APPENDIX F
Requirements for Discharges to Impaired Waters with an Approved TMDL

I. Requirements for Discharges to Impaired Waters with an Approved MassDEP In State TMDL

A. Charles River Watershed Phosphorus TMDL Requirements

On October 17, 2007, EPA approved the *Final TMDL for Nutrients in the Lower Charles River Basin* (Lower Charles TMDL)[1] and on June 10, 2011 EPA approved the *Total Maximum Daily Load for Nutrients in the Upper/Middle Charles River* (Upper/Middle Charles TMDL)[2].

The MS4-2016 Permit established phosphorus reduction requirements to address phosphorus in MS4 discharges. Under the 2016-MS4 Permit Term, permittees were required to develop a phased Phosphorus Control Plan (PCP) designed to reduce the amount of phosphorus in

[1] Massachusetts Department of Environmental Protection. 2007. *Final TMDL for Nutrients in the Lower Charles River Basin*. CN 301.1

[2] Massachusetts Department of Environmental Protection. 2011. *Total Maximum Daily Load for Nutrients in the Upper/Middle Charles River Basin, Massachusetts*. CN 272.0

stormwater (SW) discharges from its MS4 to the Charles River and its tributaries. Permittees shall implement the PCP over the entire geographic area to the boundary of the Charles River watershed within the jurisdiction of the municipality.

The PCP must be developed and fully implemented as soon as possible to meet the target Phosphorus Reduction Requirement no later than 20 years after July 1, 2018 (the effective date of the MS4-2016 Permit). The PCP shall be completed in phases and the permittee shall and report in annual reports pursuant to Part 4.4 of the Permit on its progress toward achieving its Phosphorus Reduction Requirement. Permittees were required to develop a Phase 1 PCP by 2023 (Year 5 of the MS4-2016 Permit Term). The timing of the subsequent phases over 20 years from the 2016-MS4 Permit effective date (July 1, 2018) is:

2023 – 2028	2028 – 2033	2033 – 2038
Implement Phase 1 Plan		
Create Phase 2 Plan	Implement Phase 2 Plan	
	Create Phase 3 Plan	Implement Phase 3 Plan

The Phase 1 PCP as described in MS4-2016 Permit Part A.I.1.a of Appendix F, must be added as an attachment to its written SWMP upon completion. Permittees were required to submit a complete written Phase 1 Plan by 2023, which includes the following elements:

- Legal Analysis
- Funding Source Assessment
- Scope of the PCP, Baseline Phosphorus Load, Phosphorus Reduction Requirement, & Allowable Phosphorus Load
- Description of Phase 1 Planned Non-structural Controls
- Description of Phase 1 Planned Structural Controls
- Description of Operation & Maintenance Program for Planned and Existing Structural Controls
- Phase I Implementation Schedule
- Estimated Cost for Implementing Phase 1
- Complete Written Phase 1 Plan

1. PCP Phase 1 Implementation

    a. Phase 1 Milestones

    To continue addressing the discharge of phosphorus from its MS4 during this permit term, the permittee shall implement the Phase 1 Plan as soon as possible but no later

than July 1, 2028. The Phase 1 of the PCP shall be implemented to meet the following milestones:

Table F-1: Phase 1 of the PCP components and Milestones		
Item Number	Phase 1 of the PCP Component and Milestones	Completion Date
1-11	Performance Evaluation	July 1,2024 & July 1, 2025
1-12	Performance Evaluation. Full implementation of all structural controls used to demonstrate that the total phosphorus export rate (P_{exp}) from the PCP Area in lbs/yr is equal to or less than the applicable Allowable Phosphorus Load(P_{allow}) plus the applicable Phosphorus Reduction Requirement (P_{RR}) multiplied by 0.80 $P_{exp} \leq P_{allow} + (P_{RR}\ X\ 0.80)$	July 1, 2026
1-13	Performance Evaluation	July 1, 2027
1-14	Performance Evaluation. Full implementation of all structural controls used to demonstrate that the total phosphorus export rate (P_{exp}) from the PCP Area in lbs/yr is equal to or less than the applicable Allowable Phosphorus Load(P_{allow}) plus the applicable Phosphorus Reduction Requirement (P_{RR}) multiplied by 0.75 $P_{exp} \leq P_{allow} + (P_{RR}\ X\ 0.75)$	July 1, 2028

i. Description of Phase 1 PCP Components in Table F-1:

Performance Evaluation – The permittee shall evaluate the effectiveness of the PCP by tracking the phosphorus reductions achieved through implementation of structural stormwater control measures (SCMs) and non-structural BMPs[3] and tracking increases resulting from development. Phosphorus reductions shall be calculated consistent with Attachment 2 to Appendix F (non-structural BMP performance) and Attachment 3 to Appendix F (structural SCM performance) for all BMPs implemented to date. Phosphorus export increases since 2005 due to development shall be calculated consistent with Attachment 1 to Appendix F. Phosphorus loading increases and reductions in unit of lbs/yr shall be added or subtracted from the Baseline Phosphorus Load chosen for Phase 1

[3] In meeting its phosphorus reduction requirement a permittee may quantify phosphorus reductions by actions undertaken by another entity, except where those actions are credited to MassDOT, or a permittee identified in Appendix F Table F-3.

implementation by each permittee, consistent with the requirements of the MS4-2016 Permit The permittee shall also include all information required in Part I.2 of this Appendix in each performance evaluation. Performance evaluations will be included as part of each permittee's annual report as required by Part 4.4 of the Permit.

b. Alternative Schedule Request

If the permittee determines that the schedule to meet required Phase 1 phosphorus reductions contained in Table F-1 is impracticable, the permittee may submit to EPA and MassDEP an Alternative Schedule Request to meet the phosphorus reduction requirements in Table F-1 on the shortest schedule that is achievable considering the factors below.[4]

i. A Phase 1 Alternative Schedule Request shall include an analysis demonstrating that the schedule to meet phosphorus reduction requirements in Table F-1 is unaffordable within the timeframe of Phase 1. EPA expects that such extraordinary circumstances would occur rarely, where meeting the phosphorus reductions in Table F-1 is unaffordable.[5] A Phase 1 Alternative Schedule Request is limited to alternative schedules to meet the requirements of items numbered 1-11 through 1-14 in Table F-1. Requests must include the following:
   - A narrative of the reasons for the permittee's request for an alternative schedule, including information demonstrating the applicant's efforts and extent of progress made toward meeting the required phosphorus reductions in Table F-1,
   - Analysis of the nonstructural controls implemented to date,
   - A description of the planned Phase 1 structural controls for which schedule adjustment is requested,
   - Affordability for taxpayers or ratepayers (as applicable), including a projection of sources and uses of funds, taking into consideration existing or potential financial capability and funding mechanisms (e.g., property taxes, stormwater rate changes, or stormwater utility fees), and
   - A requested schedule to meet all phosphorus reduction requirements in Table F-1.

2. PCP Phase 2 Implementation

The permittee shall complete development of Phase 2 of the PCP by July 1, 2028 and fully implement the Phase 2 PCP as soon as possible but no longer July 1, 2033. The

[4] See part A.I.6 for information regarding the Alternative Schedule Request submittal and review process.
[5] EPA notes that such expectation regarding infrequency does not constitute or establish an additional under this Part.

Phase 2 plan of the PCP shall be added to the Phase 1 Plan and contain the following elements and has the following required milestones:

Table F-2: Phase 2 of the PCP components and Milestones		
Item Number	Phase 2 of the PCP Component and Milestones	Completion Date
2-1	Update Legal analysis	As necessary
2-2	Update scope of PCP (PCP Area) Baseline Phosphorus Load and Phosphorus Reduction Requirement and Allowable Load to entire area within permittee's jurisdiction within the Charles River Watershed if not already selected. Update the Phase 1 Performance Evaluation to reflect the new Baseline Phosphorus Load if PCP Area is updated.	July 1, 2028
2-3	Description of Phase 2 planned nonstructural controls	July 1, 2028
2-4	Description of Phase 2 planned structural controls	July 1, 2028
2-5	Updated description of Operation and Maintenance Program	July 1, 2028
2-6	Phase 2 implementation schedule	July 1, 2028
2-7	Estimated cost for implementing Phase 2 of the PCP	July 1, 2028
2-8	Complete written Phase 2 Plan	July 1, 2028
2-9	Performance Evaluation.	July 1, 2029 & July 1, 2030
2-10	Performance Evaluation. Full implementation of all structural controls used to demonstrate that the total phosphorus export rate (P_{exp}) from the PCP Area in lbs/yr is equal to or less than the applicable Allowable Phosphorus Load(P_{allow}) plus the applicable Phosphorus Reduction Requirement (P_{RR}) multiplied by 0.65 $P_{exp} \leq P_{allow} + (P_{RR}\ X\ 0.65)$	July 1, 2031
2-11	Performance Evaluation	July 1, 2032

2-12	Performance Evaluation. Full implementation of all structural controls used to demonstrate that the total phosphorus export rate (P_{exp}) from the PCP Area in lbs/yr is equal to or less than the applicable Allowable Phosphorus Load(P_{allow}) plus the applicable Phosphorus Reduction Requirement (P_{RR}) multiplied by 0.50 $P_{exp} \leq P_{allow} + (P_{RR}\ X\ 0.50)$	July 1, 2033

a. Description of Phase 2 PCP Components in Table F-2

i. Updated Legal Analysis- The permittee shall update the legal analysis completed during Phase 1 of the PCP as necessary to include any new or augmented bylaws, ordinances or funding mechanisms the permittee has deemed necessary to implement the PCP. The permittee shall use experience gained during Phase 1 to inform the updated legal analysis. The permittee shall adopt necessary regulatory changes as soon as possible to implement the Phase 2 Plan.

ii. Updated PCP Area Baseline Phosphorus Load (P_{base}), Phosphorus Reduction Requirement (P_{RR}) and Allowable Phosphorus Load (P_{allow}) – All permittees shall update their Baseline Phosphorus Load (P_{base}), Phosphorus Reduction Requirement (P_{RR}) and Allowable Phosphorus Load (P_{allow}) as necessary to be consistent with Table F-3 below. Table F-3 lists the permittees subject to phosphorus reduction requirements along with the estimated Baseline Phosphorous Loads in lbs/yr, the calculated Allowable Stormwater Phosphorus Load in lbs/yr, the Stormwater Phosphorus Reduction Requirement in lbs/yr and the respective percent reductions necessary. All values in Table F-3 are representative of the permittees jurisdictional area within the Charles River Watershed. Permittees shall update their PCP Area identified in the Phase 1 PCP to be the jurisdictional area within the Charles River Watershed of each permittee.

iii. Description of Phase 2 planned non-structural controls – The permittee shall describe the non-structural BMPs necessary to support achievement of the phosphorus export milestones in Table F-2. The description of non-structural BMPs shall include the planned measures, the areas where the measures will be implemented, and the annual phosphorus reductions that are expected to result from their implementation in units of lbs/yr. Annual phosphorus reduction from non-structural BMPs shall be calculated consistent with Attachment 2 to Appendix F.

iv. Description of planned Phase 2 structural controls – The permittee shall develop a priority ranking of areas and infrastructure within the municipality for potential

implementation of phosphorus control practices during Phase 2. The ranking shall build upon the ranking developed for Phase 1. The permittee shall describe the structural stormwater control measures (SCMs) necessary to support achievement of the phosphorus export milestones in Table F-2. The description of structural controls shall include the planned measures, the areas where the measures will be implemented, and the annual phosphorus reductions (in units of lbs/yr) that are expected to result from their implementation. Structural measures to be implemented by a third party[6] may be included in a municipal PCP. Annual phosphorus reductions from structural SCMs shall be calculated consistent with Attachment 3 to Appendix F.

v. Updated description of Operation and Maintenance (O&M) Program for all planned and existing structural SCMs – The permittee shall establish an Operation and Maintenance Program for all structural SCMs being claimed for phosphorus reduction credit as part of Phase 1 and 2 of the PCP. This includes SCMs implemented to date as well as SCMs to be implemented during Phase 2 of the PCP. The Operation and Maintenance Program shall become part of the PCP and include: (1) inspection and maintenance schedule for each SCM annually or more frequently in accordance with SCM design or manufacturer specification and (2) program or department responsible for SCM maintenance.

vi. Phase 2 Implementation Schedule – A schedule for implementation of all planned Phase 2 BMPs and SCMs, including, as appropriate: funding, training, purchasing, construction, inspections, monitoring, O&M activities, and other assessment and evaluation components of implementation. Implementation of planned BMPs must begin upon completion of the Phase 2 Plan. Structural SCMs shall be designed and constructed to ensure the permittee will comply with the milestones established in Table F-2. The Phase 2 PCP shall be fully implemented as soon as possible, but no later than July 1, 2033.

vii. Estimated cost for implementing Phase 2 of the PCP – The permittee shall estimate the cost of implementing the Phase 2 non-structural and structural controls and associated Operation and Maintenance Program. This cost estimate can be used to plan for the full implementation of Phase 2.

viii. Complete written Phase 2 Plan – The permittee must complete a written Phase 2 Plan of the PCP no later than July 1, 2028. The complete Phase 2 Plan shall include Phase 2 PCP item numbers 2-1 through 2-6 in Table F-2. The permittee shall make the Phase 2 Plan available to the public for public comment during

[6] In meeting its phosphorus reduction requirements, a permittee may quantify phosphorus reductions by actions undertaken by another entity, except where those actions are credited to MassDOT or another permittee identified in Appendix F Table F-3.

