with Pavement Temperature, Effective Plowing, Emerging Technologies, Salt Accounting, and Environmental Impacts.

The remainder of the Chloride Impaired Water program described in this draft Permit includes requirements for those non-municipal entities to conform to specific application rates, to calibrate application equipment, to cover their piles, and a requirement to educate those entities on best management practices for deicing materials. This is a significant enforcement burden. The City of Portsmouth believes the TMDL documents, not this General Permit, should specify the corrective actions necessary and this section should be removed.

225. Comment from MCWRS

The state should implement a statewide training, certification, and salt usage reporting program for commercial salt applicators. This requirement should not rest on municipalities independently. The requirements of the permittees in this section are excessively burdensome and an inappropriate delegation of responsibility. It is not appropriate for EPA to use the General Permit to mandate that a municipality acquire information about the source of the chloride impairment.

The remainder of the Chloride Impaired Water program described in this draft permit includes requirements for non-municipal entities to conform to specific application rates, to calibrate application equipment, to cover their piles, and a requirement to educate those entities on best management practices for deicing materials. This is a significant enforcement burden.

The TMDL, not the General Permit, should specify the corrective actions necessary and this section should be removed.

EPA response to comments 224 -225

Part 2.2.4 was removed from the 2013 draft permit and EPA reopened section 2.2. and Appendix H to take additional comments on chloride requirements contained in draft permit. See RENOTICE Appendix H of this response to comments document for more information. In particular reporting requirements and requirements for private property owners were augmented to take advantage of the Green Snow Pro program in New Hampshire, the tracking program administered by the UNH Technology Transfer Center and the passage of RSA 489-C, RSA 508:22 and the promulgation of ENV-WQ 2200. EPA disagrees with the assertion that NPDES permits should not specify actions to meet TMDL requirements. See EPA Response to Comments 46 - 54, EPA Response to Comments 55 - 60, and EPA Response to Comments 227 - 233.

226. Comment from NH Stormwater Coalition:

The New Hampshire aquatic life water quality criteria for chloride at Env-Wq 1703.21 was based on the original recommendations made by EPA in 1988, using the procedures specified in the 1985 Guidelines for Deriving Numerical National Water Quality Criteria for the Protection of Aquatic Organisms and Their Uses. The 1988 Criteria are based on an evaluation of very limited toxicity test data. Since the 1988 recommendations, the database for the toxicity of chloride to aquatic organisms has expanded greatly to include additional organisms, allowing for the 1988 criteria to be recalculated in accordance with CWA

requirements to reflect the latest scientific information. EPA has approved updated standards in several states, as required by Section 303(c) and 304(a) of the Act.

Other states have upgraded their water quality standard for chloride using the latest science, which indicates that chloride toxicity is a function of hardness and sulfate concentration. For example, the Iowa Department of Natural Resources (IDNR) published a water quality standards review for chloride in February 200937 Similar criteria were also adopted by the State of Indiana and approved by EPA in 201238. This review presented the new data obtained since the original chloride criterion was developed by EPA in 1988. As part of the effort, IDNR working together with EPA, performed a literature search to update and recalculate the 1988 acute and chronic chloride criteria based upon new toxicity data deemed acceptable following the 1985

The revised chloride criteria are equivalent to an acute criterion of 629 mg/L and a chronic criterion of 389 mg/L for a hardness concentration of 200 mg/L (as CaCO3) and a sulfate concentration of 63 mg/L (default values used by Iowa in Table 1). Missouri has also adopted the same aquatic life criteria for chloride.[40]

The two other adjacent, downstream states (Wisconsin and Illinois) also have updated water quality criteria for chloride; however, these criteria are not dependent on hardness or sulfate. Wisconsin updated its aquatic life water quality criteria for chloride in 2000 based on an evaluation of new data and used the 1985 Guidelines approach for criteria development.41 The revised acute water quality criterion for chloride is 757 mg/L and the chronic criterion is 395 mg/L.42 Illinois has a chronic chloride water quality criterion of 500 mg/L.43

States are supposed to update criteria to reflect the latest scientific information. CWA §§ 304(a), 303(c). The need for enhanced BMPs to control chloride loads to impaired waters should be evaluated against the updated criteria to assess whether the proposed controls are necessary. In any event, EPA should encourage New Hampshire to adopt updated, revised criteria and defer implementation of the proposed BMPs in waters that are not impaired based upon the updated criteria. Relying on outdated standards misdirects and wastes local resources and is inconsistent with the requirements of the Act.

The New Hampshire water quality criteria for chloride is out of date. Env-Ws 1703.21 (860 mg/L acute, 230 mg/L chronic for nontidal, Class B waterbodies). Criteria similar to those adopted by Iowa[31] and Missouri[32] and approved by EPA Region V and VII (based on the most recent toxicity testing data) should be considered for New Hampshire.

EPA response to comment 226

See EPA Response to Comments 46 - 54, EPA Response to Comments 55 - 60, and EPA Response to Comments 227 - 233.

CWA section 402 requires that NPDES permits be written in compliance with applicable water quality standards. Applicable water quality standards are the EPA approved State Water Quality Standards for the State in which the NPDES permit is written. Therefore, this permit is written to comply with New Hampshire Water Quality Standards and EPA finds it inappropriate to use water quality standards promulgated by other States to assess compliance with water quality standards in New Hampshire, as the commenter suggests. This permit does not reopen any state water quality standard for comment or modification.

RENOTICE: 2.2 Discharges to Impaired Waters

227. Comment from NH Stormwater Coalition:

Comments on Stormwater Rule Amendments

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. § 13 l.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.

228. Comment from NH Stormwater Coalition:

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.

229. Comment from NH Stormwater Coalition:

General Objections Applicable to Entire Regulatory Action

EPA's Nov. 26, 2014 MS4 stormwater policy paper [footnote: hllp://water.epa.gov/polwaste/opdes/stonnwater/upload/EPA SW TMDL Memo.pdf] 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 storm water 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 0.05 µg/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:

- 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. Castle,* 636 F.2d 323 (D.C. Cir. 1979) ("the law does not concern itself with trifling matters"); *Public Citizen v. Young,* 831 F2.d 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. [footnote: EPA authorizes *de minim is* 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".]
- All water quality based analyses must consider the factors identified in 40 CPR 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. *US. 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 NRD/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.
- 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 downs stream. *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 hold 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.

230. Comment from NH Stormwater Coalition:

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 storm water 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. [footnote: EPA has, in other circumstances, indicated that not establishing a water quality-based limit may occur if (l) 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)l(C) of the Act.] 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. [footnote: *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.] *(Id* at 640 "that neither the language of the Act nor the intent of Congress appears to contemplate liability without causation.") *rev 'don other grounds Chemical Mfrs. Ass 'n v. Natural Res. Def Council,* 470 U.S. 116 (1985); *Ark. Poul. Fed. v. Envtl. Prat. 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.

231. Comment from NH Stormwater Coalition:

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)(l)(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 storm water 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.

232. Comment from NH Stormwater Coalition:

Approved TMDL Implementation Is Not Apparent for Bacteria

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 addition 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.

233. Comment from NH Stormwater Coalition:

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/I 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.

EPA Response to Comments 227 - 233

These comments on the 2015 Renotice, similar to comments on the 2013 Draft permit, discussed EPA's authority to include WQBELs in this permit. As an initial matter, NPDES general permits are not rules or regulations, the commenter appears to have confused a permit with a rule. For example, a commenter included captions that read, "Comments on Stormwater Rule Amendments" and "General Objections Applicable to Entire Regulatory Action." A general permit is not a rule of general applicability. Nor does this general permit modify the NPDES regulations, including the regulations concerning stormwater permits in 40 CFR part 122. Rather a general permit is a permit written to cover one or more categories or subcategories of discharges within a geographic area

where the discharges meet the criteria specified in 40 CFR §122.28(a). When a general permit is issued, a discharger that fits within the description of those with discharges covered by the permit may either choose to discharge under the general permit, or the discharger may apply for an individual permit. In setting WQBELs in the final permit, EPA's 2014 Guidance (USEPA, 2014) is instructive on EPA's overall current approach to including WQBELs in MS4 permits. "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." 2014 Guidance at 4. Additionally, "NPDES authorities have significant flexibility in how they express WQBELs in MS4 permits . . . . WQBELs in MS4 permits can be expressed as system-wide requirements rather than as individual discharge location requirements such as effluent limitations on discharges from individual outfalls. Moreover, the inclusion of numeric limitations in an MS4 permit does not, by itself, mandate the type of controls that a permittee will use to meet the limitation." *Id.* at 4-5. As discussed below, this is the approach EPA has taken in establishing WQBELs for MS4s covered by this Final Permit.

When determining the appropriateness of WQBELs in an MS4 permit, 40 CFR 122.44(d) provides a framework for determining where additional limitations are needed to protect water quality and a framework for setting appropriate water quality-based effluent limitations in the permit. Commensurate with the approach for developing WQBELs in 40 CFR 122.44(d)(1), this permit includes requirements "necessary to achieve water quality standards established under section 303 of the CWA, including State narrative criteria for water quality." Specifically, this permit includes limitations that "control all pollutants or pollutant parameters which . . . are or may be discharged at a level that will cause, have the reasonable potential to cause, or contribute to an excursion above any State water quality standard, including State narrative criteria for water quality." See 40 CFR 122.44(d)(1)(i).

The Final Permit includes requirements to ensure that the permitted MS4 discharges will not cause or contribute to exceedances of water quality standards. As discussed below, EPA has determined that, if they were not subject to the WQBELs in the Final Permit, the specified small MS4 discharges would cause or contribute to exceedances of water quality standards. *See* Fact Sheet pp. 29-30, EPA Response to Comments 61-83 and discussion below. Thus, this permit includes clear, specific, and measurable requirements for meeting water quality standards with respect to those MS4s. Moreover, the permit addresses situations where those conditions change, both by setting requirements for when a permittee becomes aware that a discharge is, in fact, causing or contributing to an impairment and by relieving permittees of additional requirements when EPA agrees that an MS4's discharges are no longer causing or contributing to an impairment or that no additional stormwater controls are necessary. See Appendices F and H.

The WQBELs in this final permit are found in Parts 2.1 and 2.2 and Appendices F and H. Part 2.1.1.a requires MS4s subject to the permit to "reduce the discharge of pollutants such that the discharges from the MS4 do not cause or contribute to an exceedance of water quality standards." Commensurate with 40 CFR 122.44(d), it is the responsibility of the Permitting Authority when developing a permit, to determine, not only where WQBELs are needed in a permit, but also what additional requirements are necessary to be implemented by a permittee in order to meet water quality standards. For permittees discharging into water quality limited waters, compliance with the requirements of Part 2.1.1.b or Part 2.1.1.c is deemed to be compliance with Section 2.1.1.a. Part

2.1.1.b, which addresses discharges into waters for which EPA has established or approved an applicable TMDL, states that "(a) permittee's compliance with all applicable requirements and BMP implementation schedules in Appendix F will constitute compliance with part 2.1.1.a of the permit." Part 2.1.1.c includes similar provisions for discharges to water quality limited waters for which there is no applicable TMDL. Part 2.1.1.c states that "(a) permittee's compliance with all applicable requirements and BMP implementation schedules in Appendix H will constitute compliance with Part 2.1.1.a of the permit." It is EPA's view that parts 2.1.1.b and 2.1.1.c, provide a clear set of requirements (as specified in Appendix F and Appendix H of the final Permit) that are necessary to ensure the dischargers will not cause or contribute to WQS exceedances as required by 2.1.1.a. Where an MS4 is discharging pollutants that cause or contribute to an exceedance of water quality standards and the MS4 is not subject to the requirements of Parts 2.2.1 or 2.2.2, and the exceedances are not the result of an illicit discharge, Part 2.1.1.d requires that the MS4 eliminate or reduce the discharge of such pollutants as expeditiously as possible, but no later than 60 days after becoming aware of the situation, so as to no longer cause or contribute to an exceedance of water quality standards. The WQBELs established in the permit address exceedances of water quality standards based on information available at the time of permit issuance and, when applicable, on information that becomes available after the permit is issued. See EPA Response to Comment 22

The NPDES regulations require small MS4s to "comply with any more stringent effluent limitations in your permit, including permit requirements that modify, or are in addition to, the minimum control measures based on an approved total maximum daily load (TMDL) or equivalent analysis." 40 CFR 122.34(e)(1). In addition, EPA's 2014 Guidance references section 122.4(d)(1)(vii)(B) and states the Agency's position that "(W)here a state or EPA has established a TMDL, NPDES permits must contain effluent limits and conditions consistent with the assumptions and requirements of the WLAs in the TMDL." *2014 Guidance* at 6. For MS4s covered by this permit, where TMDLs evaluated the contribution of stormwater discharges to the impairment, this permit includes specific requirements that are informed by the load or wasteload allocations in the approved TMDLs and are designed to address pollutants of concern in an appropriate manner consistent with the design and level of specificity of the TMDL. See Part 2.1.1.b and Appendix F. In addition to satisfying the requirements of section 122.34(e), the approach taken in this permit is also commensurate with 40 CFR 122.44(d)(1)(vii)(B).

TMDLs have been completed for certain waters that receive MS4 discharges covered by this permit, as specified in part 2.2.1 and Appendix F. These TMDLs specifically identify stormwater discharges as contributing to impairments addressed by these TMDLs and include wasteload and/or load allocations for pollutants in stormwater discharges. Where such TMDLs have been established or approved by EPA, part 2.1.1.b of the final permit requires compliance with limitations designed specifically to address each of the MS4 discharges into the impaired waters or generally to address the contribution made by each discharger, as specified in part 2.2.1 and Appendix F of the final permit. As detailed in the final permit, these limitations are specifically tailored for different receiving waters and different pollutants or classes of pollutants, to the extent that applicable data were available. These limitations vary depending on the information available in each of the applicable TMDLs. See final permit parts 2.1.1.b and 2.2.1, and Appendix F. For example, the Lake and Pond Phosphorus TMDLs contain detailed phosphorus loading information from multiple watershed sources. This loading information was important for determining the required watershed reductions in phosphorus loading in the waste load allocation in each TMDL and the subsequent requirements in Appendix F Part III. See the Fact Sheet to the 2013 Draft Permit pp 6-20. In contrast to the Lake and Pond Phosphorus TMDLs, the bacteria and pathogen TMDLs identify stormwater as a source of bacteria and/or pathogens but do not contain specific numeric pollutant loads for

stormwater sources or land uses. Thus, in this permit, the requirements focus on the removal of illicit discharges and implementation of non-structural BMP controls for bacteria/pathogen reductions, rather than setting specific bacteria and pathogen percent reduction requirements. See EPA Response to Comment 451.

For certain pollutants, where there is an impaired water, but no applicable TMDL at the time of permit issuance, this permit establishes limits in the form of specific BMPs to address those impairments, in parts 2.1.1.c and 2.2.2, and Appendix H. Part 2.2.2 specifically identifies a number of MS4s that discharge to waters impaired due to nitrogen and phosphorus. However, any of the permitted MS4s may be discharging to a receiving water that is impaired for one of the pollutants identified as covered by paragraph 2.1.1.c. This provision covers a very specific set of pollutants: nitrogen, phosphorus, certain metals (cadmium, copper, iron, lead and zinc), solids, bacteria/pathogens, chloride, and oil and grease (hydrocarbons, PAHs). These are ubiquitous pollutants commonly found in municipal stormwater discharges. See EPA Response to Comments 61-83. Therefore, where a receiving water is impaired for one or another of these pollutants, it is reasonable to determine that an MS4 discharge to that receiving water will be causing or contributing to the impairment. Because these pollutants are so ubiquitous, the permit does not require their elimination in MS4 discharges, but rather requires MS4s subject to these requirements to take reasonable measures to reduce those pollutants in their discharges. The measures vary from one pollutant type to another, because they are generated by different types of activities, and thus the measures required are specifically tailored to the reduction of those pollutants. For instance, discharges to nutrient-impaired waters must be addressed and minimized through public education efforts in the impaired catchment(s) to reduce sources of pollutants such as pet waste and unnecessary fertilizer use, while bacteria and pathogen impairments will be addressed by prioritized IDDE work in relevant catchments. Further, the permit allows permitted MS4s to select the specific BMPs they choose to implement to meet those requirements. The permit requires permitted MS4s to identify those locations where they are discharging to water quality limited waters, in order to determine when they must comply with the applicable permit conditions.

Part 2.1.1.d addresses what is required of a permittee if the MS4 becomes aware that it is discharging a pollutant that is causing or contributing to a violation of water quality standards but is not subject to the requirements of parts 2.1.1.b, 2.1.1.c, and 2.2.2 and is not an illegal discharge subject to the requirements of part 2.3.4 of the permit. In that case, “the permittee shall, as expeditiously as possible, but no later than 60 days of becoming aware of the situation, reduce or eliminate the pollutant in its discharge such that the discharge meets applicable water quality criteria.” Part 2.1.1.d. Because pollutants covered in part 2.1.1.d are not expected to be found in stormwater in amounts that would cause or contribute to an exceedance, such discharges are not likely to occur except in unusual circumstances. If such a circumstance does arise, part 2.1.1.d puts the permittee on notice of EPA’s expectations to address the violations as expeditiously as possible, and EPA would consider the permittee’s compliance with 2.1.1.d in weighing whether any enforcement action is warranted.

In setting the WQBELs for the permit, EPA has chosen to allow relief from the requirement to implement additional measures to address water quality, as required by parts 2.1.1.b and 2.1.1.c, and Appendices F and H, when EPA agrees that an MS4’s discharges are no longer causing or contributing to an exceedance. The permit provides for three possible scenarios, as appropriate, that can result in such a decision, as follows: (1) where waters are subject to a TMDL, and the TMDL has been modified, revised, or withdrawn, and EPA has approved a new TMDL that indicates that no additional controls for stormwater are necessary for the permittee’s discharge based on the

wasteload allocation; (2) where the receiving water (and, as applicable, downstream segments) is determined to be no longer impaired; or (3) where the permittee's discharge is determined to be below applicable water quality criteria. In such instances, the permitted MS4 is relieved of the requirement to implement any measures beyond those required to be implemented prior to the date of the decision in the applicable scenario, but must continue to implement any measures required before that date.

See also EPA Response to Comments 46 - 54, EPA Response to Comments 55 - 60, EPA Response to Comments 61-83, and EPA Response to Comments 205 - 210.

234. Comment from the City of Rochester

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.

EPA response to Comment 234

The permit has been edited for clarity to ensure that any reference to impaired waters relies on the latest EPA-approved Section 303(d) list. Each Section 303(d) list has a public comment period and any issues or additional water quality data should be raised at that time with NHDES, not during the issuance of a NPDES permit which contains its own public process.

See EPA Response to Comment 247 - 252 for further discussion of the definition of "water quality limited" waters (a definition of which is provided in the permit and describes who can make such a determination). In short, the absence of a water being listed as "impaired" pursuant to Section 303(d) of the Clean Water Act does not preclude the permittee, EPA or NHDES from determining that the waterbody (or a segment thereof) is not meeting water quality standards.

EPA has responded to all comments properly submitted during the public comment period. In some cases, EPA has revised this final permit in response to public comments, and has noted where the final permit differs from the proposed permit. 40 CFR § 124.19 describes the procedure for appealing NPDES permit decisions.

Commenters may exercise any and all rights allowed pursuant to the CWA and its implementing regulations. However, commenters are not entitled to reserve rights not granted or otherwise allowed under the CWA and its implementing regulations. The NPDES regulations do not extend a right to commenters to supplement the comments they make during the public comment period with additional comments submitted after the close of the public comment period. The vast majority of EPA-issued permits have public comment periods of only 30 days, which EPA has found to be sufficient even where complex technical matters are at issue. This timeframe is consistent with and satisfies EPA's procedural regulations regarding public comment periods for NPDES draft permits. *See* 40 C.F.R. § 124.10(b). The comment period, including the comment period on the 2015 Renotice for this permit was over 8 months, sufficient for many commenters to assemble a large number of detailed comments. Under applicable federal regulations, EPA is only required to respond to materials submitted *during* the public comment period. *See* 40 C.F.R. § 124.17(a)(2). "That is, within the interval of time between the beginning and end of the public comment period, not before, not after." *In re Avon Custom Mixing Servs.*, Inc., 10 E.A.D. 700, 706 (EAB 2002); *see also*, *In re City of Phoenix, Arizona Squaw Peak and Deer Valley Water Treatment Plants,* 9 E.A.D. 515, 524-31 (EAB 2000); *In re Steel Dynamics, Inc.,* 9 E.A.D. 165, 194 n.32 (EAB 2000) ("Permitting authorities are under no obligation to consider comments received after the close of the public comment period."). Further, EPA regulations do not provide any additional time for a commenter to comment on changes made to the permit by EPA in response to comments, or to provide comments on EPA's response to comments.

235. Comment from the City of Rochester

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., 40CFR§122.34(b)). The NH MS4 Permit goes well beyond this standard.

EPA response to Comment 235

It is unclear which "standards" the commenter believes are exceeded in this permit with regards to MEP and CWA stormwater regulations in general. The permit in fact uses both a BMP-based approach to MEP (Part 2.3) as well as additional requirements to meet water quality standards for certain impaired waters (parts 2.1 and 2.2). This is supported by a review of available data; see EPA Response to Comments 61-83. In addition, Appendix H has been updated to include relief from additional permit requirements in the case where a receiving water is no longer impaired (as determined by the state and approved by EPA) or (for non-nutrient pollutants) where a permittee's discharge is adequately sampled and determined to not contribute to the impairment. See EPA Response to Comments 162- 167 for more information.

To further clarify, the permit requires the elimination of specific stormwater pollution under 2.1.1.d. and not necessarily the elimination of a stormwater discharge to meet that goal, although the permittee may choose that as an effective option.

EPA disagrees with the assertion that regulations applicable to MS4s require “nothing beyond ‘minimum control measures’ where a TMDL is not in place”. See EPA Response to Comments 46 - 54, EPA Response to Comments 55 - 60, and EPA Response to Comments 227 - 233.

236. Comment from the City of Rochester

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.

EPA response to Comment 236

EPA has assembled data from various studies and the Nationwide Urban Runoff Program which suggests that certain pollutants are very common in urban stormwater in concentrations that would contribute to receiving water quality degradation. See EPA Response to Comments 61-83 for more detailed information. We disagree that “The assumed contribution to impairment and the equal treatment of all discharges is contrary to both fact and law.” Existing data and law (CWA §402(p)(3)(B)(iii),) support EPA’s decision to include additional permit requirements to address stormwater discharges to certain impaired waters. See EPA Response to Comments 46 - 54, EPA Response to Comments 55 - 60, and EPA Response to Comments 227 - 233.

For common stormwater pollutants, EPA has identified impaired waters within the state of New Hampshire as well as likely MS4 dischargers to those impaired waters. However, Appendix H has been updated to include relief from additional permit requirements in the case where a receiving water is no longer impaired (as determined by the state and approved by EPA) or (for non-nutrient pollutants) where a permittee’s discharge is adequately sampled and determined to not contribute to the impairment. See EPA Response to Comments 162- 167 for more information.

237. Comment from the City of Manchester

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.

EPA response to Comment 237

Throughout the final permit and this response to comments, EPA has stressed that permittees are responsible for the separate storm sewer systems that they operate and the discharges from regulated areas served by their MS4s. Ultimately, permittees are responsible for the discharges from their MS4, and therefore must control discharges into their MS4 from within their jurisdiction. Each permittee is responsible for their own discharges and NHDOT will be responsible for its discharges to Manchester waterbodies. However, Part 1.10 and Part 2.3. do not preclude permittees and other interested parties from working together to efficiently address shared watershed issues through sharing permit responsibilities. Please also note that compliance with the permit will be determined in terms of steps that MS4s take to address their discharges.

There is ample evidence to suggest that urban stormwater contributes to water quality degradation. See EPA Response to Comments 61-83. Where other sources of pollution, such as atmospheric deposition, have been identified in a TMDL as causing water quality impairment, no additional requirements for MS4 operators have been added to the permit (see part 2.2.1.c. of the permit).

For specific waterbodies that the city is concerned with, Manchester is welcome to submit a request that EPA exercise its residual designation authority to require NPDES permitting of other significant pollution contributors to those waterbodies, if Manchester believes this to be warranted.

See EPA Response to Comments 46 - 54, EPA Response to Comments 55 - 60, and EPA Response to Comments 227 - 233.

238. Comment from the Town of Danville

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.

EPA response to Comment 238

See EPA response to Comments 395-400. The permit has been updated to specify that roads without curbing and storm drains are not required to be swept under the permit. Please note also that permittees are solely responsible for permit requirements regarding pollutant sources within the regulated (urbanized) area served that drains to their MS4.

239. Comment from the Town of Derry

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?

EPA response to Comment 239

The permittee is responsible for all discharges from their regulated MS4 system under this permit and not discharges from privately owned and operated outfalls that discharge directly to a water of

the United States without entering an MS4 system. Part 1.2.1. of the permit states (in part) that "If the small MS4 is not located entirely within an urbanized area, only the portion of the MS4 that is located within the urbanized area is regulated consistent with 40 CFR §122.32(a)(1)."

240. Comment from the Town of Derry

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 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.

EPA response to Comment 240

EPA acknowledges this comment. The final permit contains language providing relief from additional requirements in each part of Appendix F. See EPA Response to Comment 130. The final permit updated the above referenced language to be "as of the permit issuance date" as there will be over a year lag time between issuance and effective date. Since the permit contains requirements for those discharges where TMDLs identify stormwater as a source of a pollutant of concern, the permit's relief provisions are tied to the status of the particular TMDL and the continued implementation of those controls that are in place when the TMDL status changes, rather than the results of end-of-pipe sampling.

Specifically, when the TMDL applicable to the receiving water has been modified, revised or withdrawn, and EPA has approved a new TMDL that indicates no stormwater controls for addressing the associated pollutant(s) are necessary for the permittee's discharge, then, based on wasteload allocations approved in the new TMDL, the permittee may be relieved from the additional requirements in Appendix F associated with the previously approved TMDL, as of the date of the new TMDL approval by EPA. The existing EPA-approved TMDL and related permit requirements remain in effect until a new TMDL is approved by EPA.

Changes to the permit: Appendix F has been updated in accordance with the above.

241. Comment from the Town of Derry

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.

EPA response to Comment 241

EPA has used waterbody segments in part 2.1. and 2.2. in order to be consistent with the way in which NHDES recognizes and categorizes waterbodies for water quality analysis. NHDES develops their integrated list and TMDLs based on these segments of waterbodies, acknowledging that water quality may vary throughout a waterbody. The permittee is responsible under this permit for their MS4 discharges from their regulated area.

Part 2.1.1. b. and c. states that "**if there is a discharge from the MS4** to a waterbody [with a TMDL or certain impairments]… the permittee is subject to the requirements…" (emphasis added). Conversely, the permittee is not responsible for fulfilling TMDL-based requirements where there is no discharge from their MS4.

242. Comment from the Town of Danville

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.

243. Comment from the City of Manchester

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.

244. Comment from the City of Rochester

§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.

245. Comment from the City of Portsmouth

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

EPA Response to Comment 242- 245

EPA finds it inappropriate to use draft or proposed Section 303(d) lists that have not gone through the proper approval process. Any issues or additional water quality data should be raised at the time of the Section 303(d) list comment period with NHDES, not during the public comment period for this permit. For nitrogen in particular see EPA Response to Comments 205 - 210 and EPA Response to Comments 61-83. It should be noted that the final permit contains relief from permit provisions under certain circumstances (e.g: when the latest EPA-approved Section 303(d) list no longer lists the waterbody or downstream waterbodies as impaired for nitrogen). See EPA Response to Comments 162- 167.

See EPA Response to Comments 116 - 120, EPA Response to Comments 46 - 54, EPA Response to Comments 55 - 60, and EPA Response to Comments 227 - 233.

246. Comment from the City of Dover

Sec.2.2.2 requires any MS4 listed in Sec 2.2.2.a.1.1 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.

EPA Response to Comment 246

The pollutant-specific sections of 2.2.2. specify that MS4s that discharge to the impaired waterbody (or its tributaries in some cases) are responsible for the additional requirements of Appendix H. Further, the requirements of Appendix H have been updated to specify that MS4s must implement the additional requirements of Appendix H in the catchment(s) draining to the impaired water (or its tributaries in the case of nitrogen and phosphorus). Permittees may choose to implement these additional measures throughout their MS4 regulated area for greater efficiency or cost-effectiveness, but they are not required to do so.

Changes to Permit: Part 2.2.2. has been updated accordingly.

247. Comment from the City of Portsmouth

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.

248. Comment from the City of Manchester

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).

249. Comment from the City of Rochester

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.

250. Comment from the City of Rochester

§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. WQL WB is a term that is not defined in the CW A 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.

251. Comment from the City of Dover

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.

252. Comment from the City of Rochester

§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.

EPA Response to Comment 247 - 252

See EPA Response to Comments 46 - 54, EPA Response to Comments 55 - 60, and EPA Response to Comments 227 - 233.

CWA §402(p)(3)(B)(iii) provides that MS4 permits may include "such other provisions as the Administrator determines appropriate." EPA has determined that §402(p)(3)(B)(iii) allows EPA to include more stringent permit requirements than those established as MEP in order to meet water quality standards. EPA finds it is appropriate to include such additional requirements for MS4 discharges to waters that are not meeting water quality standards due to one or more of the pollutants typically found in urban stormwater runoff. See EPA Response to Comments 61-83. EPA determined that the most straightforward and fair way to identify those permittees whose discharges have the potential to cause or contribute to the known impairment is by identifying permittees whose discharges include the pollutants known to be found in stormwater along with New Hampshire's Section 303(d) and 305(b) lists identifying water quality limited waters that are impaired due to common stormwater pollutants. EPA is also aware that the Section 303(d) and 305(b) lists do not represent an exhaustive list of those waters that may be experiencing excursions above water quality standards and took this information into account when determining the definition of "water-quality limited waters".

This permit uses the term "water quality limited waters" to encompass both waters listed as impaired under Categories 5 and 4b pursuant to Section 303(d) for particular pollutants, and waters not listed as impaired for particular pollutants but that are experiencing excursions above water quality standards. The absence of a water being listed as "impaired" pursuant to Section 303(d) of the Clean Water Act does not preclude the permittee, EPA or NHDES from determining that the waterbody (or a segment thereof) is not meeting water quality standards and should be treated as "water quality limited" for purposes of Part 2.2.2 of the final permit. (Such a determination does not automatically add the waterbody to the list of impaired waters under Section 303(d).) "Water quality limited" for the purposes of the final permit does not include any waterbody segment for which the discharge of a particular pollutant is subject to an EPA approved TMDL. A definition of Water Quality Limited has been added to Appendix A for clarity.

For information related to relief from permit requirements related to impaired waters see EPA Response to Comments 162- 167.

For information regarding Great Bay see EPA Response to Comment 242- 245.

Changes to permit: Appendix A has been updated accordingly.

253. Comment NH Stormwater Coalition:

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 Response to Comment 253

See EPA Response to Comments 61-83.

EPA disagrees that the draft permit and the final permit place permittees in "immediate non-compliance" as the commenter suggests. For discharges to certain impaired waters a permittee's compliance with all applicable requirements of part 2.2, Appendix F and/or Appendix H will constitute compliance with the provision at 2.1.1.a. which states: "The permittee shall reduce the discharge of pollutants such that discharges from the MS4 do not cause or contribute to an exceedance of water quality standards." See Parts 2.1.1.b and 2.1.1.c. of the permit. This permit is written in compliance with all applicable MS4 regulations and is consistent with state water quality standards and includes schedules to meet water quality standards where appropriate. See EPA Response to Comments 46 - 54, EPA Response to Comments 55 - 60, and EPA Response to Comments 227 - 233.

254. Comment from Conservation Law Foundation:

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 170 1.03 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 I, 1977." See* Env-Wq l 70l.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 vi1tue 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. l(h).

To the extent there is a lawful basis for a compliance schedule pursuant to New Hampshire's recently adopted regulation, Env-Wq 170 1.03 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 170 l .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. [footnote: 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.]

EPA Response to Comment 254

These comments question whether New Hampshire's compliance schedule authorizing provision allows for this permit's compliance schedules, and whether the Lake Phosphorus Control Plans are appropriate permit compliance schedules. The comment noted that as of 2014, New Hampshire's water quality standards regulations authorize compliance schedules in certain circumstances, but argued that there could not be a compliance schedule in this permit. The commenter expressed concern that there is not a new, newly interpreted, or revised water quality standard that would allow EPA to give permittees a compliance schedule. The commenter also stated that allowing 15 years for permittees to meet the Lake Phosphorus Reduction Plan percent reductions was impermissibly long.

See EPA Response to Comments 46 - 54, EPA Response to Comments 55 - 60, EPA Response to Comments 227 - 233, and EPA Response to Comments 61-83, for an explanation of EPA's authority to include WQBELs, using the framework of 40 C.F.R. § 122.44(d) and compliance schedules.

Pursuant to 40 CFR § 122.47(a), a permit may, when appropriate, specify a schedule of compliance leading to compliance with the CWA and regulations. Specifically, § 122.47(a)(1) states that "any schedules of compliance under this section shall require compliance as soon as possible, but not later than the applicable statutory deadline under the CWA." Following the Environmental Appeals Board's decisions in *In re Star-Kist Caribe*, 3 E.A.D. 172, 1990 and *In re City of Haverill*, 5 E.A.D. 211, 1994, EPA clarified its expectations for appropriate compliance schedules in a policy memo. *See* EPA Memorandum, Compliance Schedules for Water Quality-Based Effluent Limitations in NPDES Permits, James A. Hanlon to Alexis Strauss, May 10, 2007 (hereafter "Hanlon Memo"). The Hanlon Memo clarified that schedules of compliance in permits are only allowed where the state clearly authorizes such schedules through statute or regulation. Id. Additionally, compliance schedules may

extend beyond one permit term if they "include the final effluent limitations…in order to ensure enforceability of the compliance schedule as required by CWA section 502(17) and 40 C.F.R. § 122.2." Hanlon Memo, para. 4.

New Hampshire's WQS allow compliance schedules to allow permittees "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." N.H. Code Admin. R. Part Env-Wq 1701.03(a)(2).

In response to comments on the WQS rulemaking that established New Hampshire's compliance schedule authorizing provision, NHDES addressed the circumstances where they would consider WQS to be "new, newly interpreted, or revised," making WQBELs based off of them eligible for a permit compliance schedule. NHDES "believes that the language 'new, newly interpreted, or revised water quality standards' is sufficiently broad to encompass the situations in which a compliance schedule would be appropriate, including, for example, where new information becomes available. *See* State of New Hampshire Department of Environmental Services, "FP 2014-120, Env-Wq 1701.03 Compliance Schedules in NPDES Permits Summary of Comments on Initial Proposal with DES Responses" (NHDES, 2014).

EPA based this permit's phosphorus load reduction percentages on the 2008 TMDLs cited in Appendix F. New Hampshire developed site specific criteria for the TMDLs which interpreted the narrative phosphorus water quality standards. It is EPA's view that these are newly-interpreted standards, and that a compliance schedule is appropriate.

It is also EPA's view that 15 years is a reasonable time period for permittees to achieve phosphorus percent reductions "as soon as possible."

EPA has developed the phased LPCP schedule of 15 years after considering numerous factors related to the successful implementation of comprehensive stormwater management programs in already developed landscapes. The factors that support the proposed schedule for the LPCP include:

- Achieving stormwater pollutant load reductions from existing developed areas is not commonplace and represents a substantial shift in how stormwater management is currently approached. At present, stormwater management focuses on incorporating controls on new development and applying minimal non-structural controls to regulated watershed areas. Presently, applying stormwater structural controls to existing development is done mostly on a "demonstration" basis. Time will be needed for municipalities and the consultant community at large to shift from the "cookbook" stormwater standards approach used for new development and re-development to a more expansive and innovative approach needed for developing effective stormwater management plans for existing development (retrofit plans).

- Implementing structural stormwater controls and/or substantially expanded non-structural controls to existing development requires substantial baseline information, up-front planning and sustainable and sufficient funding sources. Currently, the baseline information that is needed for developing stormwater management retrofit plans is typically extremely limited and incomplete. Based on readily available information of current levels of stormwater program funding, significant increases in funding of stormwater management programs will be needed to carry out the LPCPs.

- Development of the baseline information such as detailed storm water collection system and infrastructure mapping needed for developing adequate stormwater retrofit plans is beyond the immediate funding capacity of many communities and will require a special allocation or

development of a stormwater utility that must be approved through the community's administrative process which can take time (approximately 2-3 years for a utility).

- Stormwater BMP optimization analyses look at the pollutant removal potential of a variety of BMPs with different water quality volumes and the relative cost of those BMPs in order to identify a suite of BMPs that remove the most pollutant of concern for the lowest cost, often times leading to smaller controls spread throughout a watershed. In contrast, the more traditional approach in siting BMPs has been to size BMPs as large as possible in large open spaces to treat the largest volume of water for a given area without concern for the cost implications relative to the pollutant removal efficiency of a given BMP. Stormwater management optimization analyses in the region demonstrate that selecting the most effective control types with optimal sizing for the varied site conditions within the developed watershed would likely reduce the collective overall cost by a factor of up to 4. Furthermore, the results of these analyses indicate that traditional approaches for developing retrofit plans could result in plans that easily cost up to 2 times as much when compared to retrofit plans developed based a more fully optimized analysis. The cost ranges presented above represent the range in cost between fully optimized plans (low end of range) and more traditional plans (high end of range).

- Taking the time and devoting resources to develop optimized retrofit plans is worthwhile since developing more cost effective plans will accelerate the rate of achieving phosphorus reductions because of lower unit cost factors (more phosphorus removed per dollar spent).

- Development of retrofit plans will most likely be accomplished by the large field of consultants that work in the stormwater field. Many of these consultants have limited experience in developing stormwater retrofit plans using the most effective practices with varying water quality volume capacities. Many will have little to no experience in developing plans based on conducting optimization analyses. EPA considers it to be vitally important for the implementation process to allow for sufficient time so that the stormwater consultant community can learn of the importance of developing optimized retrofit plans. Also, it is important that the consultant community have access to information and tools that would allow for ready development of optimized retrofit plans. Time is needed to develop such tools.

- Development of technically sound and fiscally responsible stormwater management retrofit plans is a rigorous process for which there are no shortcuts. Developing a feasible retrofit plan requires detailed assessments including field analysis throughout the watershed study area.

- In the interest of maximizing the use of limited financial resources and minimizing disturbance of developed areas and daily routines, it is desirable to allow for the opportunity for stormwater controls to be incorporated into other planned redevelopment and public work projects. It is expected that unit costs for reducing phosphorus will be significantly lower for such projects. Also, overall disruption to the community associated with construction activities can be reduced.

- Time should be allowed for assessing and modifying local planning zoning regulatory requirements that might present obstacles to implementing desired controls.

- Ramp-up time for implementation plans is desirable to ensure success of the program. Local consultants will need to gain experience in the design and construction oversight of innovative unique stormwater retrofits projects. Construction companies and/or municipality staff who may undertake construction of some work need to gain experience in the construction of retrofit projects. Finally, the local permitting process may need to develop additional capacity for processing permits. The successful performance of these controls depends greatly on well thought out designs

and construction contractors closely following specifications during construction. These projects are not just a hole in the ground with a special outlet control device. Contractors will need to get use to the close supervision during construction. As experience is gained capacity to implement projects will increase and unit costs will likely decrease. and

- Like any structural control measure, adequate maintenance is critical for proper and successful operation to ensure these novel controls perform as designed. Even as we continue to better quantify estimated pollutant removal performance of LID control measures, actual performance and maintenance burdens remain less clear. Maintenance of LID controls will likely require additional resources, equipment and skills that municipalities will need to wisely invest in and acquire over time. In some instances LID controls may be more vulnerable to inadequate maintenance than more traditional controls, manifesting in poor or non-performance under some circumstances or unintended consequences at worst. Ramp-up time will allow implementers to determine maintenance requirements that will facilitate educated decisions on the applicability and future selection of particular controls.

EPA has included clear milestones and activities for permittees to accomplish each year, which will lead to compliance with the final load reduction goals. Monitoring and accounting efforts will allow EPA to assess compliance.

255. Comment from Conservation Law Foundation:

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 imp011ant 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 pe1mit, 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 threephase 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 than currently proposed. We reiterate our position, discussed in Item 1, above that such schedules cannot be considered *compliance* schedules.

EPA Response to Comment 255

EPA removed the WQRP from the draft permit and re-noticed Appendix H to provide clear, specific and measurable requirements in the draft permit. EPA re-wrote the requirements of Appendix H to take ambiguity out of permit compliance and to allow public participation in the creation of all

permit requirements for each MS4. EPA finds that the requirements contained in Appendix H will adequately address the impact stormwater discharges are having on receiving waters experiencing excursions above water quality standards due to nutrients (total nitrogen or total phosphorus), metals (cadmium, copper, iron, lead, or zinc), solids (sedimentation/siltation or turbidity), bacteria/pathogens (E. Coli, Enterococcus or fecal coliform), chloride and/or oil and grease (hydrocarbons, PAHs or oil and grease). This approach is also consistent with 40 CFR §122.34 and §122.28 and the remand from the United States Court of Appeals for the Ninth Circuit in Environmental Defense Center, et al. v. EPA, 344 F.3d 832 (9th Cir. 2003). EPA declines to accelerate the timeframes contained in Appendix H in the final permit. Allowing an extended timeframe for requirements in Appendix H will allow for a thoughtful comprehensive approach to stormwater impacts and afford permittees the ability to work with NHDES to update impaired waters listings before permit requirements are effective, as requested by many commenters. See Part 2.2 of this document.

See EPA Response to Comment 254. See also EPA Response to Comments 46 - 54, EPA Response to Comments 55 - 60, and EPA Response to Comments 227 - 233.

256. Comment NH Stormwater Coalition:

Comments on Stormwater Rule Amendments

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 CW A 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.

EPA Response to Comment 256

EPA disagrees with the commenter on all points raised in the comment. See EPA Response to Comments 46 - 54, EPA Response to Comments 55 - 60, EPA Response to Comments 227 - 233, and EPA Response to Comment 22. EPA finds the analysis of stormwater quality data collected in New England and the mid-Atlantic as well as literature review of pollutant event mean concentration in stormwater sources to be comprehensive and representative of the pollutant concentrations found in stormwater sources regulated by this permit. See EPA Response to Comments 61-83. The approach taken to require additional controls on stormwater sources causing or contributing to a water quality standards violation in this permit is consistent with the applicable MS4 regulations and the Clean Water Act. EPA disagrees that this approach is inconsistent with the approach taken in EPA's response to several residual designation petitions as asserted by the commenter. The approach to designate a source as requiring a permit and the approach to ensure already regulated discharges do not cause or contribute to a water quality standards violation through a NPDES permit are subject to different regulations and requirements and cannot be directly compared. EPA notes

that the final permit contains relief from permit requirements related to impaired waters under certain circumstances. See EPA Response to Comments 162- 167. In addition, any municipality that would so prefer (e.g., because it harbors doubts regarding its ability to implement particular conditions of the general permit or would like to characterize discharges from its system specifically) has the option to seek an individual permit that would place effluent limits on discharges to ensure those discharges do not cause or contribute to a water quality standards violation.

257. Comment NH Stormwater Coalition:

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.

EPA Response to comment 257

The final permit is written consistent with applicable MS4 regulations. See EPA Response to Comments 46 - 54, EPA Response to Comments 55 - 60, and EPA Response to Comments 227 - 233. The final permit contains relief from requirements related to discharges to impaired waters without a TMDL, including relief when a waterbody is found to be meeting water quality standards or a discharge is meeting water quality standards (in certain circumstances) see EPA Response to Comments 162- 167 . In the example provided by the commenter, pollutant reductions gained at a POTW could bring a waterbody back into attainment of water quality standards and following a NHDES finding and EPA approval, the commenter would be relieved of any further requirements related to that impairment. In addition, for discharges to waterbodies with a TMDL, the final permit allows each permittee to work with NHDES to prepare an alternative pollutant reduction plan and submit it to EPA along with their NOI for operator specific permit requirements tailored to a permittees specific situation. See EPA Response to Comment 22. EPA notes that any applicant can seek an individual permit containing outfall specific effluent limitations if a permittee believes the MS4 general permit requirements is not suited for their discharges or system.

258. Comment NH Stormwater Coalition:

The Appendices (F /H) indicate that to avoid the more restrictive requirements the community must show that the pollutant is not "measureable" 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.

EPA Response to Comment 258

EPA disagrees with the assertion that detection levels can not be imposed as effluent limitations or compliance levels in NPDES permits. In the final permit, EPA included language related to relief from additional requirements in Appendix H to provide permittees an opportunity to demonstrate that the stormwater discharge at a particular outfall is not causing or contributing to a water quality impairment or that the waterbody is meeting water quality standards. See EPA Response to Comments 145- 150.

259. Comment from the City of Rochester

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.

EPA response to Comment 259

Throughout the permit, EPA generally does not differentiate between traditional and non-traditional MS4s, except in Permit sections 5 and 6 to specify which permit conditions are not applicable to non-traditional MS4s. Part 2.2.1 (d), (e), and (f) state that "The operators of MS4s located in municipalities listed above that discharge to a waterbody segment listed…" This statement includes traditional and non-traditional operators. The listing of specific municipalities is meant to give geographic context for all MS4s to easily determine if they should examine Appendix F for potential requirements for their discharges.

260. Comment from the City of Rochester

§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.

EPA response to Comment 260

Part 2.2.2.c applies to waterbodies that do not meet applicable water quality standards for bacteria or pathogens but for which a TMDL has not been developed. Part 2.2.1.e. specifies which towns with eligible MS4s contain at least one waterbody on the NH Statewide Bacteria TMDL report. There should be no overlap in eligibility for these two parts at the receiving water level: a waterbody segment will fall into either one category or the other.

See EPA Response to Comments 448 - 450 for a discussion of comments on TMDLs and previously-approved water quality data. The changes to the permit as a result of the2015 Renotice included significant changes to Section 2.2 to provide clarity of permit requirements and certainty on applicability of permit provisions. The amended language altered the requirements under Section 2.2.1 and Appendix F for permittees subject to an approved TMDL, including changes to Tables F-1 and F-2.

Section 2.2.1.c and Appendix F Part II outline the requirements for permittees subject to an approved bacteria TMDL; these requirements make it clear that neither the Draft Permit nor the Final permit required a specified percent reduction in bacteria concentrations in stormwater discharges but instead the requirements include additional or enhanced BMP requirements.

Changes to the permit: Appendix F has been updated accordingly.

261. Comment NH Stormwater Coalition:

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. Castle,* 636 F.2d 323 (D.C. Cir. 1979) ("the law does not concern itself with trifling matters"); *Public Citizen* v. *Young,* 831F2.d1108 (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.

EPA Response to Comment 261

See EPA Response to Comment 158 and EPA Response to Comment 160.

262. Comment NH Stormwater Coalition:

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.

EPA Response to Comment 262

See EPA response to comment 226.

263. Comment from Tighe & Bond

(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.

EPA response to Comment 263

The eligibility requirements of part 1.2.1. of the permit specify that under the small MS4 general permit, permittees are responsible for MS4 discharges from their regulated area. This distinction is made clear in the final permit language for parts 2.2.1 and 2.2.2. A listing of TMDL and water quality

limited waters relevant to permittees was created using simple jurisdictional (town boundary) information and does not necessarily take into account the regulated area or the areal extent of a permittee's MS4. Permittees may use this information to further refine their town-specific requirements and to determine which portions of their jurisdiction are subject to the relevant requirements of appendices F and H.

Regarding the source of impaired waters requirements, EPA has provided relevant available information in the permit, but the permittee is expected to determine whether the waterbodies are actual receiving waters for their MS4 discharges, as EPA does not know the extent of each permittees' MS4 system. Impaired waterbodies and relevant community listings in the final permit (and Appendices F and H) have been updated to reflect the latest EPA-approved NHDES Integrated Waters List in the final permit. As noted above, permittees will have the flexibility to use site-specific MS4 information to determine relevant impaired receiving waters and applicable Appendix H requirements in their NOI. See EPA Response to Comments 162- 167. All towns containing a waterbody with a relevant TMDL will be listed in the final permit; however, if a permittee determines that their regulated MS4 does not discharge to the waterbody (or a tributary to a waterbody with a nutrient TMDL), they are not required to list it as a receiving water in their NOI, or follow the requirements of Appendix F.

264. Comment from Tighe & Bond

(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.

EPA Response to Comment 264

EPA is participating in the PTAPP process to help ensure consistencies between the MS4 permit nutrient reduction accounting and the PTAPP process, including consistencies in the methodology in load reduction calculations. The PTAPP process is separate from MS4 permitting and participation in the process is not equivalent to ensuring compliance with NPDES permit provisions. However, future tools developed through the PTAPP process may be used to facilitate permit compliance to the extent that all permit requirements are met.

265. Comment from Conservation Law Foundation

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.

EPA Response to Comment 265

EPA disagrees with the suggestion that it should go beyond its practice in NPDES permitting in order to incorporate requirements to meet additional relevant TMDLs that have not been approved but

may be finalized during the permit term. At each permit renewal, TMDL approval from the previous permit term will be incorporated into the permit requirements. Cf. In re Dominion Energy Brayton Point, LLC, 12 E.A.D. 490, 611-18 (EAB 2006). EPA does, however, retain the authority to modify the permit during its term where necessary. See 40 CFR § 122.62. As such, the ability to impose additional requirements to comply with TMDLs on permittees subject to this permit is unnecessary.

266. Comment from Conservation Law Foundation

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 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,[footnote: 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)(l)(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".] CLF objects to striking this overarching language.

EPA Response to Comment 266

EPA appreciates the omission recognized by the commenter and has made the recommended change to Part 2.2.2.e. EPA finds the language of 2.2.2. and 2.1.1. sufficient in characterizing additional requirements on discharges relative to water quality limited waters when a permittee becomes aware that they are discharging to a water quality limited water during the permit term.

Changes to Permit: Permit Part 2.2.2. has been updated accordingly.

2.3 REQUIREMENTS TO REDUCE POLLUTANTS TO THE MAXIMUM EXTENT PRACTICABLE (MEP)

267. Comment from Dr. Robert M. Roseen

Perhaps the greatest limitation is the need to require the usage and application of Low Impact Development (LID) stormwater management as the expression of the Maximum Extent Practicable (MEP). The need for LID as MEP is reasonable and well documented. The usage of the practicality of LID as MEP is exemplified by its successful application in both state and municipal applications throughout the New Hampshire and the US. LID stormwater management is evolving and becoming increasing affordable, increasingly familiar with the design community, and increasingly manageable from a maintenance perspective. It is also important to note that with the raising of the standards for MEP, that certain practices should be disallowed for usage. Practices that have been demonstrated to be contributing to the water quality failures should be eliminated were feasible. An example is the removal of the use of retention ponds and hydrodynamic separators in the 2010 Rhode Island Stormwater Manual.

Arguments against the usage of LID as MEP are typically due to a lack of familiarity with the practices and inflated cost estimates taken out of context of typical municipal activities. The majority of problems associated with LID stormwater management are less to do with the technology, and more to do with poor

design, installation, and maintenance. A careful permit that requires qualified personnel during the design and installation process will prevent widespread problems.

EPA response to Comment 267

EPA acknowledges these comments regarding low impact development (LID) stormwater management. In particular, recent work by UNH, among others, has provided valuable information about the cost and potential cost savings of LID and optimized stormwater management. EPA has included several requirements in the permit (see part 2.3.6) to encourage the use of LID as well as to look for and work to remove barriers to LID in local ordinances and codes. LID is an important aspect of current stormwater management and should be used to the maximum extent feasible, as described in the permit. In order to preserve the flexibility for towns and the development community to use various stormwater management options, LID is not required in part 2.3.6. EPA works to be aware of the latest science regarding LID and to share that information with the regulated community through our public websites. We will continue to revise and update stormwater permits as new information becomes available.

268. Comment from the Neponset River Watershed Association

Section 2.3 Requirements to Reduce Pollutants to the Maximum Extent Practicable. Although the "additional BMPs" referenced in Section 2.2.2.a.ii.(b)2., discussed directly above, cross references the minimum control measures identified in Section 2.3, Section 2.3 does not cross reference the "additional" BMPs listed in Section 2.2.2. Because Section 2.3 covers the minimum control measures that exist in the 2003 NH MS4 permit, while the requirements of 2.2.2 are almost entirely new, cross referencing in Section 2.3 is essential to ensure that MS4s discharging to impaired waters consider all the listed BMPs that are reasonably available.

EPA response to Comment 268

The language in section 2.2.2 and appendix H adequately describes the additional requirements for discharges to impaired waters. The 6 minimum control measures required of all permittees regardless of receiving water are outlined in part 2.3 and EPA does not wish to create a circular reference to certain requirements in part 2.2.2 and appendix H that are not required of all permittees within this part. In addition, when MS4 opperators are creating NOIs for permit coverage, they will also be determining which sections of the permit are applicable to them in a deliberate process.

269. Comment from the Town of Newmarket

As a general comment, completing the multitude of requirements included in this section in a 5- year permit cycle is not realistic. We suggest that the number of requirements be reduced substantially and be spread over two permit cycles or allow up to 10 years to complete the requirements of this section.

EPA response to Comment 269

Please note that certain requirements of the permit (due to updates in New Hampshire water quality standards) are on a 10 year (illicit discharge detection and elimination program) or 15 year (requirements for discharges to waterbodies with certain phosphorus TMDLs) schedule. In general, however, the permittee is expected to update existing programs in the stormwater management program within the 5 year permit cycle. See EPA Response to Comments 46 - 54, EPA Response to Comments 55 - 60, and EPA Response to Comments 227 - 233.

270. Comment from the Town of Derry

The definition for "maximum extent practicable" (MEP) though the draft permit should not imply immediate implementation of a best available technology or be in immediate noncompliance. MEP should be a phased approach through an iterative process.

271. Comment from the City of Manchester

“The permittee shall reduce the discharge of pollutants from the MS4 to the maximum extent practicable (MEP), as set forth in parts 2.3.2 through 2.3.7." The EPA needs to further define what the MEP is. What one community defines as MEP might not be the same as the EPA or as another group may define MEP. This can leave a community open to fines and litigation.

EPA response to Comments 270-271

EPA has defined MEP for this permit iteration in the specific requirements for each of the 6 minimum control measures listed in parts 2.3.2.-2.3.7. These requirements include implementation schedules in accordance with updated New Hampshire Water Quality Standards. See EPA Response to Comments 46 - 54, EPA Response to Comments 55 - 60, and EPA Response to Comments 227 - 233.

2.3.1 Control Measures

No comments were received on this section of the draft permit.

2.3.2 Public Education and Outreach

272. Comment from the City of Rochester

The EPA states that the objective of this measure is to educate the public and change behavior. EPA does not explain its authority to require this objective given that EPA does not document if or how much this requirement will reduce the pollutant of concern nor does EPA provide any calculations on levels of pollution reduction that can be attained and credited.

EPA response to Comment 272

Public education and outreach is one of the minimum control measures required of Small MS4s in the Phase II stormwater regulations under 40 CFR 122.34(b)(1)(i):

> “[As an operator of a regulated small MS4] you must implement a public education program to distribute educational materials to the community or conduct equivalent outreach activities about the impacts of stormwater discharges on waterbodies and the steps that the public can take to reduce pollutants in stormwater runoff.”

The requirements of Part 2.3.2 are intended to meet the regulatory requirements for the minimum control measures. MS4 operators do not need to calculate pollutant reductions from public education practices. Public education is an important part of addressing any environmental issue that is the result of many sources, although the effects of public education on numerical pollutant reductions have not yet been quantified. See EPA response to Comments 276-277 for examples of measurable ways to evaluate the effectiveness of a public education effort.

EPA has updated this permit's public education and outreach program objective to clarify this permit's goals.

Changes to the permit: Part 2.3.2 has been updated accordingly.

273. Comment from Roger Frymire

Public support for sewer and stormwater infrastructure expenditures will only occur with greater public education and notification - especially of notable possible health impacts. To this end, outfall signage for both CSO and stormwater outfalls with sewage contamination needs to be highly visible and understandable. A green and white CSO wet weather overflow sign is not getting the job done. I propose that a single simple criteria be set for ALL outfalls: If E. Coli levels are found over 10,000 cfu/100ml twice in a two-year period, a BIOHAZARD orange and black sign specifying SEWAGE CONTAMINATION or WET WEATHER SEWAGE OVERFLOW should be required and maintained until such problem is fixed.

EPA response to Comment 273

EPA notes the suggestion regarding public education and notification of stormwater and CSO outfalls. EPA has removed the requirement to label stormwater outfalls since they are not often easily accessible to the public. While CSO outfall labelling is not a requirement of this permit, nothing in this permit precludes taking these actions to educate the public about combined sewers and illicit stormwater discharges.

274. Comment from the City of Nashua

The City continues to implement its existing MS4 permit requirements and, as a member of the Nashua Area Stormwater Coalition, works with surrounding communities to celebrate successes and address stormwater management challenges. The following activities are examples of the City's efforts to improve water quality and comply with the existing MS4 permit: A "Paulie the Pickerel" logo has been adopted as part of the public education program with colorful markers attached to catch basins.

EPA response to Comment 274

EPA acknowledges the comments on your city's public education efforts; similar programs may be used to comply with the permit requirements.

275. Comment from the Neponset River Watershed Association

2.3.2 says that the ultimate objective of public education is to increase knowledge and change behavior of the public. This should be clarified to indicate that one of the behaviors the public may be encouraged to take is to support efforts by their town to adequately fund stormwater management activities.

EPA response to Comment 275

EPA recognizes this comment regarding the importance of adequate funding for stormwater management activities. EPA would like to acknowledge that municipalities are tasked with providing many important services and functions for their citizens on limited budgets, including stormwater management. One result of an effective public education program may be increased acceptance or interest in funding stormwater management work. However, the ultimate goal of the program is to change behavior in a way that reduces stormwater pollution and increases awareness of it. Gaining support for funding may be a means or step towards this goal that a community chooses to take, but there is an insufficient underlying basis to make a funding message a permit requirement. Thus, EPA has not modified the permit to include funding as an educational message.

276. Comment from the Town of Exeter

Exeter has a strong Outreach and Education Program however, the new requirement to assess/evaluate the effectiveness of the messages is daunting. EPA and NHDES have professional outreach employees. We suggest that these professionals provide a list of recommended methods for program evaluation/assessment.

277. Comment from the Neponset River Watershed Association

We appreciate the suggestion in the new proposal that permittees partner with watershed associations on public education, something our watershed association has been doing very successfully. On the other hand, we have sympathy with towns which testified at the Public Hearing that they were not clear how they are expected to show evidence of progress being made toward achieving their defined educational goals. More guidance needs to be issued on how permittees are expected to do this.

EPA response to Comments 276-277

Public Education and Outreach is one of the six Minimum Control Measures required for small MS4 permits. 40 CFR 122.34 (d)(1)(ii) states that all permittees must identify and submit to the NPDES permitting authority the measurable goals, including interim milestones and the frequency of the action, to meet these minimum control measures. This dictates the need for measuring the effectiveness of one's public education and outreach activities.

As stated in Section 2.3.2 of the permit, the ultimate objective of a public education program is to increase knowledge and change behavior of the public so that pollutants in stormwater are reduced. The program should improve audiences' understanding of the causes and effects of stormwater pollution, as well as educate them about how they can reduce those impacts with the ultimate goal of reducing pollution in stormwater. These must be measured in order to demonstrate compliance with the related provisions. Quantifiable data such as the number of brochures distributed, the number of hits on a website, or the number of public attendees at MS4 sponsored events can be tracked and these values would support the requirement for interim milestones. However, they do not always measure the ultimate effectiveness of one's message.

The permit does not state a specific methodology to measure the effectiveness of the education program in order to allow flexibility for a municipality to determine their own effectiveness indicators. Generally, it is not necessary to include guidance or examples within permit language. It is highly recommended that permittees take a thoughtful and targeted approach when considering the goal of each public education and outreach program. If a permittee sets a broad goal (e.g., increasing knowledge or changing a person's mindset,) EPA agrees it could be difficult to measure such effectiveness, though Maine successfully analyzed such measures (Maine DEP, 2005). EPA suggests that permittees set more measurable goals (as will be discussed below), which are more readily assessed during the specified timeframe.

Example: A town has a trash problem in the local park, where trash is ending up in the MS4. A measurable goal may be to decrease the amount of trash in that park that reaches the MS4 by a certain percentage. The municipality installs more trash barrels and signs as their public education/outreach, establishes a clean-up day, then monitors the results for a defined period of time. If the amount of trash in catch basins of the MS4 decreases based on the efforts of the municipality, then the municipality could conclude that both the message and delivery of the message were effective with amount of trash collected from the MS4 being the thing that was measured.

The Agency is not expecting sophisticated data gathering, nor the hiring of consultants. Rather, it is expecting municipalities to focus on known, specific stormwater problems or conditions, to develop reasonable methods to educate the appropriate audience(s) to address those problems or conditions, and to measure the success of that educational material for the chosen topic. Potential measurable goals could include (but are not limited to): Increase in participation in leaf litter program; decrease in calls to hotline about illegal dumping; increase in participation in hazardous waste drop-off days; reduction in volume of trash removed from the MS4; decrease in volume of material removed from catch basins; decreased bacteria counts in local waterways; increase in number of rain gardens installed by citizens; increase in number of people who use pet waste bags, etc. Once again, each MS4 may select its own unique set of goals or objectives, but the ultimate outcome of the program is to elicit specific changes in behavior that in turn benefits water quality. The measurement of the effectiveness of the educational messages should be linked to the measurable goals established by the MS4.

See EPA response to Comments 281-282 for additional information on public education resources.

278. Comment from the City of Manchester

''The ultimate objective of a public education program is to increase knowledge and change behavior so that pollutants in stormwater are reduced." The City of Manchester supports the public education element of the permit. We need to attempt to educate the public to be more environmentally conscious. The concern is that how a community can measure a change in behavior. The EPA needs to develop tools to help the communities' measure a change in behavior and the EPA also needs to define what they see as a change in behavior. The EPA and the NHDES should also work together to develop public service messages and give guidance to the municipalities on messages for the different audiences.

As written, the MS4 permit requires each community individually to conduct public education and outreach activities. This is one area in which groups of communities could work together to develop public education and outreach materials since the messages would be very similar or would overlap and it would be far more cost-effective if groups of communities could share resources to help reduce the overall burden on any one community. It will take time to develop targeted and appropriate education and outreach materials and it will take time to form the multi-community partnerships and groups needed to accomplish this.

In terms of measuring outcomes and results to measure effectiveness, it is first necessary to define the criteria that could be used to make such an assessment. Then it would be necessary to establish some type of baseline condition before results could be monitored and assessed. This is simply not practical within a 5-year time frame.

