|                    | LAKE PH   | OSPHORUS CO  | NTROL PLAN                             | (LPCP) DRAFT                       | TEMPLATE                      |                         |
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| Bas<br>Ass<br>info | ed on a docun<br>ociation (CRWA<br>rmation and feed | nent originally p<br>) and MassDEI<br>lback from Massl | orepared by K<br>P in June 202<br>DEP. | Geinfelder for C<br>21. Updated Ju | Charles River Vine 2022, with | /atershed<br>additional |
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#### **APPENDICES**

#### Reference Appendices (companion documents for template):

- **R.1 LPCP Approach Guidance**
- R.2 Worksheets for Calculation Support
- R.3 Funding Source Assessment: Overview and Guidance
- **R.4 Resource Library**
- **R.5 Simple Planning Accounting Spreadsheet**

#### Recommended (if not included in body of LPCP template):

- A. Legal Analysis
- **B. Funding Source Assessment**
- C. Supporting Calculations for Non-Structural Controls
- D. Supporting Calculations for Structural Controls (or documentation of location(s) stored)
- E. Operations and Maintenance Program (or documentation of location(s) stored)
- F. Priority Ranking of BMPs and Implementation Planning
- G. Documentation of Public Comment Process and Comments Received
- H. Alternative Schedule Request (if submitted)
- I. Watershed Based Planning Tool Report(s) (if desired)



#### (1) DOCUMENT USE

This document is intended to serve as a guide as municipalities develop and adapt their Lake Phosphorus Control Plan (LPCP). This document does not constitute legal advice and use of the template does not guarantee compliance with the terms and conditions of the MS4 permit. Municipalities should consult legal counsel for consistency with applicable laws and regulations, including the MS4 Permit.

<u>Template Instructions:</u> Throughout the template, instructional text is included, which aims to guide the user and describe the requirements for each section. This text is formatted as colored, italicized text in boxes (like this text). In preparing your Lake Phosphorus Control Plan (LPCP), this text can be removed after the instructions are no longer needed.

Additionally, information located between two pound signs ("##EXAMPLE##") is placeholder text for the user to customize. You should replace these instances with the corresponding data that pertains to your municipality.

Black, non-italicized text is template text which should be reviewed and edited as relevant to your community. The MS4 Permit requirements are included as black italicized text to facilitate understanding of the specific LPCP section and can be kept or deleted as desired by each permittee.

#### **Document Use:**

The purpose of this document is to provide a framework and template for permittees subject to the LPCP requirements of the Massachusetts MS4 General Permit that can be customized to reflect their unique needs and compliance approach. This version of the proposed LPCP template is intended for use by communities in the Commonwealth with lakes or ponds subject to an approved phosphorus TMDLs (see Table F-6 of MS4 Permit Appendix F, Part II). Use of this template is not a requirement for the LPCP, but rather offered as a guide to assist in the development and implementation of the LPCP as prescribed by the MS4 Permit.

This document has been developed to serve the following purposes:

- Assist communities to meet the planning and documentation requirements outlined in the MS4 Permit:
- Provide step-by-step guidance and calculation supports for establishing baseline conditions;
- Provide guidance on identifying potential strategies to meet the implementation schedule milestones;
- Provide references and resource materials for prospective tracking of structural and nonstructural best management practice (BMP) reductions;
- Maintain a centralized record of activities and tasks undertaken in performance of the LPCP objectives;
- Serve as a template for the written LPCP due in Permit Year 5; and
- Provide guidance for communities to decide on their LPCP scope in Permit Year 4.

This document was developed by Kleinfelder and Charles River Watershed Association in spring 2021. Input was provided by MS4 communities that are required to develop LPCPs through one-on-one interviews, written surveys, and discussions at Municipal Stormwater Collaborative meetings. Input was also provided by EPA Region 1 and MassDEP, although their involvement



does not constitute regulatory approval of the template. This template was developed through a Fiscal Year 2021 Municipal Assistance Grant awarded by MassDEP.