Phase 2 plan development. EPA encourages the permittee to post the Phase 2 Plan online to facilitate public involvement.

ix. Performance Evaluation – The permittee shall evaluate the effectiveness of the PCP by tracking the phosphorus reductions achieved through implementation of structural SCMs and non-structural BMPs[7] and tracking increases resulting from development. Phosphorus reductions shall be calculated consistent with Attachment 2 to Appendix F (non-structural BMP performance) and Attachment 3 to Appendix F (structural SCM performance) for all BMPs implemented to date. Phosphorus export increases due to development shall be calculated consistent with Attachment 1 to Appendix F. Phosphorus loading increases and reductions in unit of lbs/yr shall be added or subtracted from the applicable Baseline Phosphorus Load given in Table F-3 to estimate the yearly phosphorous export rate from the PCP Area. The permittee shall also include all information required in Part I.2 of this Appendix in each performance evaluation. Performance evaluations will be included as part of each permittee's annual report as required by Part 4.4 of the Permit.

Table F-3: Baseline Phosphorus Load, Phosphorus Reduction Requirement, Allowable Phosphorus Load and Percent Reduction in Phosphorus Load from Charles River Watershed.

Charles River Watershed Community Annual Stormwater Phosphorus Load Reduction by Permittee			
Community	**Baseline Phosphorus Load, lb/yr**	**Stormwater Phosphorus Load Reduction Requirement (lb/yr)**	**Allowable Phosphorus Load (lb/yr)**
Arlington	234	150	84
Ashland	148	62	86
Bellingham	2,088	877	1,210
Belmont	445	231	214
Boston Total[8]	15,181	9,138	6,043
Boston	15,112	9,092	6,020

[7] In meeting its phosphorus reduction requirements, a permittee may quantify phosphorus reductions by actions undertaken by another entity, except where those actions are credited to MassDOT or another permittee identified in Appendix F Table F-3.

[8] Boston is included for reference and for non-traditional MS4s located within the city of Boston. Boston is covered by an individual Phase I MS4 permit. Boston's individual Phase I MS4 permit will also reflect this phosphorus load reduction.

DCAMM-Charles F. Hurley Building	14	9	5
DCAMM- State House	7	5	2
VA Boston Jamaica Plain	18	12	6
VA Boston West Roxbury	30	20	10
Brookline	3,605	2,134	1,470
Cambridge	2,288	1,419	869
Dedham	1,775	891	884
Dover	1,832	397	1,437
Foxborough	4	0	4
Franklin	5,168	2,231	2,937
Holliston	3,402	1,093	2,306
Hopedale	236	104	132
Hopkinton	644	196	448
Lexington	1,168	534	633
Lincoln	1,307	280	1,027
Medfield	2,105	761	1,347
Medway	2,344	882	1,459
Mendon	64	24	37
Milford	3,552	1,784	1,768
Millis	2,136	664	1,473
Natick	2,443	1,071	1,371
Needham	3,907	2,147	1,757
Newton	8,563	5,214	3,349
Total Norfolk	2,213	631	1,583
Norfolk	1,942	562	1,381
Norfolk-Walpole Correctional Complex	271	69	202
Somerville	1,424	882	540
Sherborn	1,865	344	1,521
Total Walpole	351	82	267
Walpole	317	63	252
Norfolk-Walpole Correctional Complex	34	19	15
Waltham	6,396	3,869	2,526
Watertown	2,485	1,550	935
Wayland	101	42	60
Wellesley Total	3,155	1,810	1,343
Wellesley	3,121	1,795	1,326

MassBay Community College	34	15	19
Weston	2,588	827	1,761
Westwood	829	331	498
Wrentham	1,362	463	897
Mass-DCR	928	201	728

b. Alternative Schedule Request
If the permittee determines that the schedule to meet required Phase 2 phosphorus reductions contained in Table F-2 is impracticable, the permittee may submit to EPA and MassDEP an Alternative Schedule Request to meet the phosphorus reduction requirements of items numbered 2-10 and 2-12 in Table F-2 on the shortest schedule that is achievable considering the factors below.[9]

i. A Phase 2 Alternative Schedule Request shall include an analysis demonstrating that the schedule to meet phosphorus reduction requirements in items numbered 2-10 and 2-12 in Table F-2 is impracticable. Requests must include, where relevant, the following:
- A narrative of the reasons for the permittee's request for an alternative schedule, including information demonstrating the applicant's efforts and extent of progress made toward meeting the required phosphorus reductions in Table F-2,
- A description of the planned structural controls to meet applicable phosphorus reduction milestones,
- Suitability and availability of areas for siting and construction structural controls, including, if appropriate, a review of third-party partnerships considered for within-watershed structural control sites,
- Access and acquisition of real property rights for constructing and maintaining structural controls,
- Timelines for the permittee's planning, design, financing, easement or property interest acquisition, and procurement for and construction of structural controls,
- Timelines for and constraints due to the federal, state and/or local approval(s) and permitting processes for structural controls,
- Anticipated phosphorus reductions due to the rate of redevelopment within the community and the degree to which future redevelopment may be reasonably anticipated to achieve the desired reductions in lieu of reliance upon structural controls by the permittee,
- Estimated cost of the planned structural controls to meet applicable phosphorus reduction milestones,

[9] See Part I.A.6 for information regarding the Alternative Schedule Request submittal and review process.

- Scale of structural SCM controls required and phasing considerations with other capital improvement projects that are being implemented by the permittee or other parties that impact the permittee, municipality or relevant taxpayers or ratepayers,
- Affordability for taxpayers or ratepayers (as applicable), including a projection of sources and uses of funds, taking into consideration existing or potential financial capability and funding mechanisms (e.g., property taxes, stormwater rate changes, or stormwater utility fees),
- Other relevant information, and
- A requested schedule to meet all phosphorus reduction requirements in Table F-2.

3. PCP Phase 3

The permittee shall develop Phase 3 of the PCP by July 1, 2033 and fully implement the Phase 3 of the PCP as soon as possible but no later than July, 2038. The Phase 3 plan of the PCP shall be added to the Phase 1 Plan and the Phase 2 Plan to create the comprehensive PCP and contain the following elements and has the following required milestones:

Table F-4: Phase 3 of the PCP components and Milestones

Item Number	Phase 3 of the PCP Component and Milestones	Completion Date
3-1	Update Legal analysis	As necessary
3-2	Description of Phase 3 planned nonstructural controls	July 1, 2033
3-3	Description of Phase 3 planned structural controls	July 1, 2033
3-4	Updated description of Operation and Maintenance (O&M) Program	July 1, 2033
3-5	Phase 3 implementation schedule	July 1, 2033
3-6	Estimated cost for implementing Phase 3 of the PCP	July 1, 2033
3-7	Complete written Phase 3 Plan	July 1, 2033
3-8	Performance Evaluation.	July 1, 2034 & July 1, 2035
3-9	Performance Evaluation. Full implementation of all structural controls used to demonstrate that the total phosphorus export rate (P_{exp}) from the PCP Area in lbs/yr is equal to or less than the applicable Allowable Phosphorus Load(P_{allow})	July 1, 2036

	plus the applicable Phosphorus Reduction Requirement (P_{RR}) multiplied by 0.30 $P_{exp} \leq P_{allow} + (P_{RR}\ X\ 0.30)$	
3-10	Performance Evaluation	July 1, 2037
3-11	Performance Evaluation. Full implementation of all structural controls used to demonstrate that the total phosphorus export rate (P_{exp}) from the PCP Area in lbs/yr is equal to or less than the applicable Allowable Phosphorus Load (P_{allow}) $P_{exp} \leq P_{allow}$	July 1, 2038

a. Description of Phase 3 PCP Components

i. Updated Legal Analysis- The permittee shall update the legal analysis completed during Phase 1 and Phase 2 of the PCP as necessary to include any new or augmented bylaws, ordinances or funding mechanisms the permittee has deemed necessary to implement the PCP. The permittee shall use experience gained during Phase 1 and Phase 2 to inform the updated legal analysis. The permittee shall adopt necessary regulatory changes as soon as possible to implement the Phase 3 Plan.

ii. Description of Phase 3 planned non-structural controls – The permittee shall describe the non-structural BMPs necessary to support achievement of the phosphorus export milestones in Table F-4. The description of non-structural BMPs shall include the planned measures, the areas where the measures will be implemented, and the annual phosphorus reductions that are expected to result from their implementation in units of lbs/yr. Annual phosphorus reduction from non-structural BMPs shall be calculated consistent with Attachment 2 to Appendix F.

iii. Description of planned Phase 3 structural controls – The permittee shall develop a priority ranking of areas and infrastructure within the municipality for potential implementation of phosphorus control practices during Phase 3. The ranking shall build upon the ranking developed for Phase 1 and 2. The permittee shall describe the structural stormwater control measures necessary to support achievement of the phosphorus export milestones in Table F-4. The description of structural controls shall include the planned measures, the areas where the measures will be implemented, and the annual phosphorus reductions in units of lbs/yr that are expected to result from their implementation. Structural measures to be implemented by a third party may be included in a municipal PCP. Annual phosphorus reduction from structural SCMs shall be calculated consistent with Attachment 3 to Appendix F.

iv. Updated description of Operation and Maintenance (O&M) Program for all planned and existing structural SCMs – The permittee shall establish an Operation and Maintenance Program for all structural SCMs being claimed for phosphorus reduction credit as part of Phase 1, 2 and 3 of the PCP. This includes SCMs implemented to date as well as SCMs to be implemented during Phase 3 of the PCP. The Operation and Maintenance Program shall become part of the PCP and include: (1) inspection and maintenance schedule for each SCM annually or more frequently in accordance with SCM design or manufacturer specification and (2) program or department responsible for SCM maintenance.

v. Phase 3 Implementation Schedule – A schedule for implementation of all planned Phase 3 BMPs and SCMs, including, as appropriate: funding, training, purchasing, construction, inspections, monitoring, O&M activities, and other assessment and evaluation components of implementation. Implementation of planned BMPs must begin upon completion of the Phase 3 Plan. Structural SCMs shall be designed and constructed to ensure the permittee will comply with the July 1, 2036, and July 1, 2038 milestones established in Table F-4. The Phase 3 plan shall be fully implemented as soon as possible, but no later than July 1, 2038.

vi. Estimated cost for implementing Phase 3 of the PCP – The permittee shall estimate the cost of implementing the Phase 3 non-structural and structural controls and associated Operation and Maintenance Program. This cost estimate can be used to plan for the full implementation of Phase 3.

vii. Complete written Phase 3 Plan – The permittee must complete the written Phase 3 Plan of the PCP no later than July 1, 2033. The complete Phase 3 Plan shall include Phase 3 PCP item numbers 3-1 through 3-6 in Table F-4. The permittee shall make the Phase 3 Plan available to the public for public comment during Phase 3 Plan development. EPA encourages the permittee to post the Phase 3 Plan online to facilitate public involvement.

viii. Performance Evaluation – The permittee shall evaluate the effectiveness of the PCP by tracking the phosphorus reductions achieved through implementation of structural SCMs and non-structural BMPs[10] and tracking increases resulting from development. Phosphorus reductions shall be calculated consistent with Attachment 2 to Appendix F (non-structural BMP performance) and Attachment 3 to Appendix F (structural SCM performance) for all BMPs implemented to date. Phosphorus export increases due to development shall be calculated consistent with Attachment 1 to Appendix F. Phosphorus loading increases and reductions in

[10] In meeting its phosphorus reduction requirements, a permittee may quantify phosphorus reductions by actions undertaken by another entity, except where those actions are credited to MassDOT or another permittee identified in Appendix F Table F-3.

unit of lbs/yr shall be added or subtracted from the applicable Baseline Phosphorus Load given in Table F-3 to estimate the yearly phosphorous export rate from the PCP Area. The permittee shall also include all information required in Part I.4 of this Appendix in each performance evaluation. Performance evaluations will be included as part of each permittee's annual report as required by Part 4.4 of the Permit.

b. Alternative Schedule Request

If the permittee determines that the schedule to meet required Phase 3 phosphorus reductions contained in Table F-4 is impracticable, the permittee may submit to EPA and MassDEP an Alternative Schedule Request to meet the phosphorus reduction requirements in items numbered 3-9 and 3-11 in Table F-4 on the shortest schedule that is achievable considering the factors below.[11]

i. A Phase 3 Alternative Schedule Request shall include an analysis demonstrating that the schedule to meet phosphorus reduction requirements in items numbered 3-9 and 3-11 in Table F-4 is impracticable. Requests must include, where relevant, the following:

- A narrative of the reasons for the permittee's request for an alternative schedule, including information demonstrating the applicant's efforts and extent of progress made toward meeting the required phosphorus reductions in Table F-4,
- A description of the planned structural controls to meet applicable phosphorus reduction milestones,
- Suitability and availability of areas for siting and construction structural controls, including, if appropriate, a review of third-party partnerships considered for within-watershed structural control sites,
- Access and acquisition of real property rights for constructing and maintaining structural controls,
- Timelines for the permittee's planning, design, financing, easement or property interest acquisition, and procurement for and construction of structural controls,
- Timelines for and constraints due to the federal, state and/or local approval(s) and permitting processes for structural controls,
- Anticipated phosphorus reductions due to the rate of redevelopment within the community and the degree to which future redevelopment may be reasonably anticipated to achieve the desired reductions in lieu of reliance upon structural controls by the permittee,
- Estimated cost of the planned structural controls to meet applicable phosphorus reduction milestones,
- Scale of structural SCM controls required and phasing considerations with other capital improvement projects that are being implemented by the

[11] See part A.I.6 for information regarding the Alternative Schedule Request submittal and review process.

permittee or other parties that impact the permittee, municipality or relevant taxpayers or ratepayers,
- Affordability for taxpayers or ratepayers (as applicable), including a projection of sources and uses of funds, taking into consideration existing or potential financial capability and funding mechanisms (e.g., property taxes, stormwater rate changes, or stormwater utility fees),
- Other relevant information, and
- A requested schedule to meet all phosphorus reduction requirements in Table F-4.