EPA response to Comment 278

EPA agrees that communities may be more effective and efficient if they work together and/or with watershed groups to develop public education resources, and EPA supports such efforts should permittees choose to work together. The permit does not preclude MS4 operators from collaborating on any of the minimum control measures in the permit, including public education (see part 2.3.1). EPA does not believe developing these sorts of partnerships warrants additional time for MS4 operators to meet the permit deadlines for public education.

See EPA response to Comments 281-282 for information on public education resources that EPA has already developed.

279. Comment from the Town of Wilton

Public Education requirements in Part 2.3.2.1.b shall be extended one year; however this does not eliminate the need to have 2 messages to each of the four audiences for a total of 8 within the permit period. This only allows for the messages to begin in the second year but still requires the same number of messages within the same time frame. Reducing the total messages to each group to one or having a total of 4 for the permit period would be better in reducing the burden versus only extending the time by a year.

EPA response to Comment 279

EPA acknowledges this comment regarding public education requirements for new permittees. Accordingly, new permittees are responsible for one message to each audience over the permit term. See Permit Part 1.10.3.a. In addition, part 2.3.2.1.a. has been updated to specify that permittees are not responsible for educational messaging to any of the four required audiences if they are not present in the area served by the MS4; this shall be documented in their NOI and SWMP.

Changes to the permit: Parts 1.10 and 2.3.2. of the permit have been updated accordingly.

280. Comment from the City of Nashua

Part 2.3.2 1 c iv Industrial Program - "The permittee shall at a minimum consider the following topics [including Industrial Program] when developing the outreach/education program." Comment: The City does not feel that the Industrial Program topic should be included in the MS4 Permit since private facilities are permitted separately under the NPDES Multi- Sector General Permit (MSGP), which is also within the EPA's jurisdiction. A municipal staff training program is already required under the MSGP and is implemented at MSGP- permitted municipal facilities. Request: Please remove the reference to the industrial program from this part of the permit.

EPA response to Comment 280

The requirement to include industrial facilities as part of the municipality's public education program has not been removed. Industrial sources within a municipality may contribute pollutants to the MS4. Further, not all industrial facilities are covered by the MSGP because some fall outside the industrial sectors identified in the MSGP and the definition of "stormwater associated with an industrial activity. It is important for the MS4 operator to ensure that discharges into its system from private owners such as industrial facilities do not cause problems for the system. The permit has been updated to specify that permittees are not expected to create specific education materials for industrial facilities or any other target audience if they are not present in the MS4 regulated area.

Changes to the permit: part 2.3.2.1.a. has been updated accordingly.

281. Comment from the City of Portsmouth

Section 2.3.2 Public Education and Outreach: While the City appreciates that the EPA provided more time to conduct the public education program in this draft of the permit, the City is reiterating its comment from the 2009 permit: Current studies show that the majority of the public does not understand how stormwater can become polluted and how it can Contribute to water quality issues. Most of the public still believes that catch basins in their roads transport stormwater to a treatment facility prior to discharge. In addition, most people do not understand the concept of a watershed, or the concepts related to the water cycle (rainfall, runoff, infiltration, and evapotranspiration). A significant amount of awareness-raising must be done across the United States prior to an individual community education/outreach campaign in order to truly stimulate

behavior changes in the general public. The City of Portsmouth, like many other municipalities, sees a large influx of visitors during the tourist season and thus education must extend well beyond the immediate locality to be truly effective.

The City supports the requirements to provide public education materials related to the four sectors identified in the General Permit, however it is beyond any individual municipality's means to conduct a truly meaningful effective campaign. A national education program, such as that promoted by Keep America Beautiful in the 1970's, could provide a consistent and transferable message that regulated MS4s could use in developing further promotional materials. At a minimum, the USEPA should provide a template or umbrella program for education of stormwater issues that each municipality could modify to be specific to the municipality's waters. Engaging a public relations firm to identify messages that can be effective is a lengthy and expensive process that should not be imposed upon smaller communities or single cities. It will likely take any party at least 6 months to identify a target audience and message, and develop an evaluation protocol. The USEPA is in a better position to create and evaluate the effectiveness of any public education messages. The City of Portsmouth has participated with the Seacoast Coalition on storm water educational initiatives in the past and is particularly sensitive to the need for a properly funded, broad sweeping public education program in lieu of inadequately-funded local initiatives.

282. Comment from MCWRS

While EPA provides more time to conduct the public education program in this draft of the permit, it is important to keep in mind that current studies show that the majority of the public does not understand how stormwater can become polluted and how it can contribute to water quality issues. Most of the public still believes that catchbasins in their roads transport stormwater to a treatment facility prior to discharge. In addition, most people do not understand the concept of a watershed, or the concepts related to the water cycle (rainfall, runoff, infiltration, and evapotranspiration). A significant amount of awareness-raising must be done across the United States prior to an individual community education/outreach campaign in order to truly stimulate behavior changes in the general public. Many municipalities see a large influx of visitors during the tourist season and thus education must extend well beyond the immediate locality to be truly effective.

The MCWRS supports the requirements to provide public education materials related to the four sectors identified in the General Permit, however it is beyond any individual municipality’s means to conduct a truly meaningful effective campaign. A national education program, such as that promoted by Keep America Beautiful in the 1970’s, could provide a consistent and transferable message that regulated MS4s could use in developing further promotional materials.

At a minimum, EPA should provide a template or umbrella program for education of stormwater issues that each municipality could modify to be specific to the municipality’s waters. Engaging a public relations firm to identify messages that can be effective is a lengthy and expensive process that should not be imposed upon smaller communities or single cities. It will likely take any party at least 6 months to identify a target audience and message, and develop an evaluation protocol. EPA is in a better position to create and evaluate the effectiveness of any public education messages. Any stormwater education initiatives need to be properly funded and appropriately broad in reach.

EPA response to Comments 281-282

EPA acknowledges the comment that highlights the importance of public education in increasing knowledge of stormwater among residents. Public education and outreach is one of the required minimum control measures required of Small MS4s in the Phase II regulations under 40 CFR 122.34(b)(1)(i):

"[As an operator of a regulated small MS4] you must implement a public education program to distribute educational materials to the community or conduct equivalent outreach activities about the impacts of stormwater discharges on waterbodies and the steps that the public can take to reduce pollutants in stormwater runoff."

Messages may vary across the country due to ecoregional distinctions. EPA Region I provides a number of resources and templates for New Hampshire permittees to utilize in their public education campaign. NHDES has already adopted the "Soak up the Rain New Hampshire" website and other resources to help raise awareness about stormwater and promote the implementation of practices to reduce runoff. The "Soak up the Rain New Hampshire" information, available at http://soaknh.org, has a wide range of resources for those looking to conduct outreach about actions that citizens can take to reduce polluted runoff.

A number of other valuable resources, funded or collected by EPA, can be found at the following website: http://cfpub.epa.gov/npstbx/index.html. Of particular notice is the 3rd edition of Getting in Step: A Guide for Conducting Watershed Outreach Campaigns, which is available in hardcopy, in video, or as a webinar. Section 6 of the resource discusses ways to evaluate (or measure) an outreach campaign which help permittees as they measure the effectiveness of their programs. For example, it provides an easy way to monitor web traffic which can help determine the effectiveness of an outreach campaign, if the audience is directed to a website. It also highlights free resources for polling and surveys. It is also recommended that permittees investigate the "Surveys and Evaluations" tab on the aforementioned website which include baseline attitude surveys, stormwater program-related surveys, and other examples. A number of the documents focus on New England states, including Maine. (See http://cfpub.epa.gov/npstbx/WhereYouLive.cfm?StateID=22 for examples of some of their templates.) EPA's Public Education and Outreach Factsheet (USEPA, 2005) also provides valuable examples. In addition, EPA suggests that permittees review the report "Measurable Goals Guidance for Phase II Small MS4s" (USEPA, n.d.) and the webcast "Social Marketing: A Tool for More Effective Stormwater Education and Outreach Programs,"[16]. These resources, templates, and examples mean permittees do not need to develop appropriate educational outreach from scratch.

2.3.3 Public Involvement and Participation

283. Comment from the City of Nashua

The City continues to implement its existing MS4 permit requirements and, as a member of the Nashua Area Stormwater Coalition, works with surrounding communities to celebrate successes and address stormwater management challenges. The following activities are examples of the City's efforts to improve water quality and comply with the existing MS4 permit: The City has an online Customer Service request form to allow residents to notify the City of drainage issues or suspicious discharges.

EPA response to Comment 283

EPA acknowledges this comment on the public participation available for residents of the city.

[16] U.S. EPA, Social Marketing: a Tool for More Effective Stormwater Education and Outreach Porgrams, May 2007 (Webcast). www.epa.gov/npdes/outreach_files/webcast/may092007/files/lobby.html. Accessed January 2, 2017

2.3.4 Illicit Discharge Detection and Elimination (IDDE) Program

284. Comment from the Charles River Watershed Association

CRWA strongly supports the revised methodology and detailed approach to the IDDE program in the draft permit. Illicit discharges remain a persistent problem, and an aggressive, standardized approach to detection and elimination is necessary to achieve water quality standards and reduce the impacts of stormdrains and sanitary sewer systems on receiving waters.

EPA response to comments 284

EPA appreciates these comments regarding the importance of the IDDE program.

285. Comment from the City of Rochester

There is a conflict with the time period to correct an illicit discharge. This section states 30 days, while elsewhere in the permit, a 60 day period is provided.

286. Comment from the Town of Londonderry

On Page 27 of 60 under 2.3.4.2.b there is reference to a 30 day time limit to remedy and illicit discharge. This is inconsistent with the 60 day limit mentioned earlier.

287. Comment from the Town of Goffstown

On Page 27 of 60 under 2.3.4.2.b there is reference to a 30 day time limit to remedy and illicit discharge. This is inconsistent with the 60 day limit mentioned earlier.

EPA Response to Comments 285 - 287

The timeframe to eliminate an illicit discharge after locating the source has been changed to 60 days after identification of the source.

Changes to Permit: Part 2.3.4.2. has been updated accordingly

288. Comment from Barnes and Thornburg (on behalf of Atkinson, Kingston, Newton, and Plaistow)

The Draft MS4 Permit's Illicit Discharge Detection and Elimination ("IDDE") program (Section 2.3.4) is overblown and unnecessary in its detail. Much of the Draft MS4 Permit language and related Fact Sheets (2008 and 2013) read like "guidance" and should be removed from the permit and, at EPA's discretion, developed as guidance for MS4 operators. The addition of specific dry weather inspections contained in the Draft MS4 Permit would help to enhance the 2003 permit terms, recognizing that dry weather visual inspections have proven to help MS4s to identify and address possible illicit discharges.

In its Fact Sheets, EPA Region 1 indicates that the expansion of the IDDE program is in response to lessons learned by the Clean Charles Initiative. But that initiative has no bearing and cannot possibly be used as an example for small New Hampshire MS4 operators. EPA's simple description on its website indicates that the initiative has taken almost 20 years to develop, includes far more participants (including with far more resources, such as the federal government) and credits the results of extensive litigation to achieve its ends. See http://www.epa.gov/regionllcharles!initiative.html. To indiscriminately apply that type of program to small MS4s is arbitrary and capricious.

In addition, adding wet weather sampling represents a resource intensive and extravagant effort to find what amounts to a "needle in a haystack"- by searching for intermittent illicit discharges that otherwise do not show up in dry weather visual inspections - is to expand the small MS4 permit program into something that it cannot be at this point in its development. And, while entirely inappropriate for the Draft MS4 Permit, much of EPA's IDDE proposed program and Fact Sheet discussions might be valuable information for small MS4s to have access to through voluntary and informative guidance. Hence, the Represented Towns assert that EPA Region 1 should adopt a more simplistic IDDE program based on the 2003 permit. In doing so and converting its excess to guidance, EPA will avoid the legal and technical problems associated with forcing inappropriate provisions into the permit.

EPA Response to Comment 288

See EPA Response to Comments 46 - 54, EPA Response to Comments 55 - 60, and EPA Response to Comments 227 - 233.

Discharges from an MS4 covered under this permit that contain non-stormwater sources not listed in part 1.4 are not authorized by this permit. Therefore, discharges that contain non-stormwater flows are considered illicit discharges and are unlawful. All illicit discharges from the MS4 are unlawful and remain unlawful until eliminated. Illicit discharges are subject to fines, enforcement actions and citizen suits. This permit does not create or relieve any additional liability for permitted MS4s with respect to discharges from other sources into their systems.

EPA has found the requirements of the 2003 permit to be insufficient to address the objectives of the Clean Water Act. The lessons learned from enforcement actions taken under the 2003 MS4 permit revealed inadequate implementation and effort regarding IDDE programs among permittees covered by the 2003 permit. Some permittees had conducted detailed investigations of their MS4 system removing multiple illicit discharges to their MS4 systems while others have failed to proactively address illicit discharges to their MS4. The results of enforcement actions taken under the 2003 permit led to the removal of many illicit discharges in urban as well as suburban/rural communities. EPA disagrees that information gained through the Charles River Initiative is not relevant in New Hampshire, because the Charles River MS4 communities were subject to the same permit requirements (2003 MS4 permit). In particular, over 58 million gallons of untreated sewage have been removed from MS4 systems in the Boston Harbor Watershed since 2004 (partly due to enforcement actions) and over 60 illicit discharges have been removed in the seacoast area of New Hampshire with the help of NHDES using similar IDDE protocol as that required in part 2.3.4 of the Permit. If the permittees covered by the 2003 MS4 permit implemented adequate IDDE programs enforcement actions would not have revealed the ubiquitous nature of illicit discharges in permittees' MS4 systems and more communities would have reported the removal of illicit discharges in annual reports. The IDDE programs implemented by permittees covered under the 2003 MS4 permit that led to the removal of illicit discharges were substantially similar to the requirements of Part 2.3.4. of the final permit and indicate that the requirements in this permit are achievable, as well as necessary for meeting the objectives of the CWA. Indeed, Dover, Portsmouth, Manchester and Rochester and other seacoast communities have all undertaken more thorough inspections and investigations of their MS4 systems as noted in annual reports and all have removed illicit discharges from their systems, and the statewide bacteria TMDL indicates that since 1996 over 60 illicit discharges have been removed from seacoast area towns (NHDES , 2010) indicating that the problem is more ubiquitous than the commenter suggests. In addition, the 2016 Phase II Remand Rule (81 FR 89320) (Dec. 9, 2016) emphasizes that permit requirements must be expressed in ''clear, specific, and measurable'' terms and the requirements of Part 2.3.4. of this permit comply with this

requirement. The 2003 permit's IDDE program contained no "clear, specific and measurable" terms and rolling over similar permit requirements in this permit would not comply with 40 CFR § 122.34.

EPA finds that the level of effort described in part 2.3.4 of the Draft Permit is necessary and appropriate to ensure discharges from the MS4 are limited to the stormwater discharges authorized by this NPDES permit. Regarding wet weather sampling, it is not the intent of the program that every outfall should be sampled in wet weather to find the "needle in the haystack" as the commenter suggests, but only to require wet weather sampling where it will aid in the detection and elimination of illicit discharges. In the final permit EPA has reduced the number of System Vulnerability Factors listed in part 2.3.4.8 (c)(i) from 12 in the 2013 Draft Permit to 8 in the final permit that must be considered and that trigger the requirement for at least one wet weather sample at the outfall. Other factors such as infrastructure more than 40 years old, sewer pump/lift stations, and wide-spread code-required septic system upgrades are recommended, but are not required System Vulnerability Factors in the final permit. This will reduce the amount of wet weather samples conducted by most permittees and focus wet weather sampling on those areas that potentially contain illicit discharges triggered during wet weather. See EPA Response to Comments 339 - 340 and EPA Response to Comments 342 - 343

Changes to permit: Part 2.3.4.7. has been updated in accordingly

289. Comment from the Town of Goffstown

Overall, the lDDE Screening requirements are quite well done, however, there is an extensive amount of work required to inventory the system in the first year. It would be beneficial to allow the inventory to be completed within the first 3 years of the permit. This would better coincide with what was requested above for prioritizing water bodies.

290. Comment from the City of Dover

The proposed schedule for completion of an IDDE work is unreasonable. Dover has an extensive and old storm drainage system. Much IDDE work has been completed in Dover over the last 20 years with numerous illicit connections removed. Much of the work was done with NHDES staff long before the first MS4 permit. NHDES chose to work with Dover on their IDDE pilot program because of the cooperative local staff and their commitment to protect local water resources. As a result most of Dover's illicit connections have been identified and removed. Consequently requiring a community like Dover who has already committed significant resources to address the IDDE problem to sample every outfall during the permit is redundant and does not acknowledge the fine work already completed. Communities should be given the flexibility to propose the level of effort needed to appropriately address the IDDE issue in their community. Requiring sampling of every discharge location regardless of past work is not productive or helpful in attaining the water quality improvements by wasting resources.

291. Comment from the City of Rochester

The time requirements to complete the IDDE program should take into account system complexity, land area, funding availability and available resources.

292. Comment from the City of Portsmouth

2.3.4 Illicit Discharge Detection and Elimination Program: The proposed schedule for completion of an IDDE work under the new permit is unreasonable. Portsmouth has been upgrading its stormwater system over the last 20 years and has removed numerous illicit connections. As a result, most of Portsmouth's illicit connections have been identified and removed and we continue to upgrade the stormwater system and

investigate possible areas of concern. Requiring the City to sample every outfall under this permit is redundant and does not acknowledge the effort and work already completed. Requiring sampling of every discharge location regardless of past work is not productive, cost-effective, or helpful in attaining water quality improvements.

293. Comment from the Neponset River Watershed Association

It is not clear in Section 2.3.4.8. or 2.3.4.9 whether implementation of each of the 8 program elements must be completed before moving on to the next listed element. Furthermore, Section 2.3.4.9. does not, as it should, include milestones for completing all eight elements listed in 2.3.4.8., which is necessary in order to evaluate the milestones of each individual element.

d. Outfall and Interconnection Screening and Sampling. Sec. 2.3.4.9 a. sets a deadline for completion of dry weather screening and sampling of non-Problem Catchments. For other aspects of outfall screening and sampling, Sec. 2.3.4.9.b. refers to milestones (deadlines) listed under 2.3.4.9.c., but those milestones refer to the Catchment Investigation Procedure, not Outfall Screening and Sampling. There are no deadlines, for example, for wet weather screening/sampling or for dry weather screening/sampling of problem catchments, as there need to be.

e. Catchment Investigation Procedures. There are milestones for this element in 2.3.4.9. c., but the adequacy of those deadlines is dependent on how long it will take to complete the preceding elements of the IDDE program (2.3.4.8.a.-d.). Furthermore, MS4s should complete the Procedure in the first 3 years for the catchments with the most serious problems, as indicated by dry weather screening. Only those with the least serious problems should be put off for years 4 and 5.

294. Comment from the City of Nashua

Part 2.3.4.8- "The written IDDE program shall be completed within one [1) year of the effective date of the permit." Comment: As discussed under Item 8 above, the mapping and assessment of data for the storm drain and sanitary sewer systems is essential to the IDDE program. Therefore, an updated written IDDE program should be completed on a schedule that integrates the system mapping requirements under Part 2.3.4.6 of the draft MS4 Permit and Part 1.0.5.4 of CSO & WWTP Permit. Request: Please revise Part 2.3.4.8 to allow the City to meet an alternative schedule [e.g. 42 months) for the written IDDE program that builds upon the mapping efforts in Part 2.3.4.6 of the MS4 Permit and Part 1.0.5.4 of the CSO & WWTP Permit.

295. Comment from the Town of Wilton

Under Part 2.3.4.8 Illicit Discharge Detection and Elimination Program the plan must be set up within one year or within 3 years for those new Permittees. This plan will provide the Permittee with adequate legal authority, it will identify lDDE Program Responsibilities, Assess and Prioritize rankings of Catchments into different categories and rank each on screening factors and update the plan yearly. This plan also requires Outfall and Interconnection Screening and Sampling to be done during various times of the year and must be setup within 3 years of obtaining the permit even though the mapping won't have to be done until within 4 years. It would be more beneficial to allow time to inventory the system and to coincide this with the prioritizing of Outfall Inventory and Outfall Mapping.

296. Comment from the Neponset River Watershed Association

2.3.4.8. IDDE Program and 2.3.4.9 IDDE Program Implementation Goals & Milestones. Section 2.3.4.8 sets a 1 year deadline for developing a written IDDE program that includes 8 program elements listed in subsections a.-h. Each MS4's IDDE program should be digitized and made available to the public.

It is not clear in Section 2.3.4.8. or 2.3.4.9 whether implementation of each of the 8 program elements must be completed before moving on to the next listed element. Furthermore, Section 2.3.4.9. does not, as it should, include milestones for completing all eight elements listed in 2.3.4.8., which is necessary in order to evaluate the milestones of each individual element. [Examples]:

a. Legal Authority – no milestones;

b. Statement of IDDE Program Responsibilities – no milestones;

c. Assessment and Priority Ranking of Catchments – no milestones;

f. Removal and Confirmation. Section 2.3.8.4 states only that "within one year of removal of all identified illicit discharge and SSO sources, confirmatory … screening shall begin," but sets no deadline for its completion of the removal phase.

g. Follow up Screening. Deadlines are included in Section 2.3.4.8.

h. Illicit Discharge Prevention Procedures. No milestones established.

297. Comment from the Town of Milford

Catchment Area Ranking and Investigations (2.3.4.9)- The permit requires the completion of the outfall inventory within one year of the permit date. However, identification of outfalls does not define catchment areas. Significant additional data is required to accomplish this. Until catchments are defined, rankings cannot be meaningfully completed. Further, evaluation and investigation of the catchments requires the understanding of interconnections, flow constraints and flow directions. In order to evaluate catchment areas, Milford will need an even better understanding of its more than 30 miles of storm sewers. Work to accomplish this is underway as part of a 6 year data gathering effort (planned completion during 2019) in which 200,000 linear feet of storm sewer,1600 catch basins, and hundreds of drain manholes are being better defined though video and survey methods. Interconnections cannot be understood until this is completed.

Once the system is understood, investigations can be effectively conducted. While we agree that the proposed 10 year investigation time frame would be ideal, the time and effort involved in obtaining sufficient information to carry-out this program will likely add approximately 5 years to the proposed schedule. We request that the time frames related to this effort be increased as follows: Allow 5 years from permit inception for the completion of the ranking process and 15 years from permit inception for the completion of the investigations following the prioritizations identified in the present permit draft.

298. Comment from the City of Nashua

Part 2.3.4.9.a IDDE Program Implementation Goals and Milestones- "The permittee shall complete dry weather screening and sampling (where flowing) of every MS4 outfall and interconnection (except Excluded and Problem Catchments) no later than three years from the permit effective date." Comment: Based on previous screening efforts and available resources, the City's program will be most effective if its limited resources are focused on high priority catchments only for dry weather screening. Low priority catchments should be investigated only if priority catchment investigations have not identified a probable or significant source(s) of the problem during the permit term. Request: Please remove the requirement to screen low priority catchments during the 5- year permit period.

299. Comment from the City of Dover

Dover has been committed and will continue to be committed to detecting and removing illicit connections from its MS4. The city can increase its level of effort in IDDE in the new permit but will need to balance and prioritize the IDDE work with the other new requirements in the permit.

300. Comment from the Town of Wilton

All other IDDE Program timelines such as program development, monitoring and IDDE Program Implementation Goals and Milestones under Part 2.3.4 shall be extended by 2 years. Under Part 2.3.4.2 Elimination of Illicit Discharges shall be eliminated within 30 days. If the 2 years were to apply to this section then the time frame also falls within the second year. Section 2.3.4.6 allows the existing MS4 Towns 2 years from the effective date of the permit plus the additional 2 year extension allowed will put the effective date of mapping within 4 years of the permit effective date.---This section also continues on with sections 2.3.4.9 lDDE Program Implementation Goals and Milestones and 2.3.4.10 Indicators of lDDE Program Progress along with 2.3.4.11 employee training requirements. All of the parts under 2.3.4 are extremely comprehensive and will take a lot of time, planning, implementing all of which will require funding resources.

301. Comment from the Town of Salem

Section 2.3.4.2.{b) and (c) -Similar concerns to those expressed above under Section 2.1.1.c are again expressed by the Town in relation to the time frame of eliminating an illicit discharge and being immediately in violation of the permit upon detection of the discharge. We would again propose 365 days to facilitate proper budgeting for identified problems, and that development of a reasonable schedule along with 'reasonable and prudent measures to minimize the discharge of pollutants' would constitute a good faith effort by the Town/MS4.

302. Comment from the City of Manchester

"The permittee shall complete the Catchment Investigation Procedure in a minimum of 80% of the MS4 area served by Problem Catchments within 3 years of the permit effective date and l00% of Problem Catchments within five years of the permit effective date" and "Samples shall be analyzed at a minimum for ammonia, chlorine, conductivity, salinity, E-Coli (freshwater receiving water) or enterococcus (saline or brackish receiving water), surfactants (such as MBAS), temperature, and any other pollutants pursuant to Part 4.3.I": The EPA needs to be flexible in its screening methods and what is accepted. In other regions of the country canine detection is used as an effective screening tool and it should be allowed in this region. It has already been used and showed success in New England. If through the screening program an illicit discharge is detected, then further testing should commence. The required testing as it is outlined in the permit is a tremendous drain to the City of Manchester's resources.

303. Comment from the Town of Hampton

2.3.4.9.c.l lDDE Program Implementation Goals and Milestones - This section states that 80% of all of our problem catchments need to be sampled and tested within three (3) years of the permit date and 100% within five (5) years. We have determined that all of our catchments fall into the problem designation because of a note in Appendix F, page 5. This note reads as follows. "Catchments draining to any waterbody with an approved bacteria TMDL shall be designated either Problem Catchments or HIGH priority in implementation of the lDDE program". The five (5) testing sites listed in table F-1 of Appendix F are listed as impaired for bacteria therefore all of our catchments are Problem Catchments. Given the recent release of the 2012 TMDL's we now request that no testing be required for bacteria and also that all of our catchments are no longer classified as Problem Catchments.

Our issue with this section of the draft permit is the time it will take to locate, catalog, install signs and test each one of our outfalls and catchments. Our first look at the number of outfalls we have is approximately 160. If we are to look at 80% of these within three (3) years and have to install signs ($100 each) and test each location ($100 to $150 each) it will cost the Town between $8500 to $10,500 per year plus labor. At the same time we are trying to install all of the outfall signs we are also trying to meet a 2017 deadline to have all street and traffic signs upgraded to meet the Federal DOT guidelines.

In discussions with the State and other members of our local Stormwater Coalition it is the collective opinion that the amount of work you are asking us to do should be spaced out over 10 to 20 years. This is due to the amount of funding it will take and the amount of time. We also feel that if the source of bacteria in the stormwater could be due to leaking sewage collection pipes (exfiltration). If this is the case then it may take more time than allowed under the permit to replace those older sewer pipes that may contribute to a non-point source of bacteria.

EPA response to comments 289 - 303

EPA appreciates these comments regarding the timing and milestones of the IDDE program. EPA has made a number of changes to the IDDE section so that the IDDE program addresses the comments above and follows a reasonable and efficient schedule for permittees.

In particular, EPA has revised the initial ranking to specify that it will be based on *outfalls* and not *catchments* in order to not delay outfall and interconnection screening and sampling. The initial outfall ranking shall be due within one (1) year but will only be based on existing information available to the permittee; it is mainly intended to identify "problem" and "excluded" outfalls that will not require follow-up sampling. The results of the outfall sampling will ultimately be the largest factor in prioritizing later catchment investigations; an updated ranking is due at year three (3) of the permit following dry weather screening. Please note that during the initial outfall ranking stage permittees are only required to take a water sample at outfalls with dry weather flows.

In addition, catchment delineation expectations and full system mapping has also been aligned with system investigations in the final permit. An estimated delineation of catchments based solely on existing system information and mapping must be completed within two (2) years of the permit term. A refined catchment delineation can occur concurrently with catchment investigations as required under part 2.3.4.8. of the final permit, but this updated and "ground-truthed" information must be incorporated into the system map at part 2.3.4.5. within the ten (10) year implementation timeframe of the IDDE program. Please note that the timeframe to map below-ground MS4 infrastructure such as pipes has also been extended to 10 years in part 2.3.4.5., so as not to delay illicit discharge investigations and illicit removals.

Many deadlines have been altered for certain mapping elements, screenings, and catchment investigations in part 2.3.4. Outfall and interconnection dry weather screening and sampling must be completed within three years of the permit effective date (no extension from draft permit). Please note that sampling and analysis is only required where dry weather flow is found in accordance with part 2.3.4.7.b.3. of the final permit. Catchment investigations of problem outfalls must be completed within seven years (four year extension from draft permit) and those with evidence of illicit discharges must also be completed within seven years (two year extension from draft permit), while the remaining catchments must be investigated within ten years of the permit effective date (no extension from draft permit). Wet weather sampling must be completed at all outfalls with system vulnerability factors concurrent with catchment investigations (no extension from draft permit).

EPA disagrees with many commenters who assert the program cannot be completed within 10 years of the permit effective date. The changes mentioned above should streamline the IDDE program for all permittees making the program milestones achievable for all permittees. In addition, all permittees covered under the 2003 small MS4 permit were required to have an IDDE program to "develop, implement and enforce a program to detect and eliminate illicit discharges" (Part III.B.3 (US EPA, 2003)) and therefore EPA expects that those permittees will already have a streamlined program requiring few samples to be taken during dry weather which will lead to an accelerated IDDE program. It should be noted that where capital improvement projects are needed to address illicit discharges (e.g. underdrains or exfiltration of the sanitary sewer) the permit allows for permittees to address these issues on a schedule they develop, as long as it is as expeditious as possible, and allows the permittee to mark catchments with these issues as "complete" in meeting investigation requirements of part 2.3.4 of the permit once the source of the illicit discharge has been identified. EPA notes that permittees may rely on screening conducted under the MS4-2003 permit, pursuant to an EPA enforcement action, or by the state or EPA to the extent that it meets the requirements of Part 2.3.4.7.b.3.iv and will not need to re-do the sampling requirements contained in the permit.

Some commenters appear confused by the ranking requirements. EPA has revised the assessment and priority ranking of catchments to include an initial ranking followed by a re-ranking of outfalls based on dry weather screening and sampling, and has reorganized Part 2.3.4 of the permit to help address some of the confusion caused by the draft permit requirements. The point of the ranking is to compare outfalls based on information that is available in order to prioritize investigations to target illicit discharges most expeditiously. The permittee should consider the characteristics that EPA has chosen to inform permittees of illicit discharge potential but ranking using all characteristics found in the permit is not required. The final permit only requires the re-ranking of outfalls after dry weather screening completion in year 3, however the ranking of outfalls is intended to be an ongoing process where the ranking can be redone at any point by permittees as additional information becomes available. The catchment ranking and outfall sampling processes ensure that permittees focus on investigating evidence of illicit discharges in their system and eliminating them as expeditiously as possible to protect the environment and human health. Robust planning and outfall ranking will make sure resources are used in the most efficient manner to investigate and eliminate illicit discharges.

Part 1.10.3 of the permit has been updated to provide more clarity for new permittees and the milestones in the permit related to part 2.3.4.

EPA notes that the work of removing illicit discharges to the MS4 is an ongoing task that will need to be re-done periodically to address new illicit discharges or illicit discharges that were not found during the first inspection or may appear after IDDE program completion. While previous work will help expedite the requirements of Part 2.3.4. previous inspections do not mean that the permittee should never have to re-evaluate their system to look for new or additional illicit discharges. Part 2.3.4.10. aknowleges this fact by requiring re-ranking and inspection of outfalls after the entire IDDE program required by this permit is complete.

Changes to Permit: Parts 2.3.4. and 1.10.3 have been updated accordingly.

304. Comment from the Town of Hampstead

Illicit Discharges: The entire town of Hampstead is serviced by private septic systems. So what kind of illicit discharge would be discharging into a system that doesn't exist for the Town? I might have interpreted the requirement incorrectly and therefore in this instance the Town would need specific direction from EPA or an indication that the Town is exempt from this particular requirement. As we discussed when we spoke over the phone, the towns that fall under the MS4 permit vary greatly in population, density, infrastructure, stormwater knowledge and man- power. Therefore, EPA would have to work hand-in-hand with the smaller communities so that those communities understand specifically what is required and how if differs from the urbanized communities.

EPA response to comment 304

EPA recognizes that the IDDE program in communities that do not have sanitary sewer systems may be notably less onerous than that of sewered communities, but nevertheless failing septic systems and illegally piped septic overflow pipes represent a potential source of illicit discharges to the storm sewer system. In addition, the IDDE program as required by part 2.3.4 of the permit is also designed to identify illegal dumping into the storm sewer system that also poses a threat to water quality and human health. Therefore, the requirements of part 2.3.4. apply fully to those communities that do not have a sanitary sewer system, however with the overall decreased likelihood of illicit discharges EPA anticipates that the IDDE program in these communities will require significantly less effort (e.g., few dry and very few weather samples needed).

EPA plans to provide more detailed information and training regarding the IDDE requirements of the permit in the future prior to when the permit takes effect.

305. Comment from the City of Manchester

“The permittee shall implement an IDDE program to systematically find and eliminate sources of non-stormwater from the separate storm sewer system and to implement procedures to prevent illicit connections and discharge" and "Illicit discharges to the MS4 are prohibited, and any such discharge violates this permit and remains a violation until eliminated": The communities that are regulated under this MS4 permit recognize the importance of correcting illicit discharges. Manchester has implemented an aggressive illicit discharge protocol after the issuance of the 2003 Stormwater Permit in which the City reports findings annually in the stormwater reports. This illicit discharge program under the current permit docs screening of areas through testing for E-Coli. Manchester has; found that almost all of the discovered illicit discharges were not caused by the municipality, but by residents within the community. The municipality should not be held culpable for the actions of private citizens, but should take every step to assure these discharges are eliminated once discovered.

306. Comment from the Town of Goffstown, Londonderry and Exeter

Holding the Town immediately and legally responsible for the illegal acts of others who have illicit discharges into our system is not required in the storm water regulations. Given the statutory penalties required by the CWA as they compare to the statutory penalties that a NH community can impose on a violator; this creates a very unfavorable position for a local government to be placed in by this permit.

EPA response to comments 305 - 306

Discharges from an MS4 covered under this permit that contain non-stormwater sources not listed in part 1.4 are not authorized by this permit. Therefore, discharges that contain non-stormwater flows are considered illicit discharges and are unlawful. All illicit discharges from the MS4 are

unlawful and remain unlawful until eliminated. Illicit discharges are subject to fines, enforcement actions and citizen suits. This permit does not create or relieve any additional liability for permitted MS4s with respect to discharges from other sources into their systems.

40 CFR 122.34 requires that permittees "must develop, implement, and enforce a program to detect and *eliminate* illicit discharges (as defined at § 122.26(b)(2)) into your small MS4." Therefore, even if an illicit discharge has been identified and a reasonable schedule for its removal has been documented, the illicit discharge is not authorized under the permit and is unlawful. The permit lays out a consistent methodology to detect and identify sources and eliminate illicit discharges to the MS4 system, including schedules and requirements necessary to maintain compliance with the permit. However, discharges of illicit discharges to waters of the United States from a permittee's MS4 are unlawful upon detection. While EPA recognizes that delays may occur, the CWA requires that the permit effectively prohibit illicit discharges. CWA section 402(p)(3)(B)(ii).

307. Comment from Roger Frymire

I believe stormwater and CSO permits should be combined for CSO communities. CSO problems are merely a variety of stormwater impact. Besides lessening the number of permits needed, overall solutions especially involving green infrastructure may be better reached if a single framework for CSO communities' stormwater can be defined.

EPA response to Comment 307

EPA notes that there are different regulatory statutes and standards for CSOs and stormwater, leading to significantly different permitting requirements, even if some technologies, such as green infrastructure, can be used, in part, to reduce the discharge of pollution from both types of systems. EPA declines to include CSO permitting requirements in this permit, although interested communities may choose to seek an integrated permitting approach to all of their NPDES obligations.

308. Comment from the City of Dover

It is completely unjustified and unworkable that upon discovery of a potential illicit connection that the MS4 is in immediate non-compliance and potentially subject to fines from the moment of discovery. EPA needs to establish a fair and reasonable standard to determine that a MS4 is proceeding expeditiously to resolve a violation.

309. Comment from the City of Nashua

Part 2.3.4.2.c- "The period between identification and elimination of an illicit discharge is not a grace period, and an illicit discharge to the MS4 remains a violation of the permit until eliminated." Comment: The City recognizes and understands that the MS4 Permit does not authorize illicit discharges. However, the purpose of the IDDE program is to identify and remove these unauthorized discharges. As long as the City has an effective IDDE program in place pursuant to Part 2.3.4 with a reasonable schedule for the removal of identified illicit discharges, the presence of such discharges should not constitute an ongoing violation of the permit. It would be more appropriate to state that failure to effectively implement the IDDE program is a violation. Request: Please remove Parts 2.3.4.2.a and 2.3.4.2.c from the permit or revise these parts to rely upon the IDDE program to comply with the permit.

EPA Response to comments 308 - 309

Discharges from an MS4 covered under this permit that contain non stormwater sources not listed in part 1.4 of the Permit are not authorized by this Permit and therefore discharges that contain

illicit discharges are unlawful. The permit lays out a consistent methodology to detect and identify sources and eliminate illicit discharges to the MS4 system, including schedules and requirements necessary to maintain compliance with the permit. However, discharges of illicit discharges to waters of the United States from a permittee's MS4 are unlawful upon detection and remain unlawful until eliminated. Illicit discharges are subject to fines, enforcement actions and citizen suits. This permit does not create or relieve any additional liability for permitted MS4s with respect to discharges from other sources into their systems. While EPA recognizes that delays may occur, the CWA requires that the permit effectively prohibit illicit discharges. CWA section 402(p)(3)(B)(ii).

The requirement to remove the illicit discharge once identified within 60 days also contains the clause "Where elimination of an illicit discharge within 60 days of its identification as an illicit discharge is not possible, the permittee shall establish an expeditious schedule for its elimination and report the dates of identification and schedules for removal in the permittee's annual reports" which recognizes that not all illicit discharges can be removed within 60 days of identification and each case may require a different schedule. No extended schedules to remove illicit discharges or maximum timeframes have been added to the permit.

310. Comment from the Neponset River Watershed Association

2.3.4.3 Non-Stormwater Discharges. As noted above, there ought to be a procedure whereby third parties are given the opportunity to identify the listed sources as significant contributors of pollutants.

EPA response to comment 310

While no procedure for third parties to identify listed sources as significant contributors of pollutants in Part 2.3.4.3 of the Permit, Part 2.3.3. of the permit requires that permittees engage the public in producing their SWMP and allowing comments on the plan every year. Third parties that have evidence that a non stormwater discharge listed in Part 1.4 of the permit are significant contributors of pollutants should work with permittees at the time of SWMP creation or required yearly updating.

311. Comment from the Neponset River Watershed Association

2.3.4.4 SSOs. We strongly support this proposal to beef up SSO reporting requirements. We believe that SSOs are currently underreported by a wide margin (at least in our Massachusetts watershed). However, the time allowances for reporting in subsection c are unreasonably long; oral notice can easily be given within 6 hours and written notice within 3 days after the permittee has become aware of the SSO. EPA should also establish a "hot line" on which the public may report SSOs.

312. Comment from the City of Rochester

Under the 2013 NH Small MS4 Draft General Permit, the EPA lacks the authority to require the City of Rochester to report on sanitary sewer overflow events that do not enter the MS4. Therefore, all requirements regarding reporting of SSOs should be stricken, unless the SSO enters the MS4.

313. Comment from the Charles River Watershed Association

CRWA suggests the language and requirements in this section be strengthened, with a particular focus on locations where repeated SSOs are identified. In spite of the permit specifications that SSOs are a violation of the permit, the primary requirements of this section remain focused on inventorying and reporting SSOs. Although the later subsections detail inspection, mapping and sampling protocols that will assist in SSO remediation, specific remediation requirements should be made in this section. In practice, many

municipalities have ongoing and recurring SSOs and they are not moving expeditiously to eliminate them, nor are they aggressively taking interim mitigation measures to minimize the discharge of pollutants unless EPA begins enforcement proceedings. As the permit does in other sections, we suggest that specific required mitigation measures for areas with recurring SSOs be spelled out in this section.

314. Comment from the Town of Derry

Section 2.3.4.4 adds unnecessary reporting requirement involving sanitary sewer overflows. Municipalities are already required to report any SSOs under other programs to NHDES and USEPA (CMOM). There is little value to adding the burden of another reporting requirement of the same information to a different program under the same agency. Typically the wastewater departments are separate from those overseeing the town's stormwater program and should not have to be concerned about how many separate entities within EPA to report the same information to.

315. Comment from the Town of Exeter

We question including sanitary sewer overflows (SSOs) as part of the Small MS4 permit. The Town already reports SSOs to the State and EPA. Because it is already covered in other regulations, we believe the additional tracking for this program is not necessary.

316. Comment from the City of Nashua

Part 2.3.4.4 Sanitarv Sewer Overflows - This part and other references to Sanitary Sewer Overflows (SSOs) do not address operators of MS4s that are regulated under a CSO Program and an individual NPDES Permit. Comment: As discussed above, the City of Nashua has a CSO Program under an EPA Consent Decree and approximately 25% of the City's urban area is served by a combined storm drain and sanitary sewer system that discharges to the City's wastewater treatment plant at Sawmill Road. The service area for this combined system is excluded from the regulated area under the MS4 permit. Additionally, the MS4 permit should provide flexibility for the City to develop a program that addresses SSOs as part of its CSO & WWTP Permit. Activities proposed under the draft CSO & WWTP Permit, such as the "Collection System Operation and Maintenance Plan" (Part I.D.5), will assist in meeting the requirements related to SSOs. Reporting SSOs to two permit programs is an unnecessary administrative burden to the City. Request: The City requests that the EPA revise Part 2.3.4.4 to provide flexibility in meeting the requirements through other NPDES permits and related programs that adequately address SSOs. In some cases, the schedule for meeting these requirements will be based on the efforts to meet the CSO & WWTP Permit (No. NHOl00170).

317. Comment from the City of Manchester

In this permit the EPA is trying to regulate Sanitary Sewer Overflows (SSOs). These are already regulated through our NPDES Wastewater Discharge Permits and through our Capacity Management Operation and Maintenance (CMOM) Programs. This is considered a duplication of efforts and should not be regulated under this program.

318. Comment from the City of Portsmouth

The City is reiterating its objection to regulation of Sanitary Sewer Overflows (SSOs) in this Permit. Most municipalities or quasi-municipal sewer districts, including the City of Portsmouth, are required to report to the USEPA on SSOs and removal and address SSOs as part of their NPDES permits for their wastewater treatment plants. This requirement for additional reporting is redundant. The City of Portsmouth recommends it be removed from the General Permit Requirements.

319. Comment from the Town of Newmarket

Moreover, the NPDES Permit recently issued to the Town for its wastewater treatment plant already includes provisions for the Town to develop a plan and report progress on reducing pollutant contributions from nonpoint sources. These provisions in themselves require the Town to undertake significant effort and funds to initiate planning, analysis and implementation efforts to address nonpoint sources. Having to address multiple and overlapping permit requirements related to nonpoint source will only add to the financial burden.

320. Comment from MCWRS

This Sanitary Sewer Overflow reporting requirement is redundant and should be removed from the Small MS4 permit. Most municipalities are already required to report on overflows and removal and measures to address them as part of their NPDES permits for wastewater treatment plants.

EPA response to comments 311 - 320

Combined sewer overflows (CSOs) from a combined sewer system are regulated under individual NPDES permits, and have an EPA-approved long-term control plan for their abatement. This permit does not cover combined sewer systems or areas serviced by those systems and therefore does not address CSOs.

While EPA agrees that the draft permit includes requirements addressing SSOs, EPA disagrees that these requirements are a complete duplication of effort with a permittee's wastewater permit and should therefore not be included in the permit. The draft permit appropriately prohibits the discharge of SSOs and requires their removal consistent with 40 CFR 122.34. Furthermore, consistent with standard conditions included in all NPDES permits issued by EPA Region 1, the draft permit requires oral and written notice to EPA regarding any noncompliance which may endanger health or the environment – such as the occurrence of an SSO. The draft permit expands upon the written notice requirements included in these standard conditions by requiring additional detail on a compilation of the past five years of SSO occurrences and the maintenance of this SSO inventory as part of the permittee's SWMP.

EPA agrees that the oral and written notification requirements for noncompliance found in both this permit and in an NPDES permit authorizing wastewater or CSO discharges should be satisfied by a single notification to EPA. EPA has modified the permit to clarify that where common notification requirements are included in multiple NPDES permits issued to a permittee, a single notification may be made to EPA as directed in the permittee's wastewater or CSO permit. The SSO reporting times are consistent with 40 CFR 122.41 and no change to reporting time has been included in the final permit. EPA encourages third parties to notify permittees of an SSO immediately and may also contact EPA at 1-888-372-7341 and NHDES at (603) 271-3899.

EPA finds that the compilation and maintenance of a current inventory of SSOs in the permittee's SWMP and annual report is not duplicative. EPA considers the comprehensive nature of this inventory to be essential to support the implementation and EPA's oversight of the permittee's IDDE Program. The schedules and requirements to remove an illicit discharge to the MS4 also apply to SSOs that enter the MS4 and EPA finds that no additional guidance or removal requirements are necessary.

321. Comment from the Neponset River Watershed Association

2.3.4.6. System mapping. The required mapping elements listed in subsection a.i. are excellent. Under subsection b., we believe that digital mapping should be required, at least by the end of Year 2 of the permit. Our understanding is that an inventory of outfalls should already have been developed under the 2003 permit and that annual updating should be all that is required. No additional time should be allowed for meeting the requirements of the 2003 permit. The permit should also specify that this information be available digitally within a reasonable time (e.g., end of Year 2).

EPA response to comment 321

While GIS mapping can be very beneficial to expedite and track an IDDE program, EPA declines to add a requirement to use a particular mapping technique or software in order to provide flexibility to permittees. This permit does not extend any deadlines required by the 2003 permit and includes additional mapping elements to be part of the system wide map for proper IDDE program implementation.

322. Comment from the Town of Sandown

In several Sections of the draft 2013 General Permit municipalities will be required to produce relatively sophisticated mapping (see Section 2.3.4.6) in a relatively short time frame. While those larger municipalities that presently enjoy in-house GIS capabilities should be able to satisfy these mapping requirements with little difficulty, we see this type of requirement as burdensome, particularly for smaller towns as such Sandown that presently do not have in-house mapping capabilities.

323. Comment from the Town of Danville

Additional mapping elements: The requirement to obtain a more developed and detailed mapping of our MS4 elements within 2 years of the permit would be an expensive undertaking for the town. The initial mapping was completed under the MS4-2003 and additional requirements and elements that are required under the new permit would impose a great financial burden to the towns. The new system mapping requirements, including the additional elements required for the maps and time frames requested, causes the smaller towns to expend immediate funds which are not easily or readily available to them due to the budgeting cycles, as well as currently allowable budget amounts that will increase to perform these additional requirements within the time frames requested. This needs to be taken into consideration when requiring times for all items to be completed. A considerable observation to be made are towns that do not have public sewage systems, only private septic systems which are governed by state laws. Also, many towns do not have curbed roadways and zoning requirements of 2 acre building lots.

324. Comment from the Town of Londonderry

The IDDE Screening requires to inventory the system in the first year. It would be beneficial to allow the inventory to be completed within the first 3 years of the permit. This would better coincide with what was requested above for prioritizing water bodies.

325. Comment from the City of Nashua

Part 2.3.4.6 System Mapping - "This revised map of the MS4 shall be completed within two (2) years of the effective date of this permit." Comment: The system mapping requirements and recommended elements under this part identify important storm drain and sanitary sewer system characteristics to be used to prioritize catchments for illicit discharge investigations. It is important to note that the EPA is already requesting that the City prepare a detailed map of the sanitary sewer system under the draft CSO & WWTP Permit (Part I.D.5.4) within 30 months of the effective date of this permit. The storm drain

system mapping should be coordinated with this effort to allow a more integrated and cost effective approach to gathering the data. Request: The City requests that the EPA revise the schedule and allow at least 36 months for the development of the revised map to meet the requirements in Part 2.3.4. This will allow the City to develop an integrated mapping approach which will result in a more effective Illicit Discharge Detection and Elimination Program, as well as provide critical information to address impaired waters under Part 2.2 of the draft MS4 Permit.

EPA response to comments 322 - 325

EPA has updated the mapping deadlines in response to comments above. While additional time is warranted to collect detailed outfall/interconnection information, an initial listing of outfalls and interconnections can be done within 1 year. Outfall mapping was a requirement under the 2003 MS4 permit, and EPA notes that the mapping of all outfalls for existing permittees was to be completed by 2008. In an effort to provide additional time to collect detailed outfall/interconnection information, EPA has streamlined the outfall/interconnection inventory to fit closely with the IDDE program and be updated with additional outfall/interconnection information as it is collected as part of IDDE program implementation. The initial inventory can be based on existing information and any information available to create an outfall/interconnection inventory. This initial inventory is then bolstered with specific data elements as they become available when the permittee visits outfalls and interconnections during dry weather screening and updated annually in conjunction with IDDE progress reporting.

The permit has been updated to specify that certain mapping requirements must be completed within two years of the permit effective date; others must be completed within the 10-year implementation timeframe of the IDDE program. The system mapping is intended to inform and aid the IDDE program, as well as demonstrate the extent of completed an ongoing investigations and corrective actions. Therefore, while we agree that certain elements are an important first step in managing stormwater, such as developing a rough estimate of catchment delineations from existing information, we also believe that the catchment delineation will be refined and system infrastructure will be required to be mapped during the catchment investigation process. EPA does not intend for the mapping requirements of the IDDE section to delay the investigation and correction of illicit discharges to the system. Permittees are required to report on the progress towards completion of the map in each annual report.

Changes to the permit: Permit part 2.3.4.5. and 2.3.4.7. have been updated accordingly

326. Comment from MCWRS

The required mapping elements include indication of all use impairments as identified in the state's most current 303(d) list. This information is complex and cannot all be displayed on a map in a manner that is legible without significant effort. We respectfully request clarification on the intent of this requirement, so it may be properly and reasonably addressed by municipalities.

327. Comment from the City of Portsmouth

2.3.4.6 System mapping: The required mapping elements include indication of all use impairments as identified in the state's most current 303(d) list. This information is complex and all of it cannot be displayed on a map in a manner that is legible without significant effort. The City respectfully requests clarification on the intent of this requirement so it may properly display the information.

EPA Response to Comments 326 - 327

Part 2.3.4.8. of the final permit requires permittees to sample outfalls for pollutants of concern. In order to identify the pollutants of concern each outfall needs to be sampled for each permittee must identify the receiving water and look up any associated impairments on the most recent EPA approved New Hampshire Section 303(d) list. This information is also due on the Notice of Intent for permit coverage (see Appendix E). How the permittee wishes to display the information is left up to the discretion of each permittee. To facilitate the collection of this information EPA recommends NHDES's online data viewer to search and find waterbodies and their impairments: http://des.nh.gov/onestop/gis.htm.

328. Comment from the Town of Wilton

Outfall Inventory under Part 2.3.4.7 shall be completed within 2 years of the permit effective date. This section requires not only an inventory of the outfall but also the interconnection discharging from within the MS4. The timeframe required for a previously designated MS4 Town is one year from the permit effective date, thereby only giving the new Towns only one extra year putting the burden within the second year. Wouldn't it be more prudent to have this done concurrently with the Outfall Mapping, extending the timeframe to whithin 5 years of the effective date?

The Outfall Mapping under Part 2.3.4.6 shall be completed within 4 years of the permit effective date. The best available mapping shall be included with its SWMP until the new mapping is completed. Again the existing communities have to have this provided within a 2 year time frame so this gives any new Town only an additional 2 years but it still must be completed within 4 years of the permit effective date. This is an expensive part of this program for each Town and providing an extra year stating that the Outfall Mapping must be done within 5 years of the permit effective date would be more productive for the New Permittees.

EPA Response to Comment 328

EPA agrees that new permittees will need additional time to complete many tasks in this permit and has outlined extended schedules for SWMP requirements in Part 1.10.3 of the final permit. Outfall and interconnection mapping is now due 4 years from the effective date of the permit for new permittees and all milestones in Parts 2.3.4.4 – 2.3.4.11 have been extended 3 years.

Changes to the permit: Permit part 1.10.3 and 2.3.4. have been updated accordingly

329. Comment from the Neponset River Watershed Association

The requirement in 2.3.4.8. that wet weather screening may only be done from March – June is unreasonable and unnecessary. We believe that 25% percent of wet weather screening should be completed each year during years 2 – 5 of the permit.

EPA Response to Comment 329

EPA agrees that the timing of wet weather sampling should not be restricted to March through June and now only recommends that permittees adopt this practice. Wet weather discharges can manifest when groundwater levels are highest and stormwater infrastructure and wastewater infrastructure can be overwhelmed with infiltrating groundwater and EPA strongly encourages permittees to monitor outfalls when water table levels are the highest, however in order to provide flexibility in program implementation this requirement has been removed from the final permit. The timing of wet weather screening follows the implementation of the IDDE program. EPA believes this is not only the best use of permittee resources but also makes sense from a practical standpoint.

Wet weather samples should only be conducted after the permittee has removed all dry weather sources of illicit discharges to ensure all potential sources of illicit discharges are accounted for and to ensure that a sample taken during wet weather that indicates the presence of an illicit discharge is actually one triggered during wet weather.

Changes to the permit: Permit part 2.3.4. has been updated accordingly

330. Comment from NH Stormwater Coalition

Throughout the Draft Permit there are references to the use of sampling data to assess whether illicit connections are present. *See, e.g.,* Draft Permit, at 32. This screening includes analyses for bacteria, with bacteria levels in excess of the water quality criteria serving as an indicator of a potential sanitary connection. The water quality criterion is an inappropriate threshold for evaluating illicit connections to sanitary wastewater and there is no justification presented in the Draft Permit that would support such a low level of bacteria as indicative of illicit connections. This appears to be yet another unsupported regulatory presumption (*i.e.,* if a criteria is exceeded, presume the MS4 is the source and require a study of that system). EPA should look to state policy applicable on this issue, prior to imposing its own approach, as required by 40 C.F.R. §122.44(d). An appropriate bacteria concentration to indicate a potential sanitary connection is >2,000 cts/100 mL. *See* 2012 CALM, at 37.

EPA Response to Comment 330

The threshold values included in the permit are the numbers that EPA has determined indicate likely sewer input to the MS4. The permit's methodology is based on expert guidance in the stormwater field (Center for Watershed Protection, 2004) and EPA Region 1 field experience including a project analyzing over 3,600 water quality data points. This information was used to determined efficient and cost-effective screening parameters (and thresholds) to identify illicit discharges. EPA's methodology for determining likely sewer inputs recognizes that any single exceedance of screening levels (ammonia, surfactants, bacteria, chlorine) does not necessarily indicate an illicit discharge issue, as the commenter suggests. However, these indicators taken together can give the permittee confidence that an illicit discharge issue may be present.

331. Comment from the Town of Danville

Catchment investigations: Danville has a limited number of catch basins with closed drainage outlets all within 500 feet of the inlet. The main purpose of these catch basins are to decelerate the amount of stormwater flow directly into the watersheds and allow the flow to slowly drain through the natural flow areas. The potential of Danville having to analyze the System Vulnerability Factors wiII be limited due to the amount of outfalls that the town has. The catch basin cleaning sample testing that was done in 2009 under the 2003 requirements showed normal limits in the samples. Currently there are samplings being processed for 2013. The requirement to perform dry and wet weather investigations testing and sampling costs that would have to be performed under the 2013 draft permitting would include additional investigations, re-evaluation of the outfalls and monitoring for dry and wet weather sample collections. This would greatly affect the town's budgeting by increasing costs of additional sampling than what is currently done along with testing time frames and what is tested for, especially if there are no observations of any type of illicit discharge parameters showing in the system.

332. Comment from the City of Nashua

Part 2.3.4.8.c.i- Excluded catchments are limited to those listed in the permit and do not consider any prior assessments completed under the 2003 MS4 permit. Comment: Over the past permit cycle the City has implemented an outfall monitoring program and completed screening, monitoring, and testing of outfalls.

In numerous cases, there was no evidence of illicit discharges at these outfalls and this information should be considered when setting priorities for future assessments. Request: Please revise the permit to allow MS4s to identify additional excluded catchments and set priorities based on historic IDDE activities.

EPA Response to Comments 331 - 332

Permittees may rely on screening conducted under the MS4-2003 permit, pursuant to an EPA enforcement action, or by the state or EPA to the extent that the screening meets the requirements of Part 2.3.4.7.b.3.iv. The permit specifically allows this to give credit for past work.

"Excluded" catchments are intended to limit the scope of the IDDE program to just those catchments with any potential for an illicit discharge in the past and in the future. One clean sample at the end of a pipe does not indicate that there will never be an illicit discharge discharging from that outfall. The IDDE program required by this permit specifically addresses the potential for future illicit discharges with ongoing screening once the initial program is complete. As such, EPA declines to augment the definition of "Excluded Catchments".

333. Comment from the Neponset River Watershed Association

Finally, it would be much easier for MS4s to meet whatever "milestones" are set for each IDDE program element if each individual MS4 weren't required to establish its own procedures for outfall screening and catchment investigations. EPA should itself adopt model procedures for these activities.

334. Comment from the Town of Danville

It is recommended that this requirement should be regulated by the local community rather than it just being a generalized requirement for all. The ranking of catchments should only be based upon screening factors as determined by the permittee, not regulated with sampling requirements but with review of the requirements. This process for communities would be time consuming and for those assisted by consultants increasingly costly. Currently, regulations for the smaller communities are more based on testing results of their catchment cleanings and when there are good results then testing is at a lesser level and most of the time they are reviewing their catchments during every heavy rain event.

335. Comment from the Town of Danville

To make a general manhole inspection methodology based on storm drain network investigations as a general requirement is not favorable. Some of the MS4 communities do not have manholes at all in their communities, therefore this regulation should be more site specific and not a general requirement.

336. Comment from NH Stormwater Coalition:

While we appreciate the fact that the monitoring is not quite as onerous as provided in the 2008 draft permit, we believe that the command and control approach to monitoring is still problematic. For example, in responding to a comment by the City of Goffstown, EPA states:

With respect to the Town of Goffstown comment that discretion to concentrate on suspected areas of concern would be a more prudent use of limited resources, EPA is requiring a comprehensive system-wide examination.Fact Sheet, at 97. Such an approach where EPA dictates the activities that should be undertaken by a municipality, particularly where the municipality does not find such approach to be useful, flies in the face of the MS4 regulations. First, it is important to keep in mind, as readily admitted by EPA, that the MS4 regulations "do not include specific management practices or standards to be implemented." 74 Fed. Reg. 68,620 (2009). F u r t h e r more, EPA recognizes that "stormwater permits leave a great deal of discretion to the regulated community to set their own standards and to self-monitor." *Id.* I n fact, monitoring programs

are supposed to be designed to be based upon reasonable municipal preferences, not that of the permit writing agency:g agency:

EPA encourages permitting authorities to work with permittees to determine if storm water monitoring efforts are appropriate and useful. * * * [MS4s may] evaluate their monitoring program and propose changes to make the program more appropriate and useful. To accomplish this, municipalities may wish to consider using monitoring techniques other than end-of-pipe chemical-specific monitoring. . . .61 Fed. Reg. 41,699 (Aug. 9, 1996).

Accordingly, it is requested that EPA revise its command and control approach to be consistent with the adopted rules and provide MS4 communities the opportunity to utilize such monitoring as they find to be the most appropriate and useful for their situation.

EPA Response to Comments 333 - 337

See EPA Response to Comments 46 - 54, EPA Response to Comments 55 - 60, and EPA Response to Comments 227 - 233.

The MS4-2003 permit required each MS4 to develop and implement an IDDE program. Since issuance of that permit, EPA, NHDES, and MS4s have gained an improved and more comprehensive understanding of the nature of illicit discharge connections; the extent of the problem; effective technologies and procedures to detect and verify illicit discharges; and the best practices to reduce discharges of contaminated stormwater due to the presence of illicit discharges. Many Towns including Dover, Portsmouth, Nashua and Manchester have had removed illicit discharges from their systems during the 2003 permit term using comprehensive approaches to deal with illicit discharge issues. However, based on annual reporting information, not all MS4s have adequate programs to effectively detect and eliminate illicit discharges. This permit seeks to ensure the same level of protection is guaranteed for all waterbodies receiving regulated stormwater discharges. The final permit includes elements that are listed as guidance in 40 CFR §122.34(b)(3) and the information and procedures included in Illicit Discharge Detection and Elimination – A Guidance Manual for Program Development and Technical Assessment by the Center for Watershed Protection and Dr. Robert Pitt. These measures have been used in enforcement cases under the 2003 Permit and have resulted in the successful removal of illicit discharges and improvements in water quality. EPA believes that the inclusion of elements in the permit as requirements instead of guidance represents a necessary step to strengthen requirements of the IDDE program and creates a thorough, and systematic approach that can be implemented across New Hampshire that will lead to improvements to water quality. In addition, the Massachusetts and Connecticut Small MS4 Permits contains substantially similar requirements as this final permit indicating that municipalities across New England will be following the same procedures described in Part 2.3.4. EPA finds that the measure required in Part 2.3.4. represent the maximum extent practicable effort by permittees to effectively locate and remove illicit discharges from their systems. If a permittee feels that they would like an IDDE and all permit requirements tailored to their unique situation they can submit an individual permit application consistent with 40 CFR §122.33(b) (2) (i) or §122.33(b) (2) (ii).

The final permit does contain some refinements to streamline the IDDE program. See EPA response to comments 322 - 325 and EPA response to comments 289 - 303. In addition, EPA has revised the initial ranking to specify that it will be based on *outfalls* and not *catchments* in order to not delay outfall and interconnection screening and sampling. The initial outfall ranking shall be due within one (1) year but will only be based on existing information available to the permittee; it is mainly intended to identify “problem” and “excluded” outfalls that will not require follow-up sampling. The results of the outfall sampling will ultimately be the largest factor in prioritizing later catchment

investigations; an updated ranking is due at year three (3) of the permit following dry weather screening.

EPA notes that each permittee's program can be tailored to their unique circumstances as long as their program meets the minimum requirements contained in Part 2.3.4. for instance, the permit does not require a certain staff level for program implementation or require a certain practice be used in pinpointing an illicit discharge source once it has been narrowed down to an area using the manhole inspection methodology. In addition, "Key Junction Manholes" are not specifically defined to allow permittees to implement the level of effort necessary to complete the objectives of the program, if such structures exist in a particular town. One commenter mentioned the lack of manholes in town. Where a system (or baranch of a system) has no manholes there is no requirement to screen manholes and investigations during dry weather will consist of outfall screening only.