Meeting the requirements of the LPCP will require many communities to update and expand their existing stormwater programs. In preparation for completing your LPCP, we recommend working through the exercises in Appendices R.1 and R.2:

- Appendix R.1 contains some LPCP Guidance Tools, which aim to lead you through specific
  exercises to better understand how the unique features of your community can be best
  leveraged into a robust LPCP. The results generated as you work through Appendix R.1 aim
  to guide a programmatic approach to permit compliance, which will take the form of your own
  LPCP that reflects your community's particular strengths and needs.
- Appendix R.2 contains two calculation support worksheets, which will guide you through your near-term permit requirements: selecting and calculating your LPCP baseline, tracking existing structural and non-structural BMPs, and thinking through workflows for tracking planned BMPs in the later permit years. The results generated as you work through Appendix R.2 will feed directly into the LPCP template; there are many explicit references in the template to fill in tables based on the Appendix R.2 worksheets.



# DRAFT TEMPLATE V1 1 LPCP

The 2016 National Pollutant Discharge Elimination System General Permit for Stormwater Discharges from Small Municipal Separate Storm Sewer Systems (MS4) in Massachusetts ("MS4 Permit" or "the Permit") took effect on July 1, 2018. The Permit was subsequently modified on December 7, 2020. The MS4 Permit conditions the operation, regulation, and management of MS4s in subject Massachusetts municipalities. Terms and conditions include requirements across six Minimum Control Measures (also referred to as Maximum Extent Practicable or MEP provisions), and water quality-based effluent limitations (WQBEL), including requirements for waterbodies with approved Total Maximum Daily Loads (TMDLs) and other water quality-limited waters.

There are thirteen approved TMDLs covering 78 lakes and ponds located in the Commonwealth of Massachusetts. As an element of the Permit's WQBEL provisions, communities that discharge to one or more of the waterbodies included in the TMDLs are obligated to address phosphorus impairments through the development and implementation of a Lake Phosphorus Control Plan (LPCP). Appendix F of the MS4 Permit describes specific requirements of the LPCP, implementation of which is anticipated to achieve the TMDL-established targeted phosphorus reductions over a 15-year timeframe. LPCP implementation includes structural and non-structural best management practices (BMPs) executed through programs, projects, and policies. The LPCP must be fully implemented within 15 years of the Permit effective date (i.e., by June 30, 2033), as illustrated in Table 1-1. The targeted phosphorus reductions are broken out into interim mandatory milestones, culminating in achievement of the allowable TMDL phosphorus loads for each municipality at the end of the 15-year schedule.

Table 1-1. General LPCP Implementation Timeline for Lake and Pond Communities

| Timeframe   | Deadline (End<br>of Fiscal<br>Year) | Phosphorus<br>Reduction<br>Requirement<br>(% of Total) |
|-------------|-------------------------------------|--|
| 0-8 years   | 2026                                | 20%  |
| 5-10 years  | 2028                                | 40%  |
| 10-13 years | 2031                                | 70%  |
| 13-15 years | 2033                                | 100%   |

#### 1.1 OVERVIEW OF LPCP MILESTONES

This document represents the LPCP and outlines all the major milestones as required by the Permit Appendix F. The LPCP must mitigate the phosphorus load reduction requirement within these 15 years, with an interim milestone of achieving the first 20% of phosphorus load reduction by Year 8 (i.e., by June 30, 2026), 40% by Year 10 (i.e., by June 30, 2028), and 70% by Year 13 (i.e., by June 30, 2031). The detailed components of the LPCP are outlined in Table 1-2.