4. Reporting

The permittee shall include a progress report in each annual report submitted pursuant to Part 4.4 of the Permit on the planning and implementation of the PCP including the following elements:

a. All non-structural BMPs implemented during the reporting year along with the phosphorus reduction in lbs/yr (P_{NSred}) calculated consistent with Attachment 2 to Appendix F

b. Structural stormwater control measures (SCMs) implemented during the reporting year and all previous years including:
   i. Location information of structural SCMs (GPS coordinates or street address)
   ii. Phosphorus reduction from all structural SCMs implemented to date in lbs/yr (P_{Sred}) calculated consistent with Attachment 3 to Appendix F
   iii. Date of last completed maintenance and inspection for each structural control

c. Phosphorus load increases due to development over the previous reporting period and incurred since 2005 (P_{DEVinc}) calculated consistent with Attachment 1 to Appendix F.

d. Estimated yearly phosphorus export rate (P_{exp}) from the PCP Area calculated using Equation 1. Equation 1 calculates the yearly phosphorus export rate by subtracting yearly phosphorus reductions through implemented non-structural controls and structural controls to date from the Baseline Phosphorus Load and adding loading increases incurred through development to date (calculated using the methodology in Attachment 1 of Appendix F). This equation shall be used to demonstrate compliance with the phosphorus reduction milestones required as part of each phase of the PCP.

$$P_{exp}\left(\frac{mass}{yr}\right) = P_{base}\left(\frac{mass}{yr}\right) - \left(P_{Sred}\left(\frac{mass}{yr}\right) + P_{NSred}\left(\frac{mass}{yr}\right)\right) + P_{DEVinc}\left(\frac{mass}{yr}\right)$$

Equation 1. Equation used to calculate yearly phosphorus export rate from the chosen PCP Area.
P_{exp}= Current phosphorus export rate from the PCP Area in lbs/yr.
P_{base}= Baseline phosphorus export rate from LPCP Area in lbs/yr.
P_{Sred}= Annual phosphorus reduction from implemented structural SCMs in the PCP Area in lbs/yr (including SCMs on permittee-owned property, private property, and new development).
P_{NSred}= Annual phosphorus reduction from implemented non-structural BMPs in the PCP Area in lbs/yr (including BMPs on permittee-owned property, private property, and new development).
P_{DEVinc}= Annual phosphorus increase resulting from development since 2005 in the PCP Area in lbs/yr.

e. Certification that all structural SCMs are being inspected and maintained according to the O&M program specified as part of the PCP. The certification statement shall be:

> I certify under penalty of law that all source control and treatment Best Management Practices being claimed for phosphorus reduction credit have been inspected, maintained and repaired in accordance with manufacturer or design specification. I certify that, to the best of my knowledge, all Best Management Practices being claimed for a phosphorus reduction credit are performing as originally designed.

f. Certification that all municipally owned and maintained turf grass areas are being managed in accordance with Massachusetts Regulation 331 CMR 31 pertaining to proper use of fertilizers on turf grasses (see http://www.mass.gov/courts/docs/lawlib/300-399cmr/330cmr31.pdf).

5. At any time during the permit term the permittee may be relieved of additional requirements in Appendix F Parts I.A.1-3 as follows:

a. The permittee is relieved of its additional requirements as of the date when the following conditions are met:
   i. The applicable TMDL has been modified, revised or withdrawn and EPA has approved a new TMDL applicable for the receiving water that indicates that no additional stormwater controls for the control of phosphorus are necessary for the permittee's discharge based on wasteload allocations in the newly approved TMDL.

b. When the criteria in Appendix F part A.I.5.a. are met, the permittee shall document the date of the approved TMDL in its SWMP and is relieved of any remaining requirements of Appendix F part A.I.1 as of that date and the permittee shall comply with the following:

i. The permittee shall identify in its SWMP all activities implemented in accordance with the requirements of Appendix F Part I.A.1-3 to date to reduce phosphorus in their discharges including implementation schedules for non-structural BMPs and any maintenance requirements for structural SCMs

ii. The permittee shall continue to implement all requirements of Appendix F Part I.A.1-3 required to be implemented prior to the date of the newly approved TMDL, including ongoing implementation of identified non-structural SCMs and routine maintenance and replacement of all structural SCMs annually or more frequently in accordance with manufacturer or design specifications, and the reporting requirements of Appendix F Part I.A.4. remain in place.

6. The permittee may be relieved of the schedules and milestones contained in Table F-1, Table F-2, and/or Table F-4 as follows:

a. The permittee is relieved of the applicable schedules and milestones when all the following conditions are met:

i. The permittee has submitted an Alternative Schedule Request package to EPA and MassDEP. [12,13]

ii. EPA has determined the Alternative Schedule Request submittal is complete. The Alternative Schedule Request will be deemed complete 30 days from submittal, unless EPA requests additional information from the permittee.

iii. Following a 30-day public comment period on the complete Alternative Schedule Request, EPA approves the request in writing.[14] If EPA has not acted to approve, modify with permittee consent, or deny an Alternative Schedule Request within 90 days of the close of the public comment period, the Alternative Schedule Request shall be deemed approved.

b. Any action by EPA approving or denying an Alternative Schedule Request is a final agency action that shall be subject to judicial review in federal court.

c. When the permittee meets the conditions in Appendix F Part I.A.5.a, the permittee shall incorporate the approved Alternative Schedule Request and the approval date

[12] Alternative Schedule Request package must be made available to the public consistent with Part 2.3.3 of the permit.

[13] Submittal of an alternative schedule request does not relieve the permittee of noncompliance and potential enforcement for failure to comply with any permit requirements prior to the date of approval of an Alternative Schedule.

[14] EPA may deny an Alternative Schedule Request in the case of permittee noncompliance with permit requirements applicable to phosphorus reductions. EPA expects that an Alternative Schedule Request by a permittee that at the time of such request is in non-compliance with the applicable Table F-1, F-2, and F-4 phosphorus reduction percentage would be denied unless the permittee provides information regarding its phosphorus reduction efforts that EPA finds acceptable for this purpose.

in its PCP. An approved Alternative Schedule Request will supersede any remaining schedules and milestones for the phase for which schedule adjustment is requested and approved. The permittee shall:

i. Identify in its PCP all activities implemented to date in accordance with the requirements of Appendix F Part I.A and conducted to reduce phosphorus in its discharges pursuant to the submitted Alternative Schedule Request, including non-structural BMP planning and implementation schedules and any structural SCM maintenance requirements; and
ii. Continue to implement all requirements of Appendix F Part I.A.3 required to be implemented prior to the date of Alternative Schedule Request approval, including ongoing implementation of identified non-structural SCMs and routine maintenance and replacement of all structural SCMs in accordance with manufacturer or design specifications
iii. Continue to implement their PCP, and the reporting requirements of Appendix F Part I.A.4 remain in place.

B. Lake and Pond Phosphorus TMDL Requirements

Permittees that operate regulated MS4s (traditional and non-traditional) that discharge to impaired waters or their tributaries subject to an EPA-approved Lake TMDL[15] in Massachusetts must reduce phosphorus discharges to support achievement of phosphorus load reductions identified in the TMDLs. Any permittee (traditional or non-traditional) that discharges to a waterbody segment in Table F-6 is subject to the requirements of this part. Any permittee (traditional or non-traditional) that discharges to a lake or pond listed in Table F-6 or its tributaries and has a required phosphorus percent reduction greater than 0% is subject to the requirements in Appendix F Parts I.B.1 and B.2. Permittees discharging to a lake or pond listed in Table F-6 or its tributaries and has a required phosphorus percent reduction of 0% are subject only to Appendix F Part I.B.2 and I.B.3.f and are relieved of the requirements of Appendix F Parts I.B.1 and B.3.a through B.3.e.

1. Permittees shall develop a Lake Phosphorus Control Plan (LPCP) designed to reduce the amount of phosphorus in stormwater discharges from its MS4 to the impaired waterbody or its tributaries in accordance with the phosphorus load reduction requirements set forth in Table F-6 below. Table F-6 identifies the primary municipalities[16] located within the watershed of the respective lake or pond and the percent phosphorus reductions necessary from urban stormwater sources.

Table F-6: Phosphorus impaired Lakes or Ponds subject to a TMDL along with primary municipality and required percent reduction of phosphorus from urban stormwater sources

Primary Municipality	Waterbody Name	Required Percent Reduction
Auburn	Leesville Pond	31%
	Auburn Pond	24%
	Eddy Pond	0%
	Pondville Pond	8%
	Stoneville Pond	3%
Boylston	Newton Pond	19%
Charlton	Buffumville Lake	28%
	Dresser Hill Pond	17%
	Gore Pond	14%
	Granite Reservoir	11%

[15] Final, EPA-approved TMDLs for lakes and ponds in Massachusetts are available at https://www.epa.gov/tmdl/region-1-approved-tmdls-state.

[16] Primary municipalities indicate the municipality in which the majority of the lake or pond is located but is not necessarily limited to only municipalities with urbanized area that discharges to the lake or pond or its tributaries.

Primary Municipality	Waterbody Name	Required Percent Reduction
	Jones Pond	13%
	Pierpoint Meadow Pond	27%
	Pikes Pond	38%
Dudley	Gore Pond	14%
	Larner Pond	55%
	New Pond	56%
	Pierpoint Meadow Pond	27%
	Shepherd Pond	25%
	Tobins Pond	62%
	Wallis Pond	54%
Gardner	Hilchey Pond	27%
	Parker Pond	47%
	Bents Pond	52%
	Ramsdall Pond	49%
Grafton	Flint Pond/Lake Quinsigamond	59%
Granby	Aldrich Lake East	0%
Hadley	Lake Warner	24%
Halifax	East Monponsett Pond	41%
	West Monponsett Pond	40%
Hanson	While Oak Brook Reservoir	41%
	West Monponsett Pond	40%
Harvard	Bare Hill Pond	2%
Hudson	Lake Boon	28%
Leicester	Smiths Pond	30%
	Southwick Pond	64%
	Cedar Meadow Pond	17%
	Dutton Pond	23%
	Greenville Pond	14%
	Rochdale Pond	8%
Ludlow	Minechoag Pond	48%
Millbury	Brierly Pond	14%
	Dorothy Pond	1%
	Howe Reservoir	48%
Oxford	Buffumville Lake	28%
	Hudson Pond	37%
	Lowes Pond	51%
	McKinstry Pond	79%