One commenter seems to confuse outfall screening and sampling procedures as part of the IDDE program in Part 2.3.4. of the permit with monitoring requirements imposed on Phase I MS4s. The requirements in Part 2.3.4. are consistent with 40 CFR §122.34(b)(3) and are not based on monitoring requirements for Phase I MS4s found at 40 CFR §122.26. The requirements and sampling results of Part 2.3.4. are not intended to measure success of the SWMP as is the intention of monitoring for Phase I permittees.

Changes to the permit: Permit part 2.3.4. has been updated accordingly

337. Comment from the City of Nashua

Part 2.3.4.8.d.iii Dry Weather Screening and Sampling - "When a flow is observed, a sample of the flow shall be collected and analyzed for the parameters listed in 2.3.4.8.d.v." Comment: The parameter list for dry weather monitoring should be specific to the outfall and receiving water body and not the generalized list in the permit. The flow should not be analyzed for all these parameters if the screening assessment does not indicate the potential pollutant. For example, if previous screening events and visual observation indicate that the flow is likely groundwater infiltration and the receiving water is impaired for pathogens, then the City should not be required to analyze for ammonia. Request: Please revise the permit to provide flexibility for MS4s to exclude unnecessary analytical parameters for dry weather flows based on the MS4's understanding of the drainage system, water quality issues, and past analytical data.

EPA Response to Comment 337

The threshold values included in the permit are the numbers that EPA has determined indicate likely sewer input to the MS4. The permit's methodology is based on expert guidance in the stormwater field (CWP, Pitt 2004) and EPA Region 1 field experience including a project analyzing over 3,600 water quality data points. This information was used to determined efficient and cost-effective screening parameters (and thresholds) to identify illicit discharges. EPA's methodology for determining likely sewer inputs requires the collection of all parameters: ammonia, surfactants, bacteria, conductivity, salinity, temperature and chlorine to effectively indicate the presence of an illicit discharge with a high degree of confidence. Although groundwater may be a suspected source of dry weather flow, without this suite of parameters to rule out other sources, an investigator cannot assume the flow is due to groundwater. Therefore, EPA declines to augment the sampling requirements for the IDDE program. However, EPA has revised the permit to specify that outfall sampling for the purposes of detecting illicit discharges under part 2.3.4. may use field test kits, which should alleviate some time and costs.

338. Comment from the Town of Amherst

Section 2.3.4.6.a.ii Required Mapping Elements, basic request as part of the 2003 MS-4 permit. However it appears under Section 2.3.4.8.b Statement of lDDE Program Responsibilities Is EPA expecting a municipality to inspect each and every private septic system within the MS-4 designated area? The Town does not have the authority to enter private property or to require homeowners to allow the Town access to septic systems without an obvious violation on a property. How can a municipality be held to an enforcement standard it has not been granted the authority from the State to enforce?

EPA Response to Comment 338

The permit does not require the permittee to inspect any septic systems within their jurisdiction. The requirement that the IDDE program contain a Statement of IDDE Program Responsibilities is to identify which town department is responsible for each part of the IDDE program. For instance, the board of health may be responsible for issuing fines or other enforcement actions when a third party is found to be discharging illegally to the MS4 system and the Highway Department may be responsible for the mapping requirements of the IDDE program.

339. Comment from the Town of Seabrook

12. Catchment Investigation, General Permit, Sections 2.3.4.8.c and 2.3.4.8.e., Pages 31 and 35 of 60, and Page 38 of 60, 2.3.4.9.c

EPA requires that catchments be ranked and prioritized and that a full investigation of every catchment be performed regardless of screening results. Catchments can be excluded only under provisions that are extremely restrictive, which in practice, would result in exempting very few areas. If prior screening results completed under the first permit term show that an outfall has no dry weather flow and no evidence of illicit activity, why perform needless upstream investigation? The Town of Seabrook objects to the provisions contained in the aforementioned sections. These might apply to highly urbanized areas with ancient sewer, storm drain or combined sewer systems, but not com munities with new infrastructure. All of Seabrook's piping is modern (less than 20 to 25 years old) and completely separated. In our case, such catchment investigations would only be necessary in situations where outfall screening indicates the presence of contamination.

340. Comment from the City of Nashua

Part 2.3.4.9.c IDDE Program Implementation Goals and Milestones - "The permittee shall implement the Catchment Investigation Procedures in every catchment of the MS4, even where dry weather screening does not indicate evidence of illicit discharges." Comment: The City completed an initial screening of its outfalls under the 2003 MS4 Permit and has identified catchments that require additional monitoring and/or investigation. The ability to reduce the number of catchments for physical investigation by a clearly defined desktop screening process in accordance with Part 2.3.4.8.e.i. would focus the City's efforts and result in a more feasible and achievable goal. Request: Please remove the requirement to conduct catchment investigations in every catchment of the MS4, even where dry weather screening does not indicate evidence of illicit discharges. The IDDE program development, specifically the priority ranking of catchments based on detailed mapping information, is an appropriate screening tool to focus the City's efforts on catchments where illicit discharges are most likely to be present.

EPA Response to Comments 339 - 340

Illicit discharges can take many forms (improperly connected lateral, underdrain, dumping, cross connection etc), are not always continuous during dry weather (flow from an improperly connected lateral would be intermittent) and some only activate during wet weather events (when the sanitary system is overwhelmed or groundwater table is high). Given the variable nature of illicit discharges EPA has determined that a thorough systematic inspection of each permittee's system is necessary to detect illicit discharges to the MS4. Visiting an outfall one time may not lead to the identification of problems on a specific catchment while a thorough investigation of assets will increase the chance of finding illicit discharges. The 2004 Center for Watershed Protection Illicit Discharge Detection and Elimination guidance document (Center for Watershed Protection, 2004) identifies thorough investigation and knowledge of stormwater infrastructure as necessary for a successful IDDE program. Once a "clean sweep" of the system is complete and permittees have inspected and mapped their entire system future IDDE work can be driven by outfall inspections alone. Timeframes for mapping in the final permit have been aligned with inspection requirements which will streamline IDDE programs and interim milestones for program completion have been removed which should make IDDE program completion more achievable. See EPA response to comments 322 - 325 and EPA response to comments 289 - 303.

341. Comment from the Town of Exeter

Overall, the IDDE Screening requirements are well done and the use of field kits for sampling is an improvement. It has been difficult to identify sampling equipment which is approved for stormwater sampling. It would be beneficial to New Hampshire communities if EPA or NHDES could provide a list of approved sampling kits and meters for use in our stormwater programs. Additionally, if the EPA or NHDES could establish a contract with an approved supplier then communities could purchase equipment at a reduced cost and be insured they were purchasing the appropriate field kits and sampling equipment.

EPA Response to Comment 341

The permit contains required detection levels for all analytical parameters and in order to provide flexibility and the use of any new technology the final permit will not require the use of any particular test, kit or probe. Although it would not be appropriate for EPA to implement the kind of contract the commenter suggests, the bacteria source tracking protocol on EPA's website (USEPA, 2011) contains recommendations for field test kits and probes to use in IDDE investigations.

342. Comment from the Town of Seabrook

Wet Weather Investigation, General Permit, Section 2.3.4.8.e.ii.b, Page 36 of 60

EPA requires wet weather screening under certain conditions, including if one or more System Vulnerability Factors are present. The factors, as listed on Page 35 of 60, are written in such a way that makes it impossible for nearly any regulated entity to be exempt from wet weather sampling. For example, 'crossings of storm and sanitary sewer alignments'. How many communities with both types of systems do not have crossings of some sort? Why is this concern in a community that has new piping? Seabrook objects to wet weather screening on the grounds that the Town's systems are less than 20 to 25 years old and are constructed of modern materials such as polyvinyl chloride (with gaskets), reinforced concrete and precast concrete.

343. Comment from the City of Nashua

Part 2.3.4.8.e.ii.b Wet Weather Investigation- "The permittee shall conduct at least one wet weather screening and sampling at the outfall for any catchment where one or more System Vulnerability Factors are present." Comment: Wet weather sampling requirements for outfalls should be based on a holistic approach that considers the evaluation of catchments under Part 2.3.4.8.c and the requirements for discharges to impaired waters under Part 2.2. A more focused wet weather investigation program for priority catchments will result in better data to guide corrective actions to improve water quality. Request: Please revise the permit to provide flexibility for MS4s to conduct wet weather investigations based on priority catchments identified under Part 2.3.4.8.c and the MS4's understanding of the drainage system and water quality issues.

EPA Response to Comments 342 - 343

EPA experience in the region indicates that wet weather sampling as part of a comprehensive IDDE program is necessary to rid the system of illicit discharges and EPA declines to remove the requirement based on system age. Even recently installed systems can be susceptible to illicit discharges. In order to reduce the number of wet weather samples required in the final permit, EPA has reduced the number of System Vulnerability Factors that trigger wet weather sampling and made other factors discretionary. The goal of SVFs is to identify catchments that have a high probability of wet weather discharge of untreated sewage to the MS4 based on the permittees understanding of their system. As such, each mandatory SVF in the Final Permit focuses on areas where the sanitary system could potentially discharge to the MS4 due to proximity, design, or failure. Other factors that may not be applicable to all systems, including age of infrastructure, are now discretionary and the permittee may consider other factors as SVFs when applicable to their system. Regarding crossings of the storm drain system and sanitary system, the final Permit only requires permittees to identify those crossings where the sanitary system is shallower (above) the storm sewer, which represents the situation the SVF aimed to target in the draft Permit, which will reduce the instances that trigger the wet weather sample requirement.

Changes to Permit: Part 2.3.4.8 has been updated accordingly

344. Comment from the City of Nashua

Part 2.3.4.8.f Removal and Confirmation "Within one year of removal of all identified illicit discharge and SSO sources, confirmatory outfall or interconnection screening shall be conducted." Part 2.3.4.8.q Follow-up Screening "Upon completion of the catchment investigation… the catchment outfall or interconnection shall be scheduled for follow-up screening within five years ..." Comment: These requirements are unnecessary and require MS4s to repeat the initial catchment screening and detailed investigation previously completed. These efforts will consume much needed resources that could otherwise be focused on high priority areas for the investigation and removal of other potential illicit discharges. Request: Please remove language from Part 2.3.4.8.1 and all of Part 2.3.4.8.g from the permit and rely upon the documented IDDE investigations that result in the removal of illicit discharges.

345. Comment from Roger Frymire

2) Realizing the burden outfall sampling (especially wet-weather) places on permittees, I continue to look for reasonable ways to lessen their costs. Towards this, possibly the re-testing intervals for outfall sampling might be stretched for outfalls to unimpaired waterways. (if the first round shows no problem)

EPA Response to Comments 344 - 345

EPA declines to remove the requirement for followup screening and ongoing screening in the final permit. Followup screening is necessary to ensure that the illicit that was removed by the permittee was done completely and all illicit discharges in the catchment have been removed. Each catchment has the potential for multiple illicit discharges and removal of one illicit discharge could reveal that the initial sample actually contained more than one illicit discharge that needed to be removed and further investigation is required. The work of removing illicit discharges to the MS4 is an ongoing task that will need to be re-done periodically to address new illicit discharges or illicit discharges that were not found during the first inspection or may appear after IDDE program completion. While previous work will help expedite the requirements of Part 2.3.4. previous inspections do not mean that the permittee should never have to re-evaluate their system to look for new or additional illicit discharges. Ongoing screening in Part 2.3.4.10. acknowledges this fact by requiring re-ranking and inspection of outfalls after the entire IDDE program required by this permit is complete. Once the full IDDE program is complete (10 years after the permit effective date) ongoing sampling and inspections should be able to be done quickly with very few illicit discharges detected or samples required, and EPA finds requiring screening of all outfalls one time every 5 years to be practicable and necessary to ensure MS4 discharges do not contain illicit discharges.

346. Comment from the Town of Merrimack

Screening and Sampling Procedures: In Section 2.3.4.9. of the 2013 MS4 Draft General Permit Requirements it states that “the permittee shall adopt a screening and sampling protocol consistent with EPA New England Stormwater Outfall Sampling Protocol (Draft, January 2012)” Since this document is a draft, how can it be inserted into the 2013 MS4 General Permit without being first finalized by the EPA and NHDES.

EPA Response to Comment 346

The screening and sampling procedures now state that the EPA New England Bacterial Source Tracking Protocol an example of one procedure that could be used by the permittees. Permittees are not required to adopt this protocol.

Changes to Permit: Part 2.3.4.7. (2.3.4.9 in the 2013 Draft Permit) has been updated accordingly.

347. Comment from the City of Rochester

Appendix F requires the implementation of enhanced BMPs. By way of example, one significant requirement is the illicit discharge section (A. I .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 [sic], 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.

EPA Response to Comment 347

See EPA Response to Comments 46 - 54, EPA Response to Comments 55 - 60, and EPA Response to Comments 227 - 233.

Requirements in Appendix F related to bacteria TMDLs are consistent with the TMDLs and the TMDL implementation plans. The permit requirement to more effectively target drainage areas to these waterbodies with a bacteria TMDL for IDDE investigation will lead to the removal of human sources of bacteria, as envisioned by the implementation plan in the TMDLs. The final permit no longer contains the requirement to investigate 40% of the outfall catchments within 5 years of the effective date and increased the timing to investigate those outfalls where dry weather screening indicates the presence of an illicit discharge from 5 years to 7 years from the permit effective date. This provides flexibility for IDDE implementation.

Changes to the Permit: Permit part 2.3.4.8 has been updated accordingly.

2.3.5 Construction Site Stormwater Runoff Control

348. Comment from the Town of Exeter

Define the difference between the EPA's stormwater construction program and the MS4's Construction Site Stormwater Runoff Control Program.

349. Comment from the Town of Seabrook

Construction Site Stormwater Runoff Control, General Permit, Section 2.3.5, Page 39 of 60

EPA will require municipalities to administer such controls at sites exceeding 1 acre. In spite of the claim made on Page 39 of 60 that EPA's program is separate and distinct, the requirements remain similar, if not duplicated. The Town of Seabrook objects to Section 2.3.5 on the basis that EPA already has a Construction General Permit (COP) program that is substantially similar and the requirements contained in the MS4 NPDES General Permit appear to unfairly burden the Town with enforcement responsibilities.

EPA Response to Comments 348-349

40 CFR 122.34(b)(4) requires small MS4 permittees to develop a program to reduce pollutants in stormwater runoff to their MS4s from construction activities that result in a land disturbance of greater than or equal to one acre (including smaller disturbance projects part of a larger common plan of development). The NPDES Phase II stormwater regulations, in addition to requiring NPDES permits for discharges from small MS4s, require permits for discharges from small construction activity. *See* 40 CFR 122.26(a)(9)(i)(B), 122.26(b)(15)(i). Construction activities disturbing less than one acre of land typically do not require NPDES permits for their stormwater discharges unless they are part of a common plan of development. However, permittees are not prevented from regulating smaller earth disturbing activities within their Construction Site stormwater Runoff Control Program, if they so choose. Regarding enforcement responsibilities, it is the municipality's obligation to enforce its ordinances. Further, it is in the municipality's interest to have this responsibility since the objectives of the ordinance are to protect the municipal resource by preventing excessive sediment from reaching the municipal MS4 and to prevent associated pollutants from discharging from the MS4 which the municipality is responsible for. It is EPA's obligation to enforce the terms of the final permit.

The MS4's Construction Site Stormwater Runoff Control Program is one of the six minimum control measures required of permittees to meet the conditions of a small MS4 permit under 40 CFR 122.34(b)(4). Therefore, the MS4's Construction Site Stormwater Runoff Control Program and EPA's Construction General Permit are different programs required by the Clean Water Act. While the

goals of both programs are to reduce the discharge of pollutants associated with construction activity, the construction site minimum control measure for the small MS4 program localizes regulation and enforcement efforts. Small MS4 permittees are ultimately responsible for the construction site stormwater discharges in their MS4s and must have a program in place to effectively control these discharges. Thus, while the on-the-ground requirements of a construction site operator are similar under the local ordinance and the EPA CGP, the two programs differ in the party who sets the terms of the responsibility and enforcing these terms.

Please note that EPA currently regulates stormwater from large and small construction activities that discharge to waters of the United States under the Construction General Permit. Projects are permitted regardless of whether they are located within or drain to a regulated MS4 community. More information on the Construction General Permit can be found On EPA's CGP website[17]. This minimum control measure is for discharges from construction sites *to* the MS4 system and the requirements are meant to minimize sediment and construction materials from entering the MS4 system, acknowledging that the permittee is ultimately responsible for its discharge and the pollutants in it. The permit has been updated to specify that the objective of the construction stormwater runoff control requirements is to prevent pollutants in stormwater associated with construction sites from entering and discharging from the MS4.

Changes to the permit: the objective of part 2.3.5. has been updated accordingly.

350. Comment from the Neponset River Watershed Association

Sections 2.3.5 and 2.3.6. (Construction site and post-construction stormwater management). These subsections are not sufficiently clear about what should be included in a town's "ordinance or regulatory mechanism."

EPA Response to Comment 350

In Sections 2.3.5 and 2.3.6, EPA intends to provide permittees with the flexibility to implement ordinances and regulatory mechanisms for stormwater management on construction sites as appropriate for their specific municipalities. EPA recognizes that municipalities are organized differently and that different departments or existing review channels may be involved in the site plan review process and for this reason we do not provide standard procedures.

EPA, state agencies, industry and watershed groups provide examples of language to be used in regulatory mechanisms to meet Part 2.3.5. of the permit: Permittees may use or modify language from EPA's Construction General Permit (CGP), or other approved small or large MS4 programs, among others, when developing an ordinance or regulatory mechanism. EPA has also identified a number of enforcement tools that may be included in local ordinances to improve compliance, including: Notices of Violation, Administrative Fines, Administrative Orders or Stop Work Orders, Civil Penalties, Criminal Penalties, or other Actions – including bonding requirements, requirements to implement BMPs and requirements to perform restoration work.

Because there may be limitations on regulatory legal authority, the permittee is required to satisfy this minimum control measure to the maximum extent practicable and allowable under New

[17] http://www.epa.gov/npdes/stormwater-discharges-construction-activities#overview, Accessed January 2, 2017

Hampshire laws and/or local laws. Additional information and guidance on the Small MS4 minimum control measures can be found on EPA's MS4 website[18].

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

351. Comment from Dr. Robert M. Roseen

Another limitation is the size of disturbance to trigger the post construction stormwater controls is too large. Many projects with the significant impacts are smaller than 1 acre. The cumulative impact of small sites is tremendous. In many urban and suburban areas, very few lots will exceed 1 acre but will represent the major form of development.

352. Comment from the Charles River Watershed Association

CRWA encourages EPA to modify this section to state that the program should apply to new development or redevelopment projects that disturb one or more acres of land*, or less if determined appropriate by the permittee*... (italics added). Many municipalities are highly developed and may have passed or wish to pass post-construction stormwater control ordinances for projects that redevelop sites that are less than an acre. They should be encouraged and explicitly allowed to do so.

EPA Response to Comments 351 - 352

In the urban environment a smaller size threshold may be warranted for new and redevelopment projects. However, this is a general permit which applies to urban environments as well as sub-urban and ex-urban environments where a smaller threshold may not be warranted. 40 CFR 122.34(b)(5) requires post construction requirements to apply to earth disturbances of greater than one acre; areas less than once acre shall be included if part of larger common plan, and this permit reflects that regulatory requirement. EPA notes that this threshold can be lowered on a permittee-by-permittee basis and the one acre threshold is a "minimum" requirement and Part 2.3.6. of the permit was modified to reflect this and re-noticed on September 1, 2015.

353. Comment from DOD - Department of Defense (Dept. of the Navy)

The draft permit includes requirements from EISA § 438 in a Clean Water Act (CWA) NPDES permit. We note EISA and the CWA are two separate statutes having related but distinct underlying purposes and enforcement mechanisms. The CWA is designed to eliminate the discharge of pollutants into navigable waters of the United States and the accompanying sovereign immunity waiver as related to federal facilities provisions apply to the "control and abatement of water pollution". EISA § 438 is designed to maintain or restore to the maximum extent technically feasible the pre-development hydrology of the property with regard to the temperature, rate, volume, and duration of flow. Therefore, EISA § 438 is designed to retain stormwater onsite to allow infiltration into groundwater rather than entry into navigable waters of the United States and goes beyond the waiver provision. We also note Congress did not amend the CWA when it passed EISA, nor the accompanying CWA sovereign immunity waiver provision. Any waiver of sovereign immunity must be unequivocally expressed and cannot be implied. Given that EISA does not have a sovereign immunity waiver, clearly EISA § 438 was written to be self-executing by federal agencies in the management of stormwater from federal development and redevelopment projects.

[18] https://www.epa.gov/npdes/stormwater-discharges-municipal-sources#developing, Accessed January 2, 2017

We do not believe the CWA authorizes the inclusion of EISA § 438 standards in New Hampshire GP-NHR042000. The CWA contains broad enforcement authorities to ensure compliance by the entire regulated community, including federal facilities, in applicable circumstances, but Congress did not extend that authority to the substantive EISA § 438 requirements. Prior to the inclusion of requirements based on EISA § 438 in an MS4 permit, we assume that EPA would complete federal rulemaking under the Administrative Procedures Act to amend its stormwater regulations, providing all stakeholders notice and the opportunity to comment on the standards, their effectiveness, and the economic impact of the imposition of such standards. EPA has only started this process by requesting for input on a rulemaking for newly developed or redeveloped sites through issuance of its Stakeholder Input on Stormwater Management Including Discharges from New Development and Redevelopment, 74 Fed. Reg, 68617 (December 28, 2009). As you know, DoD submitted comments on that proposal on February 24, 2010, requesting clarification of authorities under section 402(p) of the CWA.

EPA response to Comment 353

EPA determined that the inclusion of EISA § 438 standards as the post construction requirements for federal facilities created a higher standard for federal MS4s than traditional (city and town) MS4s and removed the requirement from the final permit in order to be equitable among all permittees subject to this permit. EPA re-noticed changes to Part 2.3.6 of the Permit on September 1, 2015 including the removal of EISA § 438 standards from Part 2.3.6 to allow for further comment on the updated post construction requirements.

354. Comment from City of Portsmouth

6. The City has already implemented numerous stormwater BMP projects in recent years. These have included the retrofit or installation of improved stormwater handling and treatment structures such as tree box filters and rain gardens. The City has also worked with community organizations and residents to assist with these installations on private property. These are in addition to other parcels in the City which have been developed with their own stormwater B.MP installations. A credit should be available to municipalities such as Portsmouth that have been proactive in this area.

EPA Response to Comment 354

EPA acknowledges the City of Portsmouth is taking a proactive approach to stormwater management. Cities such as Portsmouth that have been proactive in their stormwater management will find that compliance with the final MS4 permit will be easier and more streamlined than for a less-prepared MS4 operator. The City is not clear about what type of credit it is seeking. EPA notes that post construction retention/treatment offsets should be completed concurrently with the redevelopment project or after project completion. However, the City may be able to get credit in others ways. For instance, given that the city has installed tree box filters and other BMPs the requirement to inventory permittee owned property for potential retrofit as required in Part 2.3.6.e is likely something the City has already completed in site selection for other installed retrofits. In addition, a proactive town has likely already removed impediments to green infrastructure from town bylaws or ordinances and updated street design guidance, already completing the requirements of Part 2.3.6.c. and 2.3.6.d.

355. Comment from Dr. Robert M. Roseen

The permit needs to encourage more widely the usage of porous pavements. There is a misconception that porous pavements present a unique risk to groundwater contamination. The risk to groundwater exists for all infiltration and filtration practices and the measures and means by which this threat is controlled should

be similar. Systems can be limited or lined. Porous pavements represent substantial potential benefits hydrologically. No other LID practices can have such profound hydrologic impacts. Porous pavements can commonly recharge more rainfall than in a predevelopment condition. The same limitations do not exist for soil types as do for typical infiltration systems. Data shows that porous pavements on Hydrologic Group C soils can have as much as 25% recharge and annual volume reduction and type B soils can have as much as 92% annual volume reduction. Porous pavements can be built to be durable, and have tremendous water quality and quantity benefits. Improvements to design specifications are routine and the standard of practice is advancing rapidly. Additionally, porous pavements have also been shown to provide substantial salt reduction potential. As much as 50-75% salt reduction has been observed in some instances with the use of porous asphalt.

356. Comment from Dr. Robert M. Roseen

Cost concerns about LID stormwater management need to be balanced. Effective stormwater management will never be cost competitive with no stormwater management. However it can be cost competitive with common stormwater management using catch basins, curbing, pipe, and ponds. Two cost studies published in 2011 demonstrated a 6% and 26% savings in stormwater management infrastructure for a residential and commercial LID application. These projects had significant cost savings through the elimination of pipe, curb, retention ponds, clearing, and hydraulic control structures despite the usage of LID measures including porous asphalt, infiltration, and gravel wetlands.

357. Comment from Conservation Law Foundation

The Draft Permit Should Be Amended to Include Performance Standards Reflecting Low Impact Development ("LID") and Green Infrastructure as a Mandatory Requirement of Meeting the "Maximum Extent Practicable" Standard

CLF strongly urges the inclusion of permit performance standards that reflect Low Impact Development ("LID") or "green infrastructure" stormwater management practices as a mandatory requirement of satis fying the "maximum extent practicable," or "MEP," standard. As CLF explained in its March 31, 2010 comments on the Draft General Permit for Small MS4s for Massachusetts North Coastal Watersheds, and in its July 2010 sujpplemental comments on the Draft New Hampshire Small MS4 permit, LID/green infrastructure practices "are widely available, well proven, are generally more effective than conventional infrastructure at pollutant removal and volume reduction, and confer additional benefits to the community and the environment." See Correspondence from Cynthia E. Liebman, Staff Attorney, Conservation Law Foundation, to Thelma Murphy, Office of Ecosystem Protection, U.S. EPA Region 1 (March 31, 2010) (hereinafter "CLF 2010 Comments"), provided herewith as Attachment 1. Attachments A, B, C, and Dl-73 to CLF's 2010 Comments21 explain in great detail that these practices represent "the current expression of controlling polluted stormwater runoff to the 'maximum extent practicable' ('MEP')." Id. As CLF explained:

> From the outset, EPA has made clear the expectations that technologies would evolve, and that the Maximum Extent Practicable standard in the second round of small MS4 permits would reflect what was learned about the effectiveness of the BMP implemented during the first round. The need to meet water quality standards was to drive the evolution of the MEP standard, itself, because the ultimate objective of all BMPs is to ensure the attainment of water quality standards. As EPA expressed in the MS4 Final Rule:
>
> The Maximum Extent Practicable standard] 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. If, after implementing the six minimum control measures there is still

> water quality impairment associated with discharges from the MS4, after successive permit terms the permittee will need to expand or better tailor its BMPs within the scope of the six minimum control measures for each subsequent permit. 64 Fed. Reg. 68722, 68754 (Dec. 8, 1999) (EPA Stormwater Phase II Final Rule).

EPA anticipated that "the NPDES permitting authority may ask the permittee to revise their mix of BMPs, for example, to better reflect the MEP pollution reduction requirement." 64 Fed. Reg. 68722, 68754 (Dec. 8, 1999) (EPA Stormwater Phase II Final Rule). At this juncture, ten years after the Small MS4 program was first enacted, and given the wealth of data generated in the interim, it would b1~ inappropriate for EPA Region 1 not to include LIDbased performance standards and revise the scope of required BMPs to reflect LID/green infrastructure. Comments by Dr. Robert Roseen, Director of the University of New Hampshire Stormwater Center on the draft permit22 and Dr. Stephanie Hurley's Statement on Low-Impact Development23 confirm that Low-Impact Development and green infrastructure is well tested, effective at stormwater volume reduction and pollutant removal, suitable for New England, and confers ancillary benefits. Dr. Roseen's professional opinion is that "LID stormwater management works effectively throughout multiple seasons including challenging winter conditions. Data shows that it works better for water quality than conventional stormwater management." He also confirms that studies have shown LID to be cost effective and in some cases to result in cost savings. Furthermore, Dr. Roseen cautions that "with the raising of the standards for MEP ... certain practices should be disallowed for usage. Practices that have been demonstrated to be contributing to the water quality failures should be eliminated .... " Dr. Hurley's professional opinion regarding LID is that it "offers a more ecological, flexible, and context-sensitive stormwater management approach and more readily meets water quality and hydrologic performance standards than conventional stormwater management." Furthermore, Dr. Hurley has personally evaluated LID implementation sites at various locations throughout the U.S. and internationally, and confirms that "the principles of LID design can be successfully applied in various topographies, geographies, and climates" including New England, and at a variety of scales. Her conclusion is that LID represents the maximum extent practicable for storm water treatment. The direct testimony of Richard Horner, before the Pollution Control Hearings Board for the State of Washington in the matter of the Seattle Phase I stormwater permit (Attachment D3), affirmed that LID techniques are "unquestionably 'known' and 'available' techniques. In many cases, implementation of LID for new or redevelopment i:; less costly than conventional BMPs, and offers other economic benefits such as improved property values or reduced water use." Dr. Horner further asserted that the Seattle Phase I permit at issue did not "use all known available and reasonable methods" to control stormwater from new and redevelopment, and it was "highly unlikely" that compliance with water quality standards could be achieved using conventional techniques. Further, he asserted that "LID approaches are far more protective of water quality than the conventional BMPs" and that the permit did not reflect the maximum extent practicable standard. The direct testimony of Dr. Derek Booth in the same matter asserted that "the [Seattle Phase I] Permit ... does not protect rivers and streams, beneficial uses, or aquatic life. Continued reliance on such a [flow-based] standard for new development in western Washington will not prevent serious and significant additional degradation to these resources," and in his professional opinion, "a more protective performance standard that more closely matches natural hydrology ... is readily achievable without sacrificing opportunities for future development. Achieving a more protective standard would rely on site- and basinlevel LID BMPs that are in my opinion, sufficiently well known, understood, available and economically and technologically feasible that they can be implemented throughow: western Washington." Thomas Holz, an experienced civil engineer, testified that

LID approaches are generally more effective at protecting water quality and beneficial uses than the engineered, end-of-pipe standards embraced in the 2005 [Washington] Manual and Permit. They are known,

available, and reasonable (as well as "practicable") in vi rtually all new and redevelopment situations. (Attachment D 1, [of Cl.F's 2010 Comments] at 9[33.)

In addition, a wealth of technical articles, case studies, litigation documents, and federal government guidance documents and fact sheets summarized in Attachment C and included as Attachments 04 - [73] all demonstrate these principles.

CLF 2010 Comments, provided as Attachment 1, at 11-13 (emphasis in original). In addition to the above, it is important to note that the N.H. Department of Environmental Services has itself acknowledged the limitations associated with conventional stormwater management practices, stating in its 2008 Water Resources Primer:

> Data from national studies and from the UNH Stormwater Center have shown that conventional approaches to stormwater management (detention basins, treatment swales) do not meet DES's cumulative performance standard of 80 percent removal of total suspended solids (the most commonly used benchmark for such structures) and that they do not provide a viable means of meeting future water quality objectives ....

NHDES, NEW HAMPSHIRE WATER RESOURCES PRIMER, R-WD-08-23 (Dec. 2008) at 10-5 (available at http://des.nh.gov/crganization/divisions/water/dwgb/wrpp/p1imer.htm). Additional and more recent resources provided herewith reinforce the value, effectiveness, and importance of implementing LID. See Attachments 2, 2A - 20 (provided on disc). Consistent with the well established body of evidence that LID is practicable and a critically important tool for controlling stormwater pollution to the maximum extent, the State of Washington's Pollution Control Hearings Board invalidated that state's 2007 Phase I Municipal Stormwater Permit for its failure to require LID and remanded the permit for amendments establishing LID requirements.34

In its Fact Sheet for the instant draft permit, EPA itself acknowledges that it "has interpreted the MEP requirement as representing an iterative approach that requires that standards be raised each permit term so that progress will be made toward the attainment of water quality standards and towards the goals of the Clean Water Act established by Congress." Fact Sheet at 144. It further describes the superiority and value of LID, as compared to conventional storm water management approaches, as well as the feasibility of implementing LID, stating in its Fact Sheet:

EPA recognizes that many municipalities are more comfortable with traditional stormwater management practices such as curbs and gutters, pipes and detention basins, than they are with LID practices that mimic natural hydrology and treat stormwater as a resource. While traditional stormwater management has the virtue of familiarity, it has unfortunately become apparent that the traditional approach has resulted in significant damage to water quality that is difficult and costly to remedy. Under the traditional approach, the effects of development and urbanization on water resources are well known and include degraded habitat, incised channels, impaired aquatic life, high pollutant loads, depleted and contaminated groundwater, and higher incidence of flooding, among others. See EPA, Incorporating Low Impact Development into Municipal Stormwater Programs, 901-F-09-005 (April 2009). LID represents a paradigm shift in approach to reduce runoff and to mimic a site's predevelopment hydrology by infiltrating filtering, storing, evaporating, capturing for reuse, and detaining stormwater runoff that EPA considers crucial for protecting water quality moving forward. EPA disagrees with the comment that LID features will not function in cold climates. Research performed by the UNH Stormwater Center has produced encouraging results on the effectiveness of LID practices in winter conditions. As stated in the UNHSC 2009 Biannual Report

> LID Weathers the Cold: As a long-term field research program based in New England, UNHSC is uniquely suited to monitoring stormwater treatment system performance over a wide range of seasonal conditions. With four years of data complete, UNHSC research demonstrates that Low

Impact Development (LID) stormwater treatment systems function well in the harsh winters of cold climate regions. This finding contradicts widely held perceptions that LID systems do not perform as well as more conventional systems in winter conditions. In fact, UNHSC researchers have observed that conventional systems, such as swales, actually perform less effectively in winter months.

Fact Sheet at 102.

Despite all of the foregoing, the draft permit nonetheless adopts a flexible approach to the MEP standard that fails to require the use of LID and green infrastructure. As stated in its Fact Sheet, "EPA has intentionally not provided a precise definition of MEP to allow maximum flexibility in MS4 permitting." Fact Sheet at 72. While CLF agrees that permittees should be provided some level of flexibility in assessing which particular stormwater management measures are appropriate and most effective In specific locational contexts, taking into account site- and water-specific factors, we disagree with a "maximum flexibility" approach that does not require the implementation of LID and green infrastructure. Based on all of the above, including EPA's own acknowledgment of iterative enhancements of the MEP standard and the fact that LID and green infrastructure approaches are both practicable. and represent the on-the-ground management approaches that control pollutants to the maximum extent, CLF strongly urges EPA to amend the New Hampshire draft permit to require permittees to utilize performance standards for LID/green infrastructure for purposes of satisfying the permit's MEP standard. Absent such requirements, the permit will not fulfill or comply with the Clean Water Act's water quality objectives.

EPA Response to Romments 355 - 357

EPA has not made the use of specific low-impact development (LID) or green infrastructure (GI) BMPs mandatory in this permit, however, the final permit requires the use of LID where feasible. Permittees could choose to meet the retention/treatment standards in the final permit through LID, GI, or another equivalent alternative retention/treatment method.

EPA agrees that low impact development (LID) and green infrastructure (GI) features, such as porous pavement, will be important components of a successful stormwater management program. EPA also agrees that continuing to allow development and redevelopment to take place using the traditional approach will have continued detrimental effects on water resources in New Hampshire including degraded habitat, incised channels, impaired aquatic life, high pollutant loads, depleted and contaminated groundwater, and higher incidence of flooding. EPA also agrees that the use of GI and LID during new and redevelopment represents a practicable approach to addressing impacts from stormwater runoff on receiving water bodies by minimizing the pollutants in runoff and in many cases reducing the volume of stormwater from of the development site, recharging groundwater resources and reducing flooding impacts. To date, 40 states have developed numeric performance and/or design standards to control post-construction runoff from new development and redevelopment – all relying on GI and LID to achieve the standards (USEPA, 2016). In addition, recent research in New Hampshire has found that using LID and GI in new development can lower the cost of construction as opposed to traditional curb and gutter systems (Houle, et al., 2013). In response to the above comments and other comments received, EPA redrafted Part 2.3.6. and EPA re-noticed changes to Part 2.3.6 of the Permit on September 1, 2015 to allow for further comment on the updated post construction requirements including LID and retention/treatment requirements for post construction stormwater runoff. See EPA Response to Comments 386 - 388 for additional discussion of post construction final permit requirements.

358. Comment from the City of Rochester

EPA does not have the authority to implement this section as it clearly states that its goal is to mirror or improve the preconstruction hydrology of the site. Hydrology relates to flow and flow is not a pollutant and cannot be regulated under this permit. These requirements should be stricken from the permit.

The EPA does not have the authority to implement sections 2.3.6.6 or 2.3.6.8 as it seeks to control the amount of impervious cover within the City of Rochester. Impervious cover is a surrogate for flow and flow is not a pollutant and cannot be regulated under this permit.

EPA Response to Comment 358

See EPA Response to Comments 46 - 54, EPA Response to Comments 55 - 60, and EPA Response to Comments 227 - 233. It is not clear why the commenter believes EPA does not have the authority for the requirements in Part 2.3.6. and there seemed to be some confusion over what the post construction requirements were requiring and further confusion on what was being regulated in the 2013 Draft Permit on the part of the commenter. Due in part to this comment and others received on Part 2.3.6, EPA re-noticed changes to Part 2.3.6 of the Permit on September 1, 2015 to further clarify the post construction requirements and allow for additional comment after clarification. It should be noted that the permit does not seek to control or regulate the amount of impervious cover within a community. This permit is written in accordance with the CWA and implementing regulations. Since promulgation, the small MS4 program recognized the impact of runoff from lands modified by human activities on surface waters and, as such, post construction requirements envisioned a program that was designed to "minimize water quality impacts; and attempt to maintain pre-development runoff conditions." 40 CFR § 122.34(b)(5)(iii). The requirements in Part 2.3.6. were written in accordance with 40 CFR § 122.34(b)(5) and were informed by the impacts development has on water quality in New Hampshire and across the country (Lin, 2004) (New Hampshire House Bill 1295 Chapter 71 Laws of 2008 Stormwater Study Commission, 2010) (Pitt, et al., 2005) (USEPA, 2010) (Pitt, et al., 2005) (Shaver, et al., 2007) (National Research Council, 2008) (US EPA, 1999) (USEPA, 2016). In addition, the requirements contained in part 2.3.6. align with post construction requirements in other MS4 permits in New England and across the country; to date 26 states have small MS4 permits with numeric post construction retention or treatment requirements similar to those requirements found in this permit as part of post construction requirements (USEPA, 2016). The final permit requirements were additionally modified to address comments on the re-noticed requirements of part 2.3.6. See EPA Response to Comments 386 - 388 for further discussion of post construction requirements in the final permit and the rewording of the objective for clarity.

359. Comment from the Neponset River Watershed Association

If the MS4 discharges to an impaired water and if it isn't clear how long this condition will continue, its ordinance should include authority to implement the "additional" measures" contained in 2.2.2.a.ii.(b)2.c) and 2.2.2.a.ii.(e). It is particularly important that such town ordinances or regulations "require the use of BMPs effective at reducing the pollutants of concern in development/redevelopment within the MS4 area."

EPA Response to Comment 359

In the urban environment additional requirements for new and redevelopment may be warranted, and, indeed, may be needed to comply with requirements of part 2.2.2 and Appendix F and H of the final Permit. However, this general permit applies to a wide range of permittees and Part 2.3.6. is written in accordance with 40 CFR 122.34(b)(5) and what is practicable for all permittees. EPA notes that the requirements of Part 2.3.6. of the permit represent a minimum level of control required and any permittee may choose to impose additional requirements beyond the requirements of Part

2.3.6. for new and redevelopment sites. The permit was augmented to reflect this fact and re-noticed on September 1, 2015. Practically, many permittees may need additional measures to meet the requirements of Part 2.2.2, but the permit does not contain a requirement that an ordinance contain such language.

360. Comment from the Town of Hampstead

Benthic-Macroinvertebrate Bioassessements: The area of Kelly Brook is surrounded by conservation land and residential homes. The Town is built out by approximately 95%. For the residents who live near Kelly Brook - how are we going to limit the impervious surface? Not let the homeowner put up a storage shed or pave his or her driveway?

EPA Response to Comment 360

EPA notes that the permit does not require that permittees limit the amount of impervious area on residential lots. The permit requires management of stormwater resulting from new development and redevelopment. While reducing the amount of impervious surfaces may play a role in effective stormwater management, it is not a requirement of the permit. The permit sets forth minimum requirements for new development and redevelopment that disturb greater than 1 acre of land to minimize the impacts from stormwater on receiving waters after development is complete. It should be noted that the Town of Hampstead may find the 1 acre threshold may be too high to meet their stormwater management goals or priorities and can choose to implement post construction requirements on those sites that disturb less than 1 acre. In addition, the Town of Hampsted could update its ordinance to include limits on impervious cover if the Town believes control of impervious surfaces is necessary.

361. Comment from the Town of Derry

Section 2.3.6.3 requires permittees modify their stormwater ordinance or regulation to require compliance with the NH Stormwater Manual. The Town objects to mandating "compliance" with a specific "manual" in that it is meant to be a reference and are not a statutory regulation and should be removed from the permit. The Town has already included in its ordinance and regulations a reference to industry accepted and state (DES and DOT) Manuals as guidelines for implementing best management practices in the interest of stormwater pollution prevention.

362. Comment from the Town of Danville

Use of the State Stormwater Manual: Currently in the 2003 MS-4 General permit communities are required to develop their own Stormwater Management Plans and use them as guidelines and regulations of how we address our stormwater management practices based on our own rules, regulations and state laws. The Town requests guidance on why the EPA would require the use of the State Stormwater Manual as part of the regulatory mechanism.

363. Comment from NH Stormwater Coalition:

Section 2.3.6.3 of the Draft Permit would require that the municipal “ordinance or other regulatory mechanism be amended or modified within two (2) years of the effective date of the permit to require compliance with the design criteria set forth in the most recent version of the New Hampshire Stormwater Manual.” Draft Permit, at 41. The New Hampshire Stormwater Manual is a huge three-volume document that is not a federal regulation nor was it adopted as a state regulation. First, it cannot appropriately be imposed as an NPDES permit requirement by reference. At a minimum, EPA would have to provide its own specific analysis of all provisions and conclude that compliance with such provisions are necessary to meet

the requirements of the Act. No such analysis has been presented. Furthermore, even if it could be imposed, the permit could not appropriately require the permittee to meet a future revision which is not in existence as of the date of the issuance of the NPDES permit. As to these two issues, the federal regulations are clear: For a permit issued by EPA, an applicable requirement is a [federal] statutory or regulatory requirement (including any interim final regulation) which takes effect prior to the issuance of the permit 40 C.F.R. § 122.43(b). As the New Hampshire Stormwater Manual is neither a federal regulation nor a statutory provision, it cannot be incorporated into an EPA-issued NPDES permit, whether an individual permit or a general permit.

Furthermore, requiring the use of this manual can impose huge costs upon facilities to be managed by the MS4 entity. This is an example of costs that were not incorporated into EPA's cost estimates or by EPA's evaluation of the impacts under the RFA. This provision must be deleted from the permit.

EPA Response to Comments 361 - 363

In light of the above comments, and other comments on Part 2.3.6, EPA re-noticed changes to Part 2.3.6 of the Permit on September 1, 2015 which included updated language to refer to use of the New Hampshire Stormwater Manual only where applicable. Further, it is not unusual for NPDES permits to require that permittees follow methods and procedures or to meet standards specified in other source documents in order to achieve compliance with the permit. So long as the permit makes clear what the source document is (and includes key information, such as citation and date of publication) and what is required, and as it is clear how the document pertains to implementation of specific permit requirements, such use of other published materials serves the dual purpose of relying on established practices and procedures without the need to duplicate such (often, lengthy) material in the permit and helps to ensure that permittees are not subject to conflicting standards in conducting measures required by the permit when other standards satisfy the requirements and objectives of the permit. In this instance, the use of the NH Stormwater Manual is an appropriate means of ensuring that the MS4s subject to this permit will design BMPs in a technically sound manner to help ensure proper BMP function in meeting the requriements of this permit.

See EPA response to Comments 556 - 561 and EPA response to Comments 592-593

.Comment from the Neponset River Watershed Association

We are happy to see that EPA in Section 2.3.6.6 – 2.3.6.8 recognizes that many municipal bylaws, regulations, rules and design standards – not just those contained in Stormwater Bylaws – greatly impact the implementation of proper stormwater management. We believe that EPA should at least encourage towns to identify a single municipal Stormwater Manager whose job it would be to coordinate with all municipal Boards and Departments that have rules impacting stormwater. EPA should also provide, in the permit or in guidance issued pursuant to the permit, a list of the many available "Checklists" MS4s can use to evaluate the stormwater impacts of municipal zoning ordinances, construction codes, subdivision regulations, street and parking requirements, etc.

EPA Response to Comment 0

While many permittees may find it helpful to hire a single Stormwater Manager it is not in the scope of an NPDES permit to require that an MS4 operator have a specific position for the management of their permit requirements. Towns will be required to identify in their SWMP the departments and offices responsible for various permit-related tasks and deliverables. Smaller permittees may not need a dedicated position to comply with the terms of this requirement. EPA declines to add such a

provision to the final permit. See EPA's technical support document (USEPA, 2011) for information regading parking lot design standards review.

364. Comment from the City of Rochester

The EPA does not have the authority to mandate the City of Rochester's use of a specific BMPs such as low impact development or a green infrastructure practices.

EPA Response to Comment 364

The permit does not require the use of a certain BMP to meet the requirements of part 2.3.6. Instead, the permit provides specific requirements that can be met using a variety of different BMPs specific to the development or redevelopment site.

See EPA Response to Comments 46 - 54, EPA Response to Comments 55 - 60, and EPA Response to Comments 227 - 233.

365. Comment from the Town of Milford

3. Review of Ordinances (2.3.6.6)-The staff, administrative, and public participation efforts anticipated are significant. The timing of reviews by independent boards, such as the Planning Board, is subject to existing workloads and scheduling. Further, given the possible need for Town Meeting action on proposed changes, the proposed two-year time frame may not be sufficient, especially if the finalization of the permit occurs at a time not in concert with legislatively defined schedules. We therefore recommend that these time frames be increased by at least 180 days.

EPA Response to Comment 365

In light of the above comment, and other comments received on Part 2.3.6, EPA re-noticed changes to Part 2.3.6 of the Permit on September 1, 2015 which included an updated schedule to complete the ordinance reviews. See EPA Response to Comment 382.

366. Comment from the Charles River Watershed Association

CRWA strongly supports the inventorying and reporting of lA, including tracking changes in lA over time, and the retrofitting of lA to reduce stormwater runoff. However we are not confident that at this time there are clear and widely accepted practices for estimating DCIA. As a result, it is not clear that this requirement will benefit stormwater management programs and may create confusion, conflicting approaches, and unenforceable conditions on permittees. We suggest that, for this permit cycle, this section be modified to eliminate DCIA and to focus on lA only.

367. Comment from the Neponset River Watershed Association

Directly Connected Impervious Area. The proposed subsection has a lot of planning, identifying, and prioritizing, but does not appear to actually mandate that any retrofitting be implemented. It is even unclear whether retrofits are required if a town is unable to demonstrate, after implementation of other BMPs, that they are not causing or contributing to the violation of a water quality standard (see Section 2.2.2a.ii.(b)2.f)). Surely such retrofitting should be required in that circumstance.

368. Comment from the City of Portsmouth

2.3.6.8 Directly Connected Impervious Area: The requirement to complete an inventory and prioritization of MS4-owned property and infrastructure that may have the potential to be retrofitted is a burdensome and unreasonable requirement. The City of Portsmouth owns 184 parcels of land totaling

1,140 acres. The City estimates a cost of at least $54,000 to complete this task. Those funds could be better spent on already identified storm water treatment infrastructure needs and operational activities. Retrofits should be applied as corrective measures for areas that are already impaired from polluted stormwater runoff, or as opportunistic when a property is already planned for redevelopment. This requirement should be removed from the General Permit.

369. Comment from the City of Nashua - Mayor Lozeau

Part 2.3.6.8.b Directly Connected Impervious Area- "Within two (2) years of the effective date of this permit, the permittee shall complete an inventory and priority ranking of permittee-owned property and infrastructure that could be retrofitted with BMPs ..." Comment: The City agrees that an inventory of infrastructure for potential BMP retrofits is a good approach to understand where to make improvements to mitigate the stormwater impacts associated with impervious areas. The City understands the need and continues to look for opportunities to install BMPs at its schools and municipally-owned properties. However, the mapping requirements in Part 2.3.4.6 of the MS4 Permit and Part I.D.5.4 of the CSO & WWTP Permit as well as the efforts to develop WQRPs under Part 2.2.2 of the MS4 Permit will guide and inform the need for BMP retrofits. Developing and evaluating this data will lead to a more focused effort to evaluate potential BMP retrofits and the schedule for the mapping and other data gathering does not coincide with the schedule outlined in this part of the permit. Request: Please revise the schedule under Part 2.3.6.8.b to allow sufficient time (i.e., Permit Year 4) to integrate the schedule for WQRP development under Part 2.2.2 of the permit.

EPA Response to Comments 366 - 369

While directly connected impervious area (DCIA) is an important metric when estimating drainage area impact on receiving water quality, EPA has removed the requirement to track DCIA jurisdiction-wide. EPA has determined that estimating DCIA should be tied to actions associated with reducing the amount of DCIA in a particular catchment, and has therefore placed requirements to assess and address DCIA where there will be the greatest environmental benefit. Part 2.2.2 and Appendix F and H of the Final Permit contain requirements for certain impairments to assess DCIA on a sub catchment basis, and prioritize retrofits based on potential pollutant loading (areas with high DCIA) to address in-stream water quality issues where stormwater is causing or contributing to the impairment. In addition, EPA finds that the post-construction stormwater requirements for new development and redevelopment will lower the amount of DCIA within the MS4 area over time.

In addition, part 2.3.6 of the Final Permit includes requirements for each permittee to assess permittee-owned properties for retrofit opportunities to reduce impervious area. These requirements will reduce the overall DCIA in each town over the life of the permit. Comparatively, tracking total DCIA is a less valuable exercise at the municipal level.

EPA agrees that assessment of jurisdiction-wide impervious area and DCIA is an exercise best done at the regional or state level with sophisticated flyover mapping techniques, and EPA plans to work with NHDES and others to continue to pursue impervious cover and DCIA mapping on a larger scale at consistent intervals. In consideration of the above comments, EPA re-noticed changes to Part 2.3.6 of the Permit on September 1, 2015 that included the proposed removal of the requirement to track DCIA. Tracking DCIA is not included in the final permit.

370. Comment from MCWRS

The requirement to complete an inventory and prioritization of MS4-owned property and infrastructure that may have the potential to be retrofitted is a burdensome and inappropriate requirement for most

municipalities, many that own significant acreage. To comply would be costly and expend funds that would be better spent on already identified stormwater treatment infrastructure needs and operational activities. Retrofits should be applied as corrective measures for areas that are already impaired from polluted stormwater runoff, or as opportunistic when a property is already planned for redevelopment. This requirement should be removed from the General Permit.

371. Comment from the Town of Danville

Inventorying and ranking MS-4 owned property for BMP retrofits. The property the town owns varies from our town buildings to town forest areas and conservation land. The work that would need to be done to determine what needs to be accomplished under the permit could again run into funding issues. To accomplish the mapping to evaluate elevation/ topography, underlying soils, expected depth to groundwater and relationship to wetlands would require the town hiring various consultants to accomplish all phases of this regulation especially when the time frame for accomplishing this is very limited.

EPA Response to Comments 370 - 371

In consideration of the above comments, EPA re-noticed changes to Part 2.3.6 of the Permit on September 1, 2015, which included an updated schedule to complete the retrofit inventory, now required to be completed four years after the permit's effective date.

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

372. Comment from the Town of Danville

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.

373. Comment from the town of Derry

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?

374. Comment from the City of Rochester

§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.

375. Comment from the DOD - Department of Defense

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."

EPA Response to Comments 372 - 375

The draft permit and the final permit do not require that the permittees retrofit all permittee owned properties. The retrofit inventory requirement in Part 2.3.6.e. of the permit is intended to provide permittees with potential retrofit opportunities on permittee owned property and to conduct one (1) demonstration retrofit project within six years of the permit effective date. EPA encourages permittees to draw on the retrofit inventories as required by part 2.3.6.e. to find suitable offsite projects to fulfill the requirements of 2.3.6.a.ii.e. when developers are unable to meet full retention or treatment requirements on a redevelopment site.

EPA is allowing flexibility in how permittees rank their own retrofit sites and has not explicitly provided a list of required considerations as part of the retrofit inventory requirement. When identifying sites for retrofit opportunities there is no language in the final Permit that would preclude permittees from taking cost, feasibility, town priorities, already retrofitted sites, flood risk mitigation, or any other information the permittee deems important into consideration, and, in fact, EPA encourages the thoughtful inventory of properties for retrofit opportunities.

It is unclear why one commenter believes this requirement goes beyond the MEP standard and applicable law. See EPA Response to Comments 46 - 54, EPA Response to Comments 55 - 60, and EPA Response to Comments 227 - 233. Regarding funding for this requirement, see EPA response to Comments 592-593.

376. Comment from Conservation Law Foundation

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.

EPA Response to Comment 376

See EPA Response to Comments 367 - 370.

EPA declines to reinstate the requirement to track the changes in DCIA town wide. EPA finds that targeting DCIA reduction through inventory and demonstration projects as required by Part 2.3.6.e. will focus permittees' efforts on reducing impervious area and DCIA on permittee owned properties

and represent adequate requirements to mitigate permittee owned DCIA. The requirements of 2.3.6.a. will also result in an overall decrease in DCIA and decrease in pollutant loads through redevelopment that occurs throughout municipalities.

377. Comment from the Town of Derry

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.

378. Comment from the City of Rochester

§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.

EPA Response to Comment 377 - 378

Section 2.3.6.a.ii.(a) does not require the town to mandate the use of LID for new development but it should be used to the maximum extent feasible because it is an effective way to reduce stormwater pollutant discharges from new development and redevelopment sites. EPA disagrees with the assertion that LID use has no added benefit as the commenter suggests. LID provides many co-benefits to the site beyond stormwater pollutant removal including, flood risk mitigation, groundwater recharge and the potential to lower development costs (Houle, et al., 2013) among other benefits (see Fact Sheet at 102). It is not clear what “State Regulations” one commenter is referring to. If the commenter’s ordinance already meets the requirements of Part 2.3.6.a., then the commenter is already in compliance with 2.3.6.a. and no additional work will be necessary for that Part.

Please note this permit is not a law or regulation as put in place by local, state, and federal government but a general permit for certain stormwater discharges. See EPA Response to Comments 46 - 54, EPA Response to Comments 55 - 60, and EPA Response to Comments 227 - 233. It is not explained why this requirement is beyond MEP and applicable law, therefore, EPA cannot specifically respond to the City of Rochester’s claims.

379. Comment from Conservation Law Foundation

The proposed modifications include the requirement that " [p]ermittees shall develop, implement, and enforce a program to address post-construction storm water 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 be low). 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. [footnote: *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.] 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. [footnote: 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 whi le achieving other environmental, public health, social, and economic benefits (2014) http://www.epa.gov/smartgrowth/pdf/g i-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 (20 13) http://water.epa.gov/polwaste/green/upload/lid-gi-programs report 8-6-13 combined.pdf.] 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 storm water 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 provisions ensuring that LID/green infrastructure, as well as continuous monito1ing 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 pe1mittees to assess whether local regulations and codes *allow* LTD/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 fo1th 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 Response to Comment 379

EPA declines to add a requirement that LID measures be fitted with real time monitoring equipment as the commenter suggests. Many LID/green infrastructure practices have been studied extensively to evaluate performance and EPA finds the level of effort required to properly estimate LID/green infrastructure performance is better suited for academic undertaking. New development and redevelopment requirements of this permit contain pollutant removal requirements as one option for post development stormwater design. EPA finds that the approach taken in Part 2.3.6.a. of the permit represent a practical approach that provides certainty to developers that post construction requirements are met through the use of robust long term estimates of LID/green infrastructure pollutant removal and the requirements should not be based on real time performance data that may not represent long term benefits of GI implementation.

EPA disagrees that the requirements of Part 2.3.6.c. and 2.3.6.d. of this permit should require codes and ordinances to require the use of LID/green infrastructure instead of making LID/green infrastructure allowable. The requirements of Part 2.3.6.c. and 2.3.6.d. of the permit are intended to facilitate easy implementation of post construction stormwater management system design requirements of Part 2.3.6.a. Part 2.3.6.a. of the permit requires pollutant removal requirements for new and redevelopment through the retention/treatment requirements that will be met through the use of LID/green infrastructure technologies in the majority of cases. The assessments of Part 2.3.6.c. and 2.3.6.d. will ensure that developers are given the most flexibility in meeting the requirements of an ordinance or bylaw consistent with Part 2.3.6.a. EPA notes that if a municipality chooses to require certain LID/green infrastructure practices in their bylaws they are free to do so, however, EPA finds that forcing the use of a particular type of LID/green infrastructure practice in this general permit is not warranted.

See also, EPA Response to Comments 351 - 352, EPA Response to Comment 378 - 379, EPA Response to Comments 384 - 385, EPA Response to Comments 386 - 388.

380. Comment from the City of 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.

EPA Response to Comment 380

In order to accommodate requests for extra time to complete some permit requirements and prepare for permit implementation EPA has set the Effective Date of the permit to July 2018. This delay in effective date will allow permittees to adequately prepare for permit implementation and begin many of the permit requirements, such as the development of an ordinance.

Changes to the Permit: The Effective Date of the final permit will be July 1, 2018.

381. Comment from the City of Manchester

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.

EPA Response to Comment 381

Part 2.3.6.a.ii.(b) does not contain a requirement to monitor commercial and industrial properties for proper salt storage. Part 2.3.6.a.ii.(b) requires that the permittee's new development and redevelopment ordinance (or other regulatory mechanism) require that road salt be properly stored on commercial and industrial new or redevelopments. The permit has been updated to make this clear. This permit does not authorize the direct dumping of snow into waters of the U.S. as such a discharge is not considered stormwater or an allowable non-stormwater discharge.

Changes to the Permit: Part 2.3.6.a.(ii)(b) has been updated in accordance with the above response.

382. Comment from the City of Manchester

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 drought. 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. Areas 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.

EPA Response to Comment 382

Infiltration BMPs and other LID practices have the co-benefits of reducing the discharge of stormwater pollutants to local waterways as well as providing groundwater recharge. The City highlights the fact that infiltrating water over a wider area (i.e. mimicking pre-development natural conditions) is an ideal way to restore baseflow. Infiltration BMPs are installed to mitigate the effects of impervious cover, which greatly reduces groundwater recharge and instead generates greater, more polluted, stormwater runoff. The city's claim that infiltration practices or rainwater collection are detrimental to groundwater baseflow is not supported by current science. The study in Douglas County, CO (which receives half of the precipitation NH receives annually) mentioned by the commenter actually found that "rainwater harvesting does have potential as a sustainable water management approach… Existing literature shows that physically, not all of the precipitation falling on an undeveloped site returns to the stream system. However, current Colorado law does not allow rainwater harvesting to be utilized to its full advantage…" (Leonard Rice Engineers Inc, Meurer & Associates and Ryley Carlock & Applewhite, 2007). In part because of the study's findings, in the spring of 2016 a new law was passed in Colorado (HB 16-1005) that allows for the residential capture and use of rainwater from roof runoff.

The aforementioned study demonstrates the importance of assessing the benefits of green infrastructure and water capture practices in order to inform updates to legislation at the state or local level that govern development and water use. Scientific literature has documented the benefits of green infrastructure and rainwater capture and the permit requires an assessment of local regulations that may be an impediment to these practices.

Currently none of these practices are prohibited at the state level in New Hampshire. EPA does not expect major changes in state law during the permit term that would render this requirement impractical or illegal nor does EPA expect the State to implement water appropriations as the commenter suggests.

The deadline for completing the report assessing the allowance of certain green infrastructure practices has been extended to four (4) years in response to this and other comments on the complexity of this assessment. In addition, the deadline in Part 2.3.6.e. has been extended to four (4) years to allow coordination of efforts to complete these tasks. EPA suggests that this assessment represents one aspect of the permit that may be more efficiently conducted in collaboration with other permittees or watershed or stormwater organizations.

Changes to the Permit: Parts 2.3.6.d. and 2.3.6.e. have been updated in accordance with the above response.

383. Comment from the City of Rochester

§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.

EPA Response to Comment 383

The commenter seems to misunderstand the requirement of part 2.3.6.d. Rather than requiring broad and extensive feasibility studies, Part 2.3.6.d. states that local regulations must be assessed to determine limitations on the specific green infrastructure practices listed (at a minimum, permittees are encouraged to consider other practices as well during this assessment) and report on how local regulations could be updated to allow these specific practices. See EPA Response to Romments 355

- for a discussion of the benefits of green infrastructure and this permit requirement. The deadline for completing the report assessing the allowance of certain green infrastructure practices has been extended to four (4) years. The comment does not sufficiently explain why this requirement is unreasonable and goes beyond MEP and applicable law.

Changes to the permit: part 2.3.6.d. has been updated in accordance with the above response.

384. Comment from the City of Portsmouth

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 storm water."

385. Comment from the City of Rochester

§2.3.6.a.ii (b) contains ambiguous requirements for salt/snow storage areas on new/redevelopment 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.

EPA Response to Comments 384 - 385

EPA finds that the requirements of 2.3.6.a.ii(b) are not ambiguous and provide the level of detail necessary for permittees to update their ordinances to require proper salt storage on new and redevelopment commercial and industrial sites. NHDES Environmental Fact Sheets WD-WMB-4 and WD-DWGB-22-30 provide adequate information on salt handling and storage requirements including what is meant by “no untreated discharge” and “treatment of stormwater”. For clarity, EPA has added references to the Environmental Fact Sheets in Permit Part 2.3.6.a.ii.(b). It is unclear why the commenter feels this requirement is beyond MEP or what law the commenter believes this requirement to be contrary to.

Changes to the Permit: Part 2.3.6.a.ii.(b). has been updated in accordance with the above response

386. Comment from the City of Rochester

§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(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.

387. Comment from the City of Rochester

§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.

388. Comment from Tighe & Bond

(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.

EPA Response to Comments 386 - 388

The objective of the post construction requirements has been updated in the final permit. See EPA Response to Comment 358. For a discussion of EPAs authority to include post construction stormwater requirements in the final permit, see EPA Response to Comments 46 - 54. See also EPA Response to Comments 55 - 60 and EPA Response to Comments 227 - 233.