Table 1-2. LPCP Component Deadlines

| Permit Year # | Year-End<br>(June<br>30th) | LPCP Component(s) Due   |  |  |
|---------------|----------------------------|---|--|--|
| Year 1        | 2019                       | None  |  |  |
| Year 2        | 2020                       | Legal Analysis  |  |  |
| Year 3        | 2021                       | Funding Source Assessment   |  |  |
| Year 4        | 2022                       | LPCP Scope; calculate Baseline Phosphorus, Allowable Phosphorus Load, and Phosphorus Reduction Requirement  |  |  |
| Year 5        | 2023                       | Descriptions of the following items: - Nonstructural controls - Structural controls - O&M program for structural controls - Implementation schedule - Cost and Funding Source Assessment - Written LPCP |  |  |
| Year 6        | 2024                       | Full implementation of nonstructural controls Performance Evaluation  |  |  |
| Year 7        | 2025                       | Performance Evaluation  |  |  |
| Year 8        | 2026                       | Performance Evaluation Implementation of structural controls to achieve 20% of target phosphorus reduction  |  |  |
| Year 9        | 2027                       | Performance Evaluation  |  |  |
| Year 10       | 2028                       | Update written LPCP Performance Evaluation Implementation of structural controls to achieve 40% of target phosphorus reduction  |  |  |
| Year 11       | 2029                       | Performance Evaluation  |  |  |
| Year 12       | 2030                       | Performance Evaluation  |  |  |
| Year 13       | 2031                       | Performance Evaluation Implementation of structural controls to achieve 70% of target phosphorus reduction  |  |  |
| Year 14       | 2032                       | Performance Evaluation  |  |  |
| Year 15       | 2033                       | Performance Evaluation  Performance Evaluation  Implementation of structural controls to achieve 100% of target phosphorus reduction  |  |  |

##MUNICIPALITY## acknowledges that to meet the phosphorus reduction deadlines set forth in the MS4 Permit, significant preparation is required. In order to plan, design, and construct structural controls to meet the Year 8, Year 10, Year 13, and Year 15 reduction deadlines, there is significant work to be completed during the initial years of LPCP implementation. Some controls that rely on local bylaw or regulatory updates, or engaging landowners directly through incentives, may take even longer to implement. This is taken into account in the implementation schedule.

Note: This written LPCP must be updated at the Year 10 milestone, in 2028.



## 1.2 COMMUNITY CHARACTERIZATION AND LAKE/POND WATERSHED DESCRIPTION

<u>Instructions:</u> Add general information on your community's MS4 extents, land use/character, general opportunities/constraints (e.g. build-out, economic development activity, environmental assets), historic stormwater management approach, etc. [Optional] or delete Community Characterization text and maintain description of each lake/pond.

#### ##ADD COMMUNITY-SPECIFIC INFORMATION##

<u>Instructions:</u> Below, describe the lakes and ponds to which your community discharges. In some instances, a waterbody may be listed under a different primary municipality, but may also have watershed area within your municipal borders. Make sure to check the watershed of lakes and ponds near your community as well to address the requirement "any permittee…that discharges to a lake or pond listed in Table F-6 [of Appendix F of the MS4 Permit] or its tributaries is subject to the same phosphorus percent reduction requirements associated with that lake or pond."

Note: To quickly confirm watershed boundaries for lakes or ponds near your community, utilize the MassDEP Watershed Based Planning Tool online at <a href="http://pri.geosyntec.com/MassDEPWBP">http://pri.geosyntec.com/MassDEPWBP</a>

The ##CITY/TOWN## of ##MUNICIPALITY## discharges to the following waterbodies subject to one or more of the 13 TMDLs completed by MassDEP:

• ##LIST THE LAKES/PONDS SUBJECT TO A TMDL FROM MS4 PERMIT APPENDIX F PART II.1 TO WHICH YOUR COMMUNITY DISCHARGES##

The following presents information on each lake and pond in ##MUNICIPALITY## that is subject to a TMDL. Information presented is from the MassDEP watershed-based planning tool and supplemented by local information as appropriate.