Primary Municipality	Waterbody Name	Required Percent Reduction
	Robinson Pond	8%
	Texas Pond	21%
Pembroke	Stetson Pond	37%
Shrewsbury	Flint Pond/Lake Quinsigamond	49%
	Jordan Pond	60%
	Mill Pond	43%
	Newton Pond	19%
	Shirley Street Pond	30%
Spencer	Quaboag Pond	29%
	Quacumquasit Pond	2%
	Jones Pond	13%
	Sugden Reservoir	31%
Springfield	Loon Pond	10%
	Long Pond	56%
	Mona Lake	57%
Stow	Lake Boon	28%
Templeton	Brazell Pond	62%
	Depot Pond	50%
	Bourn-Hadley Pond	49%
	Greenwood Pond 2	56%
Wilbraham	Spectacle Pond	45%
Winchendon	Lake Denison	22%
	Stoddard Pond	24%
	Whitney Pond	16%
	Whites Mill Pond	21%

a. LPCP Implementation Schedule

For existing permittees subject to the permit conditions at Part 2.2.1 and Appendix F.II.1 under the MS4-2016 Permit, Table F-7 contains the completion date for LPCP components. For new permittees and permittees subject to permit conditions at Part 2.2.1 and Appendix F.I.B.1 for the first time upon issuance of this MS4 Permit (i.e., subject to a newly approved TMDL), the effective date refers to the effective date of this Permit. The LPCP shall be implemented in accordance with the following schedule and contain the following elements:

Table F-7: LPCP components and milestones		
LPCP Component and Milestones	**Completion Date for Permittees Subject to TMDL Requirements for the First Time**	**Completion Date for Existing 2016 Permittees**
Legal Analysis	2 years after permit effective date	July 1, 2020
Funding source assessment	3 years after permit effective date	July 1, 2021
Define LPCP scope (LPCP Area)	4 years after permit effective date	July 1, 2022
Calculate Baseline Phosphorus, Allowable Phosphorus Load and Phosphorus Reduction Requirement	4 years after permit effective date	July 1, 2022
Description of planned nonstructural and structural controls	5 years after permit effective date	July 1, 2023
Description of Operation and Maintenance (O&M) Program	5 years after permit effective date	July 1, 2023
Implementation schedule	5 years after permit effective date	July 1, 2023
Cost and Funding Source Assessment	5 years after permit effective date	July 1, 2023
Complete written LPCP	5 years after permit effective date	July 1, 2023
Full implementation of nonstructural controls.	6 years after permit effective date	July 1, 2024
Performance Evaluation.	6 and 7 years after permit effective date	July 1, 2024 and July 1, 2025
Performance Evaluation. Full implementation of all structural controls used to demonstrate that the total phosphorus export rate (P_{exp}) from the LPCP Area in lbs/yr is equal to or less than the applicable Allowable Phosphorus Load(P_{allow}) plus the applicable Phosphorus Reduction Requirement (P_{RR}) multiplied by 0.80 $P_{exp} \leq P_{allow} + (P_{RR}\ X\ 0.80)$	8 years after permit effective date	July 1, 2026
Performance Evaluation	9 years after permit effective date	July 1, 2027
Performance Evaluation. Update LPCP	10 years after permit effective date	July 1, 2028

Full implementation of all structural controls used to demonstrate that the total phosphorus export rate (P_{exp}) from the LPCP Area in lbs/yr is equal to or less than the applicable Allowable Phosphorus Load(P_{allow}) plus the applicable Phosphorus Reduction Requirement (P_{RR}) multiplied by 0.60 $P_{exp} \leq P_{allow} + (P_{RR}\ X\ 0.60)$ OR that the permittee has reduced their phosphorus export rate by 66 lbs/year (30 kg/year) (whichever is greater), unless the full Phosphorus Reduction Requirement has already been met		
Performance Evaluation	11 and 12 years after permit effective date	July 1, 2029 and July 1, 2030
Performance Evaluation. Full implementation of all structural controls used to demonstrate that the total phosphorus export rate (P_{exp}) from the LPCP Area in lbs/yr is equal to or less than the applicable Allowable Phosphorus Load(P_{allow}) plus the applicable Phosphorus Reduction Requirement (P_{RR}) multiplied by 0.30 $P_{exp} \leq P_{allow} + (P_{RR}\ X\ 0.30)$	13 years after permit effective date	July 1, 2031
Performance Evaluation	14 years after permit effective date	July 1, 2032
Performance Evaluation. Full implementation of all structural controls used to demonstrate that the total phosphorus export rate (P_{exp}) from the LPCP Area in lbs/yr is equal to or less than the applicable Allowable Phosphorus Load (P_{allow}) $P_{exp} \leq P_{allow}$	15 years after permit effective date	July 1, 2033

b. Components of LPCP Implementation:

i. Legal Analysis- The permittee shall evaluate existing regulatory mechanisms available to the MS4 such as by-laws and ordinances and describe any changes to these regulatory mechanisms necessary to effectively implement the LPCP. This may include the creation or amendment of financial and regulatory authorities. The permittee shall adopt necessary regulatory changes by the end of the permit term.

ii. Scope of the LPCP (LPCP Area) - The permittee shall identify the "LPCP Area," or the area in which the permittee plans to implement the LPCP. The permittee may either implement its LPCP in the entire geographic area within its jurisdiction discharging to the impaired waterbody or implement its LPCP in only the urbanized area portion of its jurisdiction discharging to the impaired waterbody. If the permittee chooses to implement the LPCP over the entire jurisdiction discharging to the impaired waterbody, the permittee may demonstrate compliance with the applicable Phosphorus Reduction Requirement by accounting for all structural and non-structural controls located in the entire geographic area within its jurisdiction discharging to the impaired waterbody (i.e., both inside and outside the urbanized area). If the permittee elects to implement the LPCP only within the urbanized area discharging to the impaired waterbody, the permittee must demonstrate compliance with the applicable Phosphorus Reduction Requirement by only accounting for structural and non-structural controls on discharges that occur within the urbanized area.

iii. Calculate Baseline Phosphorus Load (P_{base}), Phosphorus Reduction Requirement (P_{RR}) and Allowable Phosphorus Load (P_{allow}) – The permittee shall calculate the Allowable Phosphorus Load and Phosphorus Reduction Requirement in lbs/yr. Permittees must first estimate Baseline Phosphorus Load (in lbs/yr) from its LPCP Area consistent with the methodology in Attachment 1 to Appendix F. The baseline must be estimated using land use phosphorus export coefficients in Attachment 1 to Appendix F and not account for phosphorus reductions resulting from non-structural BMPs and/or structural SCMs implemented to date. Next, Permittees must calculate the Phosphorus Reduction Requirement (in lbs/yr) as the product of the Baseline Phosphorus Load and the applicable Percent Phosphorus Reduction requirement from Table F-6. Finally, permittees must calculate the Allowable Phosphorus Load as the difference between the Baseline Phosphorus Load and Phosphorus Reduction Requirement (in lbs/yr).

iv. Description of planned non-structural controls – The permittee shall describe the non-structural BMPs it will implement to help reduce phosphorus to the level of the Allowable Phosphorus Load. The description of non-structural BMPs shall include the planned measures, the areas where the measures will be implemented, and the annual phosphorus reductions that are expected to result from their implementation. Annual phosphorus reduction from non-structural BMPs shall be calculated consistent with Attachment 2 to Appendix F. The permittee shall update the description of planned non-structural controls as needed to support the achievement of the milestones in Table F-7, including an update in the updated written LPCP 10 years after the permit effective date.

v. Description of planned structural controls – The permittee shall develop a priority ranking of areas and infrastructure within the municipality for potential implementation of SCMs for phosphorus reductions. The permittee may coordinate this activity with the requirements for retrofitting permittee-owned property at Part 2.3.6.e of the Draft Permit. The ranking may use available screening data and monitoring results collected since the effective date of the 2016 MA MS4 Permit either by the permittee or another entity. The ranking may also use system mapping information collected and tracked in accordance with Parts 2.3.4.g and 2.3.7.d of the Draft Permit. The permittee shall also include in this prioritization a detailed assessment of site suitability for potential SCMs based on soil types and other factors. The permittee shall use the results of the priority ranking to develop a plan to install structural SCMs to support achievement of the phosphorus reduction requirement in Table F-6 considering the schedule of milestones in Table F-7. The plan shall describe the structural SCMs, identify the areas where the SCMs will be implemented, and estimate the expected annual phosphorus reductions (in lbs/yr) for each planned structural SCM. Annual phosphorus reductions from structural SCMs shall be calculated consistent with Attachment 3 to Appendix F. Existing and new structural SCMs implemented by a third party may be included in the estimated annual phosphorus reductions for the LPCP provided that the third-party structural SCM is included in the O&M Program described in Part I.B.2.vi, below. The permittee must update the description of planned structural SCMs in coordination with the LPCP update in Year 10 of the schedule provided in Table F-7 but frequent updates to the structural SCM implementation plan, as necessary, are recommended. Documentation for each structural SCM installed in accordance with this Part shall be included as part of the Asset Management requirements in Part 2.3.7.d of the Permit.

vi. Description of Operation and Maintenance (O&M) Program for all planned and existing structural SCMs – The permittee shall establish an Operation and Maintenance (O&M) Program for all structural SCMs being claimed for phosphorus reduction credit as part of the LPCP. This includes existing structural SCMs installed and operating at the time of LPCP development as well as new SCMs installed after the effective date of the permit. The O&M Program must incorporate plans for existing and/or new structural SCMs installed and operated by a third-party if the permittee's estimate of phosphrous load reductions includes third-party SCMs. The O&M Program shall become part of the LPCP and include: (1) the inspection and maintenance schedule for each structural SCM annually or more frequently in accordance with consistent with design or manufacturer specifications and (2) the party responsible for structural SCM inspection and maintenance. O&M schedules for each structural SCM shall be included as part of the Asset Management requirements in Part 2.3.7.d of the Permit.

vii. Implementation Schedule – The permittee shall develop a schedule for implementing non-structural BMPs and structural SCMs to achieve the phosphorus load reduction requirement as soon as possible but, at a minimum, in accordance with the milestones established in Table F-7. The schedule shall consider, as appropriate, planning for funding, training, purchasing, construction, inspection, monitoring, O&M and other assessment and evaluation components of implementation. Implementation of planned BMPs must begin upon completion of the written LPCP, and all non-structural BMPs shall be fully implemented within six years of the permit effective date. Where planned structural SCMs or other major drainage infrastructure projects are expected to take additional time to construct, the permittee shall provide a schedule for completion of construction consistent with the milestones in Years 8, 10, 13, and 15 in Table F-7 within four years of the effective date of the permit. The implementation schedule shall be updated as needed to support the achievement of the milestones in Table F-7, including with the updated written LPCP 10 years after the permit effective date.

viii. Cost and funding source assessment – The permittee shall estimate the cost for implementing its LPCP and describe known and anticipated funding mechanisms. The permittee shall describe the steps it will take to implement its funding plan. This may include but is not limited to conceptual development, outreach to affected parties, and development of legal authorities.

ix. Complete written LPCP – The permittee must complete the written LPCP within five years of the effective date of the permit. The LPCP shall include all components described in Table F-7 through the first five years following the effective date of the permit. The permittee shall make the LPCP available to the public for public comment during the LPCP development. EPA recommends the permittee to post the LPCP online to facilitate public involvement. The LPCP shall be updated as needed to support the achievement of the milestones in Table F-7 with a minimum of one update 10 years after the permit effective date at a minimum to reflect progress in the implementation of structural SCMs and non-structural BMPs. The updated LPCP shall build upon the original LPCP and include additional or new measures the permittee will use to support the achievement of the required phosphorus load reduction in Table F-6.

x. Performance Evaluation – The permittee shall evaluate the effectiveness of the LPCP by tracking the phosphorus reductions achieved through implementation of the LPCP. Within six years after the effective date of the permit, the permittee shall account for phosphorus load reductions achieved

with structural SCMs and non-structural BMPs[17] and phosphorus load additions from new development and redevelopment in the LPCP Area. Phosphorus additions and reductions shall be calculated consistent with methodology described in Appendix F Attachment 1 (additions and reductions through land use change), Attachment 2 (non-structural BMP performance), and Attachment 3 (structural SCM performance).[18] Phosphorus load increases and reductions (in lbs/yr) shall be added or subtracted from the calculated Baseline Phosphorus Load to estimate the yearly phosphorous export rate from the LPCP Area in lbs/yr. The permittee shall also include all information required in part II.2 of this Appendix in each performance evaluation.

2. Public Education Supplement for Plant Nutrient Management

   In addition to the Public Education minimum control measures in Part 2.3.2 of the Permit, the permittee shall supplement with an annual message informing residential homeowners and lawn care professionals about statewide standards for the application of plant nutrients to non-agricultural turf and lawns at 330 CMR 31.00. Public education messages can be combined with requirements of Appendix H Parts I, II and III as well as Appendix F Parts I.D, I.E, II.A, II.B, and II.C where appropriate.

3. Reporting

   The permittee shall report on the planning and implementation of the LPCP with each waterbody in each annual report. Permittees subject to the requirements in Appendix F Part I.B for the first time as of the effective date of this permit shall document completion of milestones in Table F-7 for the first 5 years of the permit in the annual report beginning the year after the permit effective date. After submission of the Complete LPCP (within 5 years after the permit effective date), the permittee shall include the following in each annual report submitted pursuant to Part 4.4 of the Permit:

[17] Permittees may include existing and new SCMs operated by the permittee as well as those operated by a third party when estimating phosphorus reductions provided that the O&M Program include all SCMs quantified in the reduction estimate and with the exception of phosphorus reductions already credited to MassDOT, or another permittee.