While permittees became familiar with controlling stormwater on new and redeveloped sites during the previous permit term, EPA has determined a state-wide consistent approach to dealing with post construction stormwater discharges is warranted as stormwater from urbanized areas continues to degrade the quality of waters in New Hampshire (New Hampshire House Bill 1295 Chapter 71 Laws of 2008 Stormwater Study Commission, 2010). State-wide consistency will provide a common standard for development and redevelopment in every regulated community and afford more consistent protection of affected waters. The permit contains retention/treatment requirements for newly developed and redeveloped sites that are meant to prevent excess pollutant loadings that result from the addition of impervious surface; to proactively protect receiving waters; and to ensure progress is made in protecting waterbodies from stormwater discharges over time. The increased pollutant loading associated with increased impervious area will further degrade the

receiving waterbodies if new and redevelopment is allowed to continue unmitigated.[19] Planning and design for the minimization of pollutants in post construction stormwater discharges is one of the most cost-effective approaches to stormwater quality management.

To define what is practicable for all permittees in New Hampshire, EPA relied upon the State's Alteration of Terrain (AOT) program as a starting point for retention/treatment post construction requirements. This is a program that developers in New Hampshire are familiar with and it provides a comprehensive approach to controlling stormwater runoff from development and protecting New Hampshire waterbodies. The AOT permit contains provisions that protect channels and require groundwater recharge. In addition, the AOT permit requires that stormwater controls be sized to capture the "Water Quality Volume (WQV)" which is based on treatment of 1 inch of rainfall multiplied by a runoff coefficient that uses the percent impervious cover on site. The result on new development or redevelopment sites that comply with the AOT requirements is the retention of stormwater on site based on soil type and the treatment of runoff that isn't retained. For most sites this will equal the retention and treatment of at least the 90th percentile storm event which is also equal to the first 1 inch of runoff from the site.

In addition, EPA surveyed post construction requirements across New England and the country to assess what other MS4 permits or state programs required for new and redevelopment post construction requirements. Currently, Connecticut, Maine, Massachusetts and Rhode Island have retention or treatment standards for post construction stormwater control that require the retention or treatment of a minimum of the first inch of runoff from the site (US EPA, 2016). In New England this is approximately the 90th percentile storm event. The Vermont post construction standard is the only retention/treatment requirement based on a percent retention and requires the retention of 90% of the annual storm events (USEPA, 2016). The retention or treatment of the 90th percentile storm for new development is also used across the country by many state programs (US EPA, 2016), and is similar to the AOT requirements. While other New England states have adopted one inch (or 90th percentile storm event) retention requirements for smaller developments (less than or equal to one acre of disturbance), New Hampshire' AOT permit currently only applies to large development activities (greater than 100,000 sq feet of disturbance). Development within New Hampshire that does not include protective retention or treatment practices on smaller sites (this permit's post construction requirements apply to those sites disturbing greater to or equal than 1 acre of land as required by 40 CFR§122.34(b)(5)) will cause waterbodies in the State to continue to degrade and will not ensure that overall pollutant loads from MS4s will decrease over time through redevelopment controls. EPA has determined that the Final Permit's retention/treatment requirements are the minimum control measures necessary to ensure that municipalities are reducing stormwater pollutants to the maximum extent practicable, are necessary to protect waterbodies within New Hampshire, and are necessary and appropriate under the Clean Water Act.

[19] In the Preamble to the NPDES Permit Application Regulations for Storm Water Discharges, found at 55 FR 48054 (November 16, 1990), EPA describes that of equal importance to the pollutants washed into receiving waters from residential and commercial areas is "…the volume of storm water runoff leaving urban areas during storm events. Large intermittent volumes of runoff can destroy aquatic habitat. As the percentage of paved surfaces increases, the volume and rate of runoff and the corresponding pollutant loads also increase. Thus, the amount of storm water runoff from commercial and residential areas and the pollutant loadings associated with storm water runoff increases as development progresses; and they remain at an elevated level for the lifetime of the development."

When EPA took comments on the re-noticed requirements in Part 2.3.6. in September, 2015, the re-noticed permit relied solely on the AOT requirements for retention/treatment of stormwater from new and redeveloped sites. In response to comments above as well as comments EPA Response to Comments 46 - 54 , EPA has made some changes to the retention/treatment requirements in the final permit. In particular, the final permit limits the area in which the retention/treatment volume must be calculated to the portion of the site where construction activities have occurred: EPA has defined a "site" for the purposes of part 2.3.6. to mean "the area extent of construction activity, including but not limited to the creation of new impervious cover and improvement of existing impervious cover (e.g. repaving)." The final permit also includes a treatment option for meeting the post construction requirements in response to those commenters that found the requirements ambiguous. As discussed further below, redevelopment requirements were reduced and the linear project exemption was reworded in response to comments above.

Furthermore, the final permit contains reworded requirements for new development in Part 2.3.6.a.ii(d) to reduce ambiguity in permit requirements. Part 2.3.6.a.ii(d) requires that runoff discharged to the MS4 be routed through BMPs designed to retain the Water Quality Volume (WQV) onsite calculated in accordance with Env-Wq 1504.10. This language was added to the final permit based on confusion as to what the stormwater system had to be designed to treat or retain in the re-noticed section. "Retain" or "retain on-site" means keeping the required volume of storm water from discharging off the site that is being developed or re-developed. Retaining encompasses, among other things, any activity that infiltrates, captures for use, or evapotranspirates the stormwater. Retention on-site of the WQV of runoff using properly designed and maintained BMPs would lead to pollutant removal of over 90% of the sediment, phosphorus and heavy metals that would have been discharged in stormwater from the newly developed site (Tetra Tech Inc., 2010). In addition, the volume reduction in runoff achieved through the retention of the first inch of runoff would also reduce erosion and sedimentation in streams. This requirement for new development does not intend for stormwater controls to be designed to have the capacity to retain the runoff from every storm that produces the WQV of runoff area under all circumstances, instead it requires that BMPs be sized with the capacity to retain the WQV onsite. For example, several large storm events over a short period may produce runoff events where the WQV of runoff is not fully retained by the stormwater management system for each storm. Requiring retention of the WQV from all storms in such a circumstance would substantially increase the design volume of the stormwater management system and significantly increase the cost of implementation. The capacity equal to the WQV roughly equates to the capture or treatment of the 90^{th} percentile storm event in New Hampshire. The Permit does not mandate the use of a particular technology to retain the WQV on-site, which provides maximum flexibility for developers to use the vast array of Low Impact Development (LID) and green infrastructure techniques during site design to meet the requirements in the most economical way possible.

The final permit also includes a treatment-based option for an ordinance for new development where retention of the full WQV on site is not possible or desired. Including this option in the permit also provides the permittee additional flexibility to meet the post construction requirements for new development. Instead of designing a system to retrain the full WQV on site, this option bases post-construction BMP design on pollutant removal thresholds. The final permit treatment option at 2.3.6.a.ii.(d)(1)b. requires that stormwater management systems be designed to treat the runoff to the MS4 from impervious surfaces such that 90% of the total suspended solids (TSS) and 60% of the total phosphorus (TP) annual load are removed prior to discharge to the MS4. When calculating BMP removal efficiencies to comply with the treatment requirement, the BMP efficiencies are not evaluated on a per storm basis. Instead, the removal efficiencies are based on average yearly

pollutant removal. The 90% TSS removal efficiency requirement for new development is based on the fact that retention of the WQV on site would equate to the removal of approximately 90% of the sediment load delivered from the impervious surface on site. In addition, many BMPs without infiltration components have efficiencies of greater than 90% TSS removal when built with a capacity equal (and in some cases less than) the WQV. The TP removal efficiency requirement for new development was chosen at 60% reflecting the fact that treatment-only BMPs are not as efficient at removing phosphorus as they are at removing sediment (Tetra Tech Inc., 2010). For example, a biofiltration system designed with a capacity just over 0.5 inches of runoff would remove 60% of the phosphorus load while 95% of the sediment load would be reduced through the same BMP installation. A gravel wetland with a capacity of 0.57 in runoff can remove approximately the same ratios: 90% TSS removal and TP removal over 60%. The TP annual removal efficiency was also chosen as a surrogate for the removal of other stormwater pollutants, such as metals, for which BMP removal efficiencies are not as extensively developed as they are for phosphorous removal by stormwater BMPs. In order to calculate BMP removal efficiencies, EPA finds it is important to rely on a robust estimate of New England-specific BMP performance information when that information is available. The final permit requires the use of Region 1's BMP Performance Evaluation Tool (Tetra Tech Inc., 2010) or other performance evaluation tools developed by EPA Region 1 during the permit term to estimate BMP pollution removal efficiencies for BMPs when EPA tools provide pollutant removal estimates for the proposed or installed BMP. When BMPs are installed where EPA Region 1 tools do not provide pollutant removal estimates for the particular BMP being installed, any other state or federally approved BMP performance estimates can be used to estimate pollutant removal of the proposed or installed BMPs. EPA is aware that the tools currently provided by EPA Region 1 do not cover the entire suite of BMPs available for stormwater treatment, and does not want to limit the options developers may use to treat stormwater. There are many state or federally approved stormwater handbooks and performance estimates for a variety of BMPs not covered by EPA Region 1 tools, and while the performance estimates may not be tailored to be representative of New England climate conditions and stormwater quality, state or federally approved handbooks have gone through a review process with some level of scrutiny and will provide an estimate of pollutant removal that EPA believes will be representative based on the current understanding of the BMP in question's performance. It should be noted that the permit does not require any BMP to be designed with a specified WQV when meeting the treatment option for new development. This reflects the fact that even small BMPs (treating 0.3 inches of runoff or less) can be very effective at removing pollutants, and allows new development sites to use many green infrastructure practices in combination to meet the treatment requirement option at the least possible cost. However, if a permittee would prefer to adopt the water quality volume requirements in the AOT regulations, that is another option to meet the permit requirement.

The final permit contains reworded requirements for redevelopment in Part 2.3.6.a.ii(e) to reduce ambiguity in permit requirements and to ease requirements for redevelopment consist with some commenters requests. Part 2.3.6.a.ii(e) requires that stormwater discharged to the MS4 be routed through BMPs designed to **treat** the full Water Quality Volume (WQV) calculated in accordance with Env-Wq 1504.10 on site. This language differs from the new development requirements that required BMPs be designed to **retain** the WQV on site to allow for the use of more BMPs (treatment only BMPs) to meet the redevelopment requirement. This option does not contain treatment requirements and instead relies on BMP sizing to achieve estimated pollutant reductions, consistent with AOT regulations. On redevelopment sites that do not have the space for BMPs sized to meet the WQV sizing requirements of Part 2.3.6.a.ii.(e)(1)a. the final permit includes a treatment option to provide additional flexibility on redevelopment sites. Instead of designing a system to retain or treat

the full WQV on site, the post construction requirements allow developers to design a system to meet pollutant removal thresholds. The final permit treatment option at 2.3.6.a.ii.(e)(1)b. requires that stormwater management systems be designed to treat the runoff from impervious surfaces that would otherwise be discharged to the MS4 without any treatment such that 80% of the total suspended solids (TSS) and 50% of the total phosphorus (TP) annual load are removed prior to discharge. The same principles of calculating annual removal discussed above for new development apply for redevelopment as well. The treatment thresholds have been reduced from new development in order to not dis-incentivize redevelopment by having the same requirements as new development, as one commenter suggests. The final permit also retains the off-site mitigation option for redevelopment projects that cannot meet 2.3.6.a.ii.(e) on site to allow for additional flexibility in meeting post construction stormwater requirements on redevelopment sites.

One commenter suggested that towns who have adopted the Southeast Watershed Alliance model stormwater ordinance would have to revoke this ordinance and replace it to meet the new permit requirements. EPA finds that the Southeast Watershed Alliance model stormwater ordinance dated December 2012 is at least as stringent as the final Permit post construction requirements. Therefore, the final permit contains language in 2.3.6.a.ii. allowing towns to choose to adopt the Southeast Watershed Alliance model ordinance in lieu of implementing an ordinance consistent with Part 2.3.6.a.ii.(a)-(f). The ordinance adopted by permittees must include all requirements of Section 4 Element C and Element D of the Southeast Watershed Alliance model ordinance including all pollutant removal requirements in order to be relieved of the ordinance requirements of Part 2.3.6.a.ii.(a)-(f). EPA is aware of many municipalities that have adopted the Southeast Watershed Alliance model ordinance fully and these municipalities will not have to update their ordinances with Part 2.3.6.a.ii.(a)-(f). In the event that a town has adopted the Southeast Watershed Alliance model ordinance without the pollutant removal requirements found in Section 4 Element C and Element D of the model ordinance the municipality must update their ordinance to include all requirements of Section 4 Element C and Element D to the model ordinance or update their ordinance to be consistent with Part 2.3.6.a.ii.(a)-(f).

One commenter criticized the linear project exemption of road maintenance and improvement that included an exemption of road widening up to 10% of the road width in re-notice Part 2.3.6.a.ii.(g) (now Part 2.3.6.a.ii.(f)) as being arbitrary. EPA attempted to add flexibility to the re-noticed section 2.3.6., knowing that some linear road projects may include slight widening of the road but that asking these projects to meet redevelopment requirements fully may not be feasible. The 10% increase was chosen to allow for slight widening but it was not based on any scientific or regulatory findings. In light of the comment the final permit removes the 10% widening exemption and only exempts those road maintenance projects that do not increase the impervious cover footprint on site. In addition, the requirement to improve existing conditions on all linear projects that meet exemption criteria has been removed.

The final permit removed the requirements from 2.3.6. that were requirements based on Section 401 Water Quality Certification from New Hampshire, specifically the requirement to recharge groundwater in accordance with Env-Wq 1507.041, protect channels in accordance with Env-Wq 1507.051 and control peak runoff rates in accordance with Env-Wq 1507.061. Any requirements required for Section 401 Water Quality Certification can now be found in Part 3.0 of the final permit.

Changes to the Permit: Part 2.3.6.a.ii.and Part 3.0 has been updated in accordance with the above response.

389. Comment from the City of Rochester

§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.

Response to Comment 389

See EPA Response to Comments 46 - 54, EPA Response to Comments 55 - 60, and EPA Response to Comments 227 - 233

Part 2.3.6.c. includes requirements to assess street and parking lot design to allow for low impact designs or reduced impervious cover requirements (e.g. lower parking space requirements for commercial properties, smaller parking space size, use of green street design standards, etc.. See Assessing Street and Parking Design Standards to Reduce Excess Impervious Cover in New Hampshire and Massachusetts for more information (USEPA, 2011). This assessment can be in the form of a full report or a simple checklist. The term “can be” is used to acknowledge that there may be some items where certain road width or design standards are required by other departments or agencies and the permittee may not want to change these items. This language provides the maximum flexibility when conducting the assessments of Part 2.3.6.c. and 2.3.6.d. In order to provide more clarity on what Part 2.3.6.c. and 2.3.6.d. are requiring, the final permit contains requirements to implement all recommendations found in the assessment on the schedule determined by the permittee.

Changes to the Permit: Part 2.3.6.c. and Part 2.3.6.d. has been updated in accordance with the above response.

2.3.7 Good House Keeping and Pollution Prevention for Municipal Operations

390. Comment from Dr. Robert M. Roseen

LID stormwater management works effectively throughout multiple seasons including challenging winter conditions. Data shows that it works better for water quality than conventional stormwater management, and that in the winter standard practices suffer dramatically.

LID stormwater management is reasonable to construct and maintain. Existing municipal staff can be effectively trained to build and maintain these practices. Maintenance requirements should not be substantially different than current Good Housekeeping Practices requiring regular inspection and maintenance of stormwater infrastructure. Furthermore, study of maintenance costs have shown that LID storm water management and actually be less expensive to operate and maintain than traditional conventional storm water management. Similar studies comparing costs of landscaping of traditional turf and landscape features would likely show similar results.

EPA response to Comment 390

EPA acknowledges this comment regarding the good housekeeping practices for low impact development and other stormwater management infrastructure as cities and towns begin to encourage LID within their MS4 and remove barriers to its use at the local level. The maintenance of

an effective stormwater BMP is as important as its construction in continuing to provide treatment or infiltration of stormwater pollutants.

391. Comment from the City of Nashua

The City continues to implement its existing MS4 permit requirements and, as a member of the Nashua Area Stormwater Coalition, works with surrounding communities to celebrate successes and address stormwater management challenges. The following activities are examples of the City's efforts to improve water quality and comply with the existing MS4 permit: Good housekeeping measures continue to reduce salt and sand applications, sweep miles of roadway focusing on urban areas, and clean catch basin in high priority areas.

The City continues to implement its existing MS4 permit requirements and, as a member of the Nashua Area Stormwater Coalition, works with surrounding communities to celebrate successes and address stormwater management challenges. The following activities are examples of the City's efforts to improve water quality and comply with the existing MS4 permit: The City owns in excess of 6,500 catch basins with over 380 outfalls in separated sections of the City and has identified suspicious and problematic outfalls for continued monitoring.

EPA response to Comment 391

Thank you for the information on good housekeeping efforts already undertaken in the implementation of the City's MS4 program. Efforts to reduce salt and sand applications, annual street sweeping, and prioritizing catch basin cleanings are all requirements for the Good Housekeeping minimum control measure of the Small MS4 that the City of Nashua is already undertaking. All of these existing programs will aid the City in updating their stormwater management plan to meet the requirements of the reissued Small MS4 Permit when it becomes effective.

392. Comment from the City of Nashua

Part 2.3.7.1 Operations and Maintenance O&M Programs Comment: The City encourages the EPA to more thoroughly review the economic impact and implementation timeframe proposed under the MS4 Permit. Many of the requirements outlined in the proposed permit represent an order of magnitude increase in effort to address municipal operations that is only preceded by the wastewater treatment initiatives of the 1970s, which was supported by a Federal funding program. Similar funding programs need to be developed to meet the objectives of the stormwater rules under the Clean Water Act since the proposed level of effort cannot be sustained locally. The City of Nashua wishes to enhance its O&M Program, but we have focused on priority areas to maximize the effectiveness of current resources and funding to address water quality concerns. For example, the City has documented at least 6,500 catch basins, 2,900 manholes, 380 outfalls, 253 culverts, and 43 public BMPs and therefore, over 1 0,000 storm drain system components that would need to be inspected and/or investigated under the new MS4 Permit. To meet the milestone of 100% inspected/investigated in a 5 year period, the City would need to inspect at least 8 structures per workday. Essentially, the City would need to hire multiple full-time positions within the next permit term just to do the inspections. This doesn't even include the cost of police details or the labor investment required to follow up on any findings or more detailed investigations. The City's current program consists of inspections completed by existing staff based on known problem areas and reports from citizens. Consideration should be given to the fact that MS4 communities in NH lose three to four months a year to winter temperatures during which vacuum equipment cannot operate. Therefore, the annual workload needs to be accommodated within an approximate 8 month timeframe when resources are competing to operate and maintain other City infrastructure.

EPA response to Comment 392

EPA acknowledges this comment regarding the extent of the good housekeeping program in the City of Nashua. The annual inspection requirement of Part 2.3.7.1.d.vi. does not apply to all of the structures listed by the commenter; the annual inspection requirement applies to permittee-owned stormwater treatment structures. EPA does not expect the city to inspect all outfalls and manholes annually under part 2.3.7.; please see Part 2.3.4. of the final permit for a discussion of sampling and inspection requirements at outfalls and key junction manholes under the IDDE program. Please note that the permit specifically excludes catch basins from the annual inspection requirement.

In addition, there are many site-specific factors, such as an effective street sweeping program, that may reduce the accumulation of sediment in catch basins; therefore, there are no set timelines for catch basin inspections and cleanings in the permit. The permit will require annual inspection of culverts and municipally-owned BMPs to ensure that they are functioning as intended. Throughout the good housekeeping requirements, EPA has provided flexibility for municipalities to prioritize different areas of their MS4 based on local specifics and institutional knowledge. In addition, EPA has extended the timelines to complete written O&M procedures and the inventory of municipal facilities to 2 years from the effective date of the permit.

Changes to the permit: part 2.3.7.1. has been updated in accordance with the response above.

393. Comment from the Charles River Watershed Association

2.3.7.1.a should include an evaluation of areas where there is existing or potential erosion, and the development of a remediation plan. Soil erosion is significant in many parks and open spaces, and often represents a highly effective and inexpensive opportunity for municipalities to reduce stormwater pollution, and phosphorus loading in particular. The section should include reference to 2.3.7.2.b.iv, the SWPPP.

EPA response to Comment 393

EPA acknowledges these comments regarding the importance of soil erosion as a source of stormwater pollution. EPA agrees that addressing erosion represents an effective and inexpensive opportunity for municipalities to lessen stormwater pollution. The permit has been updated to include within the parks and open space inventory a procedure to address erosion or poor vegetative cover in parks and open space when the permittee becomes aware of an issue. MS4 communities may look to EPA's construction general permit and accompanying guidance for information on erosion and sediment controls.

Changes to the permit: Part 2.3.7.1.a. has been updated accordingly.

394. Comment from the Town of Bedford

MS4 communities such as the Town of Bedford will be responsible for controlling, regulating and maintaining run off/discharge from properties that are not within its direct control, such as but not limited to public school properties over which the Town of Bedford has not budget or administrative authority, as well as no zoning oversight under current New Hampshire state statutes.

EPA response to Comment 394

MS4 operators such as the Town of Bedford will be responsible for preventing stormwater pollution from properties owned and operated by the town under the Good Housekeeping requirements of Part 2.3.7. As noted by the commenter, public schools in the State of New Hampshire are owned

and operated by Districts that are public corporations established under State law and with State oversight. See N.H. Rev. Stat. Ann, Title XV, Chapter 194. EPA agrees that if, and to the extent that, a public school district is an entirely separate political entity created under state law, it is not part of the same MS4 as the city or town in which it is located. Cities and towns that do not own or operate schools are therefore not required to meet the permit requirements for school properties that are located within their jurisdiction unless the stormwater systems at those properties are operated by the relevant municipality.

School districts, however, are themselves regulated MS4s if, and to the extent that, they operate separate storm sewer systems within an urbanized area, under the definition set forth in 40 CFR § 122.26(b)(16) and Part 1.2.1. Such entities are considered “nontraditional” MS4s, as they are not operated by traditional cities and towns, and are subject to the MS4 General Permit provisions detailed in Part 5.0.

395. Comment from the City of Rochester

Annual sweeping of all streets is required in the 2013 NH Small MS4 Draft General Permit. This is not practical, since only curbed streets should be swept. Sweeping streets that do not have curbing will not result in any significant removal of sand and debris, since these items are naturally washed off the street and into the shoulder. Only sweeping of curbed streets should be required. Installing curbing on un-curbed streets would facilitate sweeping, but would be costly and would require the construction of catch basins and storm sewers which is counter to the 2013 NH Small MS4 Draft General Permit. The requirement to sweep all streets should be stricken from the permit.

396. Comment from the Town of Stratham

Lastly, there is a presumption that all New Hampshire MS4 communities operate in an urban, and if not, a semi-urban environment. We make this inference from the draft Permit requirements to mechanically sweep our streets and parking lots on a frequency determined by water quality results. Of the approximately 90 miles of town maintained highways, it is estimated that less than 25% are curbed. Without curbing, the exercise of street sweeping is not practical and largely inefficient/ineffective since the debris sought to be collected by the sweeping has been deposited into the adjacent ditch line by the sheet flow of stormwater. Uncurbed streets naturally wash clean the paved surface and stormwater is infiltrated into the ground under the ditch line. The ineffectual sweeping of Stratham highways would not justify the cost of such an operation.

397. Comment from the Town of Hampstead

The Town of Hampstead has no curbs in town other than those on State-owned highways. I [Sally Theriault] researched the topic of street sweeping. According to Roger C. Sutherland, P.E. (Senior Water Resource Engineer with AMEX Earth & Environmental in Tigard, Oregon.), in his article Street Sweeping 101, (from Stormwater - news Jan.- Feb. 2011), he wrote the following:

"Barriers such as street curbs or New Jersey median barriers are known to have a significant effect on both the accumulation of "street dirt' and the ability of street cleaners to effectively pick up the accumulated material...So the focus of the (sic a) good street sweeping program should be on streets and roadways that are curbed or have other barriers like New Jersey barriers..."

Under closing remarks, Mr. Sutherland wrote: "A great deal of controversy currently surrounds the question of how much of the pollution generally found in urban stormwater runoff can be reduced by street sweeping practices (Sutherland 2009b).."

In addition, conditions of the roadway play a factor with regard to how effective street sweeping is or is not.

Finally on this topic [street cleaning], under EPA's Nation Pollutant Discharge Elimination System (NPDES), Street Sweepings Reuse Practices: Although sweeping may contain pollutants, federal and state regulation may allow the reuse of sweepings for ... road shoulders and other applications as long as the material is not a threat to surface waters...

398. Comment from the Town of Londonderry

Section 2.3.7.d.iii requires sweeping of uncurbed streets. This is not practical as the efficiency of a mechanical sweeper is greatly reduced in the absence of curbing. Uncurbed streets are self- cleaning as most of the roadway discharge is absorbed into the ground below the ditch lines. Of our 180 miles of road in town only few miles are with curb. If the Town is required to sweep all 180 miles of road the approximate cost would exceed $100,000 per year.

399. Comment from the Town of Goffstown

Section 2.3.7.d.iii requires sweeping of uncurbed streets. This is not practical as the efficiency of a mechanical sweeper is greatly reduced in the absence of curbing. Streets with no curbs are affected by the same factors as curbed streets, but with no curb the debris is dispersed onto areas adjacent to paved surfaces. Uncurbed streets are, in effect, self-cleaning as most of the roadway discharge is absorbed into the ground below the ditch lines. Of our 132 miles of road in town only 8 miles is curb and gutter. We currently sweep the curb and gutter sections twice per year at a cost of $9,500 per year. If the Town is required to sweep all132 miles of road the approximate cost would exceed $70,000 per year.

400. Comment from the Town of Auburn

Finally, Section 2.3.7.d.iii requires sweeping of uncurbed streets. This is not practical as the efficiency of a mechanical sweeper is greatly reduced in the absence of curbing. Of Auburn's approximately 80 miles of roads in town, approximately 15.5 miles is owned and maintained by the State of New Hampshire, and are not swept. Of the remaining 65 miles, approximately eight miles of road are Class VI roads. They are legally owned, but not maintained by the Town of Auburn and generally are gravel roads without curb and gutter. Of the remaining 56 miles of Town-owned roads, less than five miles has curb and gutter. And none of these account for private roads in developments that the Town has no legal responsibility or authority. At the present time, the Town of Auburn does not sweep any of its Town-owned and maintained roads. Estimates received approximately 18 months ago to sweep all of the Town's 56 miles of road once per year was approximately $40,000. We are doubtful we would be able to secure funds for that purpose through the annual municipal budgeting process which requires voter approval.

EPA response to Comments 395-400

EPA acknowledges these comments regarding street sweeping practicality in small MS4 communities. The permit has been revised to specify that permittees are not required to sweep uncurbed streets within their jurisdiction. Currently, there is not enough scientific information on runoff from uncurbed streets or the benefits of sweeping uncurbed streets to include it in the small MS4 permit requirements. Please also note that permittees are only expected to sweep roads that contribute runoff to their MS4 system, which provides a direct conduit for stormwater pollutants to local waterways.

The permit also provides flexibility for the permittee to develop their own targeted sweeping plan based on site-specific information and town priorities and no change to permit requirements is necessary.

Annual street sweeping (with exceptions) is an important part of a town's good housekeeping measures, especially after winter sediment accumulation but also to target other pollutants deposited from the atmosphere or vehicle emissions that cannot be assessed visually. These pollutants are nearly ubiquitous on roads and can be reduced with street sweeping (see EPA's discussion of available literature in the Factsheet to the 2013 draft permit). As some commenters note, many communities sweep streets more often than annually and are not prohibited from doing so under the permit. They may, if applicable, be able to track additional credits under TMDL or impaired waters requirements of appendices F and H for these efforts. The planning requirements of the permit require the municipality to tailor a sweeping program for their streets based on local knowledge and experience, provided they also address all eligible roads at least annually for street sweeping. A higher frequency of street sweeping, especially with a high efficiency vacuum sweeper, will have positive effects on water quality.

See EPA Response to Comments 46 - 54, EPA Response to Comments 55 - 60, and EPA Response to Comments 227 - 233 in response to comments regarding responsibility for discharges by third parties.

Changes to the Permit: part 2.3.7.1.d.iii. has been updated accordingly.

401. Comment from the Town of Danville

Street sweeping mandate in the spring. This requirement of uncurbed limited access highways to have to develop a street sweeping plan and/or do street sweeping on a yearly basis for our roadways that have no street curbing is an unrealistic request. Aside from the issue of what is the classification of a limited access highway, most roadways are not limited access highways. This requirement has the appearance of gathering nature's resources and disposing of them differently than what was intended. Danville has limited closed drainage and no street curbing. Of the closed drainage that the Town of Danville has, the inlets and outlets are all located within 500 feet, more or less, of each other. 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. The Town of Danville uses a limited amount of sand during winter roadway maintenance, therefore avoiding any large amounts of sand flowing off the roadway onto the road edges. The Road Agent for the Town of Danville is also Green Snow Pro certified and is always looking at alternative winter road maintenance procedures. As part of our public education for the MS4-2003 permit the highway department has for the last 9 years hosted a town wide roadside clean up each spring where we ask the residents to clean up the roadsides of litter that has accumulated over the winter and leave the bags on the roadside for pickup by the Highway Department. The bags are available to residents during the year and residents are encouraged to pick up roadside trash, leave the bag and notify the town for pickup of the bag. Each year participation has continued to increase making the roadside cleanup a success throughout the year.

EPA response to Comment 401

See EPA response to Comments 396-401 regarding sweeping of uncurbed streets. The town can and should document its Green Snow Pro certification, as well as various efforts to limit sand use and clean up roadside trash as part of their stormwater good housekeeping and pollution prevention methods. EPA's intent is to provide flexibility within the requirements of part 2.3.7. for towns to demonstrate compliance with the minimum control measure for sound pollution prevention practices that they are already implementing within the town.

402. Comment from the Charles River Watershed Association

CRWA suggests that once a year street sweeping operations are entirely inadequate. An absolute minimum of twice per year sweeping should be required to demonstrate any effort at good housekeeping.

EPA Response to Comment 402

EPA agrees that regular sweeping is an important part of a town's good housekeeping measures. However, regarding mandatory sweeping frequencies, EPA believes a particular municipality's sweeping program should be largely tailored to the particular circumstances and targeted pollutants. Thus, the permit provides flexibility for the permittee to develop its own targeted street sweeping plan based on annual street sweeping (with exceptions), site-specific information, and town priorities. As noted above by several commenters, certain streets are swept more often than annually, and many roads in New Hampshire are uncurbed, where the effectiveness of street sweeping has not been documented. Permittees are not precluded from street sweeping more than once a year under this permit, but EPA has not required more than annual sweeping in the final permit.

403. Comment from the Town of Newmarket

Part 2.3.7, the additional twice a year street sweeping required for Good Housekeeping and Pollution Prevention included in Appendix H should not be mandated. Given the marginal reduction benefits (assuming similar reduction efficiencies as those specified for phosphorus included in Table 2-2 in Appendix F), permittees should be allowed the flexibility to explore alternative measures to accomplish equal of better load reductions for less cost. Street sweeping may not be the most cost-effective measure and appears to offer only marginal benefits. This would allow us to make better use of our limited funds on more effective measures as long as an equivalent or better load reduction can be achieved. The same comment applies to the suggested pollutant removal credits for catch basin cleaning.

EPA response to Comment 403

The requirement for street sweeping in the fall is important in catchments that drain to waterbodies that already suffer from an excess input of nutrients. Leaf litter can be a large source of nutrients to waterbodies and making additional efforts to keep leaves and other organics out of waterbodies is necessary to restore impaired waters to designated uses. While leaf litter contributes nutrients to waterways, phosphorus in particular may build up on streets sorbed to very small particles that cannot be easily observed through an investigation procedure. More frequent street sweeping, especially with a high efficiency vacuum sweeper, will have positive effects on water quality.

However, EPA has also added the flexibility for towns to implement a leaf litter collection program in the fall in lieu of street sweeping. Appendix H now states "Permittees may also choose, in lieu of post-leaf drop street sweeping, to implement a fall leaf litter collection program to effectively minimize leaf litter on impervious surfaces and in stormwater drainage structures. Either choice will be outlined in the permittee's SWMP." A leaf litter program that effectively minimizes leaves on the streets and in catch basins could be curbside pickup of bagged or terraced leaves, or street cleaning with a vacuum device.

It is unclear from the comment what sort of other alternative measures the town would like to explore to address phosphorus loading from the MS4, however, the town is encouraged to go beyond the minimum requirements of the permit to address stormwater pollution and to inform the next round of MS4 permits.

Changes to the Permit: Appendix H has been updated accordingly

404. Comment from the City of Nashua

Part 2.3.7.1.d.ii Third Bullet - "Establish, for other catch basins, a schedule that the frequency of routine cleaning will ensure that no catch basin at any time will be more than 50 percent full." Comment: The requirement to clean catch basins that are more than 50% full is first required in the first bullet of this part for catch basins draining to impaired waters where the pollutant of concern was sediment. Why prioritize catch basins in these impaired waters if the same requirement is going to be applied to all catch basins? Shouldn't there be more prioritization for cleaning requirements? It would be clearer if the guidance for catch basin cleaning in impaired watersheds (for sediment, nitrogen, or phosphorus) was in a separate part from the guidance for catch basin cleaning in all other areas.

Due to the burden of ensuring that every catch basin does not exceed 50% full the City is interested in first evaluating the inspection results from catchments to determine high priority cleaning areas and to develop an effective sediment loading projection program. Request: The City requests that the EPA allow MS4s to develop a prioritized cleaning schedule based on catchments that are known to contribute sediment to outfalls and not hold all catch basins to the same standard to not exceed 50% full. Additionally, the catch basin cleaning requirements specific to impaired watersheds should be outlined in a separate section of the permit.

405. Comment from the Town of Derry

Section 2.3.7.1(d)(ii) requires permittees to routine inspections, cleaning, and maintenance of catch basins such the no sump shall be more than 50% full. This requirement appears to be arbitrary and without supporting evidence. Existing permittees have a catch basin cleaning program in place that is optimized based on experience, to address which drainage systems need cleaning more often and at what capacity. The sump capacity and need for c leaning is subject to many factors including catchment area, land use within the drainage area, flow rates and volume, and amount of impervious surface. Catch basin sumps and their operation and maintenance are best management practices (BMPs), the specifics of which should not be regulated under the draft permit. The requirement to record the exact volume of material removed from each catch basin is also an unnecessary burdensome task imposed on an already taxed municipality and its contractors that slows down work and increases costs simply to take time to calculate each catch basin's volume of material. Permittees already report total volume removed each year.

406. Comment from the Town of Merrimack

Sump Cleaning Requirements: In Section 2.3.7.1.d.ii of the 2013 MS4 Draft General Permit Requirements there is a requirement that sumps in catch basins are no more than 50% full of materials from storm flow. What is the scientific basis for the percentage of material in a catch basin? The Town has a regular schedule of cleaning. We also note what basins fill more frequently and make an extra stop at these basins during the year. The EPA and NHDES have no authority to regulate the operation of a stormwater unit and the level of water or material in a sump should not be grounds for violation or the Clean Water Act.

407. Comment from the City of Dover

Dover has been cleaning every catch basin once every two years. The results have been incredibly beneficial. Portions of the system that would back up during rain events causing staff to respond to street flooding have virtually disappeared. With clean sumps and now clean pipes water is flowing and sumps are trapping contaminant bearing sediment and debris.

There is no doubt that water quality discharging the MS4 has improved during the last 10 years of the MS4 permit. Dover does not plan on utilizing the proposed 50% sump capacity threshold to clean basins. It will continue to clean basins every two years because of the beneficial effect City staff has seen. This methodology has proven to be as effective as necessary.

408. Comment from NH Stormwater Coalition:

Section 2.3.7.1(d)(ii) of the Draft Permit (Operation and Maintenance Programs) provides that "the permittee shall optimize routine inspections, cleaning and maintenance of catch basins such that … no sump shall be more than 50% full." Draft Permit, at 45. While it is understood that cleaning sumps and catch basins is part of the expected management practices to ensure their proper operation, this provision, as worded is unduly restrictive. While some sumps must be cleaned when at 50% capacity, others do not. It depends on the catchment area and conservativeness of the design. Moreover, the requirement to "optimize" operations is vague and could place even compliant operations in violation because they were not "optimized". Finally, this provision, as worded, regulates the operation of a unit, not the pollutant output of a unit and EPA has no authority under the Act to do so. *See Iowa League of Cities,* 711 F. 3d at 877-878. Moreover, the fact that the sump is 50% or more full may be a basis for triggering a requirement to inspect more frequently. However, it should not be a violation when there is still significant capacity remaining in a unit, or even if a unit is full. The level of water in a sump cannot be grounds for violating the Act (or permit) as it does not involve a discharge or the improper operation of a unit, *per se*. We suggest that the 50% target be set as an example, not a rigid requirement applicable to all situations. The proposed language should be reworded to require that the permittee conduct "sufficient" inspections "to ensure proper operation of catch basins and sumps."

EPA response to Comment 404-408

EPA acknowledges these comments regarding municipal catch basin cleaning. EPA aims to provide flexibility in the permit for municipalities that are already implementing effective catch basin cleaning programs to claim compliance with the small MS4 permit requirements.

EPA appreciates the comments regarding measuring and reporting material mass or volume removed from catch basins under the small MS4 permit. Based on feedback from many communities as well as a reevaluation of what information will be most useful to EPA to determine water quality impacts and permit compliance, the requirement to measure and report the volume or mass of material removed from each catch basin draining to a water quality-limited waterbody in part 2.3.7.a.iii(b) has been removed.

Overall data on catch basin material removed should be measured in order to comply with state disposal guidelines; this information should already be collected by municipalities or their contractors. EPA expects that the updated tracking program for catch basin cleaning will ultimately serve an effective and individualized catch basin prioritization, inspection, and cleaning program within permitted MS4s.

In a typical stormwater system catch basin sumps often serve as the only treatment to remove solids and trash from the storm sewer system. Thus, proper maintenance and attention to whether catch basins are functioning properly is an important part of the permit's good housekeeping requirements. In addition, EPA expects that the catch basin cleaning measurement may be a useful metric for the permittee to evaluate other aspects of their SWMP, such as the success of public education messaging regarding leaf litter, trash, etc. This will not only provide valuable information

to the community but also may fulfill the MS4 permit requirement to determine methods to evaluate the effectiveness of the public education program.

EPA agrees that there are many site-specific factors, such as an effective street sweeping program, that may reduce the accumulation of sediment in catch basins; therefore, there are no set timelines for catch basin cleanings in the permit. We believe that a targeted inspection and cleaning program focused on the volume of material in catch basin sumps as well as site-specific factors known to the municipality will result in a more efficient use of resources and a reduction in pollutant loadings from the MS4.

The permit allows flexibility for permittees to prioritize catch basin inspections and cleanings, although from a water quality standpoint that should include a consideration of how full the catch basin is and not just where it is located within town. If the town finds that certain isolated catch basins are more frequently in need of being emptied (e.g., they are more than 50 percent full during two routine inspections/cleanings), the town should investigate ways to reduce the sediment load from the contributing drainage area, reducing the need to clean isolated areas around town.

EPA encourages towns with existing catch basin cleaning programs to continue to prioritize catch basins based on their particular knowledge of catchment areas and historical information on how quickly catch basins fill with sediment and debris. EPA also supports towns including as part of their catch basin prioritization program an estimation of how full each catch basin sump is during routine inspections.

A goal volume for all catch basins of 50% full was established in the draft permit based on information from the Bellevue Urban Runoff Summary Report (Pitt and Bissonnette 1984). This report found that sediment can only be retained in a catch basin sump at a volume of around 60% full. Beyond that depth the catch basins failed to significantly retain sediment and debris.

The permit has been revised to specify that <50% full catch basins is a goal of the program and a consideration for prioritization and follow-up action, not a permit requirement. We believe this goal will give towns flexibility to create (or continue) a prioritized catch basin inspection and cleaning program that will benefit both receiving water quality and the town in terms of efficiency. In addition, the word “optimize” has been changed to “conduct” for clarity. The inspection and cleaning of catch basins in catchments draining to certain impaired waters should be prioritized by the MS4 operator in accordance with the permit.

See EPA Response to Comments 46 - 54, for a discussion of EPA’s authority in issuing this general permit with specific requirements for the six minimum control measures, including good housekeeping and pollution prevention measures. See also EPA Response to Comments 55 - 60 and EPA Response to Comments 227 - 233.

Changes to the permit: Permit part 2.3.7.1.d.ii. has been updated accordingly.

409. Comment from the Charles River Watershed Association

The language in different bullets of this section is confusing and should be clarified. It is not clear if all catch basins should be kept below 50% full, or if this only applies to certain catch basins. CRWA suggests that catch basin sumps should always be kept no more than 50% full, regardless of whether the receiving water is impaired or has a TMDL.

EPA response to Comment 409

EPA has updated the language in part 2.3.7.1.d.ii. in order to clarify the requirements related to catch basin cleanings. The permittee should have a catch basin cleaning program with a goal of keeping all catch basins <50% full; catch basins near construction projects or draining to impaired waters should be prioritized in such a program.

Changes to the permit: Permit part 2.3.7.1.d.ii. has been updated accordingly.

410. Comment from the Town of Hampstead

Salt (Chloride) vs. Safety: There is a fine line between reducing the amount of salt applied to the roads in the winter to such an extent that there is a public safety issue.

EPA response to Comment 410

It is EPA's view that the salt reduction plan requirements do not conflict with or compromise public safety and responsible salt application.

This permit is limited to those activities that will be implemented by the town in order to reduce stormwater pollution and protect receiving water quality; the permit provides flexibility for municipalities to incorporate other important municipal responsibilities, such as public safety, into their stormwater management program. For that reason, Appendix H provides flexibility wherever possible for the town to implement a customized Salt Reduction Plan that takes into account the priorities and resources of the town.

EPA references different guidance documents for salt application in Appendix H that describe current best management practices for salt use as well as water quality concerns. Further, EPA finds that the required salt reduction plan aligns with permittees' existing priorities to reduce salt.

Please note that a salt reduction plan is only required of MS4s that discharge to waters that are impaired for chloride or that are water-quality limited due to chloride. EPA has also added language to clarify that "salt" means chloride-containing compounds for the purpose of this permit, as that is the stormwater pollutant that salt reduction measures are intended to address.

Changes to the permit: Part 2.3.7.1.d.v. has been updated accordingly.

411. Comment from the City of Nashua

Part 2.3.7.d.vi - "All permit-owned stormwater treatment structures (excluding catch basins) shall be inspected annually at a minimum." Comment: Being proactive, the City has installed a CDS unit, many Vortechnics, Stormceptors, hoods, and other BMPs throughout the City. The inspection frequency should not be set arbitrarily, but should be based on recommended industry best practice, manufacturer's recommendation, and inspection history. Request: Please revise this part to allow the MS4 to set the appropriate inspection frequency for stormwater treatment structures. Additionally, the City requests that the EPA allow MS4s to develop a prioritized cleaning schedule for all BMPs.

EPA response to Comment 411

EPA does not believe that its requirement to inspect stormwater treatment structures annually is arbitrary or overly burdensome. Many manufacturers (including those of products mentioned in the comment) recommend at least yearly inspections (some more frequently) as a best practice for

optimal performance of proprietary BMPs. Please note that the permit also allows flexibility for critical or high-priority stormwater infrastructure to be inspected more frequently, however, these inspections should not displace the annual inspections of other stormwater treatment structures. The requirement to inspect annualy does not include a requirement to clean the staormwater management practice annualy, which should be done according to manufacturer design or specifications.

412. Comment from the Town of Exeter

Exeter has a low speed narrow parkway surrounded by green space which receives no pesticides or fertilizer. The roadway was built with a series of catch basins with an outfall. If the town were to provide an approved BMP for the catch basins, such as inserts for oil and sediment, with a maintenance plan, could the outfall monitoring be waived? These outfalls will be extremely difficult to access.

EPA response to Comment 412

The IDDE program allows monitoring to be waived for certain outfalls: “outfalls/interconnections with no potential for illicit discharges may be excluded from the IDDE program. This category is limited to roadway drainage in undeveloped areas with no dwellings and no sanitary sewers; drainage for athletic fields, parks or undeveloped green space and associated parking without services; cross-country drainage alignments (that neither cross nor are in proximity to sanitary sewer alignments) through undeveloped land.” If the town determines that the outfall described meets those conditions, they are not required to conduct water quality sampling or MS4 inspections in the catchment.

413. Comment from the Town of Derry

Section 2.3.7.2 imposes duplicate requirements already imposed and implemented under USEPA's Multisector General Permit and should be removed from the draft MS4 permit. The Town of Derry already prepared a single SWPPP in accordance with MSGP guidelines and regulations. Although we were not required to, we chose to write one all-inclusive SWPPP that covers our transfer station, waste water treatment plant, highway garage, salt storage facility, vehicle maintenance facility, and septage transfer facility (and septage spill response plan for private haulers) which above and beyond regulatory and permit requirements. In addition, the Town was required under NHDES regulation to prepare a separate Transfer Station Operations Plan which includes duplicate coverage of materials handling relative to overall pollution prevention.

414. Comment from the Town of Seabrook

Transfer Stations, Stormwater Pollution Prevention Plan, General Permit, Section 2.3.7.2, Page 46 of 60

EPA requires that a stormwater pollution prevention plan (SWPPP) be developed for the Town's Transfer Station. The Town of Seabrook's Transfer Station is already permitted under Sector N of the Multi- Sector General Permit (MSGP) program. Under this program, a SWPPP was prepared. It is inefficient and unnecessary for the Town to be regulated under two different programs for the same issues at one facility. The Town of Seabrook objects to the MS4 NPDES General Permit requirement on the basis that the Transfer Station is currently covered under the MSGP.

415. Comment from the Town of Seabrook

Wastewater Treatment Facilities, Stormwater Pollution Prevention Plan, General Permit, Section 2.3.7.2, Page 47 of 60

EPA also includes 'other waste handling facilities' in the SWPPP requirement. Please clarify whether this includes wastewater treatment plants. If so, similar to the Transfer Station issues described above, the Town's wastewater treatment facility is already permitted under the MSGP. The Town of Seabrook objects to unnecessary and redundant permitting under the MS4 NPDES program.

416. Comment from the Town of Danville

Stormwater pollution prevention plans: The requirement to prepare SWPPP plans for all permittee owned or operated facilities where pollutants are exposed to stormwater is yet another costly item. To require a Town/City to prepare a SWPPP for all town owned properties is a costly item and the time frame to do this is very restrictive. These plan requirements are overly stringent than what the Federal regulation is currently. The town-owned buildings or facilities in some communities are spread over various parts of the town and would be extremely costly to develop each one. There are also towns with public buildings owned by the town but operated but under the control of a regional SAU and we question who the responsible party is to prepare these plans.

EPA Response to Comments 413-416

Part 2.3.7.2. of the permit states that "A SWPPP does not need to be developed for a facility if the permittee has either developed a SWPPP or received a no exposure certification for the discharge under the Multi-Sector General Permit or the discharge is authorized under another NPDES permit." Permittees may use already-developed plans that meet all of the requirements of part 2.3.7.2. in developing a SWPPP for town-owned facilities.

It is EPA's view that a separate SWPPP, even if it does not contain wholly unique information for the facility, should be available for each eligible town-owned facility. It is important for proper stormwater management that the SWPPP and any other associated protocols and plans are readily available to facility operators at each site; we also anticipate that there will be unique circumstances at different facilities around town that necessitate customized SWPPP components. For example, certain practices, such as salt storage or vehicle and equipment maintenance may only occur at certain facilities and only need to be addressed in those SWPPPs.

To the extent that town-wide plans or common practices apply to multiple facilities, those same plans and practices can be duplicated in the various SWPPP documents throughout town-owned facilities. EPA will also allow towns the flexibility to include town-wide good housekeeping, spill prevention, and other plans by reference in their SWPPPs in applicable sections, provided the town-wide plans are also available in writing and accessible to the facility operators.

Please note that a SWPPP must be developed for municipally-owned or operated maintenance garages, public works yards, transfer stations, and other waste handling facilities where pollutants are exposed to stormwater. It is not required for other town-owned facilities where stormwater pollution from industrial sources is unlikely (see part 2.3.7.a.ii). The basis for the SWPPP are from EPA's MSGP and templates are available for the SWPPP on the MSGP webpage. We believe that available MSGP guidance and appropriate templates will allow the permittee to develop a SWPPP within the required timeframe of two years.

Where the third party is conducting municipal operations on behalf of the Permittee (e.g. transfer station) the permit requirement to develop and implement a SWPPP at the site remains applicable. EPA expects the permittee will work with the third party to develop and implement the SWPPP on the same schedules provided for in the final permit.

417. Comment from NH Stormwater Coalition:

Section 2.3.7.2(b)(ii) of the Draft Permit would require the Stormwater Pollution Prevention Plan (SWPPP) to include the "location of floor drains" at facilities. Draft Permit, at 47. EPA purports to justify this approach stating that "EPA believes that examination of floor drain connections that present an unusual risk of illicit discharge, such as from maintenance shops, is an appropriate requirement to ensure that there are no improper connections to the MS4." Fact Sheet, at 110. It is not reasonable for EPA to require the MS4 permittee to identify all floor drains at all facilities within its jurisdiction. If EPA believes identification and inspection of floor drains to be necessary, then we request EPA to identify the extent to which it identified and inspected floor drains in those municipalities which do not have an MS4 program. Moreover, EPA should have assessed this as part of its statutory evaluation of MS4 programs to determine if such control should be universally applied. Municipalities, like EPA, have limited resources. As such, we would like to avoid the situation where EPA is asking a municipality to expend its resources on activities that EPA, itself, does not believe merit the use of its dollars. This provision should be dropped as no legally or technically sufficient supporting basis was provided for its justification as a "belief" is not evidence of a need.

EPA response to Comment 417

See EPA Response to Comments 46 - 54, EPA Response to Comments 55 - 60, and EPA Response to Comments 227 - 233.

Please note that part 2.3.7.2. requires the creation of a SWPPP including the "location of floor drains" at certain specific types of municipally-owned or –operated facilities, not all facilities within the municipality. This is also a requirement for facilities with coverage under EPA's MSGP and represents a common industrial good housekeeping measure to prevent spills and waste from polluting stormwater and to ensure that there are no improper cross-connections to the MS4.

The appropriateness of SWPPP requirements is independent of the criteria to designate an MS4 community. See also EPA response to Comment 418 and EPA response to Comment 419 - 420

418. Comment from Barnes and Thornburg (on behalf of Atkinson, Kingston, Newton, and Plaistow) on behalf of four New Hampshire communities

In similar fashion to other aspects of the Draft MS4 Permit, EPA Region 1 has expanded the Good Housekeeping and Pollution Prevention section (2.3.7) well beyond what is necessary. To the extent that the Draft MS4 Permit does not focus on the discharge of pollutants from point sources to waters of the U.S., many of those provisions are not justified. This section is rife with mandates for how to operate or conduct activities "on site" and EPA has not taken the necessary steps to focus on the nature of the pollutant discharges and how its mandates reduce site discharges.

EPA response to Comment 418

See EPA Response to Comments 46 - 54, for a discussion of EPA's authority in issuing this general permit with specific requirements for the six minimum control measures, including good housekeeping and pollution prevention measures. See also EPA Response to Comments 55 - 60 and EPA Response to Comments 227 - 233.

EPA disagrees with the commenter's assertion that the necessary steps have not been taken to "focus on the nature of the pollutant discharges and how its mandates reduce site discharges". The good housekeeping requirements of the permit represent an efficient way for permittees to prevent pollution from entering their MS4 through practices, many of which are common industrial good housekeeping measures that are already widely implemented under EPA and state MSGPs.

3.0 ADDITIONAL REQUIREMENTS FOR DISCHARGES TO SURFACE DRINKING WATER SUPPLIES AND THEIR TRIBUTARIES

419. Comment from NH Stormwater Coalition:

Part 3.1.2 of the Draft Permit provides for the potential automatic inclusion of additional requirements upon permittees without amendment of the permit or any further due process procedures. This section provides:

3.1.2 – If New Hampshire Department of Environmental Services (NHDES) determines that additional water quality certification requirements are necessary to protect water quality, it may require individual applicants to meet additional conditions to obtain or continue coverage under this permit. Any such conditions shall be supplied to the permittee in writing. Any required pollutant loading analysis and any designs for structural best management practices necessary to protect water quality shall be prepared by a civil or sanitary engineer registered in New Hampshire.

See also Fact Sheet, at 25 ("The requirements include . . . provision for NHDES to add additional water quality certification requirements if necessary to protect water quality. . . ."). This condition appears to be completely open-ended, as EPA acknowledges that "NHDES has not identified more specifically under what conditions or circumstances it would necessitate such additional requirements." *Id.* at 135.

State certification, however, is not a continuous process. A State gets to certify a preliminary draft or draft permit. Neither CWA Section 401 nor EPA regulations, (*see, e.g.,* 40 C.F.R. § 124.53), provide a State the right to modify a state certification during the term of the permit to unilaterally impose new requirements upon the discharger. Section 401(a)(1) provides, for example, that "[n]o license or permit shall be granted until the certification required by this section has been obtained or has been waived as provided in the preceding sentence." It reflects that the certification is *prior to* the issuance of the permit, not afterwards.

The regulations require that "State certifications shall be granted or denied within the reasonable time specified under paragraph (c)(3)." 40 C.F.R. § 124.53(d). Moreover, the referenced subsection (40 C.F.R. § 124.53(c)(3)) provides that a State will be deemed to waive its right to certify unless that right is exercised within a reasonable time *not to exceed 60 days from the date the draft permit is mailed* to the State. As the draft permit had been provided to the State more than sixty days ago, the State no longer has a right to impose additional requirements through the permitting process.

If a State is to impose conditions through a certification, it must clearly state what those conditions are:

[C]ertifications have not always clearly stated exactly what conditions are necessary to comply with State law, and whether less stringent conditions would also satisfy State law. The final regulations remedy these problems by requiring States to set forth in all cases the minimum terms and conditions which will be necessary to comply with applicable law.

44 Fed. Reg. 32,880 (June 7, 1979).[footnote: While this statement was made in the preamble to the proposed regulation, EPA indicated in the final rulemaking that it was relying on the rationale set forth in the June 7, 1979, proposal. 98 Fed. Reg. 33,413-14 (May 19, 1980)]

Furthermore, EPA‟s regulations provide a process for modification of the NPDES permit based upon changed circumstances. 40 C.F.R. § 122.62. It does not provide an open-ended provision for a State, once the permit has become effective to independently superimpose new requirements, whether water quality related or

otherwise. Such action would constitute a permit modification that must be subject to the applicable NPDES due process procedures. Consequently, Part 3.1.2 should be deleted.

In addition, the draft permit also purports to allow EPA to superimpose additional requirements upon the permittee without following NPDES permit amendment procedures. For example, section 2.3.4.8 of the draft permit provides that "EPA may *at any time* determine that a particular element is in fact applicable to the permittee and require the permittee to add it to the IDDE program." (emphasis added). Either such provisions should be deleted from the permit or EPA should clarify that due process procedures apply to modification of the permittee‟s legal obligations under the permit and no such modifications will be applicable unless and until all administrative process and appeal rights are completed.

420. Comment from the City of Manchester

If NHDES determines that additional water quality certification requirements are necessary to protect water quality, then it may require applicants to meet additional conditions to obtain or continue coverage under this permit. This requirement is difficult to plan and budget for as at anytime the NHDES can require a community to adhere to additional water quality requirements that were not outlined originally in this permit. This requirement needs to be reviewed by both the EPA and the NHDES to see if it is necessary or indeed fair to the community.

EPA response to Comment 419 - 420

EPA has deleted Part 3.1.2. EPA has also modified Part 4.1.4 to clarify that this permit's requirements will not change unless EPA formally modifies the permit.

The commenter is correct that New Hampshire has issued its CWA § 401 water quality certification prior to this permit's issuance. New Hampshire may modify its CWA § 401 certification, with public comment, if water quality standards or other applicable state laws or regulations change. *See* 40 CFR § 124.55(b). Such a § 401 certification modification does not automatically modify an NPDES permit. EPA's regulations currently provide that, in the case of a modified § 401 certification, EPA can only modify a federally-issued NPDES permit "on request of the permittee only to the extent necessary to delete any conditions based on a condition in a certification invalidated by a court of competent jurisdiction or by an appropriate state board or agency." *Id*. EPA's regulations currently do not allow EPA to modify NPDES permits to add permit conditions based on a modified state certification.

EPA disagrees with the commenters that the permit allows EPA to impose additional permit requirements without engaging in permit modification procedures. The commenter cites permit section 2.3.4.8 (IDDE program) which states that "EPA may at any time determine that a particular element is in fact applicable to the permittee and require the permittee to add it to the IDDE program." EPA assumes that all IDDE program elements apply to permittees. However, a permittee may document why they believe certain IDDE program elements may not apply to them. EPA may disagree with the permittee and may determine that such elements in fact apply to the permittee. In that case, the permittee would not be subject to requirements that are entirely new to the permit, but would be subject to all of the applicable IDDE requirements in this permit.

Changes to Permit: Part 3.1.2 has been removed and Part 4.1.4 have been updated accordingly.

4.0 PROGRAM EVALUATION, RECORD KEEPING, AND REPORTING

421. Comment from the City of Nashua

Part 4.3.3 - "The permittee shall also include in the annual report results from any other stormwater or receiving water quality monitoring or studies conducted during the reporting period" conducted on behalf of the permittee or conducted by other entities and reported to the permittee." Comment: Monitoring required and reported to the EPA under separate permits or administrative consents should not be required in the MS4 Annual Report, unless it is directly related to the completion of BMPs and/or measurable goals identified in the MS4's SWMP. Request: Please provide justification and clearer direction on the information being requested in this part. The City suggests that EPA allow MS4s to reference other programs and/or permits that meet the objectives for data reporting to EPA. This allows the results from the CSO program to be included in a holistic approach for the City.

EPA response to Comment 421

EPA has changed the language in this section to make its intent clearer. The first sentence now reads, "The permittee shall also include in the annual report results from any other stormwater or receiving water quality monitoring or studies conducted during the reporting period where that data is being used by the permittee to inform permit compliance and effectiveness." This clarifies that these results are not material which has been previously requested by EPA under other programs, but rather are materials used to inform the permittee about compliance or BMP effectiveness. For example, these additional monitoring results may be used to relieve the permittee of relevant requirements related to impaired waters requirements (see Appendix H). The additional work to include existing or outside sampling results in the annual report should be insignificant.

Changes to permit: Part 4.3.3 has been changed to read: "The permittee shall also include in the annual report results from any other stormwater or receiving water quality monitoring or studies conducted during the reporting period where that data is being used by the permittee to inform permit compliance and effectiveness."

422. Comment from the City of Dover

Permit Tracking and Reporting Requirements: The draft permit has extensive tracking and reporting for nearly every required action many of which are redundant as they will be included as part of annual reporting. Please review these requirements and make an effort to consolidate the reporting within the annual report.

As an example there is a statewide bacteria TMDL for impaired waters in NH and that the proposed MS4 permit has extensive IDDE requirements and an aggressive implementation schedule. A primary source of bacteria in MS4's is from illicit sewer connections which is also a source of nitrogen and other contaminants. The permit requires Dover and other MS4's in the Great Bay watershed to sample for nitrogen as well as other contaminants and to develop plans to reduce the contaminants while at the same time requiring IDDE plans on the same MS4 system both of which require detailed reporting much of which is redundant, burdensome, a waste of resources and nonproductive.

A simpler integrated approach should allow for each community to identify and track the contaminants of concern in their systems based on impairments as part of their IDDE program.

423. Comment from the City of Portsmouth

The draft permit has extensive tracking and reporting for nearly every required action many of which are redundant as they will be included as part of annual reporting. Please review these requirements and make an effort to consolidate the reporting within the annual report.

EPA response to Comment 422-423

Where appropriate, the permit specifies that progress and metrics must be included in a specific annual report in addition to the requirements of Part 4.0. EPA has reviewed the administrative requirements of each part of the permit and consolidated certain requirements where it will not affect the implementation of the permit.

The NPDES permitting program in general relies on a self-monitoring, self-reporting compliance model. In terms of the overall effectiveness of the program, the self-reporting model has been determined to be an effective and efficient model for environmental regulation and is in use in numerous federal and state environmental programs (Innes, 1999).

424. Comment from the City of Nashua

Part 4.4.2.5- "All outfall screening and monitoring data collected by or on behalf of the permittee during the reporting period and cumulative for the permit term" shall be included in the annual report. **Comment:** The information submitted with each annual report should be limited to the data collected during the reporting period. The intent of the annual report is to document new progress and it is an unnecessary administrative burden to continue reporting the cumulative data for the permit term with each annual report. This information will be tracked as part of the City's SWMP and made available to EPA upon request. **Request**: Please remove the requirement to submit the cumulative data for the permit term with each annual report.

EPA response to Comment 424

EPA acknowledges this comment. Parts 4.3.2. and 4.4.2.5. have been revised to make the submission of cumulative data for the permit term optional; EPA believes that the cumulative option may be easier to report for certain municipalities who wish to collect all of their outfall monitoring data in a single list or database and update as monitoring data is added throughout the permit term.

Changes to the Permit: Parts 4.3.2. and 4.4.2.5. have been updated accordingly.

5.0 NON-TRADITIONAL MS4S

425. Comment from the DOD - Department of Defense (Department of the Navy)

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 Availability for the subject GP. As discussed below, we have significant concerns with the language in Section 5.2 of the 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).

The draft permit proposes to hold federal facilities to a more stringent performance standard than non-federal facilities. The federal government is only subject to requirements under the CWA to the extent it is treated in a non-discriminatory manner. Under CWA § 313(a), federal agencies are subject to "all Federal State, interstate, and local requirements respecting the control and abatement of water pollution in the same manner, and to the same extent as any nongovernmental entity." In this case, EPA has proposed two different stormwater performance standards, one for federal entities and one for non-federal entities. The draft permit will place New Hampshire in the position of being unable to comply with the permit as they would be unable to enforce a requirement that discriminates against its federal government dischargers.