#### 1.2.1 ##LAKE/POND##

<u>Instructions:</u> Add information on each Lake / Pond in your community from Appendix F of the MS4 General Permit based on local information and use of the MassDEP's watershed-based planning tool at <a href="http://pri.geosyntec.com/MassDEPWBP">http://pri.geosyntec.com/MassDEPWBP</a>. Reference an appendix that includes a print out of this tool as appropriate.

#### 1.2.2 ##LAKE/POND##

<u>Instructions:</u> Add additional sections as needed based on number of lakes and ponds in your community, following the instructions under Section 1.2.1.

#### 1.3 LPCP LOAD REDUCTION TARGETS

<u>Permit Requirement:</u> The permittee shall indicate the area in which the permittee plans to implement the LPCP, this area is known as the "LPCP Area". The permittee must choose one of the following: 1) to implement its LPCP in the entire area within its jurisdiction discharging to the impaired waterbody (for a municipality this would be the municipal boundary) or 2) to 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 in its entire jurisdiction discharging



to the impaired waterbody, the permittee may demonstrate compliance with the Phosphorus Reduction Requirement and Allowable Phosphorus Load requirements applicable to it through structural and non-structural controls on discharges that occur both inside and outside the urbanized area.

<u>Instructions:</u> The Calculation Support Worksheet No. 1 in Appendix R.2 will walk you through key considerations for determining your LPCP Area and then calculating your Baseline Load for each Lake or Pond listed in Appendix F Part II of the MS4 General Permit.

#### 1.3.1 **LPCP** Area(s)

##MUNICIPALITY## has the option to implement its LPCP either within the entirety of the community that falls within each lake or pond watershed, or just the MS4-regulated area of our community within each lake or pond watershed.

Based on an assessment of factors relevant to the selection criteria, ##MUNICIPALITY## will implement the LPCP on ##SELECT JURISDICTION## and therefore calculate the Baseline Phosphorus Load within the corresponding watershed. The Reduction Requirement Percentage will be applied to this Baseline Load.

<u>Note</u>: Communities with multiple lakes/ponds subject to a TMDL may elect to implement the LPCP in the MS4 Regulated (Urbanized) Area only or in the entire watershed area for <u>each</u> lake or pond (i.e. the LPCP Area may not be consistent across all lakes or ponds in a community). The reasons to do this may depend on the findings below.

#### [OPTIONAL] ##OUTLINE FINDINGS##

<u>Instructions</u>: Document rationale (sample text below)

**MS4-Regulated (Urbanized) Area**: ##MUNICIPALITY## is opting to implement the LPCP within the MS4-regulated (urbanized) area because it is a smaller load and a smaller, more manageable area. We anticipate having the available space within this area to meet our MS4 Permit phosphorus reduction requirements. We do anticipate, however, that there will be improvements to stormwater management practices outside of this designated area as well due to the adoption of new stormwater policies and requirements that will be implemented at the municipal scale. We understand that these improvements will not count towards ##MUNICIPALITY'S## phosphorus reduction requirement.

**Entire Watershed Area**: ##MUNICIPALITY## is opting to implement the LPCP on the entire watershed area because (delete all that do not apply):

- Most readily-developable and re-developable land is located outside the urbanized area;
- Key large parcels suitable for structural BMPs are located outside the urbanized area;
- Soil types, groundwater conditions, etc. that are most suitable to BMPs are located outside the urbanized Area (this may be a consideration for communities with a very small difference in required phosphorus reduction between the urbanized area and entire watershed area):
- New development with modern stormwater controls is present/prevalent outside the urbanized area; and/or



 Planned practices/approaches will be implemented at the municipal scale and we want to "take credit" for all the non-structural and structural stormwater practices being implemented in the community.