[18] Annual phosphorus reductions from structural SCMs installed in the LPCP Area prior to the effective date of this permit shall be calculated consistent with Attachment 3 to Appendix F. Phosphorus Reduction Credit for previously installed SCMs will only be given if the Permittee demonstrates that the SCM is performing up to design specifications and certifies that the SCM is properly maintained and inspected annually or more frequently according to manufacturer design or specifications. This certification shall be part of the annual performance evaluation during the year credit is claimed for the previously installed SCM.

a. A list of non-structural BMPs implemented by waterbody during the reporting year along with the phosphorus reduction (P_{NSred}) in lbs/yr calculated consistent with Attachment 2 to Appendix F.

b. A list of structural SCMs implemented by waterbody during the reporting year including:
   i. Location information of structural SCMs including waterbody and GPS coordinates or street address;
   ii. Phosphorus reduction for each structural SCMs implemented to date (P_{Sred}) in lbs/yr calculated consistent with Attachment 3 to Appendix F;
   iii. Date of last completed maintenance for each structural SCM.

c. Phosphorus load increases due to development (P_{DEVinc}) within each watershed over the previous reporting period and incurred to date calculated consistent with Attachment 1 to Appendix F.

d. Estimated yearly phosphorus export rate from the LPCP Area for each applicable TMDL calculated using Equation 2, below. Equation 2 calculates the annual phosphorus export rate (P_{exp}) in lbs/yr as the baseline phosphorus load (from Table F-6) minus the annual phosphorus reductions achieved with non-structural BMPs and structural SCMs plus the load increase from development to date (calculated according to the methodology in Attachment 1 to Appendix F). This equation shall be used to demonstrate compliance with the phosphorus reduction milestones required as part of each phase of the LPCP.

$$P_{exp}\left(\frac{lbs}{yr}\right) = P_{base}\left(\frac{lbs}{yr}\right) - \left(P_{Sred}\left(\frac{lbs}{yr}\right) + P_{NSred}\left(\frac{lbs}{yr}\right)\right) + P_{DEVinc}\left(\frac{lbs}{yr}\right)$$

Equation 2. Equation used to calculate yearly phosphorus export rate from the chosen LPCP Area.

P_{exp}= Current phosphorus export rate from the LPCP Area in lbs/year.
P_{base}= Baseline phosphorus export rate from LPCP Area in lbs/year.
P_{Sred}= Annual phosphorus reduction from implemented SCMs in the LPCP Area in lbs/year (may include SCMs on permittee-owned property, private property, and new development).
P_{NSred}= yearly phosphorus reduction from implemented non-structural BMPs in the LPCP Area in lbs/year (may include SCMs on permittee-owned property, private property, and new development).
P_{DEVinc}= Annual phosphorus increase resulting from development since the year baseline loading was calculated in the LPCP Area in lbs/year.

e. Certification that all structural SCMs are being inspected and maintained according to the O&M program specified as part of the PCP. The certification statement shall be:

I certify under penalty of law that all source control and treatment Best Management Practices being claimed for phosphorus reduction credit have been inspected, maintained and repaired in accordance with manufacturer or design specification. I certify that, to the best of my knowledge, all Best Management Practices being claimed for a phosphorus reduction credit are performing as originally designed.

g. Certification that all municipally owned and maintained turf grass areas are being managed in accordance with Massachusetts Regulation 331 CMR 31 pertaining to proper use of fertilizers on turf grasses (see http://www.mass.gov/courts/docs/lawlib/300-399cmr/330cmr31.pdf).

4. At any time during the permit term the permittee may be relieved of the applicable requirements in Appendix F Parts I.B.1, I.B.2, and I.B.3 when in compliance with this part.

a. The permittee is relieved of its additional requirements as of the date when the applicable TMDL has been modified, revised or withdrawn and EPA has approved a new TMDL applicable for the receiving water that indicates that no additional stormwater controls for the control of phosphorus are necessary for the permittee's discharge based on wasteload allocations in the newly approved TMDL.

b. In such a case, the permittee shall document the date of the approved TMDL in its SWMP and is relieved of any remaining requirements of Appendix F Parts I.B.1, I.B.2, and I.B.3 as of that date and the permittee shall continue to implement all requirements of Appendix F Parts I.B required to be implemented prior to the date of the newly approved TMDL, including ongoing implementation of identified non-structural BMPs and routine maintenance and replacement of all structural SCMs in accordance with manufacturer or design specifications.

C. Bacteria and Pathogen TMDL Requirements

There are currently 20 approved bacteria (fecal coliform bacteria) or mixed pathogen (fecal coliform, E. coli, and/or enterococcus bacteria) TMDLs for certain waterbodies in Massachusetts.[19] In compliance with Part 2.2.1.b.iii of the Permit, discharges to a waterbody segment covered by a currently approved bacteria or mixed pathogen TMDL is subject to the requirements of this part.

1. In addition to the requirements of part 2.3 of the Permit, traditional and non-traditional MS4s operating in the municipalities listed in Table F-8 and/or that discharge to a waterbody subject to a bacteria or pathogen TMDL in Table F-8 shall comply with the following BMPs:

    a. In addition to the Public Education minimum control measures in Part 2.3.2 of the Permit, the permittee shall supplement the Residential program with an annual message encouraging the proper management of pet waste, including noting any existing ordinances where appropriate. The permittee or its agents shall disseminate educational materials to dog owners at the time of issuance or renewal of a dog license, or other appropriate time. Education materials shall describe the detrimental impacts of improper management of pet waste, requirements for waste collection and disposal, and penalties for non-compliance. The permittee shall also provide information to owners of septic systems about proper maintenance in any catchment that discharges to a water body impaired for bacteria or pathogens. All public education messages can be combined with requirements of Appendix H Parts I, II and III as well as Appendix F Parts I.D, I.E, II.A, II.B, and II.C where appropriate.

    b. In addition to the Illicit Discharge minimum control measures in Part 2.3.4 of the Permit, permittees shall designate catchments draining to any waterbody impaired for bacteria or pathogens as either “Problem” or “High Priority” for the purposes of catchment investigations under the IDDE program.

TMDL	No. Waterbody Segments	Geographic Area
Parker River Watershed	9	Boxford, Georgetown, Groveland, Ipswich, Newbury, Newburyport, North Andover, Rowley, West Newbury
Islands Watershed	10	Chilmark, Edgartown, Gay Head, Gosnold, Nantucket, Oak Bluffs, Tisbury, West Tisbury
Boston Harbor, Weymouth-Weir, and Mystic Watersheds	33	Abington, Arlington, Avon, Belmont, Boston, Braintree, Brockton, Burlington, Cambridge, Canton, Charlestown, Chelsea, Cohasset, Everett, Hingham, Holbrook, Hull, Lexington, Malden, Medford, Melrose, Milton, Norwell, Quincy, Randolph, Reading, Revere, Rockland, Somerville, Stoughton, Wakefield, Weymouth, Wilmington, Winchester, Winthrop, Woburn

[19] EPA-approved bacteria or pathogen TMDLs in Massachusetts available at: https://www.epa.gov/tmdl/region-1-approved-tmdls-state#tmdl-ma.

South Coastal Watershed	20	Abington, Bourne, Cohasset, Duxbury, Halifax, Hanover, Hanson, Hingham, Kingston, Marshfield, Norwell, Pembroke, Plymouth, Plympton, Rockland, Sandwich, Scituate, Weymouth, and Whitman
Neponset River Basin	4	Foxborough, Walpole, Norwood, Canton, Stoughton
North Coastal Watershed	43	Amesbury, Beverly, Danvers, Essex, Everett, Gloucester, Hamilton, Ipswich, Lynn, Lynnfield, Malden, Manchester, Marblehead, Melrose, Nahant, Peabody, Reading, Rockport, Salem, Saugus, Stoneham, Swampscott, Wakefield, Wenham
Cape Cod Watershed	17	Barnstable, Chatham, Falmouth, Hyannis, Mashpee, Orleans, Sandwich, Truro, Yarmouth, MA
Taunton River Watershed	20	Abington, Avon, Berkeley, Bridgewater, Brockton, Attleboro, Dighton, East Bridgewater, Easton, Fall River, Foxborough, Freetown, Halifax, Hanson, Lakeville, Mansfield, Middleboro, Norton, Plainville, Plympton, Raynham, Seekonk, Sharon, Somerset, Stoughton, Taunton, West Bridgewater, Westport, Whitman, and Wrentham
Narragansett/Mt. Hope Bay Watershed	7	Attleboro, Dighton, Rehoboth, Seekonk, Swansea, Westport, and Fall River
Cape Cod	49	Barnstable, Bourne, Brewster, Chatham, Dennis, Eastham, Falmouth, Harwich, Mashpee, Orleans, Provincetown, Sandwich, Truro, Wellfleet, Yarmouth
Three Bays Watershed	4	Barnstable
Buzzards Bay	52	Bourne, Dartmouth, Fairhaven, Falmouth, Marion, Mattapoisett, New Bedford, North Falmouth, Wareham, Westport
Charles River Watershed	20	Arlington, Ashland, Bellingham, Belmont, Boston, Brookline, Cambridge, Dedham, Dover, Foxborough, Franklin, Holliston, Hopedale, Hopkinton, Lexington, Lincoln, Medfield, Medway, Mendon, Milford, Millis, Natick, Needham, Newton, Norfolk, Quincy, Sherborn, Somerville, Walpole, Waltham, Watertown, Wayland, Wellesley, Weston, Westwood, Wrentham
Kickemuit River Watershed	1	Swansea, Rehoboth
Frost Fish Creek	1	Chatham
Muddy Creek	1	Chatham, Harwich
Palmer River	13	Rehoboth, Swansea
Little Harbor	1	Cohasset
Shawsheen River	16	Lawrence, North Andover, Andover, Tewksbury, Wilmington, Billerica, Bedford, Burlington, Concord, Lincoln, Lexington
Neponset River	20	Boston, Dedham, Dover, Foxborough, Medfield, Milton, Quincy, Randolph, Sharon, Stoughton, Walpole, Westwood

Table F-8: Municipalities with EPA-approved bacteria or pathogen TMDL.

2. The permittee shall identify in its SWMP all activities implemented in accordance with the requirements of Appendix F Part I.C.1 to date to reduce bacteria/pathogens in their discharges including implementation schedules for non-structural BMPs and any maintenance requirements for structural SCMs.

3. At any time during the permit term the permittee may be relieved of the applicable requirements in Appendix F Part I.C.1. as of the date when the following conditions are met:

a. The applicable TMDL has been modified, revised, or withdrawn and EPA has approved a new TMDL applicable to the receiving water that indicates that no additional stormwater controls for bacteria/pathogens are necessary for the permittee's discharge based on wasteload allocations in the newly approved TMDL.

b. In such a case, the permittee shall document the date of the approved TMDL in its SWMP and is relieved of any additional remaining requirements of Appendix F Part I.C.1 as of that date and the permittee shall continue to implement all requirements of Appendix F Part I.C.1 required to be implemented prior to the date of the newly approved TMDL, including ongoing implementation of identified non-structural BMPs and routine maintenance and replacement of all structural SCMs in accordance with manufacturer or design specifications.

D. South Coastal Nitrogen TMDL Requirements

There are 25 approved TMDLs for nitrogen for various watersheds, ponds and bays in the Buzzards Bay and Cape Cod watersheds. In addition, there is an approved nitrogen TMDL for the New Bedford Inner Harbor Embayment System and the Wareham River Estuary System.[20] For the purposes of the MS4, these nitrogen TMDLs are collectively the "South Coastal" Nitrogen TMDLs. In compliance with Part 2.2.1.b.iv of the Permit, discharges to a waterbody segment covered by a currently approved nitrogen TMLD in South Coastal Massachusetts must implement the requirements of this part to ensure that current nitrogen loads from MS4 stormwater discharged into the impaired waterbodies do not increase.