DoD is also concerned with the incorporation of portions of EPA's EISA§ 438 Technical Guidance as legally binding requirements in a NPDES permit. As required by EO 13514, EPA issued Technical Guidance on Implementing the Stormwater Runoff Requirements for Federal Projects under EISA § 438, in December 2009. In issuing the Technical Guidance, EPA explained that the document was intended solely as guidance, and did not impose any legally binding requirements on federal agencies or impose legal obligations upon any member of the public. DOD was surprised to see elements of the Technical Guidance as mandatory elements in an NPDES permit. It is not clear why these performance standards were included in the draft permit, as DOD has already instructed its installations to implement EISA § 438 consistent with EPA's Technical Guidance, pursuant to a policy memorandum in January 2010.

EPA Response to Comment 425

EPA has removed the requirement in Part 5.2 that required compliance with EISA § 438 to ensure equity amnong all permittees covered by this permit.

Change to the Permit: Part 5.2 has been updated accordingly.

426. Comment from the Town of Seabrook

EPA has exempted Federal agencies from certain stormwater requirements. We assume that the EPA has, in good faith, determined that this is a beneficial policy for both the public and governmental entities. We agree. Please expand the exemptions to include State and local government entities.

EPA Response to Comment 426

EPA has exempted non-traditional MS4s from the requirements to develop ordinances or other regulatory mechanisms because they do not have legal authorities to do them. They are required to have procedures and policies in place that meet the intent of the required regulatory mechanisms. Additionally, they are also not required to assess local regulations that affect the use of green infrastructure practices. This is because a non-traditional MS4 would have no authority to address local regulations. There are no other aspects of this permit where there are differing requirements for non-traditional MS4s. Please note that non-traditional MS4s may encompass federal, state, or local entities. Since traditional MS4s have the authority to develop ordinances or other regulatory mechanisms as well as assess its local regulations, EPA has not expanded these exemptions to other permittees.

427. Comment from the DOD - Department of Defense

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.

EPA Response to Comment 428

The section of the permit referenced in this comment is an expectation that is applied to the developer of a property within the permittees regulated area. The use of LID is a cost-effective approach to minimize any increase in stormwater pollution from new development; therefore, a developer should use LID site planning to the extent that the use of LID at a particular site is feasible. EPA has not changed the language in Part 2.3.6.a.ii.(a).

428. Comment from the DOD - Department of Defense

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."

EPA Response to Comment 428

Non-traditional MS4s have been excluded from the requirements to develop ordinances or other regulatory mechanisms as well as the requirements to assess local street design guidelines and barriers to use of low impact design. See Response to Comment 390.

6.0 REQUIREMENTS FOR MS4s OWNED AND OPERATED BY TRANSPORTATION AGENCIES

No comments were received on this section of the draft permit.

Appendix A

429. Comment from the Town of Merrimack

There is no definition of outfall in Appendix A of the 2013 MS4 Draft General Permit or in any other section or appendix of the Permit. There are many basins and drainage areas in Town that flow to swales and wooded areas. Some of these swales and wooded areas end somewhere before the water body. How do we determine what is an outfall?

EPA response to Comment 429

The definition of an "outfall" from the NPDES regulations at 40 CFR 122.2 has been added to Appendix A.

If there is any channelized stormwater flow from the town's MS4, the stormwater discharge constitutes a point source and the point of discharge to a wetlands or waterbody is considered an outfall.

Changes to the Permit: Appendix A has been revised accordingly.

430. Comment from the Town of Merrimack

In the 2013 MS4 Draft General Permit Appendix A, the definition of TMDL states that "A TMDL includes waste load allocations (WLAs) for point source discharges, load allocations (LAs) for non-point sources…" The developed TMDLs that are part of this 2013 MS4 Draft General Permit do not have sufficient WLAs. Instead, all of the loading that is causing the impairment is assumed to be discharged as part of the Town of Merrimack's MS4 system. We believe that natural sources of pollutants may be a significant cause of the impairment.

EPA Response to Comment 430

EPA is unable to comment on the specific TMDLs that the town is referencing because they are not mentioned here. The TMDL development and approval process as specified in Section 303(d) of the CWA and the implementing regulations at 40 CFR 130.7 require a public review and comment period prior to submission for EPA approval; this permit does not reopen any TMDL for comment or modification. EPA Region 1 reviews each TMDL submitted for approval by NHDES and evaluates the adequacy of the TMDL for compliance with the regulatory requirements. Each of the TMDLs identified in the draft permit and used to develop permit requirements was found through EPA's review process to satisfy all of the TMDL regulatory requirements.

Appendix B

431. Comment from the Town of Derry

This section [Section 2.3.4.4] also references Appendix B Section B.12 which appears to be more applicable to a NPDES waste water discharges and not relevant to MS4 stormwater discharge. In addition, B.12.F specifies 24 hour reporting for "any noncompliance which may endanger health or the environment. This is a very broad and all-inclusive requirement in that any kind of discharge could be deemed to "endanger the environment".

432. Comment from the Town of Seabrook

5. Duty to Comply, Standard General Requirements, Appendix B, Pages 1-3 of 10

The EPA has created a two and a half page list of punishments that we assume can be inflicted on us for any permit violation. The fines and incarceration penalties are chilling (see below).

Criminal Penalties:

Negligent Violations -$2,500 minimum to $25,000 maximum per day of violation, or one year imprisonment (maximum), or both. Double the penalties for second offense.

Knowing Violations -$5,000 minimum to $50,000 maximum, or three years imprisonment (maximum), or both. Double the penalties for second offense.

Knowing Endangerment -$250,000 maximum, or fifteen years imprisonment (maximum), or both. False Statement -- $10,000 maximum, or two years imprisonment (maximum), or both.

Civil Penalties -$32,500 per day per each violation.

Administrative Penalties:

Class I -$11,000 per violation not to exceed $32,500. Class ll- $11,000 per violation not to exceed $157,000.

The Town cannot imagine EPA would impose jail time or exorbitant fines on the townspeople and town workers in Seabrook. A stiff penalty by New Hampshire standards is $500 a day. We have heard that the EPA believes that the stiff penalties will help ensure compliance. While that may be the case, we perceive that your penalties are an indication of a government bureaucracy run amok. We ask that you abolish the criminal penalties completely and reduce the Civil and Administrative penalties by a factor of ten.

433. Comment from the Town of Seabrook

Need to Halt or Reduce Activity Not a Defense, Standard General Requirements, Appendix B: Section B.3, Page 3 of 10

Seabrook Comment: In this section, EPA seems to be predetermining what will or will not be a legal defense of a violation. Doesn't the Judicial Branch of Government determine whether a legal defense is acceptable? If so, please delete this paragraph.

434. Comment from the Town of Seabrook

EPA: "You must take all reasonable steps to minimize or prevent any discharge...in violation of this permit which has a reasonable likelihood of adversely affecting human health or the environment."

Seabrook Comment: This one sentence gives us some insight into the thinking among the EPA rule writers. The regulation implies that our drainage system (catch basins, roadside swales, culverts, etc.) may be a

threat to the health of our citizens. There is no evidence of that. None of our untreated sewage is polluting the drainageways. No one is drinking stormwater runoff. There are no outbreaks of waterborne illnesses. Most importantly, there is no reasonable likelihood of our stormwater adversely affecting the health of Seabrook citizens. If there was likelihood, Seabrook would have addressed it long before the EPA was created. ---But health is not the only EPA criteria for this rule-making. The catch-all phrase "or the environment" has been inserted here. There is no winning this debate. In EPA's mind, almost all human activity has a reasonable likelihood of adversely affecting the environment. Environmentalists scold us for driving cars and turning on the light. Carbon dioxide is created from our breath. Now, with this regulation, the environmentalists' questionable beliefs are the Seabrook taxpayers problem- another non-debatable, unfunded mandate. Seabrook emphatically objects.

435. Comment from the Town of Seabrook

8. Proper Operation and Maintenance, Standard General Requirements, Appendix B: Section B.5, Page 3 of 10

EPA: "You must at all times properly operate and maintain all facilities...to achieve compliance with the conditions of this permit".

Seabrook Comment: We resent EPA's attitude towards our Town with the forceful "You must at all times..."along with the threat of imprisonment. Proper operation and maintenance of Town facilities is a high priority and constant goal. We cannot imagine improving our O&M by issuing edicts to our fellow Town employees. To err is human.

436. Comment from the Town of Seabrook

9. Reporting Requirements -24 Hour Reporting, Appendix B, Section B.12.F.1, Page 7 of 10

EPA: "You must report any non-compliance which may endanger health or the environment. Any information must be provided orally within 24 hours from the time you become aware of the circumstances."

Question: Is it really the EPA's intent to be notified of all stormwater non-compliances within 24 hours? Please provide the EPA contact names and telephone numbers. Also, will someone be available to take calls from Friday afternoon to Monday morning?

EPA Response to Comments 431 - 436

The language contained in Appendix B is verbatim regulatory language from 40 CFR § 122.41 that is consistent with the Clean Water Act and this permit issuance does not reopen 40 CFR § 122.41 for revision. While all requirements may not be applicable to MS4s, this is an NPDES permit and as such it must contain the requirements in this part. The regulatory language of 40 CFR § 122.41 states “All conditions applicable to NPDES permits shall be incorporated into the permits either expressly or by reference.” Altering any of the language contained in Appendix B would require an alteration of existing regulations and is beyond the scope of this permit issuance. No changes have been made to Appendix B.

Appendix C

No comments were received on this section of the draft permit.

Appendix D

No comments were received on this section of the draft permit.

Appendix E

437. Comment from the City of Portsmouth

Appendix E Notice of Intent: The suggested form provided by the USEPA in Appendix E requires that information related to the 2003 SWMP be provided. The City of Portsmouth has submitted annual reports that already provided this requested information. In addition, the NOI requires that dates and responsible parties and description of BMPs associated with the SWMP be submitted with the NOI. The NOI is due within 90 days of the effective date of the permit. However the SWMP is not due to be completed until the end of the first permit year. This NOI form effectively shortens the SWMP deadline to 90 days. Please remove the requirements to provide 2003 information and new SWMP information as part of the NOI.

438. Comment from MCWRS

The suggested form provided by EPA in Appendix E requires that information related to the

2003 SWMP be provided. Many municipalities already submit annual reports providing the requested information, and the requirement is administratively duplicative and wasteful of scarce municipal resources. In addition, the NOI requires that dates and responsible parties and description of BMPs associated with the SWMP be submitted with the NOI. The NOI is due within 90 days of the effective date of the permit. Municipal SWMPs may not be due to be completed beyond the 90 days, so the NOI could effectively shorten the SWMP deadlines. We request that the requirements to provide 2003 information and new SWMP information as part of the NOI be removed.

EPA response to Comments 437-438

In order for MS4 operators to notify EPA of their intent to discharge under the 2017 Small MS4 General Permit they will need to submit information to EPA on how their current stormwater management program (including 2003 permit requirements) and additional proposed actions will meet the requirements of this general permit. The NOI is not required to contain the level of detail in terms of plans and reports that will be part of the SWMP, which is a permittee's central planning document to collect all of the relevant information about managing their stormwater program. The series of annual reports submitted under the 2003 permit often document changing approaches and descriptions of MS4 practices and MS4 characteristics in a community. EPA finds that it is an effective and appropriate requirement that the permittee provide certain information that also may be interpreted or extracted from the multi-year series of annual reports as an effective and appropriate means of ensuring accurate, up-to-date, and unambiguous information is provided to EPA for coverage under this permit. See EPA Response to Comment 22 for a discussion of NOI procedures.

Appendix F

439. Comment from Town of Goffstown

The Table F-1 dealing with the Statewide Bacteria TMDL appears to have the column headings for Single Sample and Geometric Mean reversed. Also, the Statewide Bacteria TMDL appears to be based on outdated

methodology and should be revised to reflect current EPA guidance. We also question why the beach bacteria standard would be applied year round when swimming in NH is a very limited season. It would make much more sense to have a seasonal swimming limit.

The reductions to meet the TMDL in Table F-1 are based on the highest measured sample ever taken in a water body and are not indicative of the overall water quality of the receiving water or the average levels expected from the MS4 discharges. It would be more prudent to allow for more sampling of each water body and take an overall average of each measured sample. The results will give a better overall picture of the water quality for each water body. As mentioned above, this can be done during the first 3 years to create a more rigorous and accurate storm water program.

440. Comment from the Town of Auburn

The reductions to meet the TMDL in Table F-1 are based on the highest measured sample ever taken in a water body and are not indicative of the overall water quality of the receiving water or the average levels expected from the MS4 discharges.

441. Comment from the Town of Hampton

Appendix F of the 2013 Draft MS4 Permit (73 pp.)

We would like to call your attention to page 4 of this attachment. In section 1 on this page it is stated that "Water Quality Goal of TMDL" is " a geometric mean for fecal coliform of less than 14 MPN/100 milliliters and a 90th percentile of less than 43 MPN/ 100 milliliters as determined using National Shellfish Program (NSSP) protocols". (MPN =Most Probable Number).

---In comparison, the 2010 Consolidated Assessment and Listing Methodology (CALM) report prepared by the State and adopted by the EPA states that the limits for Enterococcus is a geometric mean of 35 cts\100 mill-liters and a single sample maximum of 104 cts\ 100 mill-liters.

---There appears to be a difference in these standards and we would like to know which standard controls. If we are forced to meet the NSSP limits this may not be possible because we do not control all of the land draining into the Taylor River and its headwaters.

442. Comment from the Town of Hampton

2.3.4.8.d Outfall & Interconnection Screening and Sampling. The Town of Hampton is a seaside community that is strongly influenced and controlled by the weather.

In recent years the residents of the Town have experienced more frequent flooding in many areas of the Town. Several of our drainage systems have drainage gates on the end of them to prevent seawater from entering the drainage systems during high tides. When a rain or snow event occurs during a high tide the low lying areas flood because the high tide will not permit the tide gates to open. In many cases the flooding is only partially alleviated in the short time period between high tides.

- When this occurs the water in the pipes and catch basins will be contained anywhere from 24 hours to several days. We suspect that during this time period the bacteria in the drainage system grow to exceed TDML limits. This means that we may never achieve a low acceptable bacteria count in the tidal controlled drainage systems.

Therefore, we would propose that the Town, working in concert with the State, be permitted to collect multiple samples over a two (2) year period from the tide gate controlled systems. This would allow us to determine if bacteria in these systems is an issue and to what level. We would also propose that the tide controlled structures are unique and that if we are required to test for bacteria that a separate TMDL be

established. We also feel that this is an ongoing program and that the TMDL level should be revisited after three (3) more years and before the MS4 permit is renewed in the future.

Given the recent release of the 2012 TMDL's we would ask that no testing be required within this permit until such time as a proper set of TMDL's has been established.

443. Comment from the Town of Goffstown

Goffstown estimates that hundreds of thousands of dollars will be spent in sampling and BMP costs dealing with the bacteria TMDL in the Piscataquog River. A review of the data for the past 10 years of Glen Lake (highest priority due to the swimming beach) reveals that there have only been 5 times that we have exceeded 100 #/100mL. The highest value is 200. It seems a bit inefficient to have the Goffstown taxpayer paying hundreds of thousands of dollars to try to control bacteria in the river when there are still direct sewer overflows during heavy rain storms just a few miles downstream. We need to find a mechanism to channel the money to have the greatest impact on cleaning up the problems in our watersheds.

EPA Response to Comments 439 - 443

See EPA Response to Comments 116 - 120 and EPA Response to Comments 128 - 129, EPA Response to Comments 61-83, EPA Response to Comments 46 - 54, EPA Response to Comments 55 - 60, and EPA Response to Comments 227 - 233

As described earlier, the 2015 renotice of the draft permit included significant changes to Appendix F, to provide clarity of permit requirements and certainty on applicability of permit provisions. These changes include Table F-1; it no longer includes the columns for 'Single Sample' or 'Geometric Mean'.

The final permit provides updated language for relief from requirements of Appendix F. See EPA Response to Comment 130.

The water quality goal of the TMDL is driven by the most stringent water quality standard; for most waterbody segments, that would be the shellfishing designated use. The bacteria standards referenced above from the 2010 CALM, 35cts/100 and 104 cts/100, are for primary contact recreation.

Generally, and as a matter of legal procedure, EPA considers that the public participation process for the draft MS4 permit is not the appropriate forum for providing comments on NH's surface water quality assessments, Integrated Reports, TMDLs or water quality standards. The TMDL development and approval process as specified in Section 303(d) of the CWA and the implementing regulations at 40 CFR 130.7 require a public review and comment period prior to submission for EPA approval. This permit does not reopen any TMDL for comment or modification. EPA encourages permittees to work with NHDES to update the TMDLs in question if the permittee believes an update is warranted.

444. Comment from Charles River Watershed Association

CRWA is strongly supportive of the development of the detailed appendix and related attachments to assist in the development of phosphorus control programs (PCPs) that are compliant with the permit and achieve phosphorus reductions consistent with wasteload allocations (WLAs) in TMDLs. There is one major problem in the draft methodology: the phosphorus reduction credit granted to permittees for IDDE is inconsistent with the methodology used to estimate the existing phosphorus load, and does not appear to be consistent with the way WLAs were calculated in phosphorus TMDLs. EPA should either remove this credit altogether, or at a minimum establish a very low maximum percentage of the overall phosphorus reduction requirement

that can be achieved with an IDDE program. This is especially important in the case of a general permit, where highly detailed site specific data is not being used to establish permit requirements. [Eliminated some language] Illicit cross connections are sporadic, geographically isolated, and difficult to separate out from other sources of stormwater pollution in a modeled condition. They are not generally included in such models [Watershed models, TMDLs and watershed assessments] except as they may influence the overall average concentration of a pollutant] in stormwater.

Furthermore, TMDLs do not include a WLA for illicit cross connections because they are not allowed under the permit and thus cannot have a maximum daily load allowance. Since illicit connections have not been explicitly included in estimating existing loads, it is not appropriate to give them credit when estimating reductions. To allow a virtually unlimited credit towards phosphorus removal in a PCP that is intended to comply with a TMDL appears to give them credit under the WLA. Furthermore, from a practical perspective, CRWA has demonstrated with sampling and modeling that stormwater loads -even those with no apparent cross connections whatsoever- can still cause significant violations of water quality standards in receiving waters.

Clearly, the MS4 general permit is intended to focus on a permittee's stormwater management, and its phosphorus reduction credits should reflect improvements in stormwater control and treatment, not basic, required corrections of failing sewage infrastructure.

EPA Response to Comment 444

EPA appreciates the commenter's input on the draft permit's approach specified in Attachment 2 to Appendix F of calculating explicit phosphorus load reduction credit for the elimination of illicit discharges. EPA acknowledges that it is difficult to quantify the contribution of phosphorus load to surface waters that may be due to illicit discharges. Moreover, there are many types of illicit discharges that would require different methodologies for calculating load reductions associated with elimination of illicit discharges ranging from very straightforward calculations for the elimination of direct discharge of sanitary sewage using water meter records to much more complicated and sporadic situations such as leaking sewers discharging into underdrains and wet weather cross connections between the sanitary sewer and storm sewer systems.

The methodology proposed in the draft permit would be most suitable for the straightforward direct connection discharge types, providing permittees had credible estimates of flow volume removed. Upon further consideration, EPA recognizes that without standardized calculation methods for the wide range of illicit discharge types there would likely be high variability in the approaches used by permittees to quantify the amount of illicit discharge eliminated as part of carrying out required IDDE programs. EPA has determined that credible and consistent accounting approaches for estimating phosphorus load reductions associated with IDDE programs are needed to ensure that all permittees are ultimately given credible phosphorus load reduction credits in a fair and consistent manner. Consequently, EPA is eliminating from the final permit the option for permittees to explicitly calculate phosphorus load reduction credits associated with the elimination of illicit discharges.

Instead, EPA intends to evaluate reported estimates of illicit discharge volumes eliminated by permittees through IDDE programs and reported during the upcoming permit term. EPA then plans to consider submitted IDDE program information and, providing that adequate information is available, develop credible estimates of phosphorus load reductions associated will the elimination of illicit discharges documented by the permittee. When eliminated illicit discharges occur in drainage areas tributary to lakes/ponds with phosphorus TMDLs, then calculated phosphorus load

reduction estimates will be subtracted from the outstanding phosphorus load reduction requirements for those applicable lakes/ponds in the next permit.

EPA disagrees with a few of the commenter's other points relating to the phosphorus TMDLs, illicit discharges and the permit requirements. The lake phosphorus TMDL analyses were developed using best available information to estimate overall phosphorus loading and the reductions needed to achieve NH water quality standards and fully support designated uses. This information is a combination of local site specific data (e.g., watershed characteristics, physical, hydrological and water quality characteristics of the ponds and lakes) and extensive research information regarding pollutant source characterization and water quality responses to pollutant loading. Based on extensive and ongoing IDDE work done in many developed watershed areas served by separate storm sewer systems, it is very likely that illicit discharges are widespread and represented, and to some unknown extent, in the source information used to characterize phosphorus loadings to these lakes. Moreover, it is likely that illicit discharges are present in the lake watersheds and are therefore, contributing to existing impairments. While illicit discharges are illegal they need to be included in the overall accounting of both load contributions and load reductions to be achieved. As indicated above, prior to future permit issuances EPA intends to evaluate more detailed information developed by permittees as they implement their IDDE programs to determine if phosphorus load reduction credits are warranted for eliminated illicit discharges.

Changes To Permit: Attachment 2 to Appendix F has been updated accordingly.

445. Comment from the City of Rochester

It is confusing and difficult to understand the actual requirements of the "maximum extent practicable" (MEP) reductions. EPA, by its own records, documents in this permit that it is not necessary in all cases to implement best management practices (BMPs) to the maximum extent practicable to meet water quality. Specifically, approved total maximum daily loads (TMDLs) in Appendix F Table F.2, document that it is not necessary to implement BMPs to the maximum extent practicable to meet the TMDL waste load allocation (WLA).

EPA Response to Comment 445

It is unclear which requirements, records and documents the commenter is referring to. All permittees are responsible for complying with all MEP requirements as outlined in the permit. Permittees that are subject to an approved TMDL with a specific wasteload allocation or other requirements either individually or categorically for the MS4 discharge, shall comply with the applicable requirements of Appendix F. Please see EPA Response to Comments 46 - 54, EPA Response to Comments 55 - 60, and EPA Response to Comments 227 - 233.

446. Comment from NH Stormwater Coalition:

The Draft Permit does not specify how the determination that a MS4 is causing or contributing to an exceedance of the bacteria standard will be made. The Draft Permit subjects permittees to additional requirements for limiting the discharge of *E. coli* under Part 2.2 of the Draft Permit. *See* Part 2.2.1 – Requirements to Meet Water Quality Standards; Part 2.2.1 – Discharges Subject to an Approved TMDL; Part 2.2.2 – Discharge to an Impaired Water without an Approved TMDL. Part 2.1.1(c) provides that if the permittee, EPA, or the State determines that a discharge causes or contributes to an exceedance of the water quality standard, the permittee must eliminate the cause of the exceedance or develop a Water Quality Response Plan ("WQRP") pursuant to Part 2.2.2. The WQRP identifies additional or modified BMPs that will be implemented to ensure that the MS4 does not cause or contribute to the impairment.

The following comments are based on the assumption that the agency will use the Statewide TMDL for Bacteria (September 2010) ("Bacteria TMDL") to make such determinations. The Bacteria TMDL is thoroughly confusing and is an inconsistent document. The Bacteria TMDL makes no demonstration showing that MS4 control is necessary to achieve compliance with the applicable bacteria water quality standards or that the allocations in the TMDL will result in compliance. In fact, the approved TMDL specifically states that instream water quality, not an end-of-pipe limitation, will control whether or not the criteria are achieved. Bacteria TMDL, at 35.

Additionally, the Bacteria TMDL failed to undertake basic TMDL assessments such as identifying the sources of the impairment prior to deriving a regulatory approach, considering the fate or transport, and considering available dilution. Consequently, the document never should have been accepted by DES or approved by EPA. Recognizing these deficiencies, the TMDL does not set specific effluent limitation requirements:

The underlying assumption in setting a concentration-based TMDL for bacteria is that if all sources are less than or equal to the WQS, then the concentration of bacteria within the receiving water will attain WQS. This methodology implies a goal of meeting bacteria standards at the point of discharge for all sources. Although end of pipe bacteria measurements can identify and help prioritize sources that require attention, compliance with this TMDL will be based on ambient water quality and not water quality at the point of discharge (i.e., end of pipe).

Bacteria TMDL, at 35 (emphasis added). This is a facially deficient TMDL.

As stated above, the TMDL was developed without an allowance for dilution, but compliance will be evaluated based on ambient water quality, which factors in dilution. This inconsistency is reiterated in Appendix F of the Draft Permit.

The WLA for MS4 discharges is set at the relevant water quality standard, although compliance with the TMDL will be based on ambient water quality and not water quality at the point of discharge (i.e., end of pipe).

Draft Permit Appendix F, at 5. Given that the intent of the TMDL and the permit is to determine compliance via ambient measurement, dilution and die-off can and should be considered in determining whether an MS4 discharge causes or contributes to a bacterial impairment. Contrary to the assessment that the TMDL provides high confidence in compliance with water quality standards, the TMDL never addressed the actual source of bacteria causing the apparent impairment. Consequently, the need to regulate MS4s is not demonstrated. More importantly, load allocations applicable to wildlife waste, agricultural runoff, and contact recreation cannot be limited in the manner perceived by this TMDL. Without some demonstration that these sources are not responsible for the impairment, it is unclear if the Statewide TMDL for Bacteria will achieve its goal of restoring designated uses for contact recreation.

The objective of a TMDL is not to prevent a discharge from "causing or contributing" to a condition; it is to achieve the applicable standard. The "cause or contribute" prohibition does not exist under either CWA § 303(d) or any rule applicable to existing discharges to impaired waters. This is only a prohibition to new dischargers to impaired waters (40 C.F.R. § 122.4(i)). Thus, EPA applied the wrong regulatory regime to the development of these MS4 requirements.

Finally, the Draft Permit indicates that the WQRP must include a public education and "pooper scooper" program, increased street sweeping, and an Illicit Discharge program (already required by 2003 General Permit). As part of the Illicit Discharge program, catchments draining to the TMDL waters must be designated either Problem Catchments or High priority for implementation of the Illicit Discharge Detection and Elimination program. Again, these requirements may only be reasonable if MS4 control is necessary to restore the designated use, but the Statewide Bacteria TMDL made no such determination. That is a

required demonstration for EPA or the State, not for EPA to transfer to the MS4 community. These requirements are arbitrary and should only be imposed where determined necessary.

447. Comment from NH Stormwater Coalition:

Data supporting the impairment listings for the statewide Bacteria TMDL were provided in the appendices with the TMDL. One of these appendices (Appendix H) was reviewed to assess whether the impairment listing was reasonable given the general considerations identified above and the specific concerns with the bacteria water quality standard. Data supporting the impairment listings for the Merrimack River Watershed were presented in Appendix H of the Statewide Bacteria TMDL. This appendix presents data for 81 Assessment Units (AUs) that are considered impaired. The first 15 of these AUs were reviewed and the results are summarized below.

AU	Beach	Period of Record	Number of Exceedances		Comments
			GM	SSM	
H1	Yes	1998-2007	0	2	No exceedances after 2003
H2	No	2002-2007	0	2	No exceedances in 2007
H3	No	2000	1	2	Insufficient data
H4	No	2001	1	1	Insufficient data
H5	No	2002-2003	1	1	Insufficient data
H6	No	2000	1	1	Insufficient data
H7	No	2000	1	1	Insufficient data
H8	No	2002-2007	2	2	Exceedances in 2007 only
H9	No	2002-2007	0	2	1 dry, 1 wet weather exceedances
H10	No	2002-2007	0	2	1 dry, 1 wet weather exceedances
H11	Yes	1998-2007	0	8	Localized exceedances
H12	Yes	1998-2005	0	3	Localized, low level exceedances; No exceedances after 2001
H13	Yes	2002-2007	0	4	Localized, low level exceedances
H14	No	2004-2007	0	3	High level exceedances
H15	No	2000-2007	0	9	No exceedances after 2004

- AU H1 (Sondogardy Pond) and H2 (Merrimack River) have sufficient data in the last year of record to confirm full use support. The data for AUs H3 – H7 are insufficient to make any decision on impairment. Even if the available data for these sites show highly elevated levels of bacteria, the data are over 10 years old and management practices implemented with the 2003 General Permit may have resolved the old impairment issues. Updated data is required to confirm the impairment status of these AUs.

- AU H8 (The Merrimack River – Garvins Falls) exhibited two exceedances of the geometric mean and SSM criteria over a six year period of record. Since this site is not a beach, the SSM criteria should not be applied (consistent with EPA BEACH Act recommendations). The remaining two geometric mean exceedances fall within the once-in-three-year allowable exceedances frequency, suggesting that this site is not impaired. Moreover, the only two high bacteria readings (3,250, 460 CTS/100 mL) occurred during dry weather, suggesting that stormwater BMPs would not be effective in reducing bacteria levels.

- AU H9 (Merrimack River) and H10 (Merrimack River – Garvin Falls Bypass) each exhibited two exceedances of the SSM criterion. Both AUs are not beach areas and the SSM should not be applied. If the SSM does not apply, these AUs would be considered fully supporting designated uses. Even with application of the SSM criterion, the observed exceedances do not surpass the acceptable exceedances frequency, indicating that the site is not impaired.

- AU H11 (Crystal Lake – Town Beach) is a beach and it has experienced 8 SSM criterion exceedances over the 10-year period of record. None of the exceedances were reported under wet weather conditions (although this condition was seldom reported). The monitoring data was reported for the left, center, and right sides of the beach with several of the exceedances localized to one section of the beach. This pattern is consistent with a natural cause (*i.e., E. coli* shedding from bathers). No data was presented to suggest that stormwater runoff contributes to these exceedances or that the additional BMPs contained in Appendix F will have any effect on the impairment listing.

- AU H12 (Upper Suncook Lake – Camp Fatima Beach) is a beach with 3 reported SSM criterion exceedances over an 8 year period. There have been no exceedances reported since 2001, although the lake was only sampled twice in 2002, 2004, and 2005, with a high *E. coli* level of only 8 CTS/100 mL in these three years. Monitoring data were reported for the left and right sides of Camp Fatima with SSM exceedances only reported on one side or the other, but not both. As discussed above, this pattern is consistent with a natural cause (bathing). This AU should not be subject to a TMDL given the limited record, lack of any exceedances in the last three years of sampling, and the possible natural cause of the older exceedances.

- AU H13 (Berry Pond Brook – Town Beach) is a beach with 4 reported SSM criterion exceedances over the 6 year monitoring period. Measurements are made at the left, center, and right of the recreation area of the beach. *E. coli* concentrations have been reported at low levels during wet weather conditions with only one cluster of SSM exceedances (left, center, and right sides on a single day) reported in the last two years of record. These observations suggest a natural source of contamination (*e.g.,* bathing) and, along with the wet weather data, suggest that stormwater control will have no effect on conditions in the lake.

- AU H14 (Jenness Pond) is not designated as a beach. The record includes 6 observations in 2004, 7 observations in 2005, and a single observation in 2007. There were three SSM criterion exceedances in 2004-2005, with one exceedance reported at 23,300 CTS/100 mL. No information is presented on the weather conditions (wet or dry) associated with these observations, but the station name included in the Appendix suggests that a horse farm is located adjacent to the pond. The data is sparse and new data should be collected to assess the impairment status of the pond. Even so, these data do not suggest that a "pooper scooper" program will have a significant effect on bacteria levels in this pond.

- AU H15 (Northwood Lake) is not designated as a beach. The record includes 8 years of data, with adequate monitoring to assess the geometric mean in 2002 and 2004 – 2007. There were no reported geometric mean exceedances and the SSM criterion was exceeded 4 times in 2002 and 5 times in 2004. No additional exceedances were reported in the last three years of monitoring. This lake should not be listed as impaired.

Based on this summary, virtually all 15 AUs should be removed from the impaired waters list. For some, the data clearly indicates that primary contact recreation use is not impaired. For others, there is clearly not enough data or recent data upon which a determination of impairment can be made. Regardless of the impairment listing, there is no data presented to determine whether MS4s cause or contribute to exceedances of the bacteria standard and there is no factual basis to conclude that the MS4 communities are significantly contributing to use impairment. The impairment listings for these AUs should be revisited and the other impairment listings should be reviewed to determine whether they suffer from the same deficiencies. In any event, it is apparent that the mere listing of a water body as impaired is not substantial

evidence or legally sufficient to conclude that (1) a more restrictive MS4 permit should be imposed or (2) that the community is causing or contributing to the condition. The provisions of the proposed permit that are based on such assumptions are plainly arbitrary and capricious and should be withdrawn.

With regards to EPA‟s or the State‟s determinations under Part 2.2.1(c) of the Draft Permit, the type of assessment included in the Bacteria TMDL is also not sufficient to render any type of defensible determination that further MS4 corrective measures or regulatory controls are necessary to ensure standards compliance. Before these conditions are imposed, the source of *E.coli* contamination must be determined to ensure that MS4 control is necessary to maintain the primary contact recreation use with consideration for dilution and die-off, as intended by the TMDL.

EPA Response to Comment 446 - 447

See EPA response to Comments 85 -86, EPA Response to Comment 113, EPA Response to Comments 116 - 120 EPA Response to Comments 46 - 54, EPA Response to Comments 55 - 60, EPA Response to Comments 227 - 233, and EPA Response to Comments 128 - 129. The changes to the permit as a result of the 2015 renotice of the draft permit included significant changes to Section 2.2 to provide clarity of permit requirements and certainty on applicability of permit provisions. The amended language altered the requirements under Section 2.2.1 and Appendix F for permittees subject to an approved TMDL, including changes to Tables F-1 and F-2. Section 2.2.1.e and Appendix F Part II outline the requirements for permittees subject to an approved bacteria TMDL; these requirements make it clear that the draft permit and the final permit do not include a required specified percent reduction in bacteria concentration from stormwater discharges but instead the requirements are composed of additional or enhanced BMP requirements.

With respect to stormwater from an MS4 as a source of bacteria, please see EPA Response to Comments 61-83.

Generally, and as a matter of legal procedure, EPA considers that the public participation process for the draft MS4 permit is not the appropriate forum for providing comments on NH's surface water quality assessments, Integrated Reports, TMDLs or water quality standards. The TMDL development and approval process as specified in Section 303(d) of the CWA and the implementing regulations at 40 CFR 130.7 require a public review and comment period prior to submission for EPA approval; this permit does not reopen any TMDL for comment or modification. EPA Region 1 reviews each TMDL submitted for approval by NHDES and evaluates the adequacy of the TMDL for compliance with the regulatory requirements. Each of the TMDLs identified in the draft permit and used to develop permit requirements was found through EPA's review process to satisfy all of the TMDL regulatory requirements.

See EPA Response to Comment 130 for discussion of relief provisions for requirements for dischargers where TMDL's identify stormwater as a source of a pollutant of concern.

448. Comment from NH Stormwater Coalition:

The New Hampshire primary contact recreation water quality standards for bacteria were promulgated in 1996, and are out of date. The bacteria criteria for New Hampshire state waters are specified in Section 485-A:8 (Standards for classification of surface waters of the State), as follows:

Class	Use Type	Bacteria Type	Geometric Mean	Single Sample

A	Beach	*E. coli*	47	88
A	Non-beach	*E. coli*	47	153
B	Beach	*E. coli*	47	88
B	Non-beach	*E. coli*	126	406
Tidal	all	Enterococci	35	104

The geometric mean criteria for bacteria specified in Section 485-A:8 for Class B and tidal waters are the same criteria developed by USEPA under the 2004 Beach Environmental Assessment and Coastal Health (BEACH) Act, which are identical to EPA‟s 1986 ambient water quality criteria for bacteria. *See* 69 Fed. Reg. 67,218 (Nov. 16, 2004). These criteria were established to provide public health protection equivalent to the existing fecal coliform water quality objectives (0.8% risk in freshwater and 1.9% risk in marine waters of gastrointestinal illness to swimmers from the inadvertent ingestion of 100 ml of water through body contact recreation) originally recommended by EPA in 1986. *See id.* at 67,220, 67,233.

The 1986 EPA water quality criteria for bacteria provided geometric mean density criteria for freshwater enterococci (33/100 mL), freshwater *E. coli* (126/100 mL), and marine enterococci (35/100 mL) as well as four different SSM values for each criterion. As indicated above, the DES has adopted the freshwater *E. coli* and marine enterococci geometric mean water quality standards.

The SSM values presented in the 1986 criteria and in the BEACH Act represent a continuum along a statistical distribution, for a standard deviation of 0.4 in freshwater and a standard deviation of 0.7 in marine waters, that was developed to provide public health officials with a tool for making informed decisions to open or close beaches based on a limited amount of data.

That continuum for each criterion was defined as:

[equations deleted]

The SSM in Section 485-A:8 for Class B, non-beach waters identify the bacteria concentrations approximately associated with the 90th percentile of the distribution of *E. coli* identified by EPA for fresh waters. The SSM for Tidal waters is the 75th percentile of the distribution for Enterococci identified by EPA for marine waters. As noted by EPA, application of the SSM values to generate daily maximum limitations in an NPDES permit would result in regulating *E. coli* or Enterococci in a manner far more restrictive than intended by the water quality standard:

Other than in the beach notification and closure decision context, the geometric mean is the more relevant value for ensuring that appropriate actions are taken to protect and improve water quality because it is a more reliable measure, being less subject to random variation, and more directly linked to the underlying studies on which the 1986 bacteria criteria were based.

69 Fed. Reg. 67,224 (Nov. 16, 2004).

The single sample maximum values in the 1986 bacteria criteria were not developed as acute criteria; rather they were developed as a statistical construction to allow decision makers to make informed decisions to open or close beaches on small data sets … single sample maximums were not designed to provide a further reduction in the design illness level provided for by the geometric mean criterion … Based on the derivation of the single sample maximums as percentiles of a distribution around the geometric mean, using the single sample maximums as values not to be surpassed for all Clean Water

Act applications, even when the data set is large, could impart a level of protection much more stringent than intended by the 1986 bacteria criteria document.

69 Fed. Reg. 67,225 (Nov. 16, 2004).

If the SSM is used as a "not to exceed" value, as it is in the existing DES criteria, it would impose a level of protection far more stringent than that intended by EPA to protect contact recreation uses. For example, EPA typically uses the 99th percentile of a distribution (Z_P = 2.326) to assess compliance with regulatory maximums. Equation [1a] may be used to back calculate the actual geometric mean needed to keep a receiving water concentration below the *E. coli* maximum value of 406 colonies/100 ml, assuming the same standard deviation (0.4) employed by EPA in deriving the national criteria. For this case, the corresponding geometric mean is 48 colonies/100 ml. This geometric mean is far more stringent than the level of protection provided by the actual geometric mean criterion – 126 colonies/100 ml. Similarly, for enterococci, the maximum concentration of 104 colonies/100 mL is equivalent to a corresponding geometric mean of 2.4 colonies/100 mL while the actual geometric mean criterion is 35 colonies/100 mL.

The geometric mean indicator density for *E. coli* in fresh water and enterococci in marine waters are based on Equation [2a] and Equation [2b], respectively. *[equations deleted]*

See 69 Fed. Reg. 67,221 (Nov. 16, 2004). Solving Equation [2a] for a geometric mean of 48 colonies per 100 ml yields an illness rate of 4.0 per 1000 people. This level of protection is double the acceptable swimming associated gastroenteritis rate (8 per 1,000 people) targeted by EPA. Similarly, solving Equation [2b] for a geometric mean of 2.4 colonies per 100 mL yields an illness rate of 4.9 per 1000 people. This represents a level of protection approximately 300% greater than the target rate of 19 per 1,000 people, assuming application of the criteria as a daily maximum is appropriate at all. As demonstrated above, the current DES water quality standard is much more restrictive than the underlying EPA standard, without any rationale supporting the more restrictive requirements.

Additionally, EPA‟s guidance on coordinating CSO requirements with water quality standards[35] does not support such an approach and makes recommendations for reconciling the two requirements. In providing this guidance, EPA intended that states integrate water quality standards reviews, implement high-priority CSO controls, and develop Long Term Control Plans that support attainment of water quality standards without causing substantial and widespread economic and social impacts. This integration would include a review of state water quality standards and revision as appropriate to ensure that the applicable water quality standards are attainable. The guidance notes that, depending upon the CSO impacts, possible water quality standard revisions could include:

1. Applying the *Ambient Water Quality Criteria for Bacteria – 1986* (*i.e. E. coli* or enterococci) at the beach or at the point of contact rather than at the end-of-pipe or at the edge of the mixing zone where permits may require compliance with other criteria;

2. Segmenting the water body to preserve recreation in areas where it actually occurs;

3. Revising the use by creating subclasses to recognize intermittent exceedances of bacteriological criteria.

CSO Guidance, at 5. At a minimum, the bacteria standards should be revised to incorporate the most recent, promulgated criteria and their proper application. Alternatively, every MS4 could file a site-specific request to ensure the proper application of the criteria.

449. Comment from NH Stormwater Coalition:

Water quality criteria consist of three components: (1) magnitude, (2) duration and (3) frequency. A typical frequency component requires that the magnitude and duration components are not exceeded more frequently than once every three years on average. The criteria presented in Section 485-A:8 present the

magnitude (the allowable concentration) and duration (averaging period) components, but is silent regarding the frequency (how often criteria can be exceeded) component.

The 2012 Section 305(b) and 303(d) Consolidated Assessment and Listing Methodology (2012 CALM) presents Use Support Matrices for Bacteria that shed light on the frequency component used by the State. The Use Support Matrix for Bacteria (Primary Contact Recreation) (Table 3-19 of the CALM) indicates that the primary contact recreation designated use is not supported if there are one or more exceedances of the geometric mean criterion and/or two or more exceedances of the SSM criterion.

This interpretation of the New Hampshire water quality criteria is more stringent than the "once in three years on average" frequency typically used by water quality criteria. However, this basis is predicated on an assessment of the most recent full calendar year of data (or years if there was insufficient data in the most recent year to make an assessment). To be fully supporting the designated use, there must be sufficient data to make an assessment during the peak contact recreation season (May 24 – September 15).

The bacteria criteria should be revised to incorporate a return frequency consistent with the CWA requirements and EPA Guidance. Likewise a seasonal application of such standards is appropriate as contact recreation is not possible during cold periods when hypothermia would occur from swimming. Swimming during major storms with dangerous currents should also not be assumed and elevated bacteria under those conditions should not constitute an impairment since the use cannot physically exist under those conditions. At a minimum, impairment listings should be based on three consecutive years of data with at least one geometric mean during the peak contact recreation season exceeding the applicable criteria.

450. Comment From NH Stormwater Coalition:

The statewide bacteria TMDL was derived to comply with the New Hampshire water quality criteria for *Escherichia coli* (*E. coli*). These bacteria standards were adopted in 1996 and include geometric mean and single sample maximum (SSM) concentrations to protect recreational uses in fresh waters. These criteria are seriously out of date, contrary to Section 303(c) mandates and should be updated. Specifically, the SSM criteria presented in EPA‟s 1986 Ambient Water Quality Criteria for Bacteria were never intended to serve as water quality criteria but were intended to be used for beach closure notifications as EPA explained in its BEACH Act rulemaking. Many of the impaired waters were listed based on an exceedance of the SSM and not on an exceedance of the geometric mean. The cause of such occurrences was never assessed and it is simply impossible to tell whether the MS4 had anything to do with the condition. It is also impossible to claim that contact recreation uses have been impaired based on a single sample reading, such an approach is not accepted by the scientific community. If the bacteria standards are updated to reflect EPA‟s 2004 Implementation Guidance, many of the waters currently listed as impaired would be removed from the 303(d) list and therefore, would not need to comply with the additional requirements specified in Appendix F for discharges to bacteria- impaired waters.

EPA Response to Comments 448 - 450

The commenter is correct in describing the NH water quality criteria for bacteria and how those criteria are applied in listing and assessment decisions. As referenced in the above comments, NHDES prepares a Consolidated Listing and Methodology (CALM) Guidance every two years to coincide with the Section 303(d) Listing Cycle. As described in the 2014 CALM: *The primary purpose of this document is to describe the process used to make surface water quality attainment decisions for 305(b) reporting and 303(d) Listing purposes. This document is called the Consolidated Assessment and Listing Methodology (CALM) because it includes the methodology for assessing and listing waters (a term used to describe the process for placing waters on the 303(d) list).*

With respect to issues regarding the assessment and listing methodology used by NHDES, the time for such an analysis would be during the public comment period for the NHDES CALM. NHDES released the 2014 305(b)/303(d) CALM for public comments on August 16, 2013. On Monday, September 9th, 2013 from 1:00-3:00 pm, NHDES conducted a public informational meeting regarding the draft 2014 CALM. Interested parties were encouraged to review the draft CALM before this meeting. Comments were then accepted in writing prior to the close of business Friday, October 11th, 2013.

The commenter is correct that NHDES application of the water quality criteria for bacteria are more protective than recommended by EPA. However, as stated in the Water Quality Standards Handbook (USEPA, 2014): *Consistent with Section 510, states and authorized tribes may adopt any requirements regarding control or abatement of pollution as long as such requirements are not less stringent than the requirements of the CWA. Thus, the EPA is generally not authorized to disapprove a state or tribal WQS on the basis that the EPA considers the WQS to be too stringent.*

Generally, and as a matter of legal procedure, EPA considers that the public participation process for the draft MS4 permit is not the appropriate forum for providing comments on NH's surface water quality assessments, TMDLs or water quality standards.

See EPA Response to Comments 46 - 54, EPA Response to Comments 55 - 60, and EPA Response to Comments 227 - 233.

With respect to stormwater from an MS4 as a source of bacteria, see EPA Response to Comment EPA Response to Comments 61-83.

451. Comment from the Town of Merrimack

IV. TMDL REQUIREMENTS - BACTERIA; 4. Discharge Water Quality Vs. Ambient Water Body Quality-Section 3. of Appendix F states that "The WLA for MS4 discharges is set at the relevant water quality standard, although compliance with the TMDL will be based on ambient water quality and not water quality at the point of discharge (i.e., end of pipe"). The general permit that is to be obtained by the municipalities is a Stormwater Discharge From MS4's permit. It is unreasonable given the 'Maximum Extent Practicable' standard to expect the municipality to bear the entire financial burden for cleaning State waters without proving that the end of pipe discharge is the major contributor to the impairment.

EPA Response to Comment 451

See EPA Response to Comments 46 - 54, EPA Response to Comments 55 - 60, and EPA Response to Comments 227 - 233.

The bacteria TMDL requirements are based on the TMDL document identifying stormwater as a source of bacteria to the receiving waterbody, including MS4 discharges. The permit imposes requirements on permittees that EPA believes will reduce bacteria discharges from the MS4 and are consistent with the TMDL document. The requirements do not impose end of pipe limits on the MS4 however, if the commenter would like to pursue an individual permit containing end of pipe limits they may submit an individual permit application consistent with 40 CFR §122.33(b) (2) (i) or §122.33(b) (2) (ii).

452. Comment from the Town of Merrimack

IV. TMDL REQUIREMENTS - BACTERIA; 5. Street Sweeping - Section 3. ii. of Appendix F requires the sweeping of streets "at least two times per year". Currently, the Town of Merrimack sweeps every public street, lot, and sidewalk each spring as soon as the winter season allows at a current cost of more than $50,000. During that operation, we pick up the residual sand that was applied during the winter season. Most of Merrimack's streets are uncurbed. A second sweeping of the streets would not be of practical or fiscal value for the Town as very little debris accumulates along the road edges during non-winter seasons.

453. Comment from the City of Nashua

Appendix F, Bacteria TMDLs 3.ii. Good House Keeping (Part 2.3.7.1 .d) -"The permittee shall increase the frequency of street sweeping in areas that discharge to any waterbody with an approved bacteria TMDL to at least two times per year." Comment: Same as Item 19 regarding the requirements outlined in the proposed permit that represent an order of magnitude increase in effort to address municipal operations and lack of funding to support these requirements. The approach for street sweeping needs to be based on the watershed characteristics (e.g., land use, road lane miles) and what is necessary to reduce pollutant loads to these water bodies based on monitoring and/or WQRPs. Not all areas will require a sweeping frequency of two times per year and these resources could be better utilized to sweep other identified high priority areas. Request: Please remove the requirement to sweep at least two times per year in watersheds with an approved bacteria TMDL. The frequency for street sweeping should be based on the requirements outlined in Part 2.3.7.1.d.iii.

EPA Response to Comments 452 - 453

While EPA finds that more frequent street sweeping, especially with a high efficiency vacuum sweeper, will have positive effects on water quality EPA agrees that the requirement to sweep streets 2 times per year for the bacteria TMDL is not appropriate given the level of information regarding bacteria removal through street sweeping available at this time. The 2015 renotice of the Draft Permit removed this requirement as requested by the commenter.

454. Comment from the Town of Merrimack

3. Duplication Error: In Table F.1 in Appendix F. MS4s subject to Statewide Bacteria TMDL under the Primary Town listing for Merrimack the Merrimack River and Souhegan River are listed twice. Is this a duplication error or is a specific section of the Rivers being called out? If this is so, then please note this in Table F.1

EPA Response to Comment 454

Both the Merrimack River and the Souhegan River are included twice in Table F.1 as there are two segments of each river covered in the Statewide Bacteria TMDL (see table below). Each item in Table F.1 is based on the Assessment Unit (AU) used by NHDES. As explained in the latest NHDES Consolidated Assessment and Listing Methodology (CALM) document, (http://des.nh.gov/organization/divisions/water/wmb/swqa/documents/calm.pdf), AUs are the basic unit of record for conducting and reporting the results of all water quality assessments.

Primary Town	Waterbody Name	Assessment Unit #
MERRIMACK	MERRIMACK RIVER	NHRIV700060804-11
MERRIMACK	MERRIMACK RIVER	NHRIV700061002-13

MERRIMACK	SOUHEGAN RIVER	NHRIV700060906-18
MERRIMACK	SOUHEGAN RIVER	NHRIV700060906-25

455. Comment from the Town of Merrimack

IV. TMDL REQUIREMENTS - BACTERIA: 1. Ambiguity on Sampling Sites- In Appendix F of the 2013 MS4 Draft General Permit Section 3 dealing with TMDLs states that "The WLA of MS4 discharges is set at that relevant water quality standard, although compliance with the TMDL will be based on the ambient water quality and not water quality at the point of discharge (i.e. end of pipe)." This statement is in contradiction to the end of pipe reductions that are required as part of the TMDL and listed on Table F-1 MS4s Subject to Statewide Bacteria TMDL

EPA Response to Comment 455

See EPA Response to Comments 128 - 129, EPA Response to Comment 130 and EPA Response to Comments 116 - 120. The changes to the permit as a result of the re-notice included significant changes to Section 2.2 to provide clarity of permit requirements and certainty on applicability of permit provisions. The amended language altered the requirements under Section 2.2.1 and Appendix F for permittees subject to an approved TMDL, including changes to Tables F-1 and F-2. Section 2.2.1.e and Appendix F Part II outline the requirements for permittees subject to an approved bacteria TMDL; these requirements made clear that the requirements of the draft permit and the final permit do not include a specified percent reduction but instead are comprised of additional or enhanced BMP requirements.

456. Comment from the Town of Hampton

Designated Uses as Listed in Appendix F of the 2013 Draft MS4 Permit-Table F-1

We noted in this table five (5) locations of testing with three (3) of these exceeding the single sample limit for fecal coliform and therefore requiring the development of a better management practices (BMP) to achieve [fecal] bacteria reductions. What we would like to call to your attention is the designated use label applied to the Hampton River Marina SZ which is currently listed as a primary contact recreation (PCR) based on the assessment that it is used for swimming. In our opinion the marina's primary use is for boating and therefore should be listed as a secondary contact recreation SCR (boating).

---This is important at this time because the designation will determine the type of bacteria we need to test for and the allowable limits in the future. Our second reason for pointing this out is that the stated goal on page 4 of appendix F is "to remove all human sources of bacteria to the estuary to the extent practicable".

---At this time we request that we be dropped from having to test for bacteria because the State 2012 TMDL listing no longer shows our water bodies impaired for bacteria.

EPA Response to Comment 456

The Hampton River Marina SZ waterbody segment is designated as a Class B water, and is not a designated beach. The definition for Class B waters, according to the NHDES Consolidated Assessment and Listing Methodology (CALM):

Of the second highest quality, these waters are considered acceptable for fishing, swimming and other recreational purposes, and, after adequate treatment, for use as water supplies.

The definition of Primary Contact Recreation, as stated in the NHDES CALM is: *Waters that are suitable for recreational uses that require or are likely to result in full body contact and/or incidental ingestion of water.*

Therefore, the Primary Contact Recreation designated use applies to all Class B waters of the state of New Hampshire.

Please see EPA Response to Comments 473- 477.

457. Comment from the Charles River Watershed Association

CRWA applauds EPA for developing calculation methods and tools that are sufficiently robust to provide a high level of confidence they will achieve required control levels, and yet are simple enough to be of great assistance to permittees, providing clarity, certainty and cost-savings. We suggest several modifications to these methods.

Since the publication of this draft permit, the USGS has published a detailed report (Scientific Investigations Report 2012- 5292) on the results and findings of an extensive study of enhanced street sweeping practices in Cambridge, Massachusetts. We suggest EPA update the phosphorus reduction efficiency factors in this section to reflect the findings of this study.

EPA may wish to identify a simpler methodology for calculating credits for catch basin cleaning. Given the low maximum credit a permittee can obtain for this credit, there is a high burden of data collection.

We encourage EPA to review several new expert panel reports from the Chesapeake Bay Program prior to finalizing the credits for no phosphorus fertilizer, in particular the Recommendations of the Expert Panel to Define Removal Rates for Urban Nutrient Management published on March 14, 2013 (available at http://www.chesapeakebay.net/publications/title/recommendations_of_the_expert_panel_to_define_removal_rates_for_urban_nutrients). In addition, it is not clear to CRWA whether the export load rates for pervious soils in Table 2-1 should be broken out by soil type. Those for hydrologic soil group D (DevPERV HSG D) which will be the default soil group used in many instances because there is not sufficient site specific data, seem very high. It may be more appropriate to use an average load rate, or at least to use HSG C if there is no information available. Regarding the specific lDDE credit described in this section, see our comments above (in a different comment).

EPA Response to Comment 457

EPA appreciates the thoughtful input on the methodologies for calculating load reduction credits for non-structural practices outlined in Attachment 2 to Appendix F to the permit. Below are specific responses to the comments. EPA is aware that information on the performance of these and other practices will continue to be developed as permit programs move forward in implementing their management practices. EPA views the development of reduction credits to be an ongoing and iterative process of regularly reviewing new information to determine if updates are warranted. Therefore, EPA intends to revise credits and/or approaches to calculate credits accordingly in the future as new information becomes available. At regular intervals consistent with the five year permit reissuance cycle, EPA Region 1 plans to re-evaluate all existing credits and add new credits when supporting information is sufficient to support adding credits. It is anticipated that revised (i.e., updated) and new credit information will be made available so that permittees can account for the latest credit information as they implement their PCP and to update/refine their plan if necessary.

Sweeping Practices: EPA considered the results of the above referenced USGS study of street cleaning practices conducted in Cambridge, MA in the development of the reduction credits for sweeping practices in Table 2-2 of Attachment 2 to Appendix F of the permit. Specifically, the values for high-efficiency regenerative air sweepers were derived from this study.

Catch Basin (CB) Methodology: EPA considered the possibility of providing a more simplified approach for giving credit for adequate CB cleaning. However, EPA has concerns that as more simplified approach might not result in the desired outcome of actually maintaining CBs at a level needed to earn the specified credits. EPA's approach requires knowledge of the drainage system and contributing drainage areas, which EPA considers to be important for maximizing performance of the drainage systems including removing gross solids in well maintained CBs. To earn the credit, the permittee will need to certify that CB sumps have at least 50% free storage volume and will need to define the contributing drainage area. While this could be done on a CB-by-CB basis, it can also be done by certifying that numerous CBs serving a specified area all have the prerequisite 50% free storage volume in their sumps, which could minimize the overall documentation effort needed to earn the credit. To clarify the objective of maintaining a 50% free storage in the sump to achieve the reduction credit, EPA has modified the permit to replace the semi-annual frequency with "as needed" frequency. Removal of a specified frequency is in recognition that not all CBs sumps are filled at the same rate.

Fertilizer Credit: EPA reviewed and considered materials developed for the Chesapeake Bay Region including the referenced work *Recommendations of the Expert Panel to Define Removal Rates for Urban Nutrient Management,* published on March 14, 2013. EPA has not revised the overall approach for calculating phosphorus free fertilizer reduction credits in the permit to be more consistent with the approach being recommended in the Chesapeake Bay Region. EPA's decision is based on an expectation that the methodology provided in the permit of annually certifying no applications of phosphorus containing fertilizers (defined as containing greater than 0.67% phosphorus) to turf grasses that do need additional phosphorus to support healthy growth will ultimately result in reduced phosphorus loadings from turf grasses that have previously received excessive phosphorus fertilization. Also, EPA expects that earning this credit will result in overall improved turf management practices that will further healthy turf grass growth without excessive phosphorus fertilizer applications. Further, EPA is reluctant at this time to require additional administrative burdens for permittees that may not be necessary to achieve the desired objective of reducing loads associated with excessive phosphorus fertilizer applications to turf grasses.

EPA agrees with the commenter's suggestion of changing the default hydrological soil group (HSG) from D to another more permeable HSG. EPA has changed the default group to HSG C for circumstances when the HSG is unknown in the final permit.

EPA is clarifying in the final permit Attachment 2 to Appendix F that the credit only applies only to turf grasses that do not need additional phosphorus to support healthy turf grass as determined by soil testing and that phosphorus free fertilizer shall have no more that 0.67% phosphorus by weight. Moreover, the final permit will provide a link to the University of Massachusetts, Amherst Extension Service Turf Management Program website that includes guidance documents on nutrient turf management practices. http://ag.umass.edu/turf/publications-resources/nutrient-management-information.

Changes to Permit: Appendix F has been updated accordingly.

458. Comment from Charles River Watershed Association

CRWA believes the resources EPA Region 1 put into developing methodologies and calculation tools for estimating the phosphorus removal of structural practices serve as an outstanding resource for permittees and the public. Over time, as more data becomes available, and more practices are evaluated specifically for phosphorus reduction, EPA may wish to change the credits allowed. Thus we encourage the permit to specify that calculations should be based on the most up to date versions of the Tables and Charts, which may be modified, and direct permittees to a website where such updates will be made available.

We also encourage EPA to continue to evaluate structural practices' effectiveness over time, as well as their effectiveness at removing different types of phosphorus and phosphorus in different states of availability. As new research emerges, the methodologies and calculation tools should be modified accordingly.

EPA Response to Comment 458

EPA appreciates the commenter's support of the approach and information developed for the permit. EPA is not adding the requested language to Attachment 3 to Appendix F. EPA intends to consider new BMP performance information at regular intervals consistent with the five-year permit reissuance cycle and, when appropriate add and/or revise various items related to the LPCP including BMP efficiencies. EPA plans to share tools consistent with Attachment 2 and 3 to Appendix F with permittees prior to their development of the LPCP to aid in demonstrating permit compliance.

459. Comment from Conservation Law Foundation

A. Credits for IDDE-Related phosphorous reductions

Appendix F of the draft permit describes a methodology for calculating (1) the Watershed Phosphorus Load, described as "a measure of the annual phosphorous load discharging in stormwater from the impervious and pervious areas of the impaired watershed"; (2) the Watershed Phosphorus Pounds Reduction, also referred to as the "Phosphorus Reduction Requirement," representing "the required reduction in annual phosphorus load in stormwater to meet the WLA for the impaired watershed"; and (3) the BMP Load, representing "the annual phosphorus load from the drainage area to each proposed or existing BMP used by the BMP Load to claim credit against its Phosphorus Reduction Requirement." Permit, App. F, Attach. 2 at 1. Appendix F proceeds to describe the methods by which permittees are to calculate phosphorus load reduction credits for five enumerated "enhanced non-structural control practices." *Id.,* App. F, Attach. 2 at 1. It further states:

> The methods include the use of default phosphorus reduction factors that EPA has determined are acceptable for calculating phosphorus load reduction credits for these practices.
>
> .... The estimates of annual phosphorus load and load reductions resulting from BMP implementation are intended for use by the permittee to measure compliance with its Phosphorus Reduction Requirement under the permit. Id.

Of particular concern, Appendix F includes the elimination of illicit connections and discharges among the non-structural control practices for which a municipality may claim a phosphorus reduction credit. More particularly, it includes the elimination of such discharges for purposes of claiming a phosphorus reduction *credit* without any consideration whatsoever of illicit discharges in the methodology for calculating the Watershed Phosphorus Load, Phosphorus Reduction Requirement, and BMP Load. *Compare* Attachments 1 and 2 of App. F. Whereas the methods set forth in Attachment 1 of Appendix F clearly and exclusively focus on phosphorus loads generated *in*

stormwater by different types of land cover *(i.e.,* pervious and impervious and land uses *(e.g.,* commercial, highway, forest), nowhere do they include consideration of phosphorus loads from illicit discharges and connections. We urge EPA to either (a) amend its methodology to add illicit discharges and connections to the calculations required in Attachment 1 of Appendix F, or (b) remove the elimination of illicit discharges and connections from among the non-structural BMPs for which permittees may claim phosphorus reduction credit as set forth in Attachment 2 of Appendix F, and set up a separate accounting for loads and load reductions associated with illicit discharges and the elimination of such illicit discharges.

Regardless of which approach EPA chooses to follow with respect to the accounting of loads and load reductions associated with illicit connections and their elimination, it is essential that the methodology not overstate the amount of phosphorus contained in discharges from illicit connections. Specifically, Appendix F, Attachment 2 contains an equation for calculating an "illicit disconnection credit" premised on the assumption of "5.3 mg/L (phosphorus concentration in sewerage)." *id.* App. F, Attach. 2 at 7. We strongly question whether relying on a "phosphorus concentration in sewerage" is appropriate, in light of the diluting effects associated with inflow and infiltration. Ensuring a proper baseline assumption is essential for accurately assessing-and not inaccurately overstating-the phosphorus-load contributions of illicit connections and discharges, and the phosphorus-reduction benefits of eliminating such connections. Should EPA's methodology overstate phosphorus loads associated with illicit connections and discharges, it could inaccurately understate the relative importance of phosphorus loads from storm water and the reduction of such loads through storm water controls. The above concerns pertain not only to the methods specifically enumerated by EPA, but also to any "Alternative Methods and/or Phosphorus Reduction Factors" the draft permit may authorize permittees to develop. *See id.,* App. F, Attach. 2 at 1.