### 1.3.2 Baseline Phosphorus Load, Allowable Phosphorus Load, and Stormwater Phosphorus Reduction Requirement

Instructions: Refer to Workshop #1: All About the Loads from CRWA's online training series for detailed instructions on calculating the Baseline Load. You can also use a simplified spreadsheet referenced in Appendix R.4. Once your Baseline Load is calculated for each lake/pond subject to a TMDL in your community, you will use the instructions to apply your Required Percent Reduction from Appendix F Part A.II of the MS4 Permit to your Baseline load. Use the text below to summarize how you calculated your Baseline Load for each lake/pond (e.g. using GIS? MassDEP's Watershed Based Planning Tool? Something else?) Provide details below and then report your Baseline Load.

##MUNICIPALITY## has calculated the Baseline Phosphorus Load in conformance with Attachment 1 to Appendix F. We calculated the Baseline using ##METHODOLOGY##. ##SUMMARIZE HOW BASELINE WAS CALCULATED##

This Baseline Load represents the estimated annual phosphorus loading based on land use types, and it does not include any existing structural or non-structural BMPs already implemented. These are accounted for in Sections 1.6 and 1.7.

Once the Baseline Load is calculated, the Required Percent Reduction in Table F-7 of Appendix F is used to determine the Stormwater Phosphorus Load Reduction Requirement, Allowable Phosphorus Load, and then each of the interim milestones that must be met through this LPCP. ##All of these values are summarized in Table 1-3 OR These values are summarized in Tables 1-3 through ##

Instructions: Fill in Table 1-3 using the information from your Baseline Load calculations.

Table 1-3. LPCP Timeline of Reduction Requirements for ##LAKE/POND##

| Condition                                       | Load Value       |
|---|------------------|
| Baseline P-Load, lbs/yr                         | [Item 1.1]       |
| Allowable P-Load, lbs/yr                        | [Item 1.4]       |
| Stormwater P-Load Reduction Requirement, lbs/yr | [Item 1.3]       |
| Year 8 Milestone: 20% of Reduction in lbs/yr    | 0.2 * [Item 1.3] |
| Year 10 Milestone: 40% of Reduction, in Ibs/yr  | 0.4 * [Item 1.3] |
| Year 13 Milestone: 70% of Reduction, in Ibs/yr  | 0.7 * [Item 1.3] |
| Year 15 Milestone: 100% of Reduction, in lbs/yr | [Item 1.3]       |

To achieve the target of reducing phosphorus loads by ##YEAR 15 MILESTONE VALUE## lbs/yr by 2033, ##MUNICIPALITY## will be planning and implementing a series of structural and non-structural BMPs, updating regulatory mechanisms as necessary to aid with achieving these goals, evaluating funding mechanisms and costs, and developing its O&M and recordkeeping programs to ensure continued compliance and functionality of all installed BMPs.



<u>Instructions:</u> For any community with multiple lakes/ponds subject to a TMDL, repeat Table 1-3 above for each lake/pond. Note that, to achieve your Year 8, 10, and 13 interim milestones, you must demonstrate that percentage reduction is achieved across ALL of your lakes and ponds (if you have multiple). Therefore, you have some leeway in how you achieve your milestones. For example, if you have the following reduction requirements across three waterbodies:

- Waterbody A: 10 lbs
- Waterbody B: 6 lbs
- Waterbody C: 4 lbs
- Total Reduction Requirement: 10 + 6 + 4 = 20 lbs

Then at Year 8, to achieve your 20% reduction target, you may implement the 4 lbs of reduction across the three waterbodies in any configuration – the reductions do not need to be distributed equally across the three waterbodies. You could opt to structure your implementation plan to achieve a 20% reduction (4 lbs, in this example) across all waterbodies for Year 8, or you could prioritize one of your waterbodies in the first 8 years, so long as your aggregated reduction progress keeps pace with the 20% milestone.

#### 1.4 LEGAL ANALYSIS

**Permit Requirement:** The permittee shall develop and implement an analysis that identifies existing regulatory mechanisms available to the MS4 such as by-laws and ordinances and describes any changes to these regulatory mechanisms that may be 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.