1. In addition to the requirements of Part 2.3 of the Permit, traditional and non-traditional MS4s operating in the municipalities listed in Table F-9 and/or that discharge to a waterbody subject to one of the South Coastal nitrogen TMDLs in Table F-9 shall comply with the following BMPs:

    a. In addition to the Public Education minimum control measures in Part 2.3.2 of the Permit, the permittee shall supplement its Residential and Business/ Commercial/Institution program with annual timed messages on specific topics.
        i. The permittee shall distribute an annual message in the spring (April/May) timeframe that encourages the proper use and disposal of grass clippings and informs homeowners and landscape professionals about statewide standards at 330 CMR 31.00 for application of plant nutrients to non-agricultural turf and lawns.
        ii. The permittee shall distribute an annual message in the summer (June/July) timeframe encouraging the proper management of pet waste, including noting any existing ordinances where appropriate.
        iii. The permittee shall distribute an annual message in the Fall (August/September/October) timeframe encouraging the proper disposal of leaf litter.
        iv. The permittee shall deliver an annual message on each of these topics, unless the permittee determines that one or more of these issues is not a significant contributor of nitrogen to discharges from the MS4 and the permittee retains documentation of this finding in the SWMP. All public education messages can be combined with requirements of Appendix H Parts I, II and III as well as Appendix F Parts I.C, I.E, II.A., II.B, and II.C where appropriate.

    b. In addition to the Stormwater Management in New Development and Redevelopment minimum control measures in Part 2.3.6 of the Permit, the ordinance or other regulatory mechanism shall include a requirement that new development

[20] EPA-approved Nitrogen TMDLs for Buzzards Bay and Cape Cod are available at: https://www.epa.gov/tmdl/region-1-approved-tmdls-state#tmdl-ma

and redevelopment stormwater management systems be optimized for nitrogen removal.

c. In addition to the Good Housekeeping and Pollution Prevention minimum control measures in Part 2.3.7 of the Permit, the permittee shall:
    i. Consider structural SCMs and non-structural BMPs for optimizing nitrogen reductions when evaluating retrofits on permittee-owned property in compliance with Part 2.3.7.e of the Permit.
    ii. Establish requirements to ensure that fertilizer use on permittee owned property is in accordance with statewide standards at 330 CMR 31.00 for application of plant nutrients to non-agricultural turf and lawns, in addition to reducing and managing fertilizer use in compliance with Part 2.3.7.a of the Permit.
    iii. Establish procedures to properly manage grass cuttings and leaf litter on permittee property, including prohibiting blowing organic waste materials onto adjacent impervious surfaces.
    iv. Either establish procedures for increased street sweeping at a frequency determined by the permittee for all municipal owned streets and parking lots to target areas with potential for high pollutant loads. The street sweeping schedule determined by the permittee to target high pollutant loads shall be documented in the SWMP and included in each annual report. The number of miles swept or the volume or mass of material removed as part of this requirement shall be combined with the street sweeping reporting required in Part 2.3.7.g.i.

TMDL	No. Waterbody Segments	Geographic Area
New Bedford Inner Harbor Embayment System	4	Acushnet, Fairhaven, Freetown, Lakeville, New Bedford, Rochester
Wareham River Estuary System	6	Carver, Plymouth, and Wareham
Wellfleet Harbor Embayment System	7	Eastham, Truro, Wellfleet
Waquoit Bay and Eel River	12	Falmouth, Mashpee, Sandwich
Megansett Harbor and Squeteague Harbor	2	Bourne, Falmouth
Falmouth Inner Harbor	1	Falmouth
Slocums and Little River Embayment System	6	Dartmouth, Freetown, New Bedford, Westport
Fiddlers Cove and Rands Harbor Estuarine System	2	Bourne, Falmouth, Sandwich
Quissett Harbor Estuarine System	1	Falmouth, Mashpee, Sandwich
Wild Harbor Estuarine System	1	Bourne, Falmouth, Sandwich
Parkers River Estuarine System	3	Yarmouth
Bass River Estuarine System	9	Brewster, Dennis, Yarmouth
Swan Pond River Estuarine System	2	Brewster, Dennis, Harwich
Westport River Estuarine System	3	Dartmouth, Fall River, Freetown, Westport
Herring River Estuarine System	1	Brewster, Dennis, Harwich
Allen, Wychmere and Saquatucket Harbor Embayment Systems	3	Harwich
Lewis Bay and Halls Creek System	6	Barnstable, Yarmouth
Chatham Southern Embayments	8	Chatham

Oyster Pond System	1	Falmouth
West Falmouth Harbor Bay System	6	Mashpee, Barnstable, Sandwich
Little Pond System	1	Falmouth
Three Bays System	6	Barnstable, Sandwich, Mashpee
Phinneys Harbor	1	Bourne, Sandwich
Popponesset Bay	5	Mashpee, Barnstable, Sandwich
Centerville River – East Bay System	1	Barnstable
Waquoit Bay System	5	Mashpee, Falmouth, Sandwich
Pleasant Bay System	16	Brewster, Chatham, Harwich, Orleans
Great, Green, and Bournes Pond Embayment Systems	5	Falmouth, Sandwich, Mashpee, and Bourne
Chatham	14	Chatham

Table F-9: Municipalities with EPA-approved nitrogen TMDL in Southeastern coastal Massachusetts.

2. The permittee shall identify in its SWMP all activities implemented in accordance with the requirements of Appendix F Part I.D.1 to date to reduce nitrogen in their discharges including implementation schedules for non-structural BMPs and any maintenance requirements for structural SCMs.

3. At any time during the permit term the permittee may be relieved of additional requirements in Appendix F Part I.D.1. applicable to it when in compliance with this part.

    a. The permittee is relieved of its additional requirements as of the date when the applicable TMDL has been modified, revised, or withdrawn and EPA has approved a new TMDL applicable for the receiving water that indicates that no additional stormwater controls for the control of nitrogen are necessary for the permittee's discharge based on wasteload allocations in the newly approved TMDL.

    b. In such a case, the permittee shall document the date of the approved TMDL in its SWMP and is relieved of any remaining requirements of Appendix F Part I.D.1 as of that date and the permittee shall continue to implement all requirements of Appendix F Part I.D.1 required to be implemented prior to the date of the newly approved TMDL, including ongoing implementation of identified non-structural BMPs and routine maintenance and replacement of all structural SCMs in accordance with manufacturer or design specifications.

E. Assabet River Phosphorus TMDL Requirements

On September 23, 2004 EPA approved the *Assabet River Total Maximum Daily Load for Total Phosphorus*[21]. The following measures are needed to ensure that current phosphorus loads from MS4 stormwater discharged directly or indirectly via tributaries into the Assabet River do not increase. In compliance with Part 2.2.1.b.v of the Permit, discharges to a waterbody segment covered by the Assabet River Total Phosphorus TMDL must implement the requirements of this part.

1. In addition to the requirements of Part 2.3 of the Permit, traditional and non-traditional MS4s operating in municipalities listed in Table F-10 and/or that discharge to the Assabet River (Segments MA82B-01 through MA82B-07) shall comply with the following BMPs:

    a. In addition to the Public Education minimum control measures in Part 2.3.2 of the Permit, the permittee shall supplement its Residential and Business/Commercial/Institution program with annual timed messages on specific topics.
        i. The permittee shall distribute an annual message in the spring (April/May) timeframe that encourages the proper use and disposal of grass clippings and informs homeowners and landscape professionals about statewide standards at 330 CMR 31.00 for application of plant nutrients to non-agricultural turf and lawns.
        ii. The permittee shall distribute an annual message in the summer (June/July) timeframe encouraging the proper management of pet waste, including noting any existing ordinances where appropriate.
        iii. The permittee shall distribute an annual message in the Fall (August/September/October) timeframe encouraging the proper disposal of leaf litter.
        iv. The permittee shall deliver an annual message on each of these topics, unless the permittee determines that one or more of these issues is not a significant contributor of phosphorus to discharges from the MS4 and the permittee retains documentation of this finding in the SWMP. All public education messages can be combined with requirements of Appendix H Parts I, II and III as well as Appendix F Parts I.C, I.E, II.A., II.B, and II.C where appropriate.

    b. In addition to the Stormwater Management in New Development and Redevelopment minimum control measures in Part 2.3.6 of the Permit, the ordinance or other regulatory mechanism shall include a requirement that new development

[21] Massachusetts Department of Environmental Protection, 2004. *Assabet River Total Maximum Daily Load for Total Phosphorus.* CN 201.0 available at https://www.epa.gov/tmdl/region-1-approved-tmdls-state#tmdl-ma

and redevelopment stormwater management systems be optimized for phosphorus removal.

c. In addition to the Good Housekeeping and Pollution Prevention minimum control measures in Part 2.3.7 of the Permit, the permittee shall:
    i. Consider structural SCMs that optimize phosphorus removal by infiltrating stormwater where feasible when evaluating retrofits on permittee-owned property in compliance with Part 2.3.7.e of the Permit.
    ii. Establish requirements to ensure that fertilizer use on permittee owned property is in accordance with statewide standards at 330 CMR 31.00 for application of plant nutrients to non-agricultural turf and lawns, in addition to reducing and managing fertilizer use in compliance with Part 2.3.7.a of the Permit.
    iii. Establish procedures to properly manage grass cuttings and leaf litter on permittee property, including prohibiting blowing organic waste materials onto adjacent impervious surfaces.
    iv. Either establish procedures for increased street sweeping at a frequency determined by the permittee for all permittee-owned streets and parking lots to target areas with potential for high pollutant loads. The street sweeping schedule determined by the permittee to target high pollutant loads shall be documented in the SWMP and included in each annual report. The number of miles swept or the volume or mass of material removed as part of this requirement shall be combined with the street sweeping reporting required in Part 2.3.7.g.i.

Acton	Hudson
Berlin	Littleton
Bolton	Marlborough
Boxborough	Maynard
Boylston	Northborough
Carlisle	Shrewsbury
Clinton	Stow
Concord	Westborough
Grafton	Westford
Harvard	

Table F-10: Municipalities located in the Assabet River Watershed

2. The permittee shall identify in its SWMP all activities implemented in accordance with the requirements of Appendix F Part I.E.1 to date to reduce phosphorus in their discharges including implementation schedules for non-structural BMPs and any maintenance requirements for structural SCMs.

3. At any time during the permit term the permittee may be relieved of additional requirements in Appendix F Part I.E.1. applicable to it when in compliance with this part.

   a. The permittee is relieved of its additional requirements as of the date when the applicable TMDL has been modified, revised, or withdrawn and EPA has approved a new TMDL applicable for the receiving water that indicates that no additional stormwater controls for the control of phosphorus are necessary for the permittee's discharge based on wasteload allocations in the newly approved TMDL.

   b. In such a case, the permittee shall document the date of the approved TMDL in its SWMP and is relieved of any remaining requirements of Appendix F Part I.E.1 as of that date and the permittee shall continue to implement all requirements of Appendix F Part I.E.1 required to be implemented prior to the date of the newly approved TMDL, including ongoing implementation of identified non-structural BMPs and routine maintenance and replacement of all structural SCMs in accordance with manufacturer or design specifications.

II. Requirements for Discharges to Impaired Waters with an Approved Out of State TMDL

A. Nitrogen TMDL Requirements

Discharges from MS4s in Massachusetts to waters that are tributaries to the Long Island Sound, which has an approved TMDL for nitrogen[22], are subject to the requirements of this part. The following measures are needed to manage current nitrogen loads from MS4 stormwater discharged directly or indirectly via tributaries into the Long Island Sound. In compliance with Part 2.2.1.c.i of the Permit, discharges to a waterbody segment covered by the Long Island Sound Total Nitrogen TMDL must implement the requirements of this part.

1. In addition to the requirements of Part 2.3 of the Permit, traditional and non-traditional MS4s operating in the municipalities listed in Table F-11 and/or that discharge to a waterbody subject to the Long Island Sound Nitrogen TMDL shall comply with the following BMPs:

    a. In addition to the Public Education minimum control measures in Part 2.3.2 of the Permit, the permittee shall supplement its Residential and Business/ Commercial/Institution program with annual timed messages on specific topics.
        i. The permittee shall distribute an annual message in the spring (April/May) timeframe that encourages the proper use and disposal of grass clippings and informs homeowners and landscape professionals about statewide standards at 330 CMR 31.00 for application of plant nutrients to non-agricultural turf and lawns.
        ii. The permittee shall distribute an annual message in the summer (June/July) timeframe encouraging the proper management of pet waste, including noting any existing ordinances where appropriate.
        iii. The permittee shall distribute an annual message in the Fall (August/September/October) timeframe encouraging the proper disposal of leaf litter.
        iv. The permittee shall deliver an annual message on each of these topics, unless the permittee determines that one or more of these issues is not a significant contributor of nitrogen to discharges from the MS4 and the permittee retains documentation of this finding in the SWMP. All public education messages can be combined with requirements of Appendix H Parts I, II and III as well as Appendix F Parts I.C, I.E, II.A, II.B and II.C where appropriate.