B. Enhanced organic waste and leaf litter collection

The draft permit identifies "Organic Waste and Leaf Litter Collection program" among the five enumerated enhanced non-structural BMPs for which permittees may claim a phosphorus reduction credit. Permit App. F, Attach. 2 at 1, 5-6. Among those non-structural BMPs, the permit also allows permittees to claim phosphorus reduction credits for enhanced street-sweeping programs, and catch basin cleaning. *Id.,* Attach. 2 at 1-4. Because street sweeping (whether as part of an enhanced program or not) and catch-basin cleaning can reduce the phosphorus loading impacts of organic waste and leaf litter, CLF is concerned that the draft permit could unwittingly allow for a double-counting (or at least over-counting) of phosphorus reduction credits. We urge EPA to take necessary measures to ensure that any phosphorus reduction associated with street-sweeping and / or catch basin cleaning not also be counted for purposes of phosphorus reduction credits associated with enhanced organic waste and leaf litter collection.

EPA Response to Comment 459

See EPA Response to Comment 445. EPA has eliminated the illicit discharge reduction credit from Attachment 2 to Appendix F of the final permit.

As set forth in Attachment 2 to Appendix F, EPA considers the organic waste and leaf litter credit to be distinct and not overlapping with the credits for acceptable CB maintenance and sweeping programs. The credits developed for CB and street cleaning are based on assuming typical loading conditions without specifically taking into account the potential presence of substantial organic matter accumulations that can occur regularly or seasonally (e.g., leaf fall). The credit for organic matter/leaf litter removal is intended to account for phosphorus load reduction associated with removal of excessive amounts of organic matter that accumulates on impervious surfaces on a

weekly basis. There is ample evidence that decaying leaf litter and organic matter can be significant contributors to annual stormwater runoff phosphorus loads from impervious surfaces, and that programs designed to remove these materials prior to rain events would be worthwhile for earning reduction credits as a stand-alone practice (Selbig, 2016). Also, the CB reduction credit does not explicitly account for the capture of organic matter because dissolved nutrients are released as the captured organic matter in the sump decays making them available to be readily washed down stream to surface waters in subsequent storm events.

The timing of frequently occurring rain events and continuous solids load deposition to impervious surfaces, coupled with the timing of CB maintenance (infrequent), sweeping activities and organic matter removal are such that effects of the controls at reducing nutrient loads can be considered additive rather than duplicative. In other words, CBs capture solids that runoff in between sweeping events and after some accumulation, and sweeping accounts for removal of typical solids loading, not the excessive amounts of organic materials that can be deposited during periods of leaf fall, pollen deposition, or by other activities that regularly deposit organic materials on impervious surfaces.

460. Comment from MCWRS

How will EPA to credit municipalities for stormwater BMPs that have already been installed?

EPA Response to Comment 460

EPA recognizes that many communities have already invested time and money towards implementation of BMPs. EPA's intention is to allow phosphorus load reduction credits for existing structural stormwater controls that have already been implemented. To achieve credits for existing structural controls, the permittee shall document the type and actual hydraulic/hydrologic design capacity of each control, and verify through annual reporting that each control is being adequately operated and maintained to ensure proper functioning and operation. With this documentation as well as with accounting for phosphorous load increases during the same period, permittees can claim credit for pre-TMDL controls. This may be an opportunity and incentive to restore and even enhance existing and possibly outdated controls to more effectively achieve phosphorus load reductions. While older controls may have been installed pre-TMDL, EPA suspects that most of the older controls have not been adequately maintained to function as intended. Therefore, EPA sees allowing permittees to claim credit for pre-TMDL controls to be an opportunity to restore and even enhance existing and possibly outdated controls to more effectively capture phosphorus load reductions.

Documentation of existing BMPs will be captured in the Lake Phosphorus Control Plans Performance Evaluation, (Appendix F Part III). Phosphorus reductions shall be calculated consistent with Attachment 2 to Appendix F (non-structural BMP performance) and Attachment 3 to Appendix F (structural BMP performance) for all BMPs implemented to date.

461. Comment From NH Stormwater Coalition:

Lake and pond phosphorus TMDLs were derived for multiple water bodies in January 2011. The State does not have numeric water quality standards for phosphorus. Rather, Env-Wq 1703.14 provides that nutrients shall not be present in concentrations that would impair any existing or designated uses, unless naturally occurring. In addition, there shall be no new or increased discharges of phosphorus into lakes or that would contribute to cultural eutrophication. *Id.* In developing the TMDLs, this standard was translated into a numeric endpoint based on a supposed "weight-of-evidence" assessment based on reference conditions and

trophic state classifications such that a chlorophyll-a concentration of 15 µg/L was not exceeded. Each TMDL used the same translator based on this single assessment regardless of lake size, depth or other features affecting the presence of algae and phosphorus in the system.

The reference condition assessment is not appropriate for establishing a threshold for impairment as confirmed by US District Court for the Northern District of Florida[33] when it reviewed EPA‟s numeric nutrient criteria for Florida streams. At a minimum, the methodology used to establish the total phosphorus (TP) endpoint for all lakes should be reconsidered in light of the Court‟s ruling. Moreover, the establishment of a fixed TP criteria or maximum algal bloom levels applicable to all lakes plainly constitutes the adoption of new numeric criteria that should have undergone rulemaking, but did not. *See* Attachment B- EPA letter to the State of Florida dated June 27, 2013. TMDLs based on un-adopted criteria are not lawfully derived TMDLs.

Under state law, the specific factors influencing cultural eutrophication in lakes should have been considered using a conceptual model allowing for individual considerations for lakes with significantly different attributes that influence this response. None of these TMDLs appear to properly implement the applicable state law nor is it reasonable to claim that a narrative criteria violation exists simply because there are windblown algal mats (something that can occur naturally) in some corner of the lake that may or may not significantly affect swimming uses of the water body. It is not apparent how this condition can impair swimming or aquatic life uses. Likewise, the occurrence of short term algal growth above 15 µg/l is not indicative of cultural eutrophication as such conditions may occur in healthy ecosystems.

462. Comment from NH Stormwater Coalition:

Appendix F to the Draft Permit specifies that the permittees subject to phosphorus TMDLs must prepare a Phosphorus Control Plan (PCP) and demonstrate compliance with the TMDL through implementation of structural and non-structural BMPs. The phosphorus reduction requirements for each phosphorus TMDL are summarized in Table F-3, ranging from 40% to 80%, based on a baseline watershed phosphorus load. Appendix F also provides recommended non-structural and structural BMPs, with associated phosphorus removal rates.

The phosphorus reduction requirements specified for the MS4s within the TMDL watersheds were all based on an in-lake target of 12 µg/L. This target was derived using a “weight-of- evidence” approach (discussed in Appendix A of each TMDL) to achieve an interim threshold chlorophyll-a concentration of 15 µg/L. This interim chlorophyll-a impairment threshold for swimming is applied as a daily maximum (or 90%ile) value. The use of a daily maximum (or 90%ile) 15 ug/l level as a “swimming impairment threshold” has no objective basis in science, was never adopted into state law and was never approved by EPA as the “applicable” water quality standard. The TMDLs themselves acknowledge that with the level of algal growth, the threshold is more restrictive than necessary to protect swimming uses. Historically, DES utilized a 20 ug/l seasonal average condition as the basis for identifying conditions that could potentially limit swimming uses. EPA, itself, has endorsed this level of control in Florida and has approved similar levels as protective in other states (*e.g.*, Minnesota).

The seasonal average (median) algal levels in many of these lakes are plainly not excessive (it is oligotrophic). Moreover, assessment of median growing season concentrations is the generally accepted method for assessment of nutrient impacts on lake environments, including swimming use impairment. Thus, at worst, the use of the 15 µg/l target should have been applied as a “median” not maximum, consistent with state and federal activities in dozens of other states as well as national guidance on proper regulation of nutrient effects. The modification of this endpoint to a more restrictive averaging period is contrary to applicable federal rules and cannot be attributed to any “weight of evidence” assessment as no “evidence” was presented to demonstrate this level of algal growth is necessary to protect swimming uses. *See* 40 C.F.R. §122.44(d). Such an assessment, if balanced, would have produced a conclusion that a 15 µg/l median and

30 µg/l maximum reading would be protective of swimming uses. Given the tremendous expected cost to comply with the TMDL and MS4 general permit, it is inappropriate to base these requirements on an "interim" threshold that is 10 years old and has never gone through rulemaking. Rulemaking on the impairment threshold for chlorophyll-a in freshwater lakes should take place before the Draft Permit is finalized to confirm that the dramatic BMP reduction requirements of this permit are actually necessary.

The supporting data upon which the chlorophyll-a threshold is based includes an analysis of the relationship between TP and chlorophyll-a in New Hampshire lakes. NHDES used a similar statistical approach when developing preliminary TP criteria for freshwaters in New Hampshire (NHDES, 2005). The NHDES evaluation identified statistically significant relationships between chl *a* and TP for lakes. Statistical relationships were based on: 1) the median of TP samples taken at one-third the water depth in unstratified lakes and at the mid-epilimnion depth in stratified lakes; and 2) the median of composite chl a samples of the water column to the mid-metalimnion depth in stratified lakes and to the two- thirds water depth in unstratified lakes during the summer months (June through September). A total of 168 lakes were included in the analysis of which 23 were impaired for chl a (i.e., lakes with chl a greater than or equal to 15 µg/L). Of the 23 impaired lakes, approximately 14 were stratified (60%) and 9 were unstratified (40%).

Figure A-2 shows the cumulative frequency plots for the impaired and non- impaired lakes. Based on Figure A- 2, an initial TP target of 11.5 µg/L was selected. As shown, 20% of the impaired lakes and 80% of the non-impaired lakes have TP concentrations < 11.5 µg/L which means that 20% of the non-impaired lakes have TP concentrations > 11.5 µg/L) [sic]. After rounding, a target of 12 µg/L strikes a reasonable balance between the percent of lakes that are impaired at concentrations below this level and the percent of lakes that are not impaired at concentrations above this concentration.

Baboosic Lake TP TMDL, Appendix A at A-4 (emphasis added).

As discussed above, the analysis supporting the 12 µg/L TP target is a *median* and the 15 µg/L chlorophyll-a target is also a *median*. The use of the median summer chlorophyll-a concentration in this analysis is inconsistent with application of the 15 µg/L threshold as a daily maximum in the TMDL. Given the nature of the TP endpoint derivation, the target chlorophyll-a concentration should be the summer median concentration and lakes, such as Baboosic Lake, would not be considered impaired. Moreover, the background document cited as the basis for choosing the 15 µg/l objective indicates that it is *not* an impairment threshold for swimming and exceedance of this objective should be allowed for 20% of the readings. *See* Baboosic Lake TP TMDL, Appendix A at A-4 *citing* DES Interim Chlorophyll Criteria for Lakes, at 1-2 (June 6, 2003). The target use for protection was swimming.

Finally, the TP endpoint used in all of the TMDLs was based on an evaluation of 168 lakes, without consideration of any of the factors that influence the response of lakes to nutrients as recommended by EPA in its Guidance on the development of numeric nutrient criteria for lakes (*e.g.,* depth, stratification, detention time, water transparency). This approach violates EPA‟s own guidance and cannot be considered scientifically defensible. Rather, multiple lake types should have been identified and the database classified before target endpoints were developed (similar to the approach used in Minnesota[44] and Florida[45] and approved by EPA).

15. The Phosphorus TMDLs Impairment Listings Are Suspect

Wasteload allocations for the individual TMDLs were assessed using modeled lake water quality response to different loading scenarios. *See, e.g*., Baboosic Lake TP TMDL Table 6-2, at 6-3.

The modeled response to the current load for each TMDL is summarized below.

TMDL	TP Load (kg/yr)	Mean TP (µg/L)	Mean Chl-a (µg/L)	Probability of Summer Bloom > 15 µg/L
Baboosic Lake	175.8	18.4	6.7	3.1%
Horseshoe Pond	56.0	38.1	17	50.2
Nutt Pond	104.7	33.6	14.5	37.6
Pine Island	2533	33	14	37
Robinson Pond	115.2	20.1	7.5	5.1
Sebbins Pond	24.8	23.1	9	10.1
Showell Pond	30.3	37	16.3	46.6
Stevens Pond	65	23	9.0	10.1
Hoods Pond	505.0	49.0	23.5	74.2
Halfmoon Pond	25.1	35.4	15.5	42.8
Greenwood Pond	52.4	29	11.8	23.2
Flints Pond	80.4	19.8	7.4	4.7
Doors Pond	174.7	30.4	12.8	28
Country Pond	611.8	22	8.4	8.1
Governors Lake	61.6	23	8.8	9.2
Back Lake	134.5	13.7	4.5	0.4
Forest Lake	179.9	12.3	3.9	0.2
French Pond	62.7	32.4	13.8	34.0

Table C-17- EPA‟s Numeric Criteria for Florida Lakes.

First, as is apparent from this chart, the median chlorophyll „a‟ levels were acceptable (less than 15 µg/l median) for the vast majority of the waters claimed to be “impaired.” These lakes should have, at most, a load freeze to protect existing water quality, though most should have been delisted. Moreover, the 2012 New Hampshire Consolidated Assessment and Listing Methodology (CALM) indicates that the Primary Contact Recreation use is fully supported when the total number of water quality exceedances is less than 10% of the observations. *See* 2012 CALM, at 38. The modeling results, shown above, indicate a summertime bloom probability of less than 10% for many of the TMDL watersheds including Baboosic Lake, Robinson Pond, Flints Pond, Country Pond, Governors Lake, Back Lake, and Forest Lake. These watersheds should not be considered impaired, even under the unduly restrictive chlorophyll a target value. Stebbins Pond and Stevens Pond marginally exceed the 10% threshold but have TP reduction requirements of 64% and 50%, respectively. These reduction requirements make no sense given the marginal exceedance predicted by the model. If the chlorophyll-a impairment threshold is a median, rather than a daily maximum, most of the lakes in the table already meet the target and further MS4 controls would not be required.

EPA Response to Comments 461 - 462

EPA has carefully considered these comments and generally finds, for reasons discussed below, the comments to be largely misplaced as comments on the draft MS4 permit. These comments focus on topics related to NH's well established and long-standing procedures for assessing surface waters, adopting water quality standards, and developing TMDLs for impaired waters. The commenter appears to be challenging previous decisions made by NHDES in carrying out their program of assessing surface water quality and making use assessment determinations of NH's surface waters in accordance with CWA Sections 305(b) and 303(d), as well as NH's regulatory process for adopting water quality standards. The commenter appears to be also questioning the validity of EPA's past approval decisions related to these aforementioned programs.

Generally, and as a matter of legal procedure, EPA considers that the public participation process for the draft MS4 permit is not the appropriate forum for providing comments on NH's surface water quality assessments, TMDLs or water quality standards, especially when no new water quality data or evidence is provided to indicate that the basis of previous decisions are technically flawed. EPA notes that ample opportunity for public review and participation has occurred (in accordance with regulations) for the numerous actions that ultimately led to the 303(d) listings and establishment of the phosphorus TMDLs for lakes and ponds identified in the permit. EPA considers that the public participation processes for the 303(d) list, TMDLs and water quality standards as being the appropriate forums for the commenter to present their opinions on what constitutes acceptable water quality for supporting designated uses.

With respect to developing the final NH MS4 permit, EPA has determined that the information provided by this commenter does not support the implied assertion that EPA's previous approval decisions of the 303(d) listings and the lake and pond phosphorus TMDLs do not comply with federal regulations at 40 CFR 130.7. Following is a summary of the overall process relating to the NH lake/pond phosphorus impairments, TMDLs and the NH MS4 phosphorus reduction requirements including the basis for EPA's findings related to these comments.

Through NHDES's water quality assessment process, all of the lakes for which phosphorus TMDLs have been established and for which phosphorus load reduction requirements have been included in the permit were first assessed by NHDES as not supporting designated uses because of phosphorus related water quality impairments and then included on NH's 303(d) list of impaired waters requiring TMDLs. NH has assessed these waters following a well and clearly defined methodology referred to as the Consolidated Assessment and Listing Methodology (CALM) that is published and used to develop the NH 303(d) list. In accordance with Section 303(d) and the implementing regulations, NH developed the TMDLs, made them available for public comments, finalized the TMDLs after considering public comment and then submitted the TMDLs to EPA for review and approval. EPA reviewed and approved the TMDLs after making a finding that each TMDL fully satisfied the regulatory requirements for an acceptable TMDL at 40 CFR 130.7.

The commenter appears to have mistakenly assumed that it is not appropriate for a TMDL analysis to interpret a narrative water quality criterion such as the "cultural eutrophication" criterion cited by the commenter. However, in order for a TMDL analysis to be acceptable and ultimately approved by EPA, the analysis must define the loading capacity of the waterbody for the identified pollutant of concern (e.g., phosphorus) such that loadings at or below the loading capacity would not result in excursions of **any** applicable water quality standards including narrative criteria (emphasis added) such as the cultural eutrophication criterion. In the case of each and every NH

lake/pond phosphorus TMDL reviewed and approved, it was an absolute necessity for the narrative criterion to have been interpreted in order to satisfy the TMDL regulatory requirements.

For the NH MS4 permit, EPA Region 1, the permitting authority in NH, has used the TMDL analysis as the basis for setting phosphorus load reduction requirements for MS4 discharges to these impaired lakes and ponds and for which phosphorus TMDLs have been established. At this time, EPA considers these TMDL analyses to be the best available information for developing phosphorus load reduction requirements that are needed to address documented phosphorus related water quality impairments in these lakes and ponds. More specifically, these permit requirements are developed so that MS4 discharges will reduce phosphorus loads to levels that are consistent with the TMDL analyses, will result in improved water quality, and ultimately attain all applicable water quality standards. Without exception, the TMDL analyses substantiate that stormwater discharges (such as those that regularly occur from MS4 drainages systems) are causing and contributing to water quality standards excursions. See EPA Response to Comments 46 - 54, EPA Response to Comments 55 - 60, and EPA Response to Comments 227 - 233.

After consideration of these comments, EPA reiterates that the TMDL analyses adequately satisfy all regulatory requirements. Furthermore, EPA has not been presented with any credible evidence that the interpretation of the narrative "cultural eutrophication" criterion for this group of NH lakes and ponds is technically flawed or unreasonable. In fact, the commenter has merely presented alternative opinions about interpreting the narrative "cultural eutrophication" criterion.

EPA finds the commenter's following statement to be incorrect: "*Under state law, the specific factors influencing cultural eutrophication in lakes should have been considered using a conceptual model allowing for individual considerations for lakes with significantly different attributes that influence this response. None of these TMDLs appear to properly implement the applicable state law…*". Models of lake/pond and watershed characteristics were developed and used to calculate allowable phosphorus loading assimilative capacities for each lake and pond (i.e., loading capacities are different for each lake). Finally, regarding the commenter's reference to naturally occurring algal mats, the commenter has provided no credible information to support any assertion that phosphorus related water quality impairments are naturally occurring in these lakes and ponds. In fact, the TMDL analyses for these lakes and ponds demonstrate that the impairments are not natural but are caused, at least in part, by anthropogenic sources of phosphorus to the lakes/ponds.

463. Comment from NH Stormwater Coalition:

The various non-structural BMPs have phosphorus reduction rates that typically range from 1% to 10%. Since the TMDLs call for phosphorus removals from the MS4 discharges of at least 40%, every MS4 community subject to a phosphorus TMDL must install structural BMPs to comply with the Draft Permit. The only structural BMPs capable of achieving the reductions called for in the TMDLs are infiltration trenches and basins. Consequently, compliance with the permit would require the installation of these basins throughout the municipality. Given the major cost that must be incurred to meet the TMDL BMP load reduction objectives, it is appropriate to reconsider the technical validity of these requirements.

The Infiltration Basin performance curves presented in Appendix F, Attachment 3 indicates that removal rates up to nearly 100% can be achieved using an Infiltration Basin. In addition, removals in excess of 50% are achieved with less than 0.2 inches of runoff treated. This performance seems completely unrealistic and field data were not provided to verify these performance estimates. The Final TMDL Report for Baboosic Lake indicates that the maximum estimated achievable reduction is approximately 60 – 70%. *See* Baboosic Lake TMDL, at 6-1. Based on this estimate, 9 of the TMDLs listed in Table F-3 cannot achieve their

target load reductions because removals in excess of 60% are required. Since Section 402(p) only allows restrictions "to the maximum extent practicable" and attainment of such reductions is not "practicable", the proposed permit requirements exceed statutory authority.

An alternative curve (presented below) for estimating phosphorus reduction, from the Chesapeake Bay Program, indicates that significantly higher rainfall capture levels are require to obtain approximately 50% reduction in phosphorus load.[46] Consequently, the facilities subject to these requirements would need to install large infiltration basins throughout the watershed. Using the examples presented in Appendix F, Attachment 3 the affected municipalities would need to devote approximately 3% of the overall surface area in MS4 service areas to these basins. This land requirement is extreme and expensive – and again, not demonstrated by EPA to be "practicable". Communities faced with such requirements would likely be subject to substantial and basin-wide economic impacts as recognized under 40 C.F.R. § 131.10(g)(6). Given this certainty, the PCP Component Development Schedule presented in Appendix F (at 7) should be relaxed to allow up to 20 years for overall compliance, assuming the target reduction is practicable. [graph deleted]

464. Comment from the Town of Merrimack

Non-structural BMPs Scheduling: Enhanced non-structural Best Management Practices (BMPs) should be undertaken and completed to the full extent possible before the determination and expensive planning, designing and construction of the structural BMPs are even contemplated. Additional monitoring and analysis should be undertaken once the non-structural BMPs are in place and have had time to take effect. Only then, should the Towns commit to structural BMPs if the non-structural BMPs are not effective enough to effect water quality. In this manner the towns would have the flexibility to adjust programs, projects and goals to insure the maximum amount of efficiency of time, staffing and costs.

465. Comment from the Town of Merrimack

Scheduling of Non-structural and Structural BMPs in Year 2: Why would the non-structural controls and structural controls need to be detailed and described both in year 2? Much more time is needed to have controls in place and this schedule places a big burden to the Town in time and costs. Non-structural controls should be first and when they have been in place for an appropriate period of time and the effects of the non-structural controls have been quantified and verified then the Town would determine if structural BMPs are needed.

EPA Response to Comments 463 -465

EPA recognizes that achieving large phosphorus load reductions from developed watershed areas can be difficult and costly. However, the level of difficulty and expenditure will depend on numerous factors related to characteristics of the drainage area to be controlled and, very importantly, the analysis approach used to develop the LPCP. Also, EPA considers the extended implementation timeframe of 15 years to be another important factor that could improve the overall technical feasibility and affordably manage costs while achieving the reductions. Based on substantial work conducted by EPA Region 1 over the last decade, EPA considers it to be premature to make determinations about the technical and economic feasibility of achieving the required load reductions without thorough consideration of the most current and best available information related to actual drainage system characteristics and credible cumulative performance estimates for a variety of effective stormwater controls (SCs). Furthermore, EPA disagrees that it is necessary to demonstrate that the reduction requirements are "practicable" as suggested by one commenter. The phosphorus load reduction requirements are based on the level of control needed to attain water quality standards in these ponds/lakes.

Regarding the analysis approach for developing LPCPs, EPA has found that the use of optimization techniques and comprehensive planning to develop the most cost effective LPCP could help to avoid significant cost expenditures while meeting the specified reduction target. EPA has developed a modelling tool referred to as the Opti-Tool to assist permittees in developing the most cost effective and optimized LPCPs in a timely manner. To the extent that a permittee can demonstrate compliance with the phosphorus load reduction requirements in the final permit using non structuaral BMPs, no further structural BMPs would be necessary as part of the permittees LPCP.

With respect to technical feasibility, some of the more critical factors include soils, extent of impervious cover and the availability of space to install controls. As shown in Attachment 3 to Appendix F (noted by the commenter), EPA Region 1 has developed long-term cumulative performance estimates for numerous stormwater controls types with varying design capacities (ranging from very small to large). Most of the storm water controls practices that involve infiltration can readily achieve phosphorus load reductions in excess of 90%. Even small design capacities for controls that rely on infiltration and filtering (e.g., capacities ranging from 0.2 to 0.4 inches of runoff depth from contributing impervious area) can achieve substantial phosphorus load reductions ranging from over 30% to more than 70%. Considering small capacity controls as part of the LPCP will increase technical feasibility and lower overall costs.

Much of the underlying work used to develop the cumulative performance estimates shown in Attachment 3 has been ongoing and was not readily available at the time the TMDLs were prepared. As a result of this work, EPA considers that the Center of Watershed Protection's estimate of 60-70% maximum achievable phosphorus load reduction cited in the TMDL reports (e.g., Baboosic Lake TMDL) is a generality and is not reflective of the most current information needed to develop a site-specific LPCP.

EPA's agrees with the commenter's point that infiltration is among the most effective SCs at reducing stormwater phosphorus loads. However, it is important to recognize that other non-infiltration practices such as bio-filters and gravel wetlands are also effective at substantially reducing annual stormwater phosphorus loads. For example, the University of New Hampshire Stormwater Center (UNHSC) has conducted research and developed a bio-filter system that incorporates a filter amendment that readily sorbs phosphorus. This technology is suitable for low-permeability soils, has been monitored, and cumulative performance estimates have been developed by EPA showing it to be a highly effective control for reducing stormwater phosphorus loads. EPA expects that LPCPs developed through comprehensive planning analyses will likely include a mix of SC technologies (infiltration and non-infiltration) best suited to the MS4 drainage system.

In response to the commenter's doubts concerning the performance estimates for infiltration practices provided in Attachment 3 to Appendix F, EPA believes these estimates are realistic for the reasons discussed below. First, EPA is well aware of the SC performance curves from the Chesapeake Bay area. The methodology used to develop the EPA Region 1 curves differs from the methodology used in the Chesapeake Bay area in important ways that should help to explain the differences in the estimates.

EPA Region 1's approach involves long-term continuous simulation hydrologic and SC performance modelling using hourly precipitation data and daily temperature from a climate station that is representative of overall long-term conditions in the region. The hydrologic modelling is for 100 % impervious areas and simulates the build-up and wash-off of pollutants (e.g., phosphorus), which

EPA Region 1 considers to be extremely important for estimating long-term cumulative performances of SCs for the MS4 permit. The hourly runoff and quality are used as input to SC models developed to simulate long-term cumulative performance. These models were calibrated using stormwater quality data and comprehensive SC performance monitoring data collected at UNHSC. Moreover, the model results were checked and confirmed to be credible by considering independently derived estimates and other reported information on stormwater quality and SC performances.

Regarding infiltration practices specifically, the EPA Region 1 models simulate infiltration and quantify the amount of volume reduction occurring cumulatively for six infiltration rates that represent varying soil conditions ranging from low to high permeability. Phosphorus directed into subsurface soils with infiltrating runoff is estimated to be completely captured. The high performance of infiltration systems with small design capacities is explained by the combination of the prevalence of low-depth precipitation events and the build-up and wash-off processes that occur on impervious surfaces. Essentially, a substantial amount of the annual phosphorus load from impervious cover is delivered to SCs by the relatively low-depth precipitation events. The x-axis on the performance curves in Attachment 3 is not runoff depth treated (as stated by the commenter) but the actual physical storage capacity of the SC in terms of runoff depth times the contributing impervious area. The actual amount of runoff treated is higher than the physical storage capacity shown on the x-axis because of the dynamic nature of runoff flows entering and leaving the SC during the precipitation event (which is accounted for in the performance results).

The curves for the Chesapeake Bay area do not account for the build-up and wash-off processes that occur on impervious surfaces and consequently do not explicitly account for the high proportion of phosphorus load delivered from impervious surfaces to SCs during lower depth precipitation events. Also, SC load reductions are not estimated for each individual storm event as they are in the Region 1 method, but are estimated using the total annual runoff volume treated by the SC. The other difference is that the x-axis on the Chesapeake Bay curves is for runoff volume treated, rather than the actual physical storage capacity of the SC as it is in the Region 1 curves.

EPA declines to extend the implementation schedule to 20 years as requested by the commenter and finds that the reasons for the request are not sufficient to justify extending the schedule at this time. EPA continues to consider the timeframe of 15 years for developing and implementing the LPCP in the permit to be sufficient for accomplishing the reductions. As indicated above, EPA also considers the 15-year timeframe to be ample for providing opportunities for permittees to make best use of emerging stormwater control technologies with enhanced phosphorus removal capabilities, as well as to achieve load reductions as part of future redevelopment, urban renewal, and repairs/upgrades to infrastructure at much lower costs than stand-alone projects. However, prior to future permit re-issuances, EPA can consider new information and determine if adjustments to implementation schedules are warranted.

RENOTICE Appendix F

466. Comment from the Town of Derry

Appendix F Section I, 1.1.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.

EPA Response to Comment 466

See EPA Response to Comment 467, EPA Response to Comment 469, and EPA Response to Comments 212 - 217.

467. Comment from the City of Manchester

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 F 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.

EPA Response to Comment 467

The tracking system referred to by the Commenter that is included in the requirements for permittees that discharge to a waterbody covered by a chloride TMDL is found at on UNH's website[20]: This tracking system is an online tool provided by the UNH Technology Transfer Center, and will be used to track and report the amount of salt applied annually to all municipally owned and maintained surfaces. The tool does not require users to track daily application, as the Commenter suggests, and would therefore not need to consider weather.

EPA recognizes the use of deicing chemicals during the winter season is for public safety and is not imposing requirements that would require the elimination of salt use for winter deicing. Rather, the requirements found in Appendix F Part I focus on reducing the amount of chloride applied to various sources (state roads, town roads, parking lots, storage, etc.) through the use of calibration, low salt zones, application rate standards and other BMPs designed to reduce the amount of road salt applied without compromising public safety. See EPA Response to Comment 469 and EPA Response to Comments 212 - 217.

468. Comment from the City of Manchester

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.

EPA Response to Comment 468

The commenter is referring to Section (b)(i) of Appendix F Part I, which details the requirements for permittees subject to a chloride TMDL. As part of their NOI submittal each permittee will evaluate their receiving waters to determine if the waters are impaired and if so, if they are covered by a TMDL. Therefore, the requirement to identify parking lots that drain into the MS4 with 10 or more spaces is only for permittees that have MS4 discharges to waterbodies covered by a chloride TMDL.

469. Comment from the City of Manchester

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*

[20] http://www.roadsalt.unh.edu/Salt/, Accessed January 2, 2017

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.

EPA Response to Comment 469

The commenter is correct that the salt applicator certification program is a voluntary program in the State. However, it is included as a requirement in the MS4 permit for permittees that discharge to chloride impaired waters or are covered by a chloride TMDL as it has been proven useful in reducing chloride contributions in stormwater. According to NHDES, towns with historical salt use data that began using Green SnowPro techniques have seen an 18% – 44% reduction in salt use and towns that have not instituted any BMPs to control salt consistent with the Green SnowPro approach will likely see a 20% reduction in annual salt use when using BMPs suggested by the Green SnowPro program. This indicates that the requirements of Appendix F Part I will result in significant reductions in salt (chloride) delivered to waterbodies impaired due to chloride and relying on a voluntary program to reduce chloride discharged from the MS4 is not warranted. Moreover, utilizing this existing program creates efficiencies for permittees as many municipalities are already participating and utilizing the system. See also EPA Response to Comments 212 - 217.

470. Comment NH Stormwater Coalition:

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."

EPA Response to Comment 470

See EPA Response to Comments 46 - 54, EPA Response to Comments 55 - 60, and EPA Response to Comments 227 - 233.

Appendix F Part I outlines requirements that are consistent with the I-93 corridor TMDLs, in particular section 5 of each TMDL and the recommendations of the Salt Reduction Workgroup convened in 2008 to determine proper implantation of the TMDLs. EPA finds the requirements of Appendix F Part I necessary to be consistent with the applicable TMDLs. In addition, the commenter misrepresents the requirements in Appendix F Part I, which, contrary to the commenter's assertion, contains ample flexibility for each permittee to determine the best way to reduce salt loads to the impaired waters. In particular, Appendix F Part I.a.(ii) contains a series of

measures the permittee **may** include in their salt reduction plan but does not mandate the use of any particular BMP not does it preclude the permittee from using alternative methods of reducing salt loads as part of their salt reduction plan. The final permit also contains an option for permittees discharging to a waterbody with a chloride TMDL to create an alternative pollutant reduction plan with NHDES and submit that plan with their NOI for coverage under the permit requesting operator specific permit requirements related to TMDL implementation. See EPA Response to Comment 22.

471. Comment NH Stormwater Coalition:

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.

EPA Response to comment 471

The draft permit and the final permit do not contain any required numeric reductions in bacteria concentrations in stormwater discharged from regulated MS4s. Instead the permit requirements are consistent with the bacteria TMDLs in requiring a general reduction in bacteria concentrations in stormwater using source control BMPs. Requiring additional public education messages around bacteria sources and requiring targeting catchments draining to bacteria impaired waters will reduce the concentrations of bacteria in stormwater sources and are consistent with the Statewide Bacteria TMDL and the Hampton/Seabrook Harbor TMDL implementation plan. In addition, EPA completely disagrees with the commenter's assertion that the permit requirements are not consistent with the goal of implementation of the Hampton/Seabrook Harbor TMDL which in part is to: "remove all human sources of bacteria to extent practicable". The permit requirement to more effectively target drainage areas to these waterbodies for IDDE investigation will lead to the removal of human sources of bacteria, as envisioned by the implementation plan. If a waterbody is found to be meeting water quality standards NHDES can augment the TMDL as necessary to update which waterbody segments need additional bacteria source control and reduce requirements for certain waterbodies (if applicable) and the permittee is relieved of any further action to reduce bacteria to that waterbody. See EPA Response to Comment 130 and EPA Response to Comments 162- 167.

472. Comment NH Stormwater Coalition:

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.

EPA Response to Comment 472

The phosphorous reduction requirements in Appendix F are consistent with applicable regulations as explained in the following responses: EPA Response to Comments 46 - 54, EPA Response to Comments 55 - 60, and EPA Response to Comments 227 - 233. See also, EPA Response to Comments 483 - 485 for information regarding BMP performance.

The commenter seems confused by what TMDL documents are, how they are developed and how they are used in NPDES permits. See the above referenced responses, and for more information on the TMDL process itself see EPA's TMDL website .[21]

473. Comment from the City of Dover

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.

474. Comment from the City of Portsmouth

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.

475. Comment from the City of Rochester

The list of bacteria impaired waterbodies 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.

476. Comment from the City of Rochester

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.

477. Comment from the City of Rochester

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

[21] https://www.epa.gov/tmdl/program-overview-total-maximum-daily-loads-tmdl, Accessed January 2, 2017

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.

EPA Response to Comments 473- 477

Table F-1 in Appendix F was developed by compiling EPA approved TMDLs. Regardless of the status of the waterbody on the most recent NH Section 303(d) list, if a permittee discharges to a waterbody covered by an EPA approved TMDL, that permittee is subject to the applicable requirements. See EPA Response to Comments 46 - 54, EPA Response to Comments 55 - 60, and EPA Response to Comments 227 - 233.

The final permit provides updated language for relief from requirements of Appendix F. See EPA Response to Comment 130 for discussion of relief provisions for requirements for dischargers where TMDL's identify stormwater as a source of a pollutant of concern. The final permit also contains the option that the permittee can work with NHDES to develop a bacteria/pathogen reduction plan consistent with the applicable TMDL submit that plan with their NOI requestiong operator specific permit terms. See EPA Response to Comment 22.

See also EPA Response to Comment 114.

478. Comment from the Town of Hampstead

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. [text removed, see Comment 508]. 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.

EPA Response to Comment 478

Bacteria/pathogens concentrations in stormwater are well documented (see EPA Response to Comments 61-83) and indeed the TMDL in question identifies stormwater as a source of bacteria to the impaired receiving waters. Table F-1 in Appendix F was developed by EPA through review and analysis of EPA approved TMDLs. The TMDL development and approval process as specified in Section 303(d) of the CWA and the implementing regulations at 40 CFR 130.7 require a public review and comment period prior to submission for EPA approval. This permit does not reopen any TMDL for comment or modification. EPA Region 1 reviews each TMDL submitted for approval by NHDES and evaluates the adequacy of the TMDL for compliance with the regulatory requirements. See EPA Response to Comments 46 - 54, EPA Response to Comments 55 - 60, and EPA Response to Comments 227 - 233. EPA notes that the requirements of Appendix F Part II do not require extensive testing as the commenter suggests and instead rely on BMPs to reduce bacteria discharges in stormwater. For a discussion of relief from requirements in Appendix F see EPA Response to Comment 130.

479. Comment from the City of Manchester

Bacteria TMDLs Section 1 (i) (I) 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.

EPA Response to Comment 479

The ultimate objective of a public education program is to increase knowledge and change behavior of the public so that pollutants in stormwater are reduced. The program should improve audiences' understanding of the causes and effects of stormwater pollution, as well as educate them about how they can reduce those impacts with the ultimate goal of reducing pollution in stormwater. Measuring the effectivenss of the permittee's public education program is a requirement of the permit and of the the MS4 regulations.

The permit does not state a specific methodology to measure the effectiveness of the education program in order to allow flexibility for a municipality to determine their own effectiveness indicators. Generally, EPA does not include guidance or examples within permit language. It is recommended that permittees take a thoughtful and targeted approach when considering the goal of each public education and outreach program. If a permittee sets a broad goal (e.g., increasing knowledge or changing a person's mindset) EPA agrees it could be difficult to measure the effectiveness, though Maine successfully analyzed such a measure. *See* http://cfpub.epa.gov/npstbx/files/maine05report.pdf. EPA finds allowing flexibility in the public education program and measurement of success allows permittees to focus efforts and messages tailored to their unique situations and declines to require a specific type of measurement of success. EPA suggests that permittees set more readily measurable goals (as will be discussed below), which can be more readily evaluated during the specified timeframe.

Example 1: A popular river walk in town attracts a lot of geese because people are feeding them. As a result, there are excessive goose droppings and the nearby bathing area has been closed three times because of elevated bacteria counts. A municipality could display a DVD at a kiosk reminding people not to feed the geese. If the bacteria count still remains elevated, the municipality can decide to change their BMP and put a sign along the river walk or air a PSA on the radio. The municipality could then measure how many times the beach was closed due to high bacteria counts, or use bacteria counts from samples collected at the beach. If the number of closings or bacteria counts decreased, the municipality could use this as indication of their

message's effectiveness. Particular messages may not be completely effective at first. The benefit of measuring the program's effectiveness is the ability to change the message when it does not appear to be working.

Example 2: A town has a trash problem in the local park, where trash is ending up in the MS4. A measurable goal may be to decrease the amount of trash in that park that makes it to the MS4 by a certain percentage. The municipality installs more trash barrels and signs as their public education/outreach, establishes a clean-up day, then monitors the results for a defined period of time. If the amount of trash in catch basins of the MS4 decreases based on the efforts of the municipality, then the municipality could conclude that both the message and delivery of the message were effective with amount of trash collected from the MS4 being the thing that was measured.

EPA is not expecting sophisticated data gathering. Rather, it is expecting municipalities to focus on known, specific stormwater problems or conditions, to develop reasonable methods to educate the appropriate audience(s) to address those problems or conditions, and to measure the success of that educational material for the chosen topic. Potential measurable goals could include (but are not limited to): Increase in participation in leaf litter program; decrease in calls to hotline about illegal dumping; increase in participation in hazardous waste drop-off days; reduction in volume of trash removed from the MS4; decrease in volume of material removed from catch basins; decreased bacteria counts in local waterways; increase in number of rain gardens installed by citizens; increase in number of people who use pet waste bags, etc. Once again, each MS4 may select its own unique set of goals or objectives, but the ultimate outcome of the program is to elicit specific changes in behavior that in turn benefits water quality. The measurement of the effectiveness of the educational messages should be linked to the measurable goals established by the MS4.

With respect to available resources, NHDES has already adopted the "Soak up the Rain New Hampshire" website and other resources to help raise awareness about stormwater and promote the implementation of practices to reduce runoff. The "Soak up the Rain New Hampshire" information, available at http://soaknh.org, has a wide range of resources for those looking to conduct outreach about actions that citizens can take to reduce polluted runoff.

Second, a number of other valuable resources, funded or collected by EPA, can be found at the following website: http://cfpub.epa.gov/npstbx/index.html. Of particular notice is the 3rd edition of Getting in Step: A Guide for Conducting Watershed Outreach Campaigns, which is available in hardcopy, in video, or as a webinar. Section 6 of the resource discusses ways to evaluate (or measure) an outreach campaign which help permittees as they measure the effectiveness of their programs. For example, it provides an easy way to monitor web traffic which can help determine the effectiveness of an outreach campaign, if the audience is directed to a website. It also highlights free resources for polling and surveys. It is also recommended that permittees investigate the "Surveys and Evaluations" tab on the aforementioned website which include baseline attitude surveys, stormwater program-related surveys, and other examples. A number of the documents focus on New England states, including Maine. (See http://cfpub.epa.gov/npstbx/WhereYouLive.cfm?StateID=22 for examples of some of their templates.) EPA's Public Education and Outreach Factsheet (USEPA, 2005) also provides valuable examples. In addition, EPA suggests that permittees review the report "Measurable Goals Guidance for Phase II Small MS4s" (USEPA, n.d.) and the webcast "Social Marketing: A Tool for

More Effective Stormwater Education and Outreach Programs,"[22]. These resources, templates, and examples mean permittees do not need to develop appropriate educational outreach from scratch.

480. Comment from the City of Manchester

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 area 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.

EPA Response to Comment 480

This permit regulates the discharge of stormwater from a permittee's separate storm sewer system. There is no distinction between bacteria sources with respect to the permit requirements in Appendix F. If the town is aware that geese and duck waste in the storm sewer system is an issue contributing to the impairment, the Town may consider tailoring their educational messages around this and/or develop a program to manage the geese and duck waste. These measures could be used to meet certain requirements of Appendix F. In light of the impact that waterfowl may play in bacteria levels as raised by the commenter, additional requirements have been added to Good Housekeeping to require addressing waterfowl congregation areas at the discretion of the permittee. Permittees should consider the following guidance for addressing waterfowl:
http://wildlifehelp.org/animals/new-hampshire/canada-goose
http://des.nh.gov/organization/commissioner/pip/newsletters/sampler/documents/2014april.pdf

See EPA Response to Comments 449 - 451.

481. Comment from the City of Manchester

Ill. 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

[22] U.S. EPA, Social Marketing: a Tool for More Effective Stormwater Education and Outreach Porgrams, May 2007 (Webcast). www.epa.gov/npdes/outreach_files/webcast/may092007/files/lobby.html, Accessed January 2, 2017.

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.

EPA Response to Comment 481

See EPA Response to Comments 462 - 463 and EPA Response to Comments 464 -466.

The TMDL analyses provides the basis for selecting the water quality endpoint of 12 µg/l as the average annual total phosphorus concentration. The calculation of phosphorus loading capacities in the TMDL analyses does in fact take into account the flushing rate (i.e., hydraulic retention time) of each lake/pond. EPA refers the commenter to the TMDL analyses and the empirical models used to simulate lake/pond phosphorus concentration which all include flushing rate (F) as an independent variable in the equations.

The derivation of the phosphorus endpoint is based on the empirically derived relationship between phosphorus and chlorophyll *a* (a commonly used indicator of algal biomass) observed in NH lakes/ponds. It is not unreasonable or unexpected that the same chlorophyll *a* endpoint (response variable) was selected for TMDL lakes/ponds located within the same geographical region and that all have the same applicable water quality standards and designated uses. The varying flushing rates among the TMDL lakes and ponds do not, in themselves, support the premise that the average annual mean phosphorus concentration target used to determine the loading capacities must vary among the lakes and ponds. While flushing times are critical for estimating the overall loading capacities, the flushing rates in all of the TMDL lakes and ponds are sufficiently long enough for algal growth and blooms to become well established at levels that do not support designated uses. The commenter has not provided a basis to support a position that the 12 µg/l phosphorus target is not the appropriate target to attain chosen chlorophyll *a* endpoint.

While the permit's phosphorus reduction requirements are based on the TMDL phosphorus loading capacity analyses, the water quality goal behind these requirements is to attain NH's WQS and specifically the narrative cultural eutrophication criterion, which has been interpreted in the TMDL analyses as the 90th percentile chlorophyll *a* target of 15 µg/l. If future assessments of a TMDL lake/pond water quality should find attainment of this chlorophyll *a* target, NHDES could

update the TMDL including updating the WLAs, which could relieve the permittee of further actions in Appendix F applicable to it. See EPA Response to Comment 130.

The 20% safety factor incorporated into the phosphorus target used in the TMDL analysis is the TMDL's Margin of Safety, a required element of a TMDL submitted to EPA for approval. To change this safety factor, NHDES would need to revise and submit the TMDL for EPA approval.

482. Comment from the City of Manchester

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.

EPA Response to Comment 482

The commenter's interpretation of the scope of the phosphorus load reduction requirements, as illustrated by the provided example for Dorrs Pond, is incorrect. As described in Appendix F to the final permit, EPA's intent is for permittees to have two options for defining the scope of the LPCP area, the baseline phosphorus load, and the corresponding phosphorus load reduction requirement: 1) All area within municipal boundaries that drain to the lake or pond is used for the phosphorus loading calculations; or 2) Only the municipality's MS4 jurisdictional area that drains to the lake or pond is used for the calculations. The permittee may choose either option and depending on the choice shall calculate the baseline phosphorus load and the corresponding required phosphorus load reduction amount for the chosen area in accordance with Attachment 1 to Appendix F.

Any MS4 with drainage area to a phosphorus TMDL lake/pond identified in the permit with a greater than a zero percent (>0 %) reduction (e.g., 40%) shall be required to achieve a phosphorus load reduction equal to the % reduction value multiplied by their calculated baseline phosphorus load regardless of other contributing drainage areas within other municipalities. EPA has reviewed the permit requirements in Appendix F and the methodology in Attachment 1 to Appendix F and has determined that the intent of the requirements as explained above is adequately clear.

483. Comment from the City of Manchester

Under Section l(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.

484. Comment from the City of Manchester

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.

485. Comment from the City of Manchester

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, an example of nonstructural 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? Doe is 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.

EPA Response to Comments 483 - 485

See EPA Response to Comment 461 and EPA Response to Comment 468.

EPA appreciates the commenter's experience working in the Nutt Pond watershed, and further acknowledges the City's efforts towards restoring the water quality of Nutt Pond. EPA recognizes that implementation conditions will likely vary significantly across watershed areas, and that some conditions as described by the commenter will present more challenges than others for implementing the necessary controls. EPA finds that a compliance schedule of 15 years from permit effective date represents "as soon as possible" for implementation of requirements consistent with the phosphorus lake and pond TMDLs. See EPA Response to Comment 468 and EPA Response to Comment 254.

The permit does not require permittees to demonstrate the effectiveness of each structural control installed through monitoring and or detailed study. The permit allows permittees to demonstrate compliance by relying on credible long-term cumulative performance estimates based on technically sound methods and research results, such as those provided in Attachment 3 to Appendix F. The level of effort involved with documenting performance of stormwater controls as done by the University of New Hampshire Stormwater Center (UNSWC), is intensive and costly (in some cases can cost as much or more than the control itself). EPA would prefer permittees to direct their resources toward implementing effective controls (i.e., control practices already shown to perform well through comprehensive research efforts) rather than diverting limited resources towards conducting the type of monitoring needed to demonstrate cumulative performance of control practices. However, for new emerging and promising technologies, EPA recognizes that investments in sound research investigations to document performance could be very worthwhile for permittees.

The commenter is correct that the baseline phosphorus load calculation does not take into account the load reductions associated with existing BMPs already implemented. However, permittees may take credit for existing BMPs as part of their demonstration of their accounting for load reductions accomplished as specified in Attachments 2 and 3 to Appendix F. In order for a permittee to obtain reduction credit for existing BMPs, the permittee will need to adhere to the procedures in the Attachments 2 and 3 to Appendix F and certify that the controls are being adequately operated and maintained.

EPA declines to make an additional Appendix to the final permit that contains additional requirements that each permittee would be responsible for at each step of the LPCP process. EPA finds that flexibility within the bounds of the requirements of Appendix F Part III is necessary to tailor each permittee's LPCP to their particular situation and needs, and that limiting this flexibility is not warranted.

486. Comment from the City of Manchester

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.

EPA response to Comment 486

Please see EPA Response to Comment 483.

This permit allows the permittee two options for developing and implementing the LPCP. Should the permittee choose an LPCP scope that also encompasses non-jurisdictional MS4 drainage areas, then the permittee may account for controls and associated phosphorus load reductions implemented in these areas towards the total phosphorus load reduction requirement, as calculated using the baseline phosphorus load for the entire tributary drainage area (MS4 and non-MS4) within the municipality. However, should the permittee choose to develop and implement the LPCP only in the MS4 drainage area, then only controls implemented in the regulated area and their associated phosphorus shall be accounted for towards the required phosphorus load reduction requirement, as calculated from the baseline phosphorus load for the MS4 drainage area only.

EPA has provided these two options in the final permit to encourage watershed wide implementation, which will likely be necessary to fully attain phosphorus related WQS in the lake/pond, and also to provide the permittee with potential opportunities of implementing more cost effective controls in non-MS4 drainage areas. It would be not appropriate for the permittee to account for phosphorus load reductions for controls outside of MS4 areas if the permittee has explicitly chosen to focus on only MS4 drainages, and has calculated the phosphorus load reduction requirement based only the MS4 tributary drainage area.

487. Comment from the City of Manchester

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.

EPA Response to Comment 487

Appendix F to the Final Permit directs the permittee to Attachment 3 for acceptable methods for demonstrating compliance with the phosphorus load reduction requirements, which include using the methodology provided or alternative methods subject to EPA and NHDES approval. For purposes of clarity, EPA has removed the specific reference to use monitoring to evaluate plan effectiveness because the allowance of alternative methods is already provided for in Attachment 3 to Appendix F. EPA notes that the level of effort involved with a monitoring program to adequately demonstrate compliance with the phosphorus load reduction requirements would be high, and would likely require a considerable investment by the municipality.

Changes to the permit: Appendix F has been updated accordingly.

488. Comment from the City of Rochester

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.

EPA Response to Comment 488

Please see EPA response to Comment 487. Should a permittee choose to develop and implement a watershed-wide LPCP in non MS4 drainage areas within the municipality, then only the LPCP related requirements would apply to these non-MS4 drainage areas. The commenter is correct that all other permit requirements apply to the MS4 area only.

489. Comment from the City of Portsmouth

Appendix F: In Table F-1, please note that Assessment Unit *NHRIV*600031001-10 is named Newfields Ditch, not Newfileds Ditch.

EPA Response to Comment 489

EPA acknowledges this comment. The table will be updated in the Final Permit to reflect this correction.

Changes to Permit: Table F-1 in Appendix F has been updated accordingly.

Appendix G

490. Comment from IDEXX Laboratories

IDEXX respectfully recommends additions at Appendix G of the New Hampshire Small MS4 Permit Monitoring Requirements For Discharges into Impaired Waters - Parameters and Methods to include three additional US EPA-approved methods: 1 & 2) Colilert® and Colilert®-18 for E coli compliance monitoring and 3) Enterolert® for enterococci compliance monitoring. All three methods utilize the same IDEXX Quanti-Tray® or Quanti-Tray®/2000 for enumeration. IDEXX methods are EPA approved and listed at 40 CFR 136.3, as are the methods currently listed in the proposed revised MS4 permit in Appendix G. The addition of Colilert, Colilert-18 and Enterolert in the proposed revised MS4 permit, Appendix G, will allow facilities to have: 1) faster results (18-24 hours as opposed to 48-72 hours); 2) less complicated training; 3) stringent but far less complicated quality control procedures; 4) more cost effective testing methods; the IDEXX methods can be used for compliance monitoring under all EPA water-based programs including: wastewater, ambient water and drinking water programs

EPA response to Comment 490

Appendix G has been updated to list all of the impairment-causing pollutants and the parameters by which each should be monitored. Appendix G now refers permittees to 40 CFR Part 136 for a listing of approved methods.

Changes to Permit: Appendix G has been updated accordingly.

491. Comment from Eastern Analytical, Inc.

In addition to considering method 8270 for PAH analysis, please consider method 625 (which is an approved method in 40CRF136). Method 625 is referenced in method 610 so it appears the major difference is that method 625 encompasses compounds beyond just PAHs.

EPA response to Comment 491

In order to provide the most recent and complete information, Appendix G now refers permittees to 40 CFR Part 136 for a listing of approved methods.

Changes to Permit: Appendix G has been updated accordingly.

Appendix H

492. Comment from the Town of Exeter

Will the nitrogen load reduction credits in Attachment 1 of Appendix H align with the phosphorus reduction credits in Attachment 2 of Appendix F, which includes various management measures, including catch basin cleaning, street sweeping, litter control, phosphorus control and fertilizers? EPA should allow the same provision for nitrogen load reduction credits as the phosphorus control measures allows for alternative methods to use for determining load credits.

493. Comment from the Town of Newmarket

2.2.3 Great Bay Watershed Nitrogen Requirements

Appendix H: The information on BMPs provided in Appendix H focus on structural BMPs only. Additional information and guidance is needed for various non-structural measures for nitrogen control including allowable N removal credits, similar to the information included for phosphorus in Appendix F.

EPA response to Comment 492 - 493

The final permit includes the cumulative nitrogen load reduction estimates for most of the same stormwater control practices for which cumulative phosphorus load reduction estimates have been developed and provided in Attachments 2 and 3 to Appendix F of the permit. The final permit does not contain any numeric reduction requirements for nitrogen. However, the permit does require that permittees track nitrogen reductions gained through the implementation of structural BMPs, and Attachment 3 to Appendix F provides nitrogen removal estimations from various structural BMPs. At this time, EPA has not developed cumulative nitrogen load reduction estimates for the full suite of non structural BMPs, including proper fertilizer management for turf grasses, but it should be noted that the permit does not require permittees to track noitrogen reductions from non structural practices. Attachments 2 and 3 to Appendix F to the final permit include the nitrogen load reduction estimates along with the phosphorus load reduction estimates for the various stormwater controls included in the permit. Attachment 1 to Appendix H to the final permit has been removed as it is now redundant (see Attachments 2 and 3 to Appendix F). The final permit refers permittees to Attachments 2 and 3 to Appendix F for the appropriate cumulative nitrogen load reduction estimates.

EPA has developed the nitrogen load reduction information provided in the final permit for the various control practices following the same methodologies used to develop the phosphorus load reduction estimates provided in the draft and final permit.

Changes to the permit: Attachments 2 and 3 to Appendix F have been updated accordingly and Attachment 1 to Appendix H has been removed.

494. Comment from Durham/UNH Integrated Watershed Partnership

Appendix H does not include provisions for the permittee to use alternative methods to calculate BMP performance by developing a long-term simulation modeling approach, as Appendix F does for calculating phosphorus treatment.

EPA response to Comment 494

In response to this comment, EPA has revised the permit (see Attachment 3 to Appendix F to the final permit) to include the provision for permittees to develop new or revised stormwater control performance estimates of cumulative nitrogen and phosphorus load reductions using acceptable alternative methods such as long-term continuous simulation modelling. Permittees are now referred to Attachment 3 to Appendix F from both Appendices F and H for BMP performance calculations.

Changes to the permit: Attachment 3 to the permit has been updated accordingly.

495. Comment from Durham/UNH Integrated Watershed Partnership

Appendix H Attachment 1 describes how a permittee can calculate load reduction credits for certain structural BMPs (Table 4-3) and illicit connection removal. Although it is stated that this accounting is for informational purposes only at this stage of the permit, we feel that the permittee should be allowed to take credit for other structural and non-structural load reduction activities and BMPs beyond this limited list. For the structural BMPs, the treatment credits are grouped into only two types of BMPs: runoff

reduction and storm water treatment. These limited categories generalize the treatment potential of each BMP and do not account for the actual processes of a given BMP and a given design of that type of BMP. The curves provided do give a range of performance based on BMP relative sizing, but only accounts for the relative sizing based on contributing impervious area. We feel this misrepresent the treatment of runoff from pervious areas when comingled with that contributed from impervious surfaces or in the case where BMPs are used to treat runoff solely from pervious areas (e.g. agricultural areas, lawns, etc). In addition, the methodology provided as a work around to calculate performance when pervious areas are contributing to the BMP is difficult and time-consuming and requires the permittee to calculate treatment for each BMP individually instead of using cost-effective measures like look-up tables or automation.

EPA response to Comment 495

See EPA response to Comment 493 - 494. EPA agrees with most of the commenters' points and has revised the permit (see Attachment 3 to Appendix F to the final permit) to allow permittees to develop new or revised stormwater control performance estimates of cumulative nitrogen and phosphorus load reductions using acceptable alternative methods such as long-term continuous simulation modelling.

With respect to treating runoff from drainage areas comprising both impervious and pervious surfaces, the methods and examples in Attachment 3 to Appendix F provide step by step instructions and illustrations for calculating nutrient load reductions when implementing structural BMPs. In most cases, smaller capacity controls will receive relatively low runoff volumes from contributing pervious area compared to contributing impervious areas for most rain events and consequently, most of the credit will be due to the sizing of the control for the contributing impervious cover. However, EPA acknowledges that timing of runoff delivery to the control from contributing impervious and pervious areas could differ enough such that some controls could provide for a notably greater overall runoff volume being treated than has been accounted for in the calculations used in the crediting and sizing/crediting methodology provided for in the permit. Given the potential for highly variable conditions associated with runoff patterns from combined impervious and pervious areas that affect runoff delivery (e.g., soil types, vegetative cover, topography, relative locations of pervious and impervious areas, etc.), EPA concluded that it would be beneficial to provide a straightforward methodology in the permit, as described in Attachment 3 to Appendix F.

EPA provided the nutrient credit calculation method in the permit in order to provide a scientifically sound and straightforward approach for calculating nutrient removal from structural and non structural BMPs. However, the final permit allows permittees to pursue alternative approaches for estimating cumulative load reductions from structural BMPs, and a permittee could decide to develop a revised or alternative estimate and submit that information to EPA for approval. To assist permittees in developing such calculations that would be acceptable to EPA, EPA has developed and calibrated a modelling tool known as Opti-Tool that would allow permittees to readily simulate a large range of dynamic conditions for specific controls. This tool will be made available to permittees in 2017.

496. Comment from Durham/UNH Integrated Watershed Partnership

Appendix H. Attachment 1 describes how a permittee can calculate nitrogen loads for their contributing drainage areas. This methodology includes accounting for only two land covers/ land uses: pervious and impervious. The equivalent methodology for phosphorus load calculations (Appendix F) includes a more detailed accounting of loads from not only different land uses, but also impervious and pervious land

covers within those land uses. We feel this same level of detail should be applied to the nitrogen load calculation methodology.

EPA response to Comment 496

EPA agrees that the calculation methodology should have the same level of detail. Similar to the tables provided for phosphorus, EPA has provided in Attachments 2 and 3 to Appendix F to the final permit a table of annual nitrogen load export rates for impervious and pervious cover for several land use categories. The export rates are based on consideration of study and analysis in the Great Bay watershed, evaluation of regionally representative stormwater event mean concentrations, and local precipitation patterns and continuous hydrologic modelling results. Attachment 2 and 3 to Appendix F has been updated to include nitrogen load estimates and Attachment 1 to Appendix H has been deleted.

Changes to the permit: Attachment 1 to Appendix H has been removed and Attachment 2 and 3 to Appendix F has been updated accordingly.

497. Comment from Durham/UNH Integrated Watershed Partnership

Appendix H. Appendix H (bottom of Page 3) appears to require the MS4 municipality to regulate the management of salt application on privately maintained facilities and private streets that drain to the MS4 without the authority enabled by New Hampshire statute. Requiring the municipality to ensure that private parking lot owners and operators and private street owners and operators are using trained and certified commercial salt applicators and that they report their annual salt usage without the enabling state legislation is questionable policy that cannot be expected to produce accurate or reliable results. A program of this nature would have greater likelihood of producing the desired results if conducted and regulated at the state level.

EPA Response to Comment 497

EPA acknowledges the commenters concern about the reliability of results from reporting annual salt use. EPA contends that responsible salt use within an MS4 is an important measure for reducing chloride pollution to a chloride impaired waterbody. See EPA Response to Comments 212 - 217, EPA Response to Comment 468 and EPA Response to Comment 470 for a discussion of requirements relating to salt application on private property.

RENOTICE Appendix H

498. Comment from the City of Dover

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.

499. Comment from the City of Portsmouth

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.

EPA Response to Comments 498-499

EPA agrees with the comment and has revised the permit text in Appendix H to remove references to the "Water Quality Response Plans"

Changes to Permit: Appendix H has been updated accordingly.

500. Comment from the City of Portsmouth

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 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.

EPA Response to Comment 500

With respect to the permittees subject to the requirements of Appendix H, EPA agrees that the additional/enhanced BMPs for Impaired Waters are required in the MS4 impaired catchments only. EPA has revised the text of Appendix H to make this distinction clear.

Changes to Permit: *Appendix H has been updated accordingly.*

501. Comment from the City of Rochester

Appendix H§VII 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 1.1.a.i requires use of slow-release fertilizers, proper management of grass cuttings and leaflitter (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.

502. Comment from the City of Rochester

§1.1.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.

503. Comment from the City of Rochester

§1.1.1.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.

EPA Response to Comment 501-503

See EPA Response to Comments 61-83, EPA Response to Comments 46 - 54, EPA Response to Comments 55 - 60, and EPA Response to Comments 227 - 233. Discharges of nutrients, specifically nitrogen and phosphorus, in stormwater affect not only the point at which the discharge enters

the receiving waterbody but also affect downstream waterbodies. Therefore, in determining the list of permittees identified in part 2.2.2.a.i.1 for nitrogen, EPA reviewed the NH 2012 Integrated Report for "Total nitrogen" impairments and included the impaired waters, as well as tributaries to the impaired waters. Additionally, EPA considered all nitrogen impaired coastal waters in New Hampshire; the upstream watersheds impacting the impaired coastal waters were then included in the list of permittees in part 2.2.2.a.i.1. The nitrogen source identification report is intended to inform the permittee of potential hot spots of nitrogen delivered to waterbodies to effectively target retrofits to mitigate nitrogen sources in the most cost effective manner.

It is EPA's view that the draft NH Small MS4 permit strikes an appropriate balance between allowing each permittee flexibility to implement controls and measures while also effectively prohibiting pollutants from entering the MS4. Streets, roads, highways and parking lots accumulate significant amounts of pollutants that contribute to stormwater pollutant runoff to surface waters. Effective street sweeping programs remove debris from city streets minimizing pollutants in stormwater runoff, this includes pollutants that adhere to small particles such as phosphorus and readily soluble pollutant including various nitrogen compounds. EPA notes that the focus of the leaf litter management program is to keep impervious roadways and parking lots as free of leaf litter/organic matter as possible during critical seasonal periods and not to address all leaf litter in the entire watershed. Leaf litter deposits on pervious areas will be subject to a number natural processes that will contain, recycle and attenuate nutrient loads in the watershed. These measures are designed to specifically target the reduction of accumulated organics on impervious surfaces. In addition, removing organics from contact with stormwater will reduce the amount of nitrogen contributed to receiving waters. EPA maintains that this approach is reasonable and not overly prescriptive for permittees with water quality-limited waters.