Instructions: The legal analysis was required to be developed by end of MS4 Permit Year 2.

At the very least, the legal analysis should ensure that current rules and regulations meet Permit requirements and absolutely do not restrict or prohibit the implementation of BMPs. We encourage the permittee to explore legal avenues that could facilitate implementation of the LPCP such as establishment of a Stormwater Utility or enhancement of post-construction stormwater regulations through local stormwater bylaws and other mechanisms to impact more development projects. CRWA has developed model language for stormwater bylaws and regulations to facilitate compliance with the phosphorus reduction requirements of Appendix F of the MS4 Permit, which is included in the Resource Library in Appendix R.4. The model language allows communities to gather necessary stormwater management data (e.g., pre-development phosphorus load, post-development phosphorus load, load reductions associated with each structural BMP, operation and maintenance plan including responsible party) during project review processes and enables ongoing tracking of operation and maintenance of BMPs.

Regulatory changes also provide an opportunity to engage the private sector in phosphorus reduction calculations and documentation of BMP maintenance by requiring submission of such calculations in a designated format (i.e., using the BATT tool) and regular maintenance reports. Note that regulatory changes are not required to be implemented until the end of the Permit term, but often require extensive planning, community support, and bureaucratic approvals that can take time. Initiating this process sooner than later would be advantageous to meeting LPCP milestones.



<u>Tip/Trick:</u> While the Legal Analysis for the LPCP was due by end of Permit Year 2, Part 2.3.6 b and c of the MS4 permit require additional evaluation of "current street design and parking lot guidelines and other local requirements that affect the creation of impervious cover" and "development of a report assessing existing local regulations to determine the feasibility of making, at a minimum, [green roofs, infiltration practices, and water harvesting devices allowable when appropriate site conditions exist.]" This effort should consider the LPCP requirements, and the updated Legal Analysis should reflect this work.

Appendix F of the MS4 Permit requires ##MUNICIPALITY## to develop and implement an analysis that identifies existing regulatory mechanisms available to the MS4 such as bylaws and ordinances, and describes any changes to regulatory mechanisms that may be necessary to effectively implement the entire LPCP (the "Legal Analysis"). This may include the creation or amendment of financial and regulatory authorities. ##MUNICIPALITY'S## Legal Analysis is attached as Appendix A.

#### 1.5 FUNDING SOURCE ASSESSMENT

**Permit Requirement:** 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.

<u>Instructions:</u> Appendix F requires that the permittee describe known and anticipated funding mechanisms (e.g., general funding, enterprise funding, stormwater utilities, permit fees or penalties, user fees, grant funding, etc.) that will be used to fund LPCP implementation as well as the steps it will take to implement its funding plan. The funding source assessment should include preferred funding sources, why they are appropriate and sufficient to fund LPCP implementation, and a timeline to establish those funding sources. If a stormwater utility is being considered, you must account for a substantial public outreach and education campaign to garner support. Please see the funding source assessment guidance provided in Appendix R.3.

The Funding Source Assessment will need to consider planned non-structural and structural controls and associated estimates of probable cost over scope of work. This Assessment requires some iteration with other parts of the LPCP not due until end of Permit Year 5. Information compiled in the worksheets in Appendices R.1 and R.2 are designed to help support this process

Appendix F of the MS4 Permit requires ##MUNICIPALITY## to describe known and anticipated funding mechanisms (e.g., general funding, enterprise funding, stormwater utilities) that will be used to fund LPCP implementation (the "Funding Source Assessment"). ##MUNICIPALITY## must 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. ##MUNICIPALITY##'s Funding Source Assessment is attached as Appendix B.

[OPTIONAL] Key takeaways include the following:

##ENTER KEY TAKEAWAYS HERE##



#### 1.6 NON-STRUCTURAL CONTROLS

**Permit Requirement:** The permittee shall describe the non-structural stormwater control measures to be implemented to support the achievement of the milestones in Table F-7. The description of non-structural controls 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 [of the MS4 Permit]. The permittee shall update the description of planned non-structural controls as needed to support the achievement of the milestones in Table F-7 [of Appendix F of the MS4 Permit], including an update in the updated written LPCP 10 years after the permit effective date.