[22] Connecticut Department of Environmental Protection. 2000. *A Total Maximum Daily Load Analysis to Achieve Water Quality Standards for Dissolved Oxygen in Long Island Sound* available at https://www.epa.gov/tmdl/region-1-approved-tmdls-state.

b. In addition to the Stormwater Management in New Development and Redevelopment minimum control measures in Part 2.3.6 of the Permit, the permittee shall continue to implement procedures requiring that new development and redevelopment stormwater management systems be optimized for nitrogen removal.

c. In addition to the Good Housekeeping and Pollution Prevention minimum control measures in Part 2.3.7 of the Permit, the permittee shall:
    i. Prioritize nitrogen reductions when evaluating and installing SCM retrofits on permittee-owned property in compliance with Part 2.3.7.e of the permit.
    ii. Implement requirements to ensure that fertilizer use on permittee owned property is in accordance with statewide standards at 330 CMR 31.00 for application of plant nutrients to non-agricultural turf and lawns, in addition to reducing and managing fertilizer use in compliance with Part 2.3.7.a of the Permit.
    iii. Continue to implement procedures to properly manage grass cuttings and leaf litter on permittee property, including prohibiting blowing organic waste materials onto adjacent impervious surfaces.
    iv. Within 2 years of the effective date of the permit, establish and implement procedures for increased street sweeping at a frequency determined by the permittee for all municipal owned streets and parking lots to target areas with potential for high pollutant loads. The street sweeping schedule determined by the permittee to target high pollutant loads shall be documented in the SWMP and included in each annual report. The number of miles swept or the volume or mass of material removed as part of this requirement shall be combined with the street sweeping reporting required in Part 2.3.7.g.i.

2. Nitrogen Source Reductions

a. Beginning the second year following the effective date of the permit, the permittee shall install a minimum of one structural SCM per year in the urbanized area within the permittee's jurisdiction that is within the Connecticut River Watershed, the Housatonic River Watershed, and/or the Thames River Watershed. Planned SCMs shall prioritize the catchments with high potential nitrogen loads identified in the permittee's Nitrogen Source Identification Report. Permittees shall be informed by the analysis and schedule of planned SCMs identified in the permittee's Nitrogen Source Identification Report.

b. In the first annual report following the permit effective date, the permittee shall report:
    i. Total impervious area and total directly connected impervious area (DCIA) in the urbanized area within the permittee's jurisdiction that is within the

Connecticut River Watershed, the Housatonic River Watershed, and/or the Thames River Watershed;

ii. Total nitrogen load (in lbs/year) from the impervious area and DCIA identified in (i) above calculated using the nitrogen export loading rates in Attachment 2 Table F2-2 of Appendix F;

iii. The structural SCM installed by July 1, 2024 as a demonstration project including the type of SCM, location, total impervious area treated, design storage volume, and estimated nitrogen load removed (in lbs/year) calculated consistent with the methodology in Attachment 3 of Appendix F;

iv. The estimated nitrogen load removed (in lbs/year) resulting from the implementation of non-structural SCMs in the urbanized area within the permittee's jurisdiction that is within the Connecticut River Watershed, the Housatonic River Watershed, and/or the Thames River Watershed. The permittee shall calculate the estimated nitrogen load removed consistent with the methodology in Attachment 2 of Appendix F;

v. A list of all structural SCMs in the urbanized area within the permittee's jurisdiction that is within the Connecticut River Watershed, the Housatonic River Watershed, and/or the Thames River Watershed including the demonstration project reported in (iii) above. The permittee shall report the SCM type, total impervious area treated by the SCM, the design storage volume, and the estimated nitrogen load removed (in lbs/year). The permittee shall calculate the nitrogen load removed consistent with the methodology in Attachment 3 to Appendix F; and

vi. A list of a minimum of 4 planned structural SCMs that the permittee plans to install within a catchment with high nitrogen load potential, including a schedule for installation for five years following the effective date of the permit. Structural SCMs installed in compliance with this Part can be combined with applicable retrofit requirements in Part 2.3.6, Appendix F Parts I.B and II.B, and Appendix H Parts I and II where appropriate.

vii. For each planned structural SCM identified in (vi) above, the permittee shall identify the SCM type, total impervious area treated by the SCM, the design storage volume, and the estimated nitrogen load removed (in lbs/year). The permittee shall calculate the nitrogen load removed consistent with the methodology in Attachment 3 to Appendix F.

c. The permittee shall update the list of planned structural SCMs in annual reports for each alternate year beginning the third year after the effective date of the permit (i.e., Year 3, Year 5, etc.) to maintain a list of a minimum of 4 planned structural SCMs. The list of planned structural SCMs shall be updated annually to maintain a minimum of 4 SCMs unless all permittee-owned property has been retrofitted or additional retrofits are demonstrated to be infeasible.

d. The permittee shall track all structural SCMs installed in the urbanized area by the permittee or its agents and document the type, total impervious area treated, the

design storage volume, and the estimated nitrogen removed (in lbs/year) in the permittee's Asset Management Program in accordance with Part 2.3.7.d of the Permit. The permittee shall estimate the nitrogen removal for each by the BMP consistent with Attachment 3 to Appendix F. The permittee shall document the SCM type, total area treated by the SCM, the design storage volume of the SCM and the estimated nitrogen removed (in lbs per year) by the SCM in each annual report.

Adams	Hatfield	Rutland
Agawam	Hinsdale	South Hadley
Amherst	Holyoke	Southampton
Ashburnham	Lanesborough	Southbridge
Ashby	Leicester	Southwick
Auburn	Lenox	Spencer
Belchertown	Longmeadow	Springfield
Charlton	Ludlow	Sturbridge
Cheshire	Millbury	Sutton
Chicopee	Monson	Templeton
Dalton	North Adams	Ware
Douglas	Northampton	Webster
Dudley	Oxford	West Springfield
East Longmeadow	Palmer	Westfield
Easthampton	Paxton	Westhampton
Gardner	Pelham	Westminster
Granby	Pittsfield	Wilbraham
Hadley	Richmond	Williamsburg
Hampden	Russell	Winchendon

Table F-11: Massachusetts municipalities in which MS4 discharges are within the Connecticut River Watershed, the Housatonic River Watershed, or the Thames River Watershed.

3. The permittee shall identify in its SWMP all activities implemented in accordance with the requirements of Appendix F Part II.A to date to reduce nitrogen in their discharges including implementation schedules for non-structural BMPs and any maintenance requirements for structural SCMs.

4. At any time during the permit term the permittee may be relieved of the applicable requirements in Appendix F Parts II.A.1 and II.A.2 when in compliance with this part.

    a. The permittee is relieved of its additional requirements as of the date when the applicable TMDL has been modified, revised, or withdrawn and EPA has approved a new TMDL applicable for the receiving water that indicates that no additional stormwater controls for the control of nitrogen are necessary for the permittee's discharge based on wasteload allocations in the newly approved TMDL.

b. In such a case, the permittee shall document the date of the approved TMDL in its SWMP and is relieved of any remaining requirements of Appendix F Parts II.A.1 and II.A.2 as of that date and the permittee shall continue to implement all requirements of Appendix F Parts II.A.1 and II.A.2 required to be implemented prior to the date of the newly approved TMDL, including ongoing implementation of identified non-structural BMPs and routine maintenance and replacement of all structural SCMs in accordance with manufacturer or design specifications.

B. Phosphorus TMDL Requirements

There are currently eight approved phosphorus TMDLs for certain waterbody segments in Rhode Island that identify urban stormwater discharges in Massachusetts as sources that are contributing phosphorus to the impaired segments. The TMDLs apply to the Kickemuit Reservoir, Upper Kikemuit River, Kickemuit River, Ten Mile River, Central Pond, Turner Reservoir, Lower Ten Mile River, and Omega Pond.[23] In compliance with Part 2.2.1.c.ii of the Permit, municipalities in Massachusetts identified in the TMDLs as contributing phosphorus to the impaired waterbody segments in Rhode Island covered by these TMDLs must implement the requirements of this part.

1. In addition to the requirements of Part 2.3 of the Permit, traditional and non-traditional MS4s operating in the municipalities listed in Table F-12 or and/or that discharge to a waterbody listed in Table F-12 shall comply with the following BMPs:

    a. In addition to the Public Education minimum control measures in Part 2.3.2 of the Permit, the permittee shall supplement its Residential and Business/ Commercial/Institution program with annual timed messages on specific topics.
        i. The permittee shall distribute an annual message in the spring (April/May) timeframe that encourages the proper use and disposal of grass clippings and informs homeowners and landscape professionals about statewide standards at 330 CMR 31.00 for application of plant nutrients to non-agricultural turf and lawns.
        ii. The permittee shall distribute an annual message in the summer (June/July) timeframe encouraging the proper management of pet waste, including noting any existing ordinances where appropriate.
        iii. The permittee shall distribute an annual message in the Fall (August/September/October) timeframe encouraging the proper disposal of leaf litter.
        iv. The permittee shall deliver an annual message on each of these topics, unless the permittee determines that one or more of these issues is not a significant contributor of nitrogen to discharges from the MS4 and the permittee retains documentation of this finding in the SWMP. All public education messages can be combined with requirements of Appendix H Parts I, II and III as well as Appendix F Parts I.C, I.E, II.A, II.B, and II.C where appropriate.

    b. In addition to the Stormwater Management in New Development and Redevelopment minimum control measures in Part 2.3.6 of the Permit, the permittee shall continue to implement procedures requiring that new development and

[23] EPA-approved phosphorus TMDLs in Rhode Island available at: https://www.epa.gov/tmdl/region-1-approved-tmdls-state#tmdl-ri.

redevelopment stormwater management systems be optimized for phosphorus removal.

c. In addition to the Good Housekeeping and Pollution Prevention minimum control measures in Part 2.3.7 of the Permit, the permittee shall:
    i. Prioritize phosphorus reductions when evaluating and installing SCM retrofits on permittee-owned property in compliance with Part 2.3.7.e of the permit.
    ii. Implement requirements to ensure that fertilizer use on permittee owned property is in accordance with statewide standards at 330 CMR 31.00 for application of plant nutrients to non-agricultural turf and lawns, in addition to reducing and managing fertilizer use in compliance with Part 2.3.7.a of the Permit.
    iii. Continue to implement procedures to properly manage grass cuttings and leaf litter on permittee property, including prohibiting blowing organic waste materials onto adjacent impervious surfaces.
    iv. Within two years of the effective date of the permit, establish and implement procedures for increased street sweeping at a frequency determined by the permittee for all municipal owned streets and parking lots to target areas with potential for high pollutant loads. The street sweeping schedule determined by the permittee to target high pollutant loads shall be documented in the SWMP and included in each annual report. The number of miles swept or the volume or mass of material removed as part of this requirement shall be combined with the street sweeping reporting required in Part 2.3.7.g.i.

2. Phosphorus Source Reductions

a. Beginning the second year following the effective date of the permit, the permittee shall install a minimum of one structural SCM per year in the urbanized area within the permittee's jurisdiction that drains to the water quality limited receiving water segments or their tributaries. Planned SCMs shall prioritize the catchments with high potential phosphorus loads identified in the permittee's Phosphorus Source Identification Report. Permittees shall be informed by the analysis and schedule of planned SCMs identified in the permittee's Phosphorus Source Identification Report.

b. In the first annual report following the permit effective date, the permittee shall report:
    i. Total impervious area and total directly connected impervious area (DCIA) in the urbanized area within the permittee's jurisdiction that drains to the water quality limited receiving water segments or their tributaries;
    ii. Total phosphorus load (in lbs/year) from the impervious area and DCIA identified in (i) above calculated using the phosphorus export loading rates in Attachment 2 Table F2-1 of Appendix F;

iii. The structural SCM installed by July 1, 2024 as a demonstration project including the type of SCM, location, total impervious area treated, design storage volume, and estimated phosphorus load removed (in lbs/year) calculated consistent with the methodology in Attachment 3 of Appendix F;
iv. The estimated phosphorus load removed (in lbs/year) resulting from the implementation of non-structural BMPs in the urbanized area within the permittee's jurisdiction that drains to the water quality limited receiving water segments or their tributaries. The permittee shall calculate the estimated phosphorus load removed consistent with the methodology in Attachment 2 of Appendix F;
v. A list of all structural SCMs in the urbanized area within the permittee's jurisdiction that drains to the water quality limited receiving water segments or their tributaries including the demonstration project reported in (iii) above. The permittee shall report the SCM type, total impervious area treated by the SCM, the design storage volume, and the estimated phosphorus load removed (in lbs/year). The permittee shall calculate the phosphorus load removed consistent with the methodology in Attachment 3 to Appendix F; and
vi. A list of a minimum of 4 planned structural SCMs that the permittee plans to install within a catchment with high phosphorus load potential, including a schedule for installation for five years following the effective date of the permit. Structural SCMs installed in compliance with this Part can be combined with applicable retrofit requirements in Part 2.3.6, Appendix F Parts I.B and II.B, and Appendix H Parts I and II where appropriate.
vii. For each planned structural SCM identified in (vi) above, the permittee shall identify the SCM type, total impervious area treated by the SCM, the design storage volume, and the estimated phosphorus load removed (in lbs/year). The permittee shall calculate the phosphorus load removed consistent with the methodology in Attachment 3 to Appendix F.

c. The permittee shall update the list of planned structural SCMs in annual reports for each alternate year beginning the third year after the effective date of the permit (i.e., Year 3, Year 5, etc.) to maintain a list of a minimum of 4 planned structural SCMs. The list of planned structural SCMs shall be updated annually to maintain a minimum of 4 SCMs unless all permittee-owned property has been retrofitted or additional retrofits are demonstrated to be infeasible.

d. The permittee shall track all structural SCMs installed in the urbanized area by the permittee or its agents and document the type, total impervious area treated, the design storage volume, and the estimated phosphorus removed (in lbs/year) in the permittee's Asset Management Program in accordance with Part 2.3.7.d of the Permit. The permittee shall estimate the phosphorus removal for each by the SCM consistent with Attachment 3 to Appendix F. The permittee shall document the SCM

type, total area treated by the SCM, the design storage volume of the SCM and the estimated phosphorus removed (in lbs per year) by the SCM in each annual report.