Moreover, as explained in EPA Response to Comment 501, the requirements in Appendix H are applicable in the impaired catchments only; the Final permit text includes this clarification in Part 2.2.2. and Appendix H.

Changes to Permit: Part 2.2.2. and Appendix H have been updated accordingly.

504. Comment from the City of Rochester

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 §I.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.

EPA Response to Comment 504

In the final permit, EPA included language related to relief from additional requirements in Appendix H to provide permittees an opportunity to demonstrate that the stormwater discharge at a particular outfall is not causing or contributing to a water quality impairment or that the waterbody is meeting water quality standards. See EPA Response to Comments 162- 167.

505. Comment from the City of Rochester

Appendix H/§111 - §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.

EPA Response to Comment 505

In the final permit, EPA included language related to relief from additional requirements in Appendix H to provide permittees an opportunity to demonstrate that the stormwater discharge at a particular outfall is not causing or contributing to a water quality impairment or that the waterbody is meeting water quality standards. See EPA Response to Comments 162- 167.

The commenter did not give an example, and EPA is not clear what the comenter found confusing in the requirements between Appendix F and Appendix H. As part of their NOI submittal each permittee will evaluate their receiving waters to determine if the waters are impaired and if so, if they are covered by a TMDL. EPA recognizes that there will may be a number of permittees subject to the requirements under both Parts 2.2.1 and 2.2.2 that may encounter overlaps between TMDL requirements and requirements for water quality limited waters. There may also be overlaps between multiple TMDLs or multiple impairments. For many permittees, these overlapping requirements will not be in the same watershed.

EPA has reviewed all of the requirements under Parts 2.2. 1 and 2.2.2. Permittees that encounter overlaps may eliminate duplication whenever possible and streamline requirements according to their applicability. In general, if overlapping requirements are not in the same watershed, the permittee is likely to be subject to requirements of all applicable parts of the permit. However, permit requirements related to public education and outreach can be combined so multiple messages are not required. In addition, source identification reports may also be streamlined. All other requirements must be implemented in the impaired watershed. However, if waters with a TMDL applicable to an MS4 and waters impaired for other pollutants are located in the same watershed, the Permittee may combine all similar requirements.

Also see EPA Response to Comment 112, EPA Response to Comments 128 - 129, EPA Response to Comment 130, EPA Response to Comments 46 - 54, EPA Response to Comments 55 - 60, and EPA Response to Comments 227 - 233. For a discussion of High Priority catchments and IDDE timelines, see EPA response to comments 289 - 303.

506. Comment from the City of Portsmouth

This section regulates municipalities such as Portsmouth that discharge into chloride impaired waters. With regard to the controls and requirements set form 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 regulation 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.

507. Comment from the City of Dover

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. Mangers 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 pretreatment 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.

EPA Response to Comments 506 - 507

See EPA Response to Comments 212 - 217, EPA Response to Comment 468 and EPA Response to Comment 470.

According to NHDES, towns with historical salt use data that began using Green SnowPro techniques have seen an 18% – 44% reduction in salt use and towns that have not instituted any BMPs to control salt consistent with the Green SnowPro approach will likely see a 20% reduction in annual salt use when using BMPs suggested by the Green SnowPro program. In addition, private applicators that use the Green SnowPro techniques will see a similar decrease in salt use. This indicates that the requirements of Appendix F Part I and Appendix H Part VI will result in significant reductions in salt (chloride) delivered to waterbodies impaired due to chloride and relying on a voluntary program to reduce chloride discharged from the MS4 is not warranted. Moreover, utilizing this existing program creates efficiencies for permittees as many municipalities are already participating and utilizing the system

EPA agrees that additional flexibility for private entities to report deicing chemical use is warranted and has updated Appendices F and H to allow the permittee to collect salt use information from private applicators and report that information in the annual report. This permit is not a regulation of general applicability.

See also, EPA Response to Comments 61-83, EPA Response to Comments 46 - 54, EPA Response to Comments 55 - 60, and EPA Response to Comments 227 - 233

Changes to Permit: Appendix F Part I and Appendix H Part IV have been updated accordingly.

508. Comment from the Town of Hampstead

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.

EPA Response to Comment 508

See EPA Response to Comments 61-83 and EPA response to Comments 85 -86 for a discussion of EPA's review of existing literature and data regarding stormwater quality.

While nitrogen and phosphorus requirements in Appendix H do require tracking of nitrogen and phosphorus reductions due to actions taken by the permittee there are no monitoring requirements in Appendix H as the commenter suggests. The requirement to install one

demonstration BMP to address nitrogen or phosphorus impairments is not overly burdensome due to the contribution of nitrogen and phosphorus to receiving waters from stormwater sources. EPA notes that the permittee may choose the location of the demonstration project and should consider a location where the BMP will be most effective at reducing nutrient discharges to waterbodies.

See EPA Response to Comments 61-83, EPA Response to Comments 46 - 54, EPA Response to Comments 55 - 60, and EPA Response to Comments 227 - 233.

509. Comment from the City of Manchester

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.

EPA Response to Comment 509

The comenter appears to misunderstand the permit requirements that require compliance with Appendix F and Appendix H. The requirements under Appendix H are separate from the requirements under Appendix F, and the requirements of Appendix F do not supersede or replace the requirements of Appendix H. Moreover, there are no specified reductions for the permittees subject to the requirements of Appendix H, therefore calculating a baseline load is not necessary. Lastly, EPA disagrees that a time frame like that suggested by the comment is needed for Appendix H, Section II.

510. Comment from the City of Manchester

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.

EPA Response to Comment 510

It is not clear what section the commenter is referring to with “the comment section under phosphorus”. With respect to the requirement to track private parking spaces, the specific requirement in Appendix H Part IV is to identify private parking lots with 10 or more spaces draining to the MS4. This requirement is applicable to permittees that discharge to a chloride impaired waterbody. See EPA EPA Response to Comment 468, EPA Response to Comment 470, and EPA Response to Comments 212 - 217.

511. Comment from the City of Manchester

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 Consolidated Assessment and Listing Methodology (CALM).

512. Comment from the City of Manchester

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.

EPA Response to Comment 511 - 512

In the final permit, EPA included language related to relief from additional requirements in Appendix H to provide permittees an opportunity to demonstrate that the stormwater discharge at a particular outfall is not causing or contributing to a water quality impairment or that the waterbody is meeting water quality standards. See EPA Response to Comments 162- 167. The commenter should work with NHDES to make sure any receiving water sampling is done in accordance with the NHDES CALM and submit any data to NHDES for use in future Section 303(d) list updates.

See also EPA Response to Comments 61-83, EPA Response to Comments 46 - 54, EPA Response to Comments 55 - 60, and EPA Response to Comments 227 - 233.

513. Comment from the City of Portsmouth

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.

EPA Response to Comment 513

EPA agrees with the comment and has revised the permit text in part 2.2.2 to provide clarification as to the specific impairments listed in the NH 2012 Integrated Report (IR) that were considered in the development of the lists of permittees.

Changes to Permit: Part 2.2.2 has been updated accordingly.

514. Comment from the City of Dover

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.

EPA Response to Comment 514

EPA is participating in the PTAPP process to help ensure consistencies between the MS4 permit nutrient reduction accounting and the PTAPP process, including consistencies in the methodology in load reduction calculations. The PTAPP process is separate from MS4 permitting and participation in the process is not equivalent to ensuring compliance with NPDES permit provisions. However, future tools developed through the PTAPP process may be used to facilitate permit compliance to the extent that all permit requirements are met.

General Comments on the Draft Permit

515. Comment from Elaine Leahy

I support any efforts to limit damage to our waterways from runoff, thank you for considering this important issue.

516. Comment from Conservation Law Foundation

Stormwater runoff from impervious areas has significant negative impacts on water quality throughout this region and nationwide. As the EPA Office of Water has found, "Stormwater runoff in urban and developing areas is one of the leading sources of water pollution in the United States."1 The National Research Council (NRC) agrees: "Stormwater runoff has a deleterious impact on nearly all of the nation's waters"2 - as does the Ninth Circuit Court of Appeals: "Stormwater runoff is one of the most significant sources of water pollution in thenation."In its preamble to the Phase II stormwater regulations in 1999, EPA explained the impacts of stormwater runoff in detail:

Storm water runoff from lands modified by human activities can harm surface water resources and, in turn, cause or contribute to an exceedance of water quality standards by changing natural hydrologic patterns, accelerating stream flows, destroying aquatic habitat, and elevating pollutant concentrations and loadings. Such runoff may contain or mobilize high levels of contaminants, such as sediment, suspended solids, nutrients (phosphorous and nitrogen), heavy metals and other toxic pollutants, pathogens, toxins, oxygen-demanding substances (organic material), and floatables... Individually and combined, these pollutants impair water quality, threatening designated beneficial uses and causing habitat alteration or destruction.4

These water quality impairments "result[] in an unhealthy environment for aquatic organisms, wildlife, and humans." EPA has recognized that stormwater runoff is a "contributor to water quality impairments across the country, particularly in developing and urbanized areas."6 Stormwater has these effects in large part due to the harmful contaminants that it carries into receiving waters. According to the NRC, "The chemical effects of stormwater runoff are pervasive and severe throughout the nation's urban waterways, and they can extend far downstream of the urban source .... A variety of studies have shown that stormwater runoff is a vector of pathogens with potential human health implications." 7 In particular, over 250 studies have shown that increases in impervious area associated with urban development are a "collection site for pollutants,"8 and generate greater quantities (and additional types) of contaminants. Urban development creates new pollution sources as population density increases and brings with it "proportionately higher levels of car emissions, maintenance wastes, pet waste, litter, pesticides, and household hazardous wastes, which may be washed into receiving waters by storm water. "9 These increases in pollutant loadings can result in immediate and long-term effects on the health of the water body and the organisms that live in it.10 The U.S. Geological Survey has found that, in areas of increased urban development, local rivers and streams exhibited increased concentrations of contaminants such as nitrogen, chloride, insecticides, and polycyclic aromatic hydrocarbons (PAHs).11

The increased stormwater volume and pollutant loadings caused by urbanization, especially impervious cover, are closely connected with water body impairment. Contaminants, habitat destruction, and increasing streamflow flashiness resulting from urban development have been associated with the disruption of biological communities.12 The NRC states, "By almost any currently applied metric ... the net result of human alteration of the landscape to date has resulted in a degradation of the conditions in downstream watercourses."13

The deleterious effects of urbanization on water quality are evident from a review of the lists of impaired waters states must compile in compliance with the Clean Water Act. Thousands of water bodies nationwide are currently listed as impaired for stormwater-source pollutants such as pathogens, nutrients, sediments, and metals.14 Of those impaired water bodies, by 2000, impairments from stormwater runoff were "responsible for about 38,114 miles of impaired rivers and streams, 948,420 acres of impaired lakes, 2,742 square miles of impaired bays and estuaries, and 79,582 acres of impaired wetlands" - and the NRC considers these figures to be underestimates of actual impairments.15 Urban stormwater is listed as the "primary" source of impairment for 13 percent of all rivers, 18 percent of all lakes, and 32 percent of all estuaries, despite the fact that urban areas cover just 3 percent of U.S. land mass.16

In New England, according to Region 1, "[s]tormwater runoff from impervious areas contributes to poor surface water quality, including altered flow regime (shoreline erosion and stream channel alteration), the presence of pollutants, and the destruction of healthy populations of fish and other aquatic life."1 Because of this, "[t]oday, polluted stormwater runoff is a major cause of water quality impairment in New England."18 In New Hampshire, storm water has been identified as contributing to over 80 percent of surface water quality impairments in the state.19

Proper implementation of the Phase II stormwater regulations, including those addressing Small MS4s, is essential to protecting valuable surface water resources in New Hampshire from the proven adverse impacts of stormwater. This is especially the case in light of the growing body of evidence of stormwater pollution in the state, including but not limited to, significant chlorides impairments in southern New Hampshire, and major eelgrass- and nitrogen-related impairments in numerous water bodies that are part of the Great Bay estuary. Generally speaking, the draft permit represents an important and much-needed improvement over both the 2003 Small MS4 General Permit applicable to New Hampshire ("2003 permit") and the prior iteration of this draft permit. CLF agrees with EPA's assessment that, with respect to the small MS4 permit program, "the bar needs to be raised for the objectives of the Clean Water Act to be addressed," and that the permit must be more stringent and prescriptive for the program to achieve its statutory purpose. See Fact Sheet at 148.20 Generally speaking, and without in any way waiving specific concerns expressed infra, we support the draft permit's more prescriptive requirements for ensuring that discharges from small MS4s do not cause or contribute to the violation of water quality standards. See Draft Permit §§ 2.1, 2.2.

517. Comment from Andy Leahy

I am writing to express my support for the MS4 proposal, in hope that New Hampshire will act as a leader in storm water policies for New England, I am a Massachusetts resident, but it all flows downstream. Watersheds cross borders and healthy watersheds bring communities together

518. Comment from Mark Wolfe

I am sending this in support of the EPA’s proposed NH MS4 general permit currently being proposed. I live on a small lake that has seen a significant increase in cyanobacteria over the last few years with the cause being primarily the addition of nutrients from fertilizer and storm water run-off. Any action that can reduce this pollutant will be greatly appreciated.

519. Comment from John Case

As a long-time member of the Hoosic River Watershed Association, I heartily endorse efforts to control and treat storm water runoff in New Hampshire and Massachusetts.

520. Comment from Benita Danzing

I'm writing to express my support of the EPA's proposed NH MSF general permit, the new requirement that small cities and towns in New Hampshire with municipal separate storm sewer systems ensure storm water runoff is minimized and treated before it pollutes waterways. I hope that this model is implemented in Massachusetts down the road. The requirement is vital to our health and the health of our communities.

521. Comment from Roger Frymire

I am highly in support of the permit and see it going a long way towards removing some of the large amounts of sewage variously reaching our public waterways.

522. Comment from Kristen Hoffman

I support the MS4 permit proposal for New Hampshire.

523. Comment from Paul Lauenstein

I applaud EPA's initiative in requiring strong stormwater standards to keep our precious and finite water resources clean. Please forge ahead with your proposed MS4 general permit in New Hampshire. I am hoping this becomes a template for the rest of New England. If EPA does not protect our water resources, who will?

524. Comment from the Nashua River Watershed Association

The Nashua River Watershed Association (NRWA) is writing to express support for the EPA's 2013 Draft New Hampshire Small MS4 Permit. NRWA's Water Monitoring Program has been routinely collecting data on water quality from streams and rivers in New Hampshire and Massachusetts for the past 20 years. The data have clearly demonstrated the damaging effects stormwater runoff has on water quality. Bacteria levels spike, water clarity declines, and temperatures rise in critical cold water fisheries. A marked decline in water quality is always evident immediately after a storm, and the effects can linger for several days. It is because of this that the NRWA supports the Draft NH Small MS4 Permit, with the hope that the improvements in stormwater treatment practices will halt the degradation of streams and rivers throughout New Hampshire.

525. Comment from the Mystic River Watershed Association

MyRWA supports the new draft MS4 permit for New Hampshire. This permit builds on the progress achieved by New Hampshire's current MS4 permit, and will bring the state's waters closer to meeting the swimmable and fishable goals of the Clean Water Act (CWA). Though the 2003 permit made advancements in water quality, many waters have been left impaired. Polluted stormwater runoff is a leading cause of surface water impairment, as pesticides, fertilizers, oils, road salt, litter, debris and sediment are introduced into waters via MS4 discharges. These pollutants can deprive communities of full use of valuable surface water resources by discouraging recreational enjoyment, degrading aquatic habitat, and contaminating drinking water supplies. Additionally, polluted runoff is one of the country's only growing sources of water pollution. The new permit directly addresses these issues, while maintaining flexibility to allow municipalities to implement non-structural BMPs and meet other requirements in ways that will reduce the associated financial burdens. As coastal states, New Hampshire and Massachusetts both have strong interests in the 28.3 million jobs that depend upon clean coastal and marine waters. Protecting surface waters from polluted runoff simply makes good economic sense. Further, the requirements in the final draft have been relaxed from prior drafts in a way that strikes a fair and equitable balance between the goals of the CWA and the current fiscal realities faced by many cities.

As a result, the new permit will contribute to a vibrant New Hampshire while presenting costs that are fairly and proportionately measured to the vitally important environmental and economic benefits.

526. Comment from Hoosic River Revival (President Judith Grinnell)

We are very supportive of the EPA's proposed NH MS4 general permit and would like it implemented in Massachusetts.

527. Comment from Charles River Watershed Association

The MS4 general permit is an important regulatory tool, and when paired with additional stormwater regulatory programs and permits, provides meaningful protections for surface waters. The MS4 program in New England, however, is past due for revision and improvement. The current permits, dating from 2003, do not reflect best current practice for municipal stormwater management, and certainly do not result in achievement of water quality standards. Over the past five years, there has been significant discussion, review and public input to EPA about proposed updates to the MS4 program, and EPA has responded in exhaustive detail. Small MS4 permittees have had ample opportunity to develop stormwater management programs over time, and have also had many years to prepare for the more stringent requirements that will be necessary to meet the objectives of the Clean Water Act. We strongly encourage EPA to move forward with planned updates and improvements to all stormwater permit programs, in particular the MS4 general permit.

EPA Response to Comments 515-527

EPA appreciates the public support for addressing stormwater pollution in the small MS4 permit.

528. Comment from the Ipswich River Watershed Association

We feel the next phase of stormwater permitting as proposed is DESPERATELY needed and strongly encourage you to adopt the proposal. While we recognize the potential hardship this will place on municipalities, in needs to be understood that stormwater discharges which they manage are already in violation of federal and state water quality regulations and the new regulations are designed to reasonably address the devastating impact of stormwater on our waterways. As you are well aware, stormwater is by far the largest source of water pollution today and the time has (finally) come for society to both recognize and address the issue. Although we are located in Massachusetts, we are impacted by stormwater emanating from New Hampshire as many watershed cross boundaries. As importantly, we feel what happens with the New Hampshire permit will directly impact the proposed permit for Massachusetts so we really need the New Hampshire Permit to be as strong as possible. In sum, we strongly support adoption of the MS4 permit as proposed and encourage you to resist any efforts to weaken it.

529. Comment from the Rockingham Planning Commission

Technical and Financial Assistance: To increase compliance and reduce the financial burden on municipalities, RPC requests that the EPA establish and support, either directly, or through the NHDES, a robust program to provide financial and technical assistance to increase municipalities' capacity to implement the permit. This financial assistance should be structured to support both specific municipal stormwater management program elements, as well as more general technical support including model documents (such as sample public education materials, sample contents of a municipal stormwater management program document (SWMP), a New Hampshire specific Stormwater Pollution Prevention Plan model, inventory and mapping protocols, stormwater management guidelines, etc.), training sessions for mapping and monitoring stormwater systems, and tools for tracking progress on the implementation of a municipal SWMP.

EPA response to Comment 528-529

EPA acknowledges this comment regarding specific permit elements that EPA can provide to aid in permit compliance. EPA plans to provide technical assistance guidance and example documents to the extent that resources allow. The NH Small MS4 website will be updated frequently following the permit issuance to provide the most up to date resources to aid small MS4 operators in planning for the new permit term.

EPA does not have authority to appropriate monies for grant or loan programs; this authority rests with Congress. Congress has not provided in its appropriations to the Agency a grant program specifically targeted for stormwater infrastructure projects or technical support, although it has provided many billions of dollars to establish state revolving loan funds which can be used to fund stormwater projects. At this time, federal funding is limited to the mechanisms currently available. See EPA response to Comments 534 for further discussion of the estimated cost of permit compliance and funding information.

530. Comment from Dr. Robert M. Roseen

A substantial limitation to the Draft MS4 Permit is the lack of adequate funding mechanisms. Given the current economic conditions that challenge municipal budgets, the MS4 permit should include some additional funding mechanisms. The State of Maryland has legislation to require formation of stormwater utilities created by the state, and managed by towns. Other states are considering similar legislation. This is needed because municipalities lack the political will to pass utilities, without which no reasonable implementation of MS4 permit requirements will be implemented. The MS4 permit should require, as it does for the creation of municipal stormwater ordinance, the creation of municipal stormwater utility developed solely to support permit activities. This blanket approach is needed to facilitate and improve the rate of adoption of utilities. There are a limited number in the northeast, the state of NH has none, with the City of Manchester having one in process for nearly 7 years and counting.

EPA response to Comment 530

This permit is written in compliance with the CWA and implementing requlations for small MS4's. The regulations do not allow for MS4 permits for small MS4s to require a specific funding mechanism. While stormwater utilities may be an effective means for implementing permit requirements and other stormwater management functions, EPA cannot mandate that municipalities must establish utilities. The State of New Hampshire would have to enact such legislation.

See EPA response to Comments 534 for a discussion of cost.

See EPA response to Comment 42 for a discussion of the funding requirement in part 1.10.c, which has been deleted from the final permit.

531. Comment from the Town of Sandown

We are also concerned the extent of time and other resources which will now be required in order to demonstrate and document General Permit compliance will quickly become a burden to the Town of Sandown in terms of manpower and financial resource allocation. We presume the EPA's recognition of this potential gave rise to the inclusion of language contained in Section 1.10(c) of the General Permit, which reads: "The permittee is encouraged to maintain an adequate funding source for the

implementation of this program. Adequate funding means that a consistent source of revenue exists for the program." Talk about unfunded federal mandate!

While there are other attributes of the draft 2013 General Permit that cause us similar concerns as those examples cited above, we believe consideration of those described serve to properly reinforce our overall opinion that requirements imparted upon New Hampshire municipalities, especially smaller towns such as Sandown, will serve to create an undue burden. Most importantly, in the case of Sandown, we find it difficult to believe that the dramatic increase in annual cost required to implement a SWMP compliant with the draft 2013 General permit will actually produce better results than the current program.

EPA response to Comment 531

This permit is not a regulation and is not subject to the Unfunded Mandates Reform Act (UMRA). However, EPA recognizes that permittees may incur compliance costs as a result of being covered under an NPDES permit. EPA took these costs into consideration when promulgating the Phase II stormwater rule, on which the requirements in this permit are based. For the Phase II final rule, EPA prepared an economic analysis of costs and benefits under the UMRA, 2 U.S.C. § 1531–1538. Based on that analysis, the Agency concluded that the benefits of the rule were expected to outweigh the costs with respect to MEP. For a discussion of the analysis and EPA's consideration of the impacts on small governments. See 64 Fed. Reg. at 86,796-99. EPA is not legally permitted to consider cost when setting WQBELs in a permit. However, this permit does mitigate cost to some extent by providing a variety of flexible ways for permittees to build on existing BMPs and implement new BMPs to comply with the permit over the course of several years. See e.g. Responses to Comments for Part 2.1, 2.2, 2.3, and Appendices F and H.

Some state and federal assistance to communities is also available --- see EPA response to Comments 534.

Please note that section 1.10.c. of the permit referencing adequate funding has been removed. See EPA response to Comment 42.

The Small MS4 general permit is a key step toward improving the overall quality of New Hampshire waters, where stormwater is the leading pollution source contributing to impairments. Specific permit requirements to address illicit discharges, stormwater from new development and construction sites, as well as more stringent good housekeeping measures for MS4s will lead to water quality improvements and a more engaged approach to stormwater management throughout the state that will protect water quality.

532. Comment from the Town of Seabrook

The Town of Seabrook is a small, predominately blue collar community (Pop. 8,693) along the Atlantic coast in southeastern New Hampshire. For the past nine years we have spent $543,849 of taxpayer's dollars to meet your requirements in managing our stormwater. Now you come before us with even more stormwater requirements that have significantly more costs associated with them over the next five years. This while Concord, NH (Pop. 42,695), Keene, NH (Pop. 22,420), and Laconia, NH (Pop. 15,951) have been given waivers/exemptions from participating during the last nine years and also again during these Phase 2 new rules which encompasses the next 5 years. We conclude that no costs to these communities while little Seabrook has spent over half a million dollars is grossly unfair!

EPA response to Comment 532

See EPA response to Comments 2 - 3 for a discussion of the eligibility requirements for the permit. Also see EPA response to Comments 534 for further information on funding options. It should be noted that Concord, Keene and Laconia have not been issued waivers from permit requirements, they are currently not subject to the program based on the regulatory scope of the program as described in 40 CFR 122.32.

533. Comment from the Town of Danville

The Town of Danville New Hampshire has concerns and comments regarding the 2013 Draft Small MS4 General Permit and have listed them below. This list of concerns was generated through many discussions with the Danville Board of Selectmen, the Danville Stormwater Department/Road Agent and our Stormwater Consultant (CEI), the Danville Conservation and Forestry Commissions and Planning Board, and our representatives to the Southeast Watershed Alliance. The Town of Danville is a small rural community of 4,387 people in southeastern New Hampshire and a population of 2,890 in our urbanized area (UA) of the MS4. The town does not have public sewage. The Town of Danville has 7,070 acres of land; our green infrastructure is strongly supported by 3,451 acres of Open Space land with long term and permanent restrictions on development. The remaining land, due to our zoning and natural terrain features, is predominantly forested. This acreage provides for natural infiltration of stormwater into watershed areas. We would appreciate the EPA's viewing our concerns and addressing these points with the 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.

EPA response to Comment 533

EPA acknowledges this comment regarding the importance and the cost-effectiveness of maintaining and promoting open space and protected natural lands, which allow for natural infiltration of stormwater. It is EPA's view that the requirements of the MS4 permit will not conflict with land conservation efforts within the town.

534. Comment from the City of Dover

While improving water quality in our water bodies is a community priority, it must be put in perspective of other community responsibilities and priorities. It is easy to assume a community can afford more spending to protect the environment when looking solely at a community's median household income. However, this is too simplistic of an analysis which is insensitive to the current dynamics associated with the Federal and State programs which are mandated and which previously were subsidized by the Federal and State funds. As the Federal and State funding has dried up not just for environmental programs but all federally subsidized programs, the local communities have been scaling back on local programs and staff in order to make up for the loss of Federal and State funding of the mandated programs. Despite the belt tightening at the local level, the down shifting of mandated program costs have pushed local property taxes higher.

EPA needs to recognize that improving water quality in our water bodies is important but it needs to be accomplished in a financially sustainable way. Region One EPA Administrator Spaulding himself acknowledged, at a presentation in Stratham last spring, that "EPA cannot save Great Bay. It is up to the local communities to save it." EPA must recognize and acknowledge that communities have done a great deal already and that communities are willing to continue doing even more, but it must be at a sustainable level.

535. Comment from the City of Manchester

1.10 Stormwater Management Program (SWMP): Under c. "The permittee is encouraged to maintain an adequate funding source for the implementation of this program. Adequate funding means that a consistent source of revenue exists for the program." The concern that we have along with the other communities that were represented at the public hearing is with the costs associated with this program. In this economic environment with budget cuts and lost revenues the communities that are regulated under this permit including Manchester would have a difficult time ensuring these funds will be available and therefore complying with this section based on the current permit requirements and associated costs. The costs to comply with this permit as outlined with these comments would cost in excess of $700 millions of dollars. Currently stormwater is funded under the City's general fund and is therefore subject to budget cuts due to the budget constraints that we all are facing. The City of Manchester has been funding the current program, but we do not have the funds needed to implement the Stormwater Management Plan (SWMP) associated with the extensive and burdensome requirements of this permit.

536. Comment from the City of Rochester

To comply with the requirements of the 2013 NH Small MS4 Draft General Permit, it is estimated that the City of Rochester will be facing upwards of $250 million to $300 million to comply within the five year period. This, coupled, with the potential need for a significant wastewater treatment facility upgrade once the currently expired NPDES permit is reissued, will create significant financial hardship for the City of Rochester. An affordability guideline should be developed by the EPA and an affordability assessment be completed for the City of Rochester. That affordability information should then be followed to allow the City of Rochester sufficient time to distribute the costs for compliance in a manner.

537. Comment from the Town of Hampstead

The Town had an outside agency provide an estimate for work that is needed. For year one of the permitting process, the cost would be approximately $58,000 +and an additional $52,000 + for years two through four.

Shouldn't the EPA determine what the issues are, what is contributing to these issues and how the EPA can resolve the problem, instead of the Town doing this, particularly in light that the Town has neither the knowledge nor the skill. Further, it does not have the funds or manpower to accomplish all that the EPA is requiring?

For budgeting purposes, this funding would have to be a new line-item in the budget or a warrant article. Should the town not support the new line-item or warrant at Town Meeting, no funds could be used for this purpose for 2014. What happens then?

538. Comment from the Town of Merrimack

The cost to Merrimack to fund the programs in the 2013 MS4 Draft General Permit is estimated to be in the tens to hundreds of thousands of dollars annually with total costs for the five years in the millions of dollars. A large portion of the costs are related to the TMDL requirements and the IDDE program. Expenditures of this magnitude are out of line with the "maximum extent practicable" standard.

539. Comment from the City of Nashua

The increased level of effort to address water quality needs as required under the 2013 Draft Small MS4 General Permit should include Federal funding programs (e.g., grants, revolving loans, LID incentive programs, etc.). This is important not only for the ongoing evaluation of water quality issues and development of cost-effective solutions, but for the support of compliance implementation (construction).

Many of the current water quality funding programs preclude NPDES Phase II planning and implementation activities or the revolving loan programs offer little incentive over the current bonding capacity of regulated communities. Additionally, the available funding through these programs in New Hampshire is very limited should additional MS4s seek assistance under competitive grant programs (e.g.. s319 grants). Although the City continues to seek alternative funding in support of these efforts, currently the City optimizes the use of available funds by prioritizing BMPs and focusing on known areas of concern. The City proposes to continue prioritization of BMPs as part of our SWMP to best use available funds as we continue to seek adequate funding sources, but as noted above, we request that a more robust Federal funding program be available to the MS4 communities in New Hampshire to support this Federal mandate. Request: The city requests that the EPA and/or NHDES provide meaningful financial assistance to regulated MS4s to meet the MS4 Permit and address water quality problems

540. Comment from the Town of Bedford

It is the Town's firm belief that the proposed regulations contained within the draft MS4 permit will be overly burdensome to this community. The costs required in attempting to comply with the regulations -- both in administration and in implementation of the proposed minimum control measures --far exceed current town budget. For instance, even though the Town of Bedford has no direct or proximate frontage on Sebbins Pond (one of the many waterbodies for which the Town would be responsible), the TMDLs established by the draft MS4 permit would require the Town to spend a minimum of $700,000 - close to one year's annual road maintenance budget ---in attempting to meet one component of the permit requirements.

541. Comment from the City of Portsmouth

The Permit, as drafted, would create a significant administrative and financial burden for the City that would detract from its ability to provide direct benefits to water quality through such activities as increased street sweeping, increased catch basin cleaning, removal of illicit discharges, and/or conducting inspections of construction sites. The City's consultant has estimated that approximately 2,800 total staff hours, or approximately 560 staff hours per year, would be required to comply with the administrative components of the draft Permit such as tracking and annual reporting. The total estimated cost to comply with this Permit, an additional $3,500,000 over the five year permit cycle, would constitute a 8-12% increase in the City's current Public Works budget. Therefore, without an additional funding source other essential City programs would need to be reduced or cut to accommodate these expenditures. See Appendix A for spreadsheet relative to these expenditures.

542. Comment from the Town of Wilton

The Town of Wilton has a total population of only 3,677 people of which 1,197 is within the Regulated EPA area according to the 2010 Census. This is compared with the neighboring Town of Milford which has a total population of 15,115 of which 12,193 people are within the Regulated area. Wilton has only about one quarter the total population and one tenth the number of people within the regulation area than the Town of Milford has. The cost of maintaining the General Government between the two Towns is similar with The Town of Wilton having an appropriation of 4.2 million dollars compared to the Town of Milford's of 15.5 million dollars or about 27%.

In order to comply with the 2013 Draft the Town of Wilton will need to increase the operating budget in the order of $750,000 to $1,000,000 over the next 5 years. This equates to roughly $200,000 per year which is about a 5% increase in the operating budget; that is cost prohibitive.

Adding the cost of hundreds of thousands of dollars to a small rural community operating budget that is already stretched thin, struggling to keep our operating costs down to the bare bones while trying to deal

with an aging infrastructure will be more than our population and our wallets can handle. Our population has already seen a decline due to the present economy; to continue on this path will mean the loss of even more people due to the ever rising property tax. If the Town, NHDES and the EPA were to work together to modify the regulations, we could then work towards compliance in a practical, realistic and cost effective manner. It has taken generations to impair the waters of the State, how can we be expected to clean it all in 5 short years with limited resources?

EPA response to Comments 534 - 542

See EPA Response to Comments 46 - 54, EPA Response to Comments 55 - 60, and EPA Response to Comments 227 - 233. EPA is not legally permitted to consider cost when setting WQBELs in a permit. However, EPA recognizes and acknowledges the financial implications of the permit, and the permit does mitigate cost to some extent by providing a variety of flexible ways for permittees to improve upon existing BMPs and implement new BMPs to comply with the permit over the course of several years. Permittees can also plan for the permit's effective date of July 1, 2018. The schedules in the permit include adequate time for upfront planning so that available resources are continually put to the best use to yield the greatest environmental return on investments. It should be noted that this program is not new and the first MS4 general permit was issued for New Hampshire municipalities in 2003.

EPA has made available on the MS4 website a spreadsheet to facilitate permittees in estimating their own stormwater management program costs based on their particular system needs. Municipalities may enter information such as their population size, MS4 infrastructure size, and area served and use estimated unit costs to estimate the cost to their municipality of certain permit requirements or overall permit compliance.

A cost report (Watervision LLC, 2016, as amended by EPA January 2017) took into consideration the many specific requirements of the permit whose cost will greatly depend on the size of a permittee's MS4 system and catchment area (for example, street sweeping costs were estimated based on the number of lane miles that must be swept annually). Therefore, it is difficult to provide a general estimate of costs.

It should be noted that these are not estimated incremental costs between the 2003 permit and the 2017 final permit conditions. A proactive community that has street sweeping and catch basin cleaning procedures in place, mapping complete and all ordinances in place could see no cost increase associated with permit compliance over the first two years of permit compliance. Conversely, a permittee that has not fully implemented the requirements of the 2003 permit may need to invest more time and resources into their stormwater management program than they currently are in order to meet the 2017 permit conditions, which are based on those permit requirements in place since 2003 (Watervision LLC, 2016, as amended by EPA January 2017). EPA is aware of many communities that are already implementing many of the permit's good housekeeping measures (see comments on Part 2.3.7.), such as street sweeping and catch basin cleaning, so these tasks do not necessarily represent any increase in cost for a municipality that already manages their infrastructure using good housekeeping practices. EPA finds that the costs associated with permit compliance for this permit term will not increase significantly for communities with proper operation and maintenance plans in place and those who are fully in compliance with the 2003 permit.

Some state and federal assistance to communities is also available to offset any potential cost increases associated with permit compliance. Stormwater management loans may be available through the New Hampshire Clean Water State Revolving Fund (CWSRF), which is funded by both EPA and New Hampshire. EPA cannot otherwise provide funding to MS4s without specific budget appropriation authority.

EPA has taken steps to remove unnecessary administrative responsibilities in the final permit and plan to provide tools and templates to assist with permit implementation and compliance.

Further, the final permit does not prevent municipalities from establishing utilities, collaborating with other permittees, and seeking alternate funding sources for their program. The permit does not mandate the use of a particular source of funding for permit compliance. EPA also provides information about various funding opportunities and information on stormwater utilities on the EPA MS4 website. Some state and federal assistance to communities is also available.

The 2014 Water Resources Reform and Development Act (WRRDA) expanded eligibility categories for CWSRF assistance. CWA Section 603(c)(5), as amended, states that each CWSRF may provide financial assistance "for measures to manage, reduce, treat, or recapture stormwater or subsurface drainage water." Publicly and privately owned, permitted and unpermitted projects that manage, reduce, treat, or recapture stormwater or subsurface drainage water are eligible. This language eliminates ownership constraints on regulated stormwater projects. For example, projects that are specifically required by a MS4 permit are now eligible, regardless of ownership. Please see EPA's Interpretive Guidance for Certain Amendments in the Water Resources Reform and Development Act to Titles I, II, V, and VI of the Federal Water Pollution Control Act (USEPA, 2015).

Some commenters expressed concern over a Towns decision not to fund compliance with this permit.

Permittees who elect coverage under this general permit must comply with its terms. Each permittee remains responsible for permit compliance regardless of choice of funding mechanism.

543. Comment from the City of Nashua

The City feels that it is important to note that we have made significant progress towards improving the water quality of receiving waters over the past decade through our MS4 compliance activities and the implementation of our comprehensive CSO control program. Our investment in water quality improvements has been in excess of $83 million dollars, including at least an estimated $7.5M for stormwater alone since 2003. Compliance with the 2013 Draft MS4 Permit is an additional significant effort that cannot be supported with the City's existing resources and funding within the next 5-year permit cycle as the permit requires. The City wishes to continue improving stormwater management and water quality, but this effort needs to take into consideration the progress currently being made and be balanced with future infrastructure demands and economic conditions.

We believe that as we continue to evaluate and improve on these measures, we will build on the planning and initial implementation investment made under the 2003 MS4 permit. This allows us to focus on high priority areas and BMPs for the best use of the City's funds. Additionally, these efforts need to consider the new requirements proposed under draft NPDES Permit No. NH01 00170 for the City's CSO program and wastewater treatment plant (CSO and WWTP Permit) that was issued for public comment on July 23,

2013. Continuous improvements in all these areas are geared towards a better fulfillment of the new permit requirements and our ultimate goal of water quality improvements.

EPA response to Comment 543

EPA acknowledges this comment regarding efforts and funds the City of Nashua has already committed to improving water quality.

544. Comment from the Town of Stratham

We are concerned with the timing of the adoption of the eventual Permit. In New Hampshire, most Towns seek funding authority once per year at Town Meetings. The Town of Stratham has its Town Meeting in March of each year. In order to meet the statutory deadlines and to have a full comprehensive review of budgeted items, costs need to be known by the preceding December in order to include the budgetary warrant article required to give the public notice of the request for funding. If the adopted Permit requires immediate funding for actions to be taken under the Permit, there may not be funds authorized to expend towards those requirements. This is especially troublesome to communities, like Stratham, who are new to the Permit terms and therefore do not have an ongoing budgetary line item for this purpose. For those newly covered municipalities, we would request a one-year suspension of requirements under the Permit in order to seek funding for those requirements.

EPA response to Comment 544

See EPA response to Comment 39 and Part 1.10.3. of the final permit for information on the extended deadlines for new permittees. EPA will provide funding information on the NH MS4 website[23] as well as a third party cost estimate to aid permittees in estimating their own costs of compliance with the Small MS4 permit. Additionally, the time between permit finalization in January 2017 and the effective date of the permit in July 2018 will better align the first year of the permit, during which much of the planning of the SWMP will take place, with towns' budget cycles and meeting schedules and allow for sufficient time for towns to begin to plan for permit compliance in their budgets.

545. Comment from the Town of Litchfield

It would be more constructive and realistic to allow the Town to work with NHDES during the first three years of the permit to mutually determine the highest priority waters to address first. Additionally, this will allow us time to identify appropriate funding sources which will likely need Town Meeting authorization; this opportunity is usually one time annually.

EPA response to Comment 545

The time between permit finalization in January 2017 and the effective date of the permit in July 2018 will better align the first year of the permit, during which much of the planning of the SWMP will take place, with towns' budget cycles and meeting schedules and allow for sufficient time for towns to begin to plan for permit compliance in their budgets.

EPA does not agree that the permit should be delayed in order to prioritize waters. As part of the permit re-notice, the requirements under Parts 2.2.1 and 2.2.2 were developed with inherent

[23] https://www3.epa.gov/region1/npdes/stormwater/MS4_NH.html

flexibility such that the permittee could prioritize their work provided they continue to meet the permit schedule. See EPA Response to Comments 162- 167.

546. Comment from the City of Rochester

Based on the information available, the City of Rochester preliminarily estimates that the sampling programs dictated in the 2013 NH Small MS4 Draft General Permit will alone cost in excess of$150,000. The expenditure must be approved by the City Council as part of the City's standard budgeting program. Our budget for FY14 (July 1, 2013 to June 30, 2014) is already set and does not include an allowance for this expenditure. The earliest the City can begin any sampling efforts will be after July 1, 2014. Therefore, it is likely that the City will be issued the final permit, but will not be able to begin the required efforts for several months. It will be extremely difficult, if not impossible for the City of Rochester to comply with the permit within the time frames dictated because the City's budgeting process does not allow it.

EPA response to Comment 546

Please see Parts 2.2. and 2.3.4. and Appendices F and H of the final permit; some required and voluntary stormwater sampling requirements have been updated or eliminated in the final permit. The timeframes for sampling under the IDDE program are beyond one year for dry and wet weather outfall sampling. Permittees can reduce testing costs by using field test kits. The permit spreads IDDE implementation and costs over the permit term. In addition, while the permit will be issued final in January 2017, the effective date of the permit will be July 1, 2018, allowing time for permittees to budget for updates to their stormwater program while preparing the updated plans and documents required in the first annual report of the new permit term in 2019.

547. Comment from the Rockingham Planning Commission

Overall, the general timeframe given for implementing the permit appears to be reasonable to allow municipalities to comply with the permit conditions provided sufficient resources are available. However, the timing of the effective date of the final permit will affect municipalities' ability to budget adequately to implement those conditions, and to take other town meeting actions. Due to municipal budget cycles in New Hampshire, having the permit effective date be in spring (after town meetings typically held in March) would allow for municipalities to appropriate necessary funds and take other actions as needed implementing the permit. Also, it would be helpful to clarify for municipalities that water quality impairments, problems and pollution sources are not required to be fully resolved or eliminated by the end of the first permit cycle. However, required mechanisms, practices, enforcement, and plans must be in place.

EPA Response to Comment 547

See EPA response to Comments 548-551 for a discussion of the final permit timing. The permit includes deadlines and reporting requirements for the measures that operators of Small MS4s are expected to take to reduce pollution to the maximum extent practicable and protect water quality. See EPA Response to Comments 46 - 54, EPA Response to Comments 55 - 60, and EPA Response to Comments 227 - 233 for a discussion of WQBELs and EPA's authority.

548. Comment from the Town of Merrimack

The Town of Merrimack, NH is a NH SB2 Town that operates on a July 1 to June 30 fiscal year. The typical budget cycle starts in the fall with preparation of proposed department budgets, progresses to Town Council review in December/January; followed by the public hearing in February and the deliberative session in March, culminating in the ballot vote in April. Given that the 2013 MS4 Draft General Permit

was issued in February, and knowing that as an agency we cannot budget for an item until the costs are known, I ask that the year 1 implementation dates, and all successive implementation year dates, be set to one year from the first available budget year following issuance of the permit. The 5 year compliance schedule that is built into the 2013 MS4 Draft General Permit is very concentrated and without some adjustment for a town's budget schedule, it makes it very difficult for the Town of Merrimack to be on time and compliant. For example, if the Permit were issued in September of 2014, year 1 accomplishments would be due after July 1, 2016. Scheduling in this manner would allow the Town to review the issued permit during the budget process, determine costs and include those into the budget, allow for the funding to be approved at Town Meeting in April 2015 for July 1, 2015.

549. Comment from the Town of Amherst

The Town of Amherst starts its annual budget process in September, with a budget finalized in early January, and an SB-2 Deliberative presentation in February. The final budget goes to a ballot vote in March to become effective July 1. All proposed budget increases require hard data backup and scrutiny throughout the submittal process. A five year pending MS-4 permit without the benefit of solid backup data has not and will not make necessary funding available.

550. Comment from the Town of Seabrook

The EPA may be unaware of the process that Towns in New Hampshire follow in order to provide funding to comply with this EPA mandate. Here in Seabrook, the DPW will start to prepare their portion of the Town budget in mid July 2013. It will be submitted for review and adjustment to Town Hall in late summer and finalized in November. It will be published in the Town Report and sent before the voters in March 2014. Seabrook DPW has provided a partial list of activities that will need to be completed within the first year of 2013 MS4 General Permit: Update stormwater management plan; Prepare NOI; Determine impacts of water quality standards, outstanding resources and high quality water criteria; Prepare water quality response plan; Public education and outreach; Develop outfall inventory; Prepare written illicit discharge detection and elimination (IDDE) program; Develop a written procedure for screening and sampling outfalls; Initiate wet and dry weather sampling of outfalls; Delineate outfall catchment areas and prioritize catchments for investigation; Develop written procedures for site plan reviews; Prepare written operations and maintenance manual for Good Housekeeping and Pollution Prevention measures; Prepare inventory of facilities: parks and open space, building and facilities (i.e. schools, town offices, police and fire buildings, pools, garages, etc.), vehicles and equipment Rough estimate: $100,000 worth of work.

The costs for the first year of the program are substantial. Seabrook will not be able to shift monies around outside of budget cycles to fit this in. For the past several years, EPA has been unable to forecast a date for finalizing the MS4 regulations. Please be aware that the Final Permit must be in place by mid July 2013 in order to be funded at the March 2014 Town Meeting- any later will push the funding back to March 2015, making us unable to meet the first year requirements.

551. Comment from the City of Portsmouth

Many of the deadlines provided in the draft Permit do not allow sufficient time to allocate funding to complete the tasks required. The City's fiscal year runs from July l to June 30th every year. The City's budget process requires months of planning, hearings, and work sessions before final approval by the City Council. The budget process for the City's next fiscal year generally begins in October with a final vote expected in late May or June. The City requests that no item in the permit be required to be completed during the first Permit Year except the preparation of the Stormwater Management Plan (SWMP) to allow the City enough time to present additional fund requests and justification to City Council.

EPA response to Comments 548-551

EPA acknowledges these comments detailing the town budget process for New Hampshire communities. EPA seeks to accommodate the budget process of as many towns as possible in the timing of this permit issuance. In order for towns to have time to adequately fund any updates to a permittee's SWMP or the creation of a stormwater program in the case of new permittees, the effective date of the permit will be July 1, 2018. NOIs to operate under the permit will be due 90 days after the permit effective date, in September, 2018. Thus planning for the permit, including updates to the SWMP and other documents required in the first year of the permit (due July 1, 2019), can be done concurrently with the budgeting for activities under the permit in 2018 and beyond. The final permit contains updated timing for many requirements to relieve some burden on permittees in year 1. See EPA response to Comments 576-586.

552. Comment from the City of Manchester

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 $300 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."

553. Comment from the Town of Wilton

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 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."

EPA Response to Comments 552-553

These commenters argue that this permit is an unfunded state mandate and cited New Hampshire's state Constitutional prohibition on unfunded mandates. "The State shall not mandate or assign any new expanded or modified programs or responsibilities 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." N.H. Const. art. 28-a. This state constitutional prohibition applies to state mandates.

Since EPA is issuing this permit, not New Hampshire, this permit is not a state mandate. This permit is also not a federal mandate, since it is a general permit that offers municipalities one way to comply with EPA's stormwater regulations and is not itself a regulation. Municipalities may also apply to EPA for an individual small MS4 permit.

See also See EPA Response to Comments 46 - 54, EPA Response to Comments 55 - 60, and EPA Response to Comments 227 - 233. See also EPA response to Comments 535 above for a discussion of cost estimates for the New Hampshire Small MS4 general permit, EPA response to Comments 556 - 561.

554. Comment from the Town of Merrimack

On March 13, 2013 the EPA hosted an informational question and answer session at the NRPC offices in Merrimack. During the session, questions regarding the 2013 MS4 Draft General Permit and the various TMDL portions of the permit were posed to Newton Tedder of the EPA. The response to those questions was that DES was responsible for the TMDL content and he (Newton) could not respond to specifics. It can be gleaned from that session that the TMDL portion of the permit is a NHDES program, making it an unfunded mandate from the State of NH to its municipalities per Article 28-a of the New Hampshire Constitution.

EPA Response to Comment 554

See EPA Response to Comments 46 - 54, EPA Response to Comments 55 - 60, and EPA Response to Comments 227 - 233. The requirements of the New Hampshire Small MS4 Permit, including Part 2.2.1. (Discharges Subject to an Approved TMDL), are issued and enforced by EPA within the state of New Hampshire because the state does not have an approved NPDES program. The State of NH established, and EPA reviewed and approved, the TMDLs identified in the draft permit. In the final permit, Appendix F contains requirements for implementing the identified TMDLs. The TMDLs themselves were not reopened for public comment by including provisions for implementing the TMDLs in the draft permit. See EPA Response to Comments 128 - 129.

555. Comment from the Town of Bedford

MS4 communities such as the Town of Bedford will be responsible for controlling, regulating and maintaining run off/discharge from properties that are not within its direct control, such as but not limited to public school properties over which the Town of Bedford has not budget or administrative authority, as well as no zoning oversight under current New Hampshire state statutes.

EPA Response to Comment 555

Permittees are responsible for the discharges from their MS4s to Waters of the U.S. authorized under this permit. This may include discharges by others that the MS4 operator allows to use their MS4 system. This permit provides a set of requirements that reduce the pollutants discharged *to* and *from* a permittee's MS4. See EPA Response to Comments 46 - 54, EPA Response to Comments 55 - 60, EPA Response to Comments 61-83, and EPA Response to Comments 227 - 233.

556. Comment from the Town of Seabrook

The Regulatory Flexibility Act deals with Congress' 1980 finding that Regulations cannot impose unnecessary and burdensome demands on small towns disproportionately. It requires the EPA to carefully consider the economic impacts their rules have on small towns defined as population less than 50,000. We believe that EPA has not met their responsibility to conform with the RFA.

EPA has written their own ""Guidance for EPA Rule Writers"" concerning the RFA. They boldly state that this guidance document is not binding and can be changed at any time without public notice. EPA actions with regards to this issuance of these new regulations, gives the appearance to this small town that they believe they have the authority to interpret Congress' requirements, change Congress' interpretation at will, and neglect any complaint from the regulated communities.

EPA has unilaterally determined “that since this general permit affects less than 100 small entities, it does not have a significant impact on a substantial number of entities.” There is no mention of a minimum number of small entities in 1980 U.S. Congress Regulatory Flexibility Act (RFA).

Seabrook contends that the EPA regulations create unnecessary and burdensome demands. We must make the following argument that the RFA must be applied:

a) We believe there is no legal basis for EPA's minimum criteria of 100 small entities and contend that Congress' intent was to protect even one small entity from disproportionate Federal demands.

b) Small entities are defined ""as the governments of a city, county, town, township, village, school district or special district"" and also include small businesses. There are hundreds if not thousands of these small entities affected.

c) Since this is a Federal Regulations, the small entity calculation should include towns and cities in other States where the NPDES Regulations also apply.

557. Comment from the Town of Seabrook

Executive Order 12866 (President Clinton '93) is an effort to create a regulatory system that is effective, consistent, and sensible without unreasonable cost on society. It applies to "significant regulatory action" that will adversely affect State and local communities in a material way. EPA has determined that this new storm water draft general permit is not a "significant regulatory action" and is therefore not subject to review under this Executive Order. There's a pattern here. It seems that no matter what type of regulatory controls the Federal Government institutes to protect local communities, the EPA considers itself immune, and overturns the U.S. Congress Acts.

558. Comment from the Town of Seabrook

We are having difficulties comprehending the EPA's interpretation of the Unfunded Mandate Report Act. This act requires Federal Government entities to provide funding for federal mandates or otherwise show that the funds that the entity needs to abide by the mandate are not excessive and will not be siphoned from other important municipal functions, thereby weakening those functions. Somehow the EPA finds that these stormwater regulations do not meet the definition of "regulatory actions" and are therefore not subject to the requirements of the UMRA. It is Seabrook's position that the general permit requirements are unfunded mandates that are subject to the Act. Implementing these requirements has and will adversely impact other Town functions.

The Town of Seabrook disagrees with the EPA's claim that the general NPDES permit is not subject to the requirements of both the U.S. Congress RFA and the UMRA. We demand that EPA perform the required flexibility analysis and provide funding for this unfunded mandate, or, delay the issuance of these rules so that EPA can work with Congress to change the Clean Water Act criterion that includes communities on the basis of whether they are located in an urbanized area or not, to one that is based primarily on the size of the community and affordability.

559. Comment from Barnes and Thornburg (on behalf of Atkinson, Kingston, Newton, and Plaistow) (on behalf of Atkinson, Kingston, Newton, and Plaistow)

All of EPA's efforts to unnecessarily expand the requirements in the 2003 MS4 Permit also significantly add cost to permit implementation. EPA Region 1 admits that permit compliance will require a "substantial investment" of limited town resources. See draft 2013 Fact Sheet at 148 et. seq. The Represented Towns' limited resources are derived mainly from property taxes, which EPA admits does not provide a consistent source of funding for MS4 implementation. Id. Attachment 1 at 30. EPA's simple response to the problems facing such NH municipalities is for them to develop a stormwater utility to further extract fees from town residents or to bring enforcement actions with significant penalties for illicit discharges into the MS4. See id. at 148-160 (discussion regarding stormwater utilities) and 82 (use of enforcement to fund MS4 compliance).

But EPA's responses to comments and suggested solutions fail to reflect any real understanding regarding these towns' real world economics or revenue generating options to cover the extraneous mandates in the Draft MS4 Permit. The proper response is for EPA to conduct a more comprehensive cost-benefit analysis, significantly pare back the mandates contained in the draft permit, and add more flexible compliance approaches for the permittees. As discussed below, we believe a more interactive approach to mandates, costs, and identifying alternatives that are more efficient and effective are mandated by the Unfunded Mandates Reform Act. [footnote: EPA's website summarizes its responsibilities under Section 203 of the UMRA as follows: "Section 203 of UMRA applies to all regulatory requirements that might significantly or uniquely affect small governments. Before establishing a requirement that might significantly or uniquely affect small governments, §203 requires federal agencies to develop a plan to: provide notice of the requirements to potentially affected small governments; enable officials of small governments to provide meaningful and timely input for any proposal containing significant federal intergovernmental mandates; and inform, educate, and advise small governments on compliance with the requirements." http://www2.epa.gov/laws-regulations/summary-unfunded-mandates-reform-act (emphasis in original). We assert that EPA has not met this standard for the Represented Towns.]

Our informal coalition of New Hampshire towns would be willing to sit down with EPA Region 1 staff and walk through specific concerns in this section (and other sections) of the Draft MS4 Permit to ensure they are properly based on EPA's CWA authority and are set forth in the most efficient and effective manner.

560. Comment from Barnes and Thornburg (on behalf of Atkinson, Kingston, Newton, and Plaistow)

Finally, the February 12, 2013 Federal Register notice regarding the availability of the Draft MS4 Permit states that the Regulatory Flexibility Act and Unfunded Mandates Reform Act requirements do not apply to NPDES general permits. EPA Region 1's position on complying with those statutes is undermined not only by the law itself but also by EPA Headquarters policies and public statements. Even if there was any doubt by EPA Region 1's General Counsel regarding its legal position, it should comply with the spirit of and intent Congress set forth in those Acts. But, there is little doubt that such laws apply and EPA Region 1 must rectify its oversight.

The Small Business Administration Office of Advocacy is charged, in part, with ensuring that federal agencies comply with the RFA. In 2006, SBA Advocacy filed comments on EPA's proposed MSGP, providing a legal analysis for why EPA's general permits are, in fact, subject to the RFA. See SBA Advocacy's March 14, 2006 comments letter to EPA (http://www.sba.gov/sites/default/files/files/epa06 0314.pdf) at 2. The same logic would apply to the UMRA. In response, EPA provided a detailed discussion regarding its past

legal analyses and intervening case law in its final MSGP Federal Register notice. See 73 Fed. Reg. at 56, 577 (Sept. 29, 2008). EPA ultimately concluded and committed to the following:

> EPA hereby commits that the Agency will operate in accordance with the RFA's framework and requirements during the Agency 's issuance of CWA general permits (in other words, the Agency commits that it will apply the RFA in its issuance of general permits as if those permits do qualify as "rules" that are subject to the RFA). In satisfaction of this commitment, during the course of this MSGP permitting proceeding, the Agency conducted the analysis and made the appropriate determinations that are called for by the RFA. In addition, and in satisfaction of the Agency's commitment, EPA will apply the RFA's framework and requirements in any future MSGP proceeding as well as in the Agency's issuance of other NPDES general permits. (emphasis added)

EPA Region 1's contrary approach is unjust. Instead, EPA Region 1 should recognize the substantial impact on a significant number of small New Hampshire towns and convene a meeting to address both the RFA and UMRA obligations.

561. Comment from NH Stormwater Coalition

As the Draft Permit is poised to significantly increase the burden on small municipalities and local businesses, EPA should have prepared an initial regulatory flexibility analysis, in accordance with the Regulatory Flexibility Act (5 U.S.C. §§ 601 - 612) ("RFA"). The RFA generally requires agencies to analyze and explain the impact of their actions on small entities (businesses, non-profit organizations, and small jurisdictions of government). EPA, however, claims that "since the general permit affects less than 100 small entities, it does not have a significant economic impact on a substantial number of small entities." Fact Sheet Attachment 1, at 64.

As an initial matter, such a conclusion flies in the face of the guidance document [footnote: Final Guidance for EPA Rulewriters: Regulatory Flexibility Act as Amended by the Small Business Regulatory Enforcement Fairness Act ("Final Guidance for EPA Rulewriters) (Nov. 2006), *available at* http://www.epa.gov/rfa/documents/Guidance-RegFlexAct.pdf.] relied on and referenced by EPA in the Fact Sheet (*id.),* which states: "It remains EPA policy that program offices should assess the direct adverse impact of every rule on small entities and minimize any adverse impact to the extent feasible, regardless of the magnitude of the impact or number of small entities affected." Final Guidance for EPA Rulewriters, at 3. Moreover, EPA‟s estimate of the number of small entities affected did not include the countless number of small businesses that will be substantially impacted as a result of the conditions set forth in the Draft Permit. However, even if EPA‟s estimate of affected entities were correct, EPA provides no explanation for concluding that this number is "insignificant." [footnote: As noted on pages 47-48 of these comments, EPA‟s BMP performance curves are plainly in error and inconsistent with other estimates provided to more developed programs (e.g., Chesapeake Bay).] On this issue, the anticipated costs of the Draft Permit on small governmental jurisdictions will be very significant, especially for the smaller municipalities. [footnote: While there is a huge disparity between the costs estimates by the MS4 permittees and EPA, at a minimum it is clear that the costs merely for implementing minimum control measures will be at least $78,000 to $829,000 per year per permittee averaged over the term of the permit. Given the number of permittees, such per year costs are anything but insignificant. Fact Sheet, at 154. EPA also readily acknowledged that its cost estimate excludes some very significant costs, such as compliance with the water quality-based effluent limitations. Id. at 149] In no sense of the word could this impact be considered "insignificant." If anything, the fact that this cost estimate will be defrayed by a relatively small number of affected entities highlights the substantial nature of EPA‟s action. Accordingly, as EPA‟s conclusion represents a blatant disregard for the impacts the Draft Permit will impose, EPA should comply with the RFA in issuing the Draft Permit.

EPA response to Comments 556 - 561

See EPA Response to Comments 46 - 54, EPA Response to Comments 55 - 60, and EPA Response to Comments 227 - 233.

Commenters mischaracterize this permit as a rule or regulation. This permit is not a rule of general applicability. This permit does not mandate that municipalities make specific expenditures. Municipalities' costs for implementing this permit will vary depending on what stormwater management measures municipalities are already implementing. See EPA response to Comments 592-593. Also, in lieu of opting into coverage under this general permit, a municipality may apply for an individual permit with limits and conditions tailored to that municipality.

However, EPA recognizes that permittees may incur compliance costs as a result of being covered under an NPDES permit. EPA has included a cost analysis for this permit in the record. EPA also took these costs into consideration when promulgating the 1999 Phase II stormwater rule and the 2016 Phase II Remand Rule, on which the requirements in this permit are based. For the 1999 Phase II final rule, EPA prepared an economic analysis of costs and benefits and considered UMRA and RFA. Based on that analysis, the Agency concluded that the benefits of the rule were expected to outweigh the costs with respect to MEP. For a discussion of the analysis and EPA's consideration of the impacts on small governments. See 64 Fed. Reg. at 86,796-99. EPA also analyzed the costs for small governments for the 2016 Phase II Remand Rule. *See* 81 Fed. Reg 89,347 (Dec. 9, 2016). In both cases, EPA certified that the rules would not have a significant impact on a substantial number of small entities. This general permit implements regulatory requirements for which EPA has already analyzed costs.

EPA is not legally permitted to consider cost when setting WQBELs in a permit. However, this permit does mitigate cost to some extent by providing a variety of flexible ways for permittees to build on existing BMPs and implement new BMPs to comply with the permit over the course of several years. See e.g. Responses to Comments for Part 2.1, 2.2, 2.3, and Appendices F and H. Some state and federal assistance to communities is also available. Stormwater management loans may be available through the New Hampshire Clean Water State Revolving Fund (CWSRF), which is funded by both EPA and New Hampshire. The 2014 Water Resources Reform and Development Act (WRRDA) expanded eligibility categories for CWSRF assistance. CWA Section 603(c)(5), as amended, states that each CWSRF may provide financial assistance "for measures to manage, reduce, treat, or recapture stormwater or subsurface drainage water." Publicly and privately owned, permitted and unpermitted projects that manage, reduce, treat, or recapture stormwater or subsurface drainage water are eligible. This language eliminates ownership constraints on regulated stormwater projects. For example, projects that are specifically required by a MS4 permit are now eligible, regardless of ownership. Please see EPA's Interpretive Guidance for Certain Amendments in the Water Resources Reform and Development Act to Titles I, II, V, and VI of the Federal Water Pollution Control Act (USEPA, 2015).

562. Comment from City of Manchester

6. Second Public Review of the Draft Permit: Due to the significant comments presented by the City of Manchester and other members of our stormwater coalition, we request a second public review of this draft permit. When it was first issued in 2008 several communities submitted comments and it took EPA five-years to address these comments and re-issue the permit. The comments; submitted in 2013 will be even more extensive and detailed. Considering the complexity of the permit and the volume of comments EPA will receive, it will benefit all stakeholders if the permit is issued for public comment again.

Considering the City is facing up to $700 million in compliance cost, it is imperative that we all work together in developing a practical, reasonable, and cost effective permit.

563. Comment from the Town of Goffstown

Again we suggest that once the comment period has closed the EPA should reach out to all MS4 communities in an effort work cooperatively to develop the most efficient/effective methods to comply with the permit objectives. The Town encourages this effort to help build a better understanding between the EPA and local communities. This should be done while the EPA responds to comments which can aid in revising the permit to ensure that the local communities receive a more comprehensive permit which preserves the environment and uses limited local resources' wisely.