Instructions: Refer to Workshop #2 from CRWA's online training series for an overview of calculating credits from non-structural controls. Using data gathered to complete the exercise in Calculation Support Worksheet No. 2 of Appendix R.2, summarize average annual acres of road swept, number of catch basins (CBs) cleaned, and/or leaf litter program schedules/results to determine current and planned annual phosphorus reductions for non-structural controls per Appendix F, Attachment 2 (which will vary from year to year based on actual acres swept, CBs cleaned, etc.). Results should be presented as current non-structural BMPs below. Any identified enhancements to or addition of any of these programs to further LPCP compliance should be described in the planned non-structural BMP section.

##MUNICIPALITY##'s approach for non-structural BMP implementation for LPCP compliance is detailed in this section.

#### 1.6.1 Current Non-Structural BMPs

<u>Note:</u> If you are implementing non-structural BMPs community-wide or throughout the entire urbanized area, and you have multiple lakes/ponds to which you discharge, you may wish to keep this section simple and sum the Average Annual P-reduction (lbs/year) across all lake/pond watersheds.

However, if you plan to implement different non-structural controls within various lake/pond watersheds, you will need to repeat Table 1-4 for each lake/pond to which your MS4 discharges.

##MUNICIPALITY## has already implemented enhanced non-structural BMPs, which can qualify for phosphorus reduction credits. These are presented in Table 1-4. Credits were calculated using the updated phosphorus load export rates reported in Attachment 2 to Appendix F. These credits will count towards the required phosphorus reduction outlined in Table 1-3. Current non-structural BMPs are those that are anticipated to continue at current resource levels, or 'business as usual'. The information presented in Table 1-4 is further detailed in Appendix C and our Stormwater Management Plan (SWMP).

<u>Instructions:</u> Copy and paste the results of Calculation Support Worksheet No. 2, Part 2(b), specifically Table 2-3. See Appendix R.2.



Table 1-4. Existing Non-Structural BMPs

| Planned Non-Structural BMP | Current Implementation Levels (frequency, sweeper type, year round) | Average Annual P-<br>Reduction (lbs/yr) |
|----------------------------|---|---|
| Street Sweeping            |   |   |
| CB Cleaning                |   |   |
| Leaf Litter Program        |   |   |
| Total Existing Nor         |   |   |

The existing non-structural controls have already contributed ##AMOUNT## lbs/yr to the annual phosphorus reduction requirement of ##REDUCTION REQUIREMENT##.

#### 1.6.2 Planned Non-Structural BMPs

#### Instructions:

Planned non-structural BMPs represent additions and upgrades to current non-structural programs and/or operations for LPCP compliance such as upgrades in equipment, increased cleaning/sweeping frequencies, addition of new leaf litter programs, etc. Planned Non-Structural BMPs would result in phosphorus reductions outlined in Table 1-5 and further detailed in Appendix C.

Insert descriptions of Planned Non-Structural BMPs here and fill in Table 1-5, or state that there are no Planned Non-Structural BMPs and that you will continue with current Non-Structural BMPs throughout the LPCP. You can reuse the guidance in Calculation Support Worksheet No. 2 Part (2b) to estimate, on the planning level, the reductions anticipated from your planned non-structural BMPs. Table 1-5 should detail your new total P reduction credit from non-structural controls after you implement the changes described.

<u>Note:</u> Per Part 2.3.7.a.iii., catch basins in the Urbanized/ Regulated area must be cleaned such that a minimum sump storage capacity of 50% is maintained throughout the year. If you are already implementing such a program in compliance with the permit, you will need to evaluate the catch basin cleaning areas compared to the Urbanized/Regulated MS4 area and your LPCP Area defined in Section 2.2.