Municipality	Receiving Water	TMDL Name
Attleboro	Upper Ten Mile River, Lower Ten Mile River, Central Pond, Omega Pond and Turner Reservoir	Total Maximum Daily Load Analysis For The Ten Mile River Watershed
North Attleborough	Upper Ten Mile River, Lower Ten Mile River, Central Pond, Omega Pond and Turner Reservoir	Total Maximum Daily Load Analysis For The Ten Mile River Watershed
Plainville	Upper Ten Mile River, Lower Ten Mile River, Central Pond, Omega Pond and Turner Reservoir	Total Maximum Daily Load Analysis For The Ten Mile River Watershed
Rehoboth	Upper Kikemuit River, Kickemuit River, Kickemuit Reservoir	Fecal Coliform and Total Phosphorus TMDLs: Kickemuit Reservoir, Rhode Island (RI0007034L-01) Upper Kickemuit River (RI 0007034R-01) Kickemuit River (MA 61-08_2004)
Seekonk	Upper Ten Mile River, Lower Ten Mile River, Central Pond, Omega Pond and Turner Reservoir	Total Maximum Daily Load Analysis For The Ten Mile River Watershed
Swansea	Upper Kikemuit River, Kickemuit River, Kickemuit Reservoir	Fecal Coliform and Total Phosphorus TMDLs: Kickemuit Reservoir, Rhode Island (RI0007034L-01) Upper Kickemuit River (RI 0007034R-01) Kickemuit River (MA 61-08_2004)

Table F-12: Municipalities in Massachusetts identified in the TMDLs as containing MS4s contributing phosphorus to the impaired waterbody segments in Rhode Island, the impaired receiving water, and the approved TMDL name.

3. The permittee shall identify in its SWMP all activities implemented in accordance with the requirements of Appendix F Parts II.B.1 and II.B.2 to date to reduce phosphorus in their discharges including implementation schedules for non-structural BMPs and any maintenance requirements for structural SCMs.

4. At any time during the permit term the permittee may be relieved of the applicable requirements in Appendix F Parts II.B.1 and II.B.2 when in compliance with this part.

    a. The permittee is relieved of its additional requirements as of the date if the applicable TMDL has been modified, revised, or withdrawn and EPA has approved a new TMDL applicable for the receiving water that indicates that no additional stormwater controls for the control of phosphorus are necessary for the permittee's discharge based on wasteload allocations in the newly approved TMDL.

    b. In such a case, the permittee shall document the date of the approved TMDL in its SWMP and is relieved of any remaining requirements of Appendix F Parts II.B.1 and II.B.2 as of that date and the permittee shall continue to implement all requirements of Appendix F Parts II.B.1 and II.B.2 required to be implemented prior to the date of the newly approved TMDL, including ongoing implementation of identified non-structural BMPs and routine maintenance and replacement of all structural SCMs in accordance with manufacturer or design specifications.

C. Bacteria and Pathogen TMDL Requirements

There are currently six approved bacteria (fecal coliform bacteria) or pathogen (fecal coliform and/or enterococcus bacteria) TMDLs for certain waterbody segments in Rhode Island that identify urban stormwater discharges in Massachusetts as sources that are contributing bacteria or pathogens to the impaired segments. The TMDLs apply to the Kickemuit Reservoir, Upper Kickemuit River, Ten Mile River, Lower Ten Mile River and Omega Pond.[24] In compliance with Part 2.2.1.c.iii of the Permit, municipalities in Massachusetts identified in the TMDLs as contributing bacteria/pathogens to the impaired waterbody segments in Rhode Island covered by these TMDLs must implement the requirements of this part.

1. In addition to the requirements of Part 2.3 of the Permit, traditional and non-traditional MS4s operating in the municipalities listed in Table F-13 and/or that discharge to a waterbody listed on Table F-13 shall comply with the following BMPs:

    a. In addition to the Public Education minimum control measures in Part 2.3.2 of the Permit, the permittee shall supplement the Residential program with an annual message encouraging the proper management of pet waste, including noting any existing ordinances where appropriate. The permittee or its agents shall disseminate educational materials to dog owners at the time of issuance or renewal of a dog license, or other appropriate time. Education materials shall describe the detrimental impacts of improper management of pet waste, requirements for waste collection

[24] EPA-approved phosphorus TMDLs in Rhode Island available at: https://www.epa.gov/tmdl/region-1-approved-tmdls-state#tmdl-ri.

and disposal, and penalties for non-compliance. The permittee shall also provide information to owners of septic systems about proper maintenance in any catchment that discharges to a water body impaired for bacteria or pathogens. All public education messages can be combined with requirements of Appendix H Parts I, II and III as well as Appendix F Parts I.C, I.E, II.A, II.B, and II.C where appropriate.

b. In addition to the Illicit Discharge minimum control measures in Part 2.3.4 of the Permit, permittees shall designate catchments draining to any waterbody impaired for bacteria or pathogens as either "Problem" or "High Priority" for the purposes of catchment investigations under the IDDE program.

Municipality	Receiving Water	TMDL Name
Attleboro	Upper Ten Mile River, Lower Ten Mile River, Omega Pond	Total Maximum Daily Load Analysis For The Ten Mile River Watershed
North Attleborough	Upper Ten Mile River, Lower Ten Mile River, Omega Pond	Total Maximum Daily Load Analysis For The Ten Mile River Watershed
Plainville	Upper Ten Mile River, Lower Ten Mile River, Omega Pond	Total Maximum Daily Load Analysis For The Ten Mile River Watershed
Rehoboth	Upper Kikemuit River, Kickemuit Reservoir	Fecal Coliform and Total Phosphorus TMDLs: Kickemuit Reservoir, Rhode Island (RI0007034L-01) Upper Kickemuit River (RI 0007034R-01) Kickemuit River (MA 61-08_2004)
Seekonk	Upper Ten Mile River, Lower Ten Mile River, Omega Pond	Total Maximum Daily Load Analysis For The Ten Mile River Watershed

Table F-13: Municipalities in Massachusetts identified in the TMDLs as containing MS4s contributing bacteria or pathogens to the impaired waterbody segments in Rhode Island,, the impaired receiving water, and the approved TMDL name

2. The permittee shall identify in its SWMP all activities implemented in accordance with the requirements of Appendix F Part II.C.1 to date to reduce bacteria/pathogens in their

discharges including implementation schedules for non-structural BMPs and any maintenance requirements for structural SCMs.

3. At any time during the permit term the permittee may be relieved of the applicable requirements in Appendix F Part II.C.1 when in compliance with this part.

    a. The permittee is relieved of its additional requirements as of the date if the applicable TMDL has been modified, revised, or withdrawn and EPA has approved a new TMDL applicable for the receiving water that indicates that no additional stormwater controls for the control of bacteria/pathogens are necessary for the permittee's discharge based on wasteload allocations in the newly approved TMDL.

    b. In such a case, the permittee shall document the date of the approved TMDL in its SWMP and is relieved of any remaining requirements of Appendix F Part II.C.1 as of that date and the permittee shall continue to implement all requirements of Appendix F Part II.C.1 required to be implemented prior to the date of the newly approved TMDL, including ongoing implementation of identified non-structural BMPs and routine maintenance and replacement of all structural SCMs in accordance with manufacturer or design specifications.

D. Metals TMDL Requirements

There are currently five approved metals TMDL for a waterbody segment in Rhode Island that that identifies urban stormwater discharges in Massachusetts as sources that are contributing metals (Cadmium, Lead, Aluminum, Iron) to the impaired segment. The TMDLs include the Upper Ten Mile River, Lower Ten Mile River, Central Pond, Turner Reservoir and Omega Pond TMDLs.[25] In compliance with Part 2.2.1.c.iv of the Permit, municipalities in Massachusetts identified in the TMDLs as contributing metals to the impaired waterbody segments in Rhode Island covered by these TMDLs must implement the requirements of this part.

1. In addition to the requirements of part 2.3 of the Permit, traditional and non-traditional MS4s operating in the municipalities listed in Table F-14 and/or that discharge to a waterbody listed on Table F-14 shall comply with the following BMPs:

    a. In addition to the Stormwater Management in New Development and Redevelopment minimum control measures in Part 2.3.6 of the Permit, the permittee shall include as a provision of the ordinance or other regulatory mechanism that stormwater management systems designed to infiltrate stormwater on commercial or industrial sites be designed in compliance with the stormwater standard for land uses with higher potential pollutant loads at 310 CMR 10.05(k)(5) as described in the Massachusetts Stormwater Handbook.

    b. In addition to the Good House Keeping and Pollution Prevention minimum control measures in Part 2.3.7 of the Permit, the permittee shall:
        i. Establish procedures for increased street sweeping at a frequency determined by the permittee for all municipal owned streets and parking lots to target areas with potential for high pollutant loads. The street sweeping schedule determined by the permittee to target high pollutant loads shall be documented in the SWMP and included in each annual report. The number of miles swept or the volume or mass of material removed as part of this requirement shall be combined with the street sweeping reporting required in Part 2.3.7.g.i.

Municipality	Receiving Water	TMDL Name
Attleboro	Upper Ten Mile River, Lower Ten Mile River, Central Pond, Turner Reservoir, Omega Pond	Total Maximum Daily Load Analysis For The Ten Mile River Watershed
North Attleborough	Upper Ten Mile River, Lower Ten Mile River,	Total Maximum Daily Load Analysis For The Ten

[25] EPA-approved phosphorus TMDLs in Rhode Island available at: https://www.epa.gov/tmdl/region-1-approved-tmdls-state#tmdl-ri.

	Central Pond, Turner Reservoir, Omega Pond	Mile River Watershed
Plainville	Upper Ten Mile River, Lower Ten Mile River, Central Pond, Turner Reservoir, Omega Pond	Total Maximum Daily Load Analysis For The Ten Mile River Watershed
Seekonk	Upper Ten Mile River, Lower Ten Mile River, Central Pond, Turner Reservoir, Omega Pond	Total Maximum Daily Load Analysis For The Ten Mile River Watershed

Table F-14: Municipalities in Massachusetts identified in the TMDLs as containing MS4s contributing metals to the impaired waterbody segments in Rhode Island, the impaired receiving water, the approved TMDL name, and the pollutant of concern.

2. The permittee shall identify in its SWMP all activities implemented in accordance with the requirements of Appendix F Part II.D.1 to date to reduce metals (Cadmium, Lead, Aluminum, Iron) in their discharges including implementation schedules for non-structural BMPs and any maintenance requirements for structural SCMs.

3. At any time during the permit term the permittee may be relieved of the applicable requirements in Appendix F Part II.D.1 when in compliance with this part.

    a. The permittee is relieved of its additional requirements as of the date if the applicable TMDL has been modified, revised, or withdrawn and EPA has approved a new TMDL applicable for the receiving water that indicates that no additional stormwater controls for the control of metals (Cadmium, Lead, Aluminum, Iron) are necessary for the permittee's discharge based on wasteload allocations in the newly approved TMDL.

    b. In such a case, the permittee shall document the date of the approved TMDL in its SWMP and is relieved of any remaining requirements of Appendix F Part II.D.1 as of that date and the permittee shall continue to implement all requirements of Appendix F Part II.D.1 required to be implemented prior to the date of the newly approved TMDL, including ongoing implementation of identified non-structural BMPs and routine maintenance and replacement of all structural SCMs in accordance with manufacturer or design specifications.

III. Requirements for Discharges to Impaired Waters with a Regional TMDL

A. The "Northeast Regional Mercury TMDL (2007)"

The Northeast Regional Mercury TMDL does not specify a wasteload allocation or other requirements either individually or categorically for the MS4 discharges and specifies that load reductions are to be achieved through reduction in atmospheric deposition sources. No requirements related to this TMDL are imposed on MS4 discharges under this part. However, if the permittee becomes aware, or EPA or MassDEP 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 Parts 2.1.1.d and 2.3.4 of the Permit.