564. Comment from the Town of Londonderry

We are requesting that once the comment period has closed the EPA should reach out to all MS4 communities in an effort to work cooperatively to revise the permit to ensure that the local communities receive a more comprehensive permit which preserves the environment and uses limited local resources wisely. It will benefit all parties if the permit is issued for public comment again.

EPA response to comments 562-564

This request for revision of the 2013 Draft Permit and re-issuance for public comment was addressed with the subsequent release for public comment of certain revised sections of the Draft New Hampshire Small MS4 General Permit in 2015 (2015 Renotice). EPA has worked to consider and respond to all significant comments received on the draft permit sections in 2013 and 2015, and has made certain changes to the final permit in response to those comments. This document will serve as a record of those responses and changes to the 2013 Draft and 2015 Renotice of the New Hampshire Small MS4 permit.

565. Comment from Town of Litchfield

On behalf of the Town of Litchfield, I offer the following comments on the proposed 2013 Draft MS4 NPDES Permit. Over the past several months, I have endeavored to review and consider the implications of this permit, an exercise that is somewhat challenging serving in a small organization without engineering staff.

---Since the issuance of the last permit, nearly ten years ago, the Town of Litchfield has undertaken significant steps to manage stormwater in a rural residential setting. We have taken steps over the past few years that have improved water quality townwide, despite having only a fraction of the town covered by the original permit (and only slightly more of the town projected to be covered by this permit.)

---The issue of scale is the first area of concern. The determination of those communities included and excluded is inconsistent with the broader goals of water quality protection and improvement. Litchfield is a small community nestled between much larger communities and has retained a rural character, where our neighbors have not. To that end, there is extremely limited commercial development in town, and the majority of that is outside of the permit area. Our major municipal facilities including Town Hall, Police Station, Highway Department and Solid Waste Facility are outside of the permit area. The agricultural district along the Merrimack River is also excluded. What this leaves in the permit area are single family residential neighborhoods with small localized stormwater systems. There is no sanitary sewer system within Litchfield.

566. Comment from Town of Litchfield

Overall, the Town wishes to support and enhance clean water and to mitigate wherever possible those areas where stormwater impacts it. We are concerned, as a small town with limited staff and budget, that a rigid program of standards applying to all towns and cities in the permit area, without acknowledgement of size, capacity and available funding, will pose an unreasonable hardship on our property taxpayers. More importantly, the cost of regulatory compliance will likely compel us to devote scarce resources to the filing of paperwork rather than making meaningful changes on the ground in the community.

---We appreciate the opportunity to offer comment and hope that these comments and the comments of our similarly situated colleagues can generate a revised permit which supports environmental improvement with a responsible and reasonable of scarce local resources.

567. Comment from the Town of Sandown

Upon reading of the 2013 New Hampshire Small MS4 Draft General Permit, in general terms, the Board of Selectmen is troubled to learn that a number of amendments appear to both "shift the burdens" of implementation from others to the municipality, as well as increase the amount of time required for proper administration of the Permit. Not only does the draft permit require compliance, but in many cases now requires municipalities to expend valuable and often limited resources in order to demonstrate and document such compliance. We presume Sandown may be one of the smaller New Hampshire municipalities that will ultimately be subject to requirements of the 2013 General Permit. Based upon our reading of the amended General Permit we are concerned the extent of time and resources required in order to properly administer a future SWMP for a modest sized municipality, like Sandown, will prove to be roughly the same as that required of a much larger municipality.

568. Comment from Town of Litchfield

In addition to requiring additional time to prioritize and fund, a smaller community, such as Litchfield, will likely need to rely on collaboration with our neighbors, either through a regional stormwater coalition or a Regional Planning Commission, in order to effectively and efficiently comply with the various requirements of the permit. It would be more reasonable and for regional groups to share testing equipment and technical support, rather than for each town to independently obtain materials and services. Further, a regional approach that imposes less financial burden on each Town separately, would allow greater and faster progress on achieving the overall goal of cleaner water. We would request that a reasonable window of twelve to eighteen months be provided for establishment of such collaboration mechanisms which may require inter-municipal agreements.

EPA response to Comment 565-568

The magnitude of permit requirements, as well as recordkeeping and documentation required, will generally scale with the size of the community's MS4 and their regulated area. See EPA response to Comments 570-574 for a discussion of regional collaboration. To the extent that resources allow, EPA will provide templates for SWMPs and other written documentation in order to help smaller communities focus on implementing their stormwater management program. It is EPA's view that record keeping and documentation are valuable to ensuring that all permit requirements are being met and that the SWMP is implemented consistently throughout the community and across different departments and staffing changes.

569. Comment from the Town of Londonderry

This permit represents an increase in administrative and technical effort that would be impossible for any municipality to absorb. It is not necessarily the permit conditions themselves but rather the sheer volume

of the impaired water bodies. According to EPA's website; New Hampshire ranks 7th in the nation in the number of impaired water bodies.

EPA response to Comment 569

EPA has worked to add flexibility in the MS4 permit for permittees to combine appropriate requirements for impaired waters. EPA has reduced administrative requirements for this permit. In many cases, the requirements for impaired waters represent a modest increase in effort or specificity in one or a few minimum control measures. See Part 2.2 of this document for further information on impaired waters.

570. Comment from the Town of Londonderry

The Town would also like to note that we met with the staff at NHDES who have worked with the MS4 Communities to understand the permit implications and to find the most cost-effective and efficient way to comply with the Clean Water Act requirements. It is our hope that once the comment period closes and EPA begins the task of responding to the comments, that EPA will join our local communities in these inter-governmental implementation discussions.

571. Comment from the Town of Londonderry

This permit deals with watershed based issues. However, the permit, and its compliance responsibilities are being issued to the individual communities despite not controlling the flows from neighboring communities that contribute to water quality impairments. There is also atmospheric deposition which is a national problem. This permit should be restructured to address impairments on a watershed basis with all stakeholders contributing in a fair and equal manner as opposed to individual communities being forced to assume the full implementation and financial responsibility.

572. Comment from Town of Hampton

We would appreciate being able to participate in a regional discussion that has stormwater being monitored, cleaned and reported based upon a watershed rather than a population density level from the census. Many agencies have reported that the increase in stormwater runoff is caused by the increase in impervious areas within each watershed. It would then be logical to determine which communities need to be included in the program by the percentage of impervious areas instead of population. The technology to accomplish this exists with the use of satellite imagery to determine water quality, crop growth, nesting bird densities and other data. In our opinion it was a flawed decision to determine which communities need to participate in the MS4 program based upon census data instead of a true indicator such as impervious areas. Currently FEMA is using better technology and data to produce new flood maps. They have used historical flood data, two (2) foot interval digital maps and improvements in analysis to achieve this. Provisions need to be made so that the rules under the permit can changes as the technology improves.

---We also feel that it is an error to not have testing, analysis and remediation measures focused on the water body boundaries rather than using artificial, political boundary lines as a default. It would seem prudent to request that communities adjacent to a common water body have the same group of measures to more effectively deal with a problem and obtain an improvement. This would result in some communities having a smaller area in an MS4 and other communities not being released from the program without just cause.

573. Comment from City of Manchester

4. Interjurisdictional Issues and Responsibilities: This permits deals with watershed based issues. However, the permit, and its compliance responsibilities, are 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 impairments. This permit should be restructured to address impairments on a watershed basis with all stakeholders contributing in a fair and equal table manner as opposed to individual communities being forced to assume the full implementation and financial responsibility.

574. Comment from the Rockingham Planning Commission

Regional and lntermunicipal Cooperation: For many aspects of permit compliance, municipalities will be required to conduct the same or similar tasks, such as public education, system and impervious area mapping, developing improved stormwater regulations and other aspects of a stormwater management program (SWMP). By working together in intermunicipal, regional or watershed associations on these essentially standard tasks, towns can stretch resources and technical capacity and lower their cost of compliance. With the exception of required public education and outreach (Section 2.3.2.1.b) the permit is not structured to either explicitly encourage or permit intermunicipal cooperation and the sharing of resources. The RPC recommends that language be included in the permit specifically allowing and encouraging municipalities to work together to reduce duplicative efforts and make better use of available municipal resources. In addition, we ask that you consider language in the permit that would allow municipalities to develop an intermunicipal and/or watershed based stormwater management programs (SWMPs).

EPA response to Comments 570-574

See EPA response to Comments 2 - 3, EPA Response to Comments 46 - 54, EPA Response to Comments 55 - 60, and EPA Response to Comments 227 - 233.

EPA recognizes the value of and encourages inter-municipal collaboration when addressing stormwater management on a watershed basis in an effective and sustainable manner by stretching resources and technical capacity and lowering costs. The permit encourages such collaboration among municipalities during the development and implementation of their stormwater management programs. Part 2.3.1.b states “Implementation of one or more of the minimum control measures described in Parts 2.3.2- 2.3.7 or other permit requirements may be shared with another entity (including another interconnected MS4) or the other entity may fully implement the measure or requirement” if certain requirements are satisfied (see Part 2.3.1.b of the permit). Please note that municipalities are required to implement additional controls within their MS4 within catchments draining to impaired waterways (i.e. at a watershed scale) although they may choose to implement these measures town-wide for the sake of efficiency.

Language has been added to the SWMP section (1.10) to clarify that permittees may share responsibility of implementation of any of the permit requirements.

Changes to the Permit: Part 1.10 has been updated accordingly.

575. Comment from the City of Nashua

We have reviewed the 2013 Draft New Hampshire Small MS4 General Permit, and are concerned that our next permit will require a significant increase in the level of effort beyond the current program without taking into account the water quality improvements and measuring the effectiveness of the efforts already implemented in both the Stormwater and CSO Programs. We understand it is challenging to create an effective regulatory program to address a watershed-based problem that is also economically feasible. However, it is incumbent upon the EPA to make every effort to develop a reasonable program with set goals achievable through a reasonable use of City resources, which builds upon the investments and improvements in water quality already made.

EPA response to Comment 575

EPA recognizes that permittees may incur compliance costs as a result of being covered under an NPDES permit. EPA took these costs into consideration when promulgating the Phase II stormwater rule, on which the requirements in this permit are based. For the final rule, EPA prepared an economic analysis of costs and benefits under the UMRA, 2 U.S.C. § 1531–1538. Based on that analysis, the Agency concluded that the benefits of the rule were expected to outweigh the costs. For a discussion of the analysis and EPA's consideration of the impacts on small governments. See 64 Fed. Reg. at 86796-99. EPA is not legally permitted to consider cost when setting WQBELs in a permit. However, this permit does mitigate cost to some extent by providing a variety of flexible ways for permittees to build on existing BMPs and implement new BMPs to comply with the permit over the course of several years. Additionally, the City may use its existing stormwater control efforts to meet some of the terms of this permit. See e.g. Responses to Comments for Part 2.1, 2.2, 2.3, and Appendices F and H.

576. Comment from City of Dover

Upon review of all the requirements in the draft 2013 NH MS4 permit and charting them onto a time line, two things become abundantly clear. First, that in general all of the requirements in the proposed permit will not be able to be accomplished in the five year permit period. It is unlikely that even within 20 years everything needed to meet water quality standards will be accomplished. Second the permit is heavily front loaded with tasks that the City has neither the staff nor financial resources to accomplish as the permit requires.

577. Comment from NHDES

As shown in the attached spreadsheet [Schedule of Permit Requirements], prepared by DES to better understand the draft permit, most of the requirements are compressed into the first few years of the permit. Almost every requirement in the permit requires action within the first 6 - 12 months of the permit becoming effective. DES understands the importance of the new requirements in this draft. However, we also recognize the complexity, costs and practical realities associated with immediate implementation in the many relatively small communities in New Hampshire.

578. Comment from City of Manchester

Allotted Time for Implementation: Manchester has embraced an accelerated catch basin (CB) cleaning schedule within the City and has a program where the CBs immediately within the ponds watershed area are cleaned more frequently. We have installed a forebay and reconstructed an obsolete wetland at the east inlet of Nutt's Pond, a forebay and new inlet structure at the north inlet, porous pavers and plantings on the west side of the pond, and have plans for a gravel wetland to be installed over this summer. This is 13 years in the making and Manchester believed that this progress schedule kept within the spirit of the

TMDL Executive Summary of: "It is expected that these reductions would be phased in over a period of several years." It is clear within this new draft MS4 permit that it is now a five-year period to complete several orders of magnitude of BMP structural implementation than what was done over the past 13 years. Much different than our expectations at the time the TMDL was put out to Public Comment. Manchester has been ahead of the curve as we were deemed an MS4 community with the first permit issued in 2003. We have been in full compliance with the permit and have struggled to put together the funding to complete those requirements outlined in the first MS4 permit. This proposed MS4 Permit sets up conditions and expectations that are unrealistic for even the wealthiest communities across the country.

579. Comment from MCWRS

While the goal of the Clean Water Act is laudable and MCWRS fully supports the goal, MCWRS considers the requirements in the Small MS4 permit burdensome and some will not achieve the goal of clean water.

The schedules set forth in the draft permit are not reasonable or feasible when considered in the context of municipal realities. For instance, the 5 year timeframe for completing the required Best Management Practices (BMPs) is unreasonable.

The permit, as drafted, would create a significant administrative burden for municipalities that would detract from their ability to provide direct benefits to water cleaning and removal of illicit discharges. This permit's burden needs to be considered along with CSO, CMOM and other regulatory requirements.

Many of the deadlines provided in the draft permit do not allow sufficient time to allocate funding within set municipal budget cycles to complete the tasks required. Creating a separate fund for stormwater adds significantly more time. Without a stormwater utility, many municipalities simply do not have enough money. No item in the permit should be required to be completed during the first permit year.

580. Comment from City of Manchester

As the time schedule was accelerated at several orders of magnitude than Manchester ever thought would be proposed the City did a through investigation of the Surface Water Quality Status map for Manchester (previous attachment 7). Within this map, numerous water bodies are impaired for bacteria, metals, pH, D.O., D.O. saturation, chlorides, chlorophyll-a, Benthic-Macro invertebrate Bioassessments, foam/flocs/scum & oils, and non-native aquatic plants. BMPs will not significantly reduce all of these parameters by themselves and structural installations will eventually be the order of the day. Manchester has undertaken the BMP route for 13 years and obviously from the TMDLs issued has had little success with reaching the new goal of 12 ug/l for TP.

581. Comment from City of Portsmouth

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 basin. 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 comments herein.

The City of Portsmouth agrees with the intent and goal of the Clean Water Act (CWA). [Clean water is a vital resource and should be protected.] However we would like to reiterate our comment to the 2009 Draft MS4 General Permit that the proposed regulations are excessively burdensome and some components will not help achieve clean water or be attainable within the five year permit period. Several general comments applicable to the overall permit conditions are provided at the beginning of this

document, and subsequent comments more specific to the requirements are provided in the same sequential order as listed in the Permit.

582. Comment from Town of Merrimack

3. Current Efforts and Validation: Merrimack has been working under the 2003 MS4 Draft General Permit requirements for ten years and has made significant strides in working toward the shared goal of clean water for the future. The Town has been successful in meeting the requirements of the 2003 MS4 Permit. The long term effect of these efforts since 2003, should be quantified and detailed, with data that is current, sufficient and applicable to get a clear baseline for the draft Permit requirements. We are concerned that there has been limited effort made by the EPA and the NHDES on recording, collecting, and reviewing data during and following the 2003 Permit versus working toward preparing a new permit with greatly enhanced and costly program requirements. It seems that working together incrementally, the EPA, State, and Municipalities can use fiscally constrained resources to achieve the water quality goals in a systematic approach rather than the forced 5-year approach that causes municipalities to spend millions of dollars on program requirements that may or may not achieve the goals.

The following is a list of some of the accomplishments by the Town of Merrimack during the last 5 years under the 2003 Permit: o Completed two major drainage improvement projects (at a cost of $2M) that removed storm water flow that discharged directly to the Souhegan River and diverted the flows into infiltration basins and sedimentation basins o Revised planning regulations to decrease parking area requirements o Completed numerous projects that cut back on the amount of pavement for roadway intersection transitions. We continue to look for and plan projects to reduce the impervious areas of our roadways o Wrote and Implemented a construction and post construction ordinance to include all disturbances over 20,000 square feet rather than the mandated 1 acre o Worked closely with the Conservation Commission and Souhegan River Local Advisory Committee to brainstorm ideas for improving water quality o The Conservation Commission continues to look for land purchases to protect resource areas. The Commission now manages over 1400 acres of protected lands in Merrimack.

583. Comment from Town of Salem

The Town of Salem, NH understands and respects the goals and objectives of the EPA in the development of the 2013 NH Small MS4 Draft General Permit. While we agree with working towards the improvement of water quality, we implore the EPA to appreciate the financial limitations of municipalities in the State. The proposed MS4 changes necessitate an unreasonably large, unplanned, and immediate financial burden on the taxpayers and residents of our community. Having the ability to more gradually phase these impacts into an already stretched operating budget over a longer period of time would help to ease the burden.

584. Comment from Town of Wilton

We all agree that we want clean water, we need clean water and it is of the utmost importance. How can we achieve a balance between our responsibility to clean the water and our financial situation? One solution might be to grant a realistic time frame to implement and then to track the progress of the BMPs. Five years is too short a time frame to be able to make the important determinations that are now being asked of us. Please allow us to fully evaluate the system properly, identifying the high target areas, implementing a realistic plan and then allow us ample time to determine if the BMP is working before we declare that we need to do more. We will do our part as required, however if the requirements can be spread out over a longer period of time such as focusing on data verification for the first five years and then implementing and testing for the next 15 years for a total of 20 years then we can all achieve our common goal of clean water while spreading costs out over a greater period of time.

585. Comment from City of Manchester

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 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.

586. Comment from Dr. Robert M. Roseen

Another major concern due to a lack of familiarity is the misconception the draft MS4 permit requirements are to be implemented over a single permit cycle. The permit needs to be more explicit in the allowance of multiple permit cycles to achieve long term improvements, and thus a distribution of cost over a period of 15 to 25 years.

EPA response to Comments 576-586

Several Commenters highlighted measures that they have already undertaken as part of their stormwater management plan. Many of these practices go above and beyond the permit requirements and may be reported to EPA in an annual report and recorded in the permittee's SWMP to meet those permit conditions.

In response to numerous comments related to the efforts required under the permit, EPA has extended certain timeframes throughout the permit. In general, most permit requirements must still be fulfilled within the 5-year permit term. 40 CFR 122.46(a) states that the duration for a NPDES permit cannot exceed 5 years and therefore this permit term must remain 5 years. Where appropriate and necessary and in compliance with updated New Hampshire Water Quality Standards, EPA has added compliance schedules to this permit to allow permittees extra time to complete requirements where warranted.

The following due dates or timelines have been modified, but this is not an exhaustive list of permit changes:

* Contents of SWMP were organized to reflect the due dates in the permit; part 1.10 now specifies all of this information is not expected when the SWMP is due.

* In part 2.3.4. the due date for an SSO inventory was extended from 120 days to one year.

* In part 2.3.4., the due dates for specific mapping elements required for the system map have been extended to align with the MS4 inspection schedule.

* In part 2.3.4., the 5-year milestone for the IDDE program completion has been removed.

* In part 2.3.4., the due date for investigation of all problem catchments in the MS4 has been extended from five to seven years.

* In part 2.3.4., the due date for investigation of all catchments with indicators of sewer input in the MS4 has been extended from five to seven years.

* In part 2.3.6., the timeframe for the municipality to require the submission of as-built drawings for onsite stormwater controls was extended from one to two years.

* In part 2.3.6., the due date for the street and parking assessment report has been extended from three to four years.

* In part 2.3.7., the due date for O&M plans at municipally-owned properties has been extended from one to two years.

* The requirement to track material removed from individual catch basins has been removed in part 2.3.7.

587. Comment from Town of Hampton

In summary it is our collective opinion that the scope of the draft permit is too wide and too aggressive. We do agree that the waters of the State need to be kept clean and that our physical health and economic well-being are directly tied to these waters. We here in Hampton are more sensitive to this than some of our neighbors because we see many people come to the beach and harbor each year to enjoy our shared resources. In the same respect, with this many people coming into the Town our ability to handle one more federal program is pushing us to the edge. We already sweep the sidewalk along the beach each day, maintain expensive vacuum and jetting trucks for cleaning basins and pipes and allocate staff to these tasks on a daily basis. This draft permit seeks to take stormwater management, cleaning and reporting to a whole new level that would burden the Town to the same extent as our efforts to manage wastewater.

588. Comment from City of Manchester

The City of Manchester (City) is pleased to submit comments on the 2013 Draft New Hampshire Small MS4 General Permit. I requested my staff to review the permit requirements and to attend and participate in the public hearing that was held on March 14, 2013 in Portsmouth, NH. Once the complexity and costs of the draft permit became evident the City expanded our permit review efforts. Our staff met regularly with the New Hampshire Department of Environmental Services (NHDES) over the past few months to discuss key permit requirements. In addition, a regional stormwater coalition was formed and legal council was retained to assist with our draft permit comments. Lastly, we consulted with several engineering firms for their feedback on the draft permit requirements.

Our comments are extensive and detailed. We present general comments that pertain to the overall permit and specific comments citing permits clauses and requirements. To support our comments we have conducted preliminary engineering assessments to determine general treatment needs and costs. In addition, we have appended to these comments recent engineering studies to support our preliminary engineering and review comments.

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

589. Comment from the City of Rochester

The Town would also like to formally acknowledge the staff at NHDES who have patiently met with and worked with the MS4 Communities to understand the permit implications and find opportunities for the various levels of government to work cooperatively to serve our citizens in the most cost-effective and efficient way in complying with the Clean Water Act requirements. It would be the Town's suggestion and

hope that once the comment period closes and EPA begins the task of responding to the comments, that EPA join in these very fruitful inter-governmental implementation discussions.

590. Comment from Town of Salem

The Town of Salem, NH suggests that once the comment period has closed, that the EPA reach out to the MS4 communities in an effort to cooperatively develop the most efficient and effective methods to comply with the General Permit objectives. The Town encourages this effort to aid in building a better understanding between the EPA and local communities.

591. Comment from Town of Amherst - Board of Selectmen

Again, I encourage you to meet and confer, at the close of the comment period, with all MS-4 communities in an effort to develop the most efficient and effective method to comply with the permit objectives. We believe, and hope you do as well, that this will foster a better understanding between the EPA and local communities. We recommend this be done while EPA responds to comments which aid in revisiting the permit to ensure that local communities receive a more comprehensive permit, preserves the environment, and wisely uses limited local resources.

EPA response to Comments 587-591

EPA acknowledges these comments. EPA has made an extensive effort to reach out to affected stakeholders and seek input on the draft permit. EPA has received many comments on sections of the draft permit that are responded to in this Response to Comments document. EPA will continue to provide information on the permit and work with NHDES and other interested parties on tools and templates to aid permittees in complying with the permit in the future.

General RENOTICE Comments

592. Comment from the Town of Danville

The estimated costs of complying with the revised section 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.

593. Comment from the City of Rochester

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.

EPA response to Comments 592-593

EPA acknowledges these comments. EPA has carefully considered all substantial comments in this response to comments and have made changes to the final permit where appropriate to allow for

more efficient and effective local implementation of the permit conditions. See EPA Response to Comments 46 - 54, EPA Response to Comments 55 - 60, and EPA Response to Comments 227 - 233.

EPA has made available on the MS4 website a spreadsheet to facilitate permittees in estimating their own stormwater management program costs based on their particular system needs. Municipalities may enter information such as their population size, MS4 infrastructure size, and area served and use estimated unit costs to estimate the cost to their municipality of certain permit requirements or overall permit compliance.

A cost report (Watervision LLC, 2016, as amended by EPA January 2017) took into consideration the many specific requirements of the permit whose cost will greatly depend on the size of a permittee's MS4 system and catchment area (for example, street sweeping costs were estimated based on the number of lane miles that must be swept annually). Therefore, it is difficult to provide a general estimate of costs.

It should be noted that these are not estimated incremental costs between the 2003 permit and the 2017 final permit conditions. A proactive community that has street sweeping and catch basin cleaning procedures in place, mapping complete and all ordinances in place could see no cost increase associated with permit compliance over the first two years of permit compliance. Conversely, a permittee that has not fully implemented the requirements of the 2003 permit may need to invest more time and resources into their stormwater management program than they currently are in order to meet the 2017 permit conditions, which are based on those permit requirements in place since 2003 (Watervision LLC, 2016, as amended by EPA January 2017). EPA is aware of many communities that are already implementing many of the permit's good housekeeping measures (see comments on Part 2.3.7.), such as street sweeping and catch basin cleaning, so these tasks do not necessarily represent any increase in cost for a municipality that already manages their infrastructure using good housekeeping practices. EPA finds that the costs associated with permit compliance for this permit term will not increase significantly for communities with proper operation and maintenance plans in place and those who are fully in compliance with the 2003 permit.

Some state and federal assistance to communities is also available to offset any potential cost increases associated with permit compliance. Stormwater management loans may be available through the New Hampshire Clean Water State Revolving Fund (CWSRF), which is funded by both EPA and New Hampshire.

The 2014 Water Resources Reform and Development Act (WRRDA) expanded eligibility categories for CWSRF assistance. CWA Section 603(c)(5), as amended, states that each CWSRF may provide financial assistance "for measures to manage, reduce, treat, or recapture stormwater or subsurface drainage water." Publicly and privately owned, permitted and unpermitted projects that manage, reduce, treat, or recapture stormwater or subsurface drainage water are eligible. This language eliminates ownership constraints on regulated stormwater projects. For example, projects that are specifically required by a MS4 permit are now eligible, regardless of ownership. Please see EPA's "Interpretive Guidance for Certain Amendments in the Water Resources Reform and Development Act to Titles I, II, V, and VI of the Federal Water Pollution Control Act," January 6, 2015 (USEPA, 2015).

594. Comment from the City of Rochester

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.

EPA response to Comment 594

It is unclear from the comment which schedules the commenter would like to see extended and on what basis. The 2015 Renotice sections of the draft permit contain compliance schedules where appropriate to meet CWA obligations. See EPA Response to Comments 116 - 120, EPA response to Comments 577-587 and EPA Response to Comment 254.

See also EPA Response to Comments 61-83, EPA Response to Comments 46 - 54, EPA Response to Comments 55 - 60, and EPA Response to Comments 227 - 233

595. Comment from the City of Rochester

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.

EPA response to Comment 595

EPA is compiling a list of all deliverables outlined within the permit along with a timeline to assist permittees. EPA finds that these deliverables are important to tracking the progression of compliance, reducing pollutant discharges, and improving water quality. The NPDES permitting program relies on a self-monitoring, self-reporting compliance model that is based on permittees being responsible for administrative reporting. In terms of the overall effectiveness of the program, the self-reporting model has been determined to be an effective and efficient model for environmental regulation and is in use in numerous federal and state environmental programs. See, e.g., Remediation and self-reporting in optimal law enforcement (Innes, 1999). While EPA has reduced some annual report reporting effort in the final permit (e.g. impervious cover tracking and reporting) it has only done so where lack of reporting would not undermine review of each permittee's program implementation. While many commenters believe requirements are overly burdensome or unnecessary, fewer provided specific examples of overly burdensome requirements or unnecessary requirements. Where specific suggestions were made, EPA carefully analyzed the requirements and in appropriate cases made changes.

596. Comment from NH Stormwater Coalition:

It appears that a huge additional reporting burden has been placed on the permittees. [footnote: See, e.g., Fact Sheet, at 136 (comment 5.0(ii) from City of Portsmouth identifying "approximately 2,000 staff hours would be required to comply with the administrative components of the draft Permit such as tracking and annual reporting.").] We question whether EPA has received OMB approval of all of the reporting burden being imposed through the permit pursuant to the Paperwork Reduction Act ("PRA"), 44 U.S.C. §§ 3501 et seq. For example, the extensive NOI form contained in Appendix E fails to reflect an OMB approval number, something that is typically included on EPA reporting forms when approval has been obtained.

The fact sheet identifies the OMB approvals as being (1) OMB control number 2040•0086 for the NPDES permit application and (2) OMB control number 2040•0004 for monitoring reports. As this is not a permit application, but instead the imposition of permit requirements, the permit application approval is irrelevant. [footnote: See, e.g., 55 Fed. Reg. 47,990, 48,053 (Nov. 16, 1990) (reflecting that the permit application requirements are distinguished from the permitting requirements).] Furthermore, the OMB approval of the burden associated with the monitoring reports clearly does not address the significant burden that would be imposed upon the permittees through the Draft Permit. There are extensive reporting burdens imposed upon the permittee that are not part of the monitoring report. This includes, but is not limited to, the burden that would be imposed upon the permittee in meeting the Endangered Species Act ("ESA") requirements set forth in the Draft Permit which would require the permittee to document the results of its determinations. [footnote: Draft Permit Appendix C, at 3, 7] We request that EPA remove all requirements in the permit which are not currently approved by OMB pursuant to the PRA.

EPA Response to Comment 596

EPA disagrees with the commenter. Pursuant to the PRA, EPA accounts for burden associated with NPDES permit applications, general permit NOIs, monitoring, and reporting in the "Information Collection Request for the National Pollutant Discharge Elimination System (NPDES), OMB Control No. 2040-0004, EPA ICR No. 0229.20," March 2012. The consolidated NPDES ICR specifically accounts for the burden associated with small MS4 NOIs and individual permit applications, MS4 monitoring, and small MS4 annual reports. *See* Consolidated NPDES ICR §§ (6)(a)(i)(B)(2), (6)(a)(iii)(B)(2), (6)(a)(iv)(B)(2). See also EPA response to Comments 593-594

and Stormwater Program Cost Evaluation Technical memorandum prepared for EPA (Watervision LLC, 2016, as amended by EPA January 2017). Additionally, permittees are not required to use the suggested NOI format included in Appendix E. Permit section 1.7.2 states that in order to obtain coverage under this general permit, MS4 operators "shall submit a Notice of Intent that contains the information identified in Appendix E." EPA offers the format in Appendix E as an example of a way for permittees to efficiently submit required NOI information, but this permit does not require permittees to use the suggested format. Permittees could submit the required information in whatever manner they choose. Regarding permittees' responsibilities under the ESA, see EPA response to Comments 9 - 10.

EPA notes that permittees can apply for an individual permit if they believe the general permit is not applicable to their system. See also, EPA Response to Comments 61-83, EPA Response to Comments 46 - 54, EPA Response to Comments 55 - 60, and EPA Response to Comments 227 - 233.

597. Comment from the City of Rochester

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.l(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.

EPA response to Comment 597

See EPA Response to Comments 46 - 54, EPA Response to Comments 55 - 60, and EPA Response to Comments 227 - 233.

It is unclear from the comment which law the commenter believes this permit to be contrary to. This permit is written in compliance with MS4 regulations and other NPDES regulations, and does not change any standard or regulation applicable to MS4s. As a practical matter "where feasible”," and "possible" and "if they can be incorporated" as mentioned by the commenter provide great flexibility in meeting permit requirements on the part of permittees and allows permittees to set their own level of implementation of these particular permit requirements. This was done intentionally to allow permittees to tailor permit compliance to local needs where appropriate.

598. Comment from the City of Rochester

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.

EPA response to Comment 598

See EPA Response to Comments 46 - 54, EPA Response to Comments 55 - 60, and EPA Response to Comments 227 - 233.

It is EPA's view that the New Hampshire Small MS4 permit strikes an appropriate balance between allowing each permittee flexibility to implement controls and measures while also effectively prohibiting pollutants from entering the MS4 and fulfilling the NPDES program requirements. Many parts of the permit allow MS4 operators to implement the minimum control measures of the permit in a way that best suits their municipality's unique needs. And the overall Stormwater Management Program (SWMP) that forms the core of the municipality's MS4 strategy is meant to reflect the town's unique priorities and challenges as well as the required permit elements. For instance, Part 2.3.2 of the permit (Public Education and Outreach) requires each permittee to target 4 audiences (residents, businesses/commercial facilities, developers/ construction, and industrial facilities) with educational messages on stormwater impacts and controls. Part 2.3.2 of the permit does not require the use of any specific message and allows each permittee to tailor their educational program to each audience according to local needs and priorities. Another example of flexibility in the permit is in Part 2.3.6 (Post Construction Stormwater Management). Part 2.3.6. provides permittees with options as to how they would like to manage stormwater following development and re development projects within their jurisdiction. In particular, Part 2.3.6. allows the permittee to adopt the post construction stormwater management standards developed by the Southeast Watershed Alliance specifically for New Hampshire Communities in place of adopting an ordinance consistent with the requirements of Part2.3.6.a.ii(a)-(f). Another example of flexibility in the permit is in Appendix F (TMDL Implementation). Each part of Appendix F allows the permittee the option to work with NHDES to develop alternative pollutant reduction plans consistent with the applicable TMDLs in place of adhering to the specific TMDL requirements in Appendix F. In this case the permittee is afforded the opportunity to create their own pollutant reduction plans with NHDES and submit the plans for approval with their NOI for coverage under this permit. See EPA Response to Comment 22.

Comments regarding Comments Received on 2015 Renotice

599. Comment from Conservation Law Foundation

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

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

> Pollution from urban stormwater runoff is well documented as a leading cause of impairment of freshwater lakes, rivers, and estuaries (US EPA, 2009); (National Research Council, 2008). A number of harmful pollutants are contained in urban storm water runoff, including the following

major constituents: Nutrients (nitrogen and phosphorus), Bacteria/Pathogens, Chloride, Solids, Oil & Grease (Hydrocarbons, PAHs), and Metals (Center For Watershed Protection, 2003); (US EPA, 1999); (Shaver, et al., 2007); (Lin, 2004); (Schueler, 2011); (Pitt, et al., 2004) (Clark & Pitt, 2012); (National Research Council, 2008). Literature review and analysis of National Stormwater Quality Dataset (NSQD) data of urban storm water constituents indicates that it can be reasonably assumed that stormwater discharges from urban areas in New England contain bacteria/pathogens, nutrients, chloride, sediments, metals, and oil and grease (hydrocarbons, PAHs). This is not to say that every grab sample of storm water will always contain each of the aforementioned storm water constituents, however, if sufficient data is available for any single urban storm water discharge, the average concentrations of bacteria/pathogens, nutrients, chloride, sediments, zinc (metals), and oil and grease (hydrocarbons, PAHs) will likely be present. When a waterbody is found to be impaired pursuant to Clean Water Act (CWA) Section 303(d) or 305(b) for a particular pollutant, or the receiving water is experiencing an excursion above water quality standards due to the presence of a particular pollutant, it indicates that the waterbody has no assimilative capacity for the pollutant in question. EPA reasonably assumes that urban stormwater discharges from urbanized areas in New England contain bacteria/pathogens, nutrients, chloride, sediments, metals, and oil and grease (hydrocarbons, PAHs) and finds that MS4 discharges are likely causing or contributing to the excursion above water quality standards when the receiving waterbody impairment is caused by bacteria/pathogens, nutrients, chloride, metals, sediments or oil and grease (hydrocarbons, PAHs). EPA has determined that it is appropriate to require additional controls on such discharges to protect water quality.

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

In their joint comments, the Town of Amherst et al. ("join commenters") contend that EPA' s approach in the draft permit is unlawful on the grounds that it is somehow inconsistent with EPA's response to the July 10, 2013 petition by CLF, Natural Resources Defense Council (NRDC), and American Rivers (AR) seeking regulatory coverage under the Clean Water Act for non-permitted discharges of storm water from commercial, industrial and institutional sites in New England. [footnote: The CLF / NRDC / AR petition sought the exercise, by EPA, of its so-called residual designation authority, pursuant to which EPA can regulate a discharge of storm water that is not otherwise regulated under an existing NPD ES program if it determine the discharge "contributes to or is a significant contributor of pollutants to waters of the United States." See 33 U.S.C. § 1342(p)(2)(E); 40 C.F.R. § 122.26(a)(l(v).] Their argument is without merit. In the first instance, the joint commenters mischaracterize EPA' s response to the CLF / NRDC / AR petition as a rejection when, in fact, EPA concluded that it was neither granting nor denying the petition. More importantly, the manner in which EPA addressed the petition is simply inapposite to the manner in which it administers the Small MS4 permit program. Quite to the contrary, whereas there are no jurisdictional determinations at issue in the draft Small MS4 permit program, the CLF / NRDC / AR petition pertained solely to stormwater discharges not subject to any NPDES permit program and sought an affirmative determination by EPA to regulate those unregulated discharges through the exercise of its residual designation authority. Attempts to wield EPA's petition determination as a sword in this wholly unrelated matter rings hollow at best.

The joint commenters further suggest that EPA is acting unlawfully through the development and imposition of requirements designed to prevent discharges that cause or contribute to the violation of water quality standards [footnote: The City of Rochester, NH objects to the draft permit's use of the

phrase "cause or contribute," as well as to various other provisions, claiming they exceed the "maximum extent practicable" standard and applicable law. See Comments of City of Rochester (Nov. 2, 2015) at 3-4, 7-8. As discussed below, EPA is not limited to the maximum extent practicable standard and can impose additional requirements to control pollutants and to attain and maintain water quality standards.]. This argument, as well, is entirely without merit. The Clean Water Act could not be more explicit in the authority it provides EPA in the permitting process relative to municipal storm water discharges, stating that "[p]ermits for discharges from municipal storm sewers... shall require controls to reduce the discharge of pollutants to the maximum extent practicable, including management practices, control techniques and system, design and engineering methods, and such other provisions as the Administrator or the State determines appropriate for the control of such pollutants." See 33 U.S.C. § l 342(p)(3)(B)(iii). (emphasis added). This statutory language, as well as the overarching goals and policy of the Clean Water Act as enumerated by Congress, [footnote: See, e.g., 33 U.S.C. § 1251 (a) (objective is "to restore and maintain the chemical, physical, and biological integrity of the Nation's waters" (emphasis added); "it is the national goal that the discharge of pollutants into the navigable water be eliminated by 1985" (emphasis added); "it is the national goal that wherever attainable, an interim goal of water quality which provides for the protection and propagation of fish, shellfish, and wildlife and provides for recreation in and on the water be achieved by July 1, 1983 .... ").] is entirely consistent with, and supportive of, EPA's development of a permit that requires Small MS4s discharging pollutants of concern to impaired waters to implement more stringent BMPs to protect water quality and ensure the attainment of water quality standards. Indeed, since issuance of the Phase II regulations in 1999, EPA has interpreted the above-quoted statutory language as applying to all MS4s, including Small MS4s [footnote: See 64 Fed. Reg. 68722, 68754 (Dec. 8, 1999) ("This section [i. e., 33 U.S.C. § 1342(p)(3)(B)(iii)], also calls for 'such other provision as the [EPA] Administrator or the State determines appropriate for the control of such pollutants. ' EPA interprets this standard to apply to all MS4s, including both existing regulated (large and medium) MS4s, as well as the small MS4s regulated under today's rule.").] and has viewed the Small MS4 permitting program as an iterative one designed to attain and maintain water quality standards. [See id. at 68753 ("If the program is inadequate to protect water quality, including water quality standards, then the permit will need to be modified to include any more stringent limitations necessary to protect water quality."). See also id. at 68753 - 68754, stating:

> As noted, the 1996 Policy describes how permits would implement an iterative process using BMPs, assessment, and refocused BMPs, leading toward attainment of water quality standards. The ultimate goal of the iteration would be for water bodies to support their designated uses. EPA believes this iterative approach is consistent with and implements section 30l(b)(l)(C) [of the Clean Water Act], notwithstanding the Ninth Circuit's interpretation. As an alternative to basing these water quality-based requirements on section 30l(b)(l)(C), however, EPA also believes the iterative approach toward attainment of water quality standards represents a reasonable interpretation of CW A section 402(p)(3)(B)(iii). For this reason, today's rule specifies that the "compliance target" for the design and implementation of municipal storm water control programs is "to reduce pollutants to the maximum extent practicable (MEP), to protect water quality, and to satisfy the appropriate water quality requirements of the CW A." The first component, reductions to the MEP, would be realized through implementation of the six minimum measures. The second component, to protect water quality, reflects the overall design objective for municipal programs based on CWA section 402(p)(6). The third component, to implement other applicable water quality requirements of the CW A, recognizes the Agency's specific determination under CW A section 402(p)(3)(B)(iii) of the need to achieve reasonable further progress toward attainment of water quality standards according to the iterative BMP process, as well as the determination that

State or EPA officials who establish TMDLs could allocate waste loads to MS4s, as they would to other point sources.

See also id. at 68754 (" Successive iterations of the mix of BMPs and measurable goals will be driven by the objective of assuring maintenance of water quality standards. If, after implementing the six minimum control measures there is still water quality impairment associated with discharges from the MS4, after successive permit terms the permittee will need to expand or better tailor its BMPs within the scope of the six minimum control measures for each subsequent permit. EPA envisions that this process may take two to three permit terms .. . . The iterative process described above is intended to be sensitive to water quality concerns. ").] See also Defenders of Wildlife v. Browner, 191 F.3d 11 59, 1166-1167 (91h Cir. 1999) (affirming ability of EPA to require MS4s to control pollutants to ensure strict compliance with state water quality standards MS4s); 40 C.F.R. §§ 122.4(d), 122.34, 122.44(d).

600. Comment from Conservation Law Foundation

ln addition to the above, it is important to note that the current general permit for New Hampshire Small MS4s, issued in 2003, explicitly does not authorize the following discharges: " [d]ischarges prohibited under 40 CFR 122.4," " [d]ischarges that would cause or contribute to instream exceedance of water quality standards," and "[d]ischarges of any pollutant into any water for which a Total Maximum Daily Load (TMDL) has been established or approved by the EPA unless the discharge is consistent with the TMDL." See NPDES General Permit for Storm Water Discharges from Small Municipal Storm Sewer Systems (April, 18 2003), Part I.B.2 .(i), U), (k). It also contains provisions requiring permittees to develop stormwater management programs that address pollutants of concern and "ensure that the discharges will not cause an instream exceedance of the water quality standards." Id. Part I.C. [footnote: In its Response to Comments on the current Small MS4 General Permit, EPA stated with respect to Part I.C.2: "Part I.C.2 is intended to address the situation where waters have been identified as being impaired by a pollutant which the MS4 will discharge. In such situations, more aggressive storm water strategies would likely be necessary than in the situation where the waters are not impaired." See EPA Response to Comments at 6.] While apparently objecting to the more prescriptive nature of the draft Small MS4 permit (a prescriptive nature entirely consistent with and justified by the iterative approach identified by EPA as early as the late 1990s),- it appears the joint commenters would have EPA strip the Small MS4 general permit of essential requirements intended to ensure attainment of water quality standards and to not authorize discharges that cause or contribute to exceedances of water quality standards. ln addition to violating statutory and regulatory provisions pertaining to stormwater management as well as to the overarching objectives of the Clean Water Act and NPDES programs, see supra, any such change would violate the Clean Water Act's anti-backsliding requirements. See 33 U.S.C. §§ 13 l 3(d)(4), 1342(o).

EPA response to Comments 599 - 600

Issues raised in these comments have been addressed in other responses in this Response to Comments document. See EPA Response to Comments 46 - 54, EPA Response to Comments 55 - 60, and EPA Response to Comments 227 - 233 for a discussion of the legal basis of the New Hampshire Small MS4 General Permit in part in response to the comments mentioned above by the commenter.

601. Comment from Conservation Law Foundation

Finally, the joint commenters, as well as the Cities of Rochester and Portsmouth in comments submitted by them individually, contend that New Hampshire's recently approved 2012 Section 303(d) list of impaired waters is out of date with respect to nitrogen-related impairments for certain waters in the Great Bay estuary. In support of this contention, they reference the proposed de-listing of certain nitrogen

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

EPA response to Comment 601

Issues raised in this comment have been addressed in other responses in this Response to Comments document. See EPA Response to Comments 227 - 233 for a discussion of these concerns.

602. Comment from the NH Stormwater Coalition:

Sheehan Phinney Bass + Green, PA and Hall & Associates, on behalf of the following New Hampshire MS4 Communities that comprise the New Hampshire Stormwater Coalition: Town of Amherst; Town of Bedford; Town of Danville; City of Dover; Town of Hampton; Town of Londonderry; City of Manchester; Town of Merrimack; City of Portsmouth; Town of Raymond; City of Rochester; Town of Rollinsford; Town of Salem; Town of Stratham submit pursuant to the Notice of Reopening of the Public Comment Period on Select Sections of the Draft Small Municipal Separate Storm Sewer System (MS4) NPDES General Permit - New Hampshire, the following observations/objections to comments submitted by the Conservation Law Foundation (CLF) submitted on November 1, 2015 (CLF Comment):

- Assertions that compliance schedules must be limited to the 5 year permit term (CLF comment at 2) is in error and contrary to the Environmental Appeals Board (E.A.B.) decision regarding the allowable NPDES program for the District of Columbia. *In re District of Columbia Water and Sewer Authority,* __ E.A.D. __ , NPDES Appeal Nos. 05-02, 07-10, 07-11, and 07-12 (E.A.B. March 19, 2008).
- Virtually all of the New Hampshire water quality standards were adopted or amended by rule after July 1, 1977. Thus, EPA's presumption that schedules of compliance are allowed is well placed. EPA has reasonably satisfied the requirements necessary to allow schedules of compliance in the proposed permit, absent a demonstration that a standard at issue has remained unmodified, in any manner, since July 1, 1977. CLF, it should be noted, does not identify a single New Hampshire standard that would fit this description.
- A permit may not be unilaterally modified during its term, as recommended by CLF (Comment at 3). Modification provisions of 40 CFR 122.62, including the related public notice requirements, apply to any such actions.

- Any major substantive changes, such as mandating low impact development (LID) or green infrastructure as a mandatory component of the "MEP" standard as suggested by CLF (Comment at 4) would be a major revision requiring republication of this proposed permit and a complete regulatory analysis justifying statewide implementation of the requirement. No such analyses are presently contained in the record, nor are they provided by the CLF comments.

EPA Response to Comment 602

Issues raised in this comment have been addressed in other responses in this Response to Comments document. See EPA Response to Comment 254, EPA Response to Comment 255, and EPA Response to Comment EPA Response to Romments 355 - for EPA's discussion of the above-mentioned topics.

603. Comment from the City of Manchester

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

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

CLF indicates a strong support for clear deadlines by which permittees must complete specified actions and opposes striking the §2.2. I (h). Deadlines need to be flexible as early permit holders are finding that there are many obstacles in locating structures. Easements need to be obtained to site baffle tanks, storm treatment systems and wet ponds when municipal lands are not always available. A few years of analysis of pond/lake data may be interpreted differently by stakeholders with competing interests, necessitating a third and fourth year study to verify or refute early weak trends. Then there are always the potential of legal battles where part of planned projects can come to a standstill until the dispute is resolved through the court process. It makes sense from a municipal standpoint to allow as much flexibility as possible to assure the project is done right rather than half-heartedly in a rush to meet a deadline.

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

Nutt Pond is the most accessible of Manchester's TMDL ponds on a smaller scale than most. Manchester was required under a 1999 Consent Decree to begin a Supplemental, Environmental Pollution Projects (SEPP). This program required a formation of a committee of stakeholders, a review of the worse environmental conditions within the Manchester Community (riverbank erosion, delta sediments within ponds, nutrient pollutants within water bodies, classification of water bodies, impact by urban areas, type of recreational use for that specific water body, etc.). It took two years to classify and prioritize the projects, and then the higher priority project went into design, bidding, and construction. In Manchester the highest priority projects (Crystal Lake, Dorrs Pond, and the Piscataquog River bank erosion) projects began in 2003 (about 2 and 1/2 years after the order was given). The Phase I SEPP program was under a 10-year compliance program associated with the CSO, Long Term Control Program (LTCP).

Nutt Pond Projects were being designed and bid during the construction outlined in the paragraph above. Nutt Pond projects began in 2005 with forebays, reconfiguration and restoration of wetlands, inlet gates and structures and sediment removal. These projects were finished by the end of 2007. In the subsequent

two-year review of the pond analytical data and the NHDES dropping the phosphorus compliance target from 15 ug/1 to 12 ug/l, it was determined that Nutt Pond still did not meet the State's Phosphorus TMDL.

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

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

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

EPA response to Comment 603

Thank you for the municipal perspective regarding TMDL execution. Issues raised in this comment have been addressed in other responses in this Response to Comments document. EPA has considered the aforementioned comment at EPA Response to Comment 254. Please see EPA Response to Comment 149 - 152 and EPA Response to Comment 153 for EPA's response to other comments from the City on the Nutt Pond TMDL.

604. Comment from the City of Manchester

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

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

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

CLF also looks at application of this rule to areas as little as 1/2 acre. This can more than double the effort needed to cover 1 acre application. Again due to the lack of data associated with the fate of the vegetative nutrient transport it is too early to determine is this practice will have the long-term success that is attributed to it.

EPA response to Comment 604

Issues raised in this comment have been addressed in other responses in this Response to Comments document. See EPA Response to Comment 380 for EPA's discussion of the above-mentioned issues.

605. Comment from the City of Manchester

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

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

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

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

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

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

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

EPA response to Comment 605

Issues raised in this comment have been addressed in other responses in this Response to Comments document. See EPA Response to Comment 380 for EPA's discussion of the above-mentioned issues. This final permit does not require the use of any specific type of BMP to meet permit requirements and acknowledges the suitability of different BMPs for different situations and sites.

606. Comment from the City of Manchester

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

EPA response to Comment 606

Issues raised in this comment have been addressed in other responses in this Response to Comments document. See EPA Response to Comment 515 on the above-mentioned issue.

607. Comment from the City of Manchester

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

There is currently 'clean metals' analytical data for Manchester and Nashua, NH. Shortly there will be available data available from Lowell. The concentrations measured during sampling were between three and eight times less than what was measured under non-clean conditions. The probabilistic approach needs to be reviewed using these higher accurate measurements to determine true WQ metals impairment.

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

The chronic criteria for copper is 2.9 ug/l. There are river gages along the major rivers that one can correlate rainfall to water level. If the river is at five times the 7Ql0 why wouldn't the discharge from a culvert, swale or other direct discharge to that receiving body also receive a multiple of five for compliance for a discharge of 14.5 ug/l? A dynamic condition requires dynamic compliance measures.

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

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

EPA response to Comment 607

Issues raised in this comment have been addressed in other responses in this Response to Comments document. The Small MS4 permit is very different from a wastewater treatment plant (WWTP) permit because of the variability in stormwater flow and contributing drainage areas as well as the complexities of instream chemistry and hydrology during storm events. The permit does not include end-of-pipe limits like those found in a WWTP permit. See EPA Response to

Comments 61-83 for a discussion of EPA's comprehensive stormwater quality analysis based on currently available data.

608. Comment from the City of Manchester

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

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

EPA response to Comment 608

Issues raised in this comment have been addressed in other responses in this Response to Comments document. See EPA Response to Comment 247 - 252 for a discussion of the above-mentioned topic.

609. Comment from the City of Manchester

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

Manchester does agree with Rochester that significant costs burdens will be placed upon the citizens. In the original comments Manchester provided on the MS4 there was a spreadsheet for costs for the Storm Treat system. This system is the oilly system that captures solids via baffle tanks, uptakes nutrients and metals from stormwater and attenuates part of the flow. In review of the four TMDLs issued to Manchester and the acreage of the watersheds that surround these ponds, it was determined that the cost for enough treatment units to assure all water quality parameters are met would be between $550 million and over $700 million dollars dependent on the phosphorus limit that had to be met (12 ug/l to 15 ug/l). The argument is that phosphorus can be treated with less expensive means, but when the water quality limit for lead is 0.54 ug/l and the only time this was measured in the Merrimack River under 'clean sampling' conditions were in fact during times of rain. If it collects in the urban streets it will eventually be evident in the ponds and lakes and Storm Treat is a very effective system to remove this contaminant. ·Storm Treat meets the clause "maximum extent practicable" and "maximum extent feasible." This is why a dynamic contaminant determination, as the example given above, is needed otherwise there will be runaway costs that no municipality will be able to afford.

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

As Manchester alluded to in its comments we agree with Rochester's comments regarding waiving out of the extensive sampling requirement. Manchester looked at the amount of samples and the time that demonstrated compliance as excessive. However, the term "no measurable amount of nitrogen/

phosphorus" in discharges is well beyond any expectation. If it meets the water quality standard it should be considered in compliance. There should also be consideration for dilution and flush rates as rainfall is a dynamic component.

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

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

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

EPA response to Comment 609

Issues raised in this comment have been addressed in other responses in this Response to Comments document. See EPA response to Comments 535 and EPA response to Comments 549-552. Due to the lack of interest (one request), EPA declines to conduct a public hearing regarding the 2015 Renotice. A public hearing on the 2013 Draft Permit was conducted March 14, 2013.

Public Hearing

610. Comments from the Public Hearing on March 14, 2013 by Carl Quiram (Town of Goffstown), Steve Parkinson (City of Porsmouth), Bruce Berry (Town of Amherst), Ricardo Cantu (City of Manchester), Craig Durrett (Town of Derry), Tim Moore (Town of Plaistow), Steve Dookran (City of Nashua), Sarah Marchant (Town of Amherst), Steve Pearlman (Neponset River Watershed Association), Sumner Kalman (Barnes and Thornburg, Town of Plaistow) , Brian Goetz (Tighe and Bond), Sean Fitzgerald (Town of Plaistow), Leigh Komornick (Town of Plaistow), David Scott (Town of Dover)

The transcript for the Public Hearing held March 14, 2013 on the NH MS4 Draft Permit can be found on EPA's website[24]

EPA Response to Comment 610

Significant issues raised in oral testimony by the above commenters at the Public Hearing are substantially similar to the written comments submitted by the commenters and/or their town or

[24] https://www3.epa.gov/region1/npdes/stormwater/nh/NH-MS4-2013-Hearing.pdf.

organization. Please see responses to written comments from the above commenters contained in this Response to Comments Document.

See also EPA Response to Comments 46 - 54, EPA Response to Comments 55 - 60, and EPA Response to Comments 227 - 233 for a discussion of the legal basis of the final permit; EPA Response to Comments 61-83 for a discussion of stormwater quality and impaired waters; EPA response to Comments 593-594 for a discussion of program cost and funding;

EPA response to Comment 395 for information regarding school districts; EPA response to Comment 37, EPA Response to Comment 113, and EPA response to Comments 571-575 for information on permittee collaboration; EPA response to Comment 23 - 25 for information on permit timing and effective date; Part 2.3.4 of this document for all responses related to IDDE implementation.

EPA note: The commenters below did not appear to submit written comments to EPA on the 2013 Draft Permit or the 2015 Renotice. Nevertheless, the issues raised by these commenters have been answered in response to other comments in this document. Any commenters associated was a particular town or organization should see responses to that organizations' comments.

611. Comments from the Public Hearing on March 14, 2013 by Karen Anderson (Town of Greenland)

Hi. Karen Anderson representing the Town of Greenland. And I have a few just random questions and clarifications that I've come across. And we do support the education requirements and with the one question about quantifying the effective change in behavior. We currently do a lot of -- for example, our pet waste. We have a pet waste program. We have put pet waste containers around. Now to quantify how much is taken out of it on a weekly basis, just seems like time consuming that we don't know if we're going to change a behavior. If we provide the mechanism, provide the education, measuring that and reporting on it just seems very difficult.

And I also had a question on whether the education requirements can be combined, such as commercial and industrial. We're a very small town. We have 3500 population. We have two industrial properties. Can my commercial message count twice instead of a separate message for an industrial.

Another question I had was a clarification on the enclosure of salt storage. Currently, our salt storage is three sided. It is under cover, but it is not enclosed. So, whether that clarification now means that it needs to be closed in on all four sides.

And another question was on the street sweeping. We don't utilize sand on our roads for our winter road maintenance. Sweeping the streets each spring is likely not going to accomplish anything. There won't be anything to measure and analyze whether or not and what the debris actually is.

So those are the concerns from a very small town.

The transcript for the Public Hearing held March 14, 2013 on the NH MS4 Draft Permit can be found on EPA's website[25].

[25] https://www3.epa.gov/region1/npdes/stormwater/nh/NH-MS4-2013-Hearing.pdf.

EPA Response to Comment 611

See EPA response to Comments 276-277 and EPA response to Comments 281-282 for EPA's response about public education messaging and evaluation.

See EPA response to Comments 396-401 for a discussion of street sweeping.

See EPA Response to Comments 385 - 386 for a discussion of the salt storage requirement. Similar to EPA's requirements for potential pollutant (material) storage under the Multisector General Permit for industrial stormwater discharges (MSGP), salt should be stored or enclosed such that it is not exposed to precipitation or runon/runoff.

612. Comments from the Public Hearing on March 14, 2013 by Thomas Willis (City of Somersworth)

Good afternoon. I don't have any prepared remarks. I am the Public Works Director for the City of Somersworth, New Hampshire. We are one of the most densely developed and populated communities in the state. We have embraced the current permit and -- and during my three years, tenure as Public Works Director, we have met all of our requirements in our stormwater prevention -- our stormwater plans. And briefly, reviewing these proposed requirements in the year 2013 permit, it looks like you are proposing some additional requirements with regard to IDDE. I think these are laudable goals. However, they present a significant challenge to communities, particularly those with an old and aging infrastructure. And we are -- we've been through the last five years of economic challenges. We've seen our -- our staffing levels and our budgets shrink.

And with these new requirements, the only way we will be able to meet with them is to reverse that trend. However, we don't -- I don't see the -- without significant tax and fee increases, already on a burdened citizenry, it's going to be a very significant challenge for us to comply with them as I see them written.

EPA response to Comment 612

EPA acknowledges the comment regarding funding challenges and aging infrastructure as it relates to the IDDE program. See EPA response to Comments 593-594 for a discussion of program cost and funding. In additions see EPA Response to Comment 288 for a discussion of EPA's legal and technical basis for the more detailed IDDE requirements of the final permit. EPA also plans to hold webinar sessions and provide additional resources regarding the IDDE requirements of the permit.

613. Comments from the Public Hearing on March 14, 2013 by Bill Arcieri (VHB)

Bill Arcieri. I am a Water Resource Consultant with VHB. And I have just one general comment that is somewhat technical in nature.

And this affects the communities that are in the Great Bay Watershed. And that is, the nitrogen load

reduction credits that are available in Attachment 1 of Appendix H seem very limited and they're limited to just structural BMP's, as opposed to the phosphorus reduction credits that are in Attachment 2 of Appendix F, which includes various management measures, including catch basin cleaning, street sweeping, litter control, phosphorus control and fertilizers.

So, it would seem, and I'm wondering if you're going to provide that same level of nitrogen load reduction credits management measures for nitrogen in Appendix H, guess, for nitrogen. It seems, on balance, there

should be that same level of number of management measures and types of management measures for nitrogen load reduction credits.

The second part of that is, the phosphorus control measures allows for alternative methods to be used for

determining load credits. And I wonder if, also, if you would allow that same provision to be in for nitrogen load reduction credits as well.

EPA response to Comment 613

See the section of this document pertaining to Appendix H for a discussion of EPA's updated Nitrogen BMP performance information, which includes both structural and non-structural nitrogen load reduction estimates. Please note that the final permit does not require any tracking or accounting of nitrogen reductions from non-structural BMPs.

Please note the effective date of the permit will be July 1, 2018. This allows significant time for planning and budget development, as well as implementation of any measures an MS4 may wish to implement by the effective date of the permit.

614. Comments from the Public Hearing on March 14, 2013 by Aubrey Strauss (Tata & Howard)

My name is Aubrey Strauss. I work in the Portland, Maine office of Tata and Howard. I have been active with the Seacoast Stormwater Coalition for a few years and I am the facilitator for Central Massachusetts Regional Stormwater Coalition which is growing to 30 members next week. I have two comments of sort of an administrative nature and then, three technical comments.

The first comment is that, actually, I think Sarah Marchant from Amherst said it better than I was planning to, that, we understand that EPA is being more flexible with the dates of coverage for the permit once it becomes final. I think that is absolutely excellent and really important for these communities. So that, they are able to plan out the funding to implement it properly. I think one of the things that definitely scares a lot of clients is -- our clients is that gap in funding. So, I think that is excellent, and I encourage that.

Secondly, along the same lines of flexibility, with respect to illicit discharges removal, the phrase in the permit right now is immediately commence actions, which is a little bit scary, especially when you are dealing with utilities that may be owned by districts that are on an entirely different funding schedule than the permitee itself. So, I would encourage flexibility too. And it's in there in terms of scheduling and planning out a calendar for the removal of that. That is definitely a step in the right direction. And I think that that is going to get overall more reductions and eliminations of those illicit discharges. So, I think that that is an excellent addition as well.

From a technical standpoint, I think again, it is a great step in the right direction that we can use field kits and meters for the screening. That is absolutely vital in saving money. I would actually request to take that a step further. And two things, first of all, have the agency consider approving orthophosphate for use as a surrogate for total phosphorus, which has a lot of functional field restrictions associated with it. Very hard to do in the field.

And then, once that decision has been made, to publish a list of approved field kits and meters that will make it easier for these communities to know what they should purchase and taking it yet a step further, to even, perhaps, encourage that some funding be used on a -allocated to some of the stormwater coalitions or other regional groups to do bulk purchasing of those kits and those meters to make it easier for the communities to get what they need now that they know what they need.

EPA response to Comment 614

Please note the effective date of the permit will be July 1, 2018. This allows significant time for planning and budget development, as well as implementation of any measures an MS4 may wish to implement by the effective date of the permit.

EPA acknowledges the comments regarding field test kits and IDDE flexibility. See EPA Response to comments 308 - 309 for a discussion of the timing to eliminate illicit discharges. See EPA Response to Comment 337 and EPA Response to Comment 347 for a discussion of IDDE testing methodology; the final permit allows for the use of field test kits to test for sewage indicators. However, EPA finds that many stormwater coalitions and watershed groups that are already doing this work could more easily recommend appropriate field kits and meters. EPA does not plan in the final permit to require use of a certain type of testing equipment, as long as the method is sufficiently sensitive to detect the sewage indicators as specified in Part 2.3.4. of the final permit.

615. Comments from the Public Hearing on March 14, 2013 by Chris Albert (Town of Epping)

Chris Albert, consultant representing the Town of Epping.

The Town of Epping is one of the 15 waiver communities. At this time, we'd like to comment for an extension of the public comment period until those waiver requests have been determined.

The rationale is that, DES actually sent out waivers to the 15 communities which they did submit, feeling that they would get waived.

So, most of these Towns haven't even looked at what the impacts are going to be from a financial aspect to go through the 500 page documents. So, we'd like to have more time knowing if we are on board or not. And then, after that, we'd have more time to comment.

EPA response to Comment 615

EPA extended the public comment period twice on the 2013 Draft Permit in response to these and other comment received requesting an extension. The Town of Epping was granted a waiver from the permit requirements on April 20, 2013. All town waiver correspondence is available on EPA's website[26].

[26] https://www3.epa.gov/region1/npdes/stormwater/nh.html.

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