<u>Tip/Trick:</u> For a more robust analysis, you may wish to calculate total life cycle costs associated with proposed BMPs. For non-structural BMPs, life cycle costs should include capital (equipment purchase or rental) and operation and maintenance costs (e.g., gas/diesel/oil, parts, repairs, disposals of sweepings or catch basin cleanings, staff, water, etc.). These costs can be normalized against estimated lbs/yr per area and compared to structural BMP costs. In particular, costs associated with enhanced sweeping and leaf litter programs may be greater per pound of phosphorus removed than structural BMPs.

<u>Note:</u> If you are implementing non-structural BMPs community-wide or throughout the entire urbanized area, and you have multiple lakes/ponds to which you discharge, you may wish to keep this section simple and sum the Average Annual P-reduction (lbs/year) across all lake/pond watersheds.



However, if you plan to implement different non-structural controls within various lake/pond watersheds, you will need to repeat Table 1-5 for each lake/pond to which your MS4 discharges.

##MUNICIPALITY## is planning on making the following changes to our non-structure controls starting in permit year 5. Phosphorus reductions are presented in Table 1-5.

Street Sweeping: [None or describe changes]
CB Cleaning; [None or describe changes]
Leaf Litter Program: [None or describe changes]

Table 1-5. Planned Non-Structural Control Summary

| Planned Non-<br>Structural BMP | Average Annual<br>Acres Managed | Average Annual<br>P-Reduction<br>(lbs/yr) | Anticipated Implementation<br>Level (frequency, sweeper<br>type, year round) |
|--------------------------------|---------------------------------|---|--|
| Street Sweeping                |                                 |   |  |
| CB Cleaning                    |                                 |   |  |
| Leaf Litter                    |                                 |   |  |
| Program                        |                                 |   |  |

#### 1.7 STRUCTURAL CONTROLS

**Permit Requirement:** The permittee shall develop a priority ranking of areas and infrastructure within the municipality for potential implementation of phosphorus control practices. The ranking shall be developed through the use of available screening and monitoring results collected during the permit term either by the permittee or another entity and the mapping required pursuant to part 2.3.4.6 of the Permit. The permittee shall also include in this prioritization a detailed assessment of site suitability for potential phosphorus control measures based on soil types and other factors. The permittee shall coordinate this activity with the requirements of part 2.3.6.8.b of the Permit. A description and the result of this priority ranking shall be included in the LPCP. The permittee shall describe the structural stormwater control measures necessary to support achievement of the milestones in Table F-7 [of Appendix F of the MS4 Permit]. 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 mass/yr that are expected to result from their implementation. Structural measures to be implemented by a third party may be included in the LPCP. Annual phosphorus reduction from structural BMPs shall be calculated consistent with Attachment 3 to Appendix F [of the MS4 Permit]. The permittee shall update the description of planned structural controls as needed to support the achievement of the milestones in Table F-7 [of Appendix F of the MS4 Permit], including an update in the updated written LPCP 10 years after the permit effective date.

Our community will employ structural BMPs to detain, treat, and better manage runoff from well-defined areas of impervious surface, such as roads, parking lots, or rooftops. Semi-structural BMPs are more passive stormwater management approaches that can still produce excellent water quality benefits such as rainwater harvesting, impervious area disconnection, conversion of impervious area to pervious, and enhancement of pervious areas. For the purposes of this document, the term structural controls refers to both structural and semi-structural BMPs.



<u>Instructions:</u> Refer to Workshops #2 and #3 from <u>CRWA's online training series</u> for an overview of calculating credits from structural controls. Per Appendix F, Attachment 3, each structural and semi-structural BMP type has a unique phosphorus load reduction based on the BMP's treatment capacity which is applied to the phosphorus loads from the BMP's drainage area to determine the phosphorus reduction for that BMP.

Customize language below as necessary to reflect your municipality's experience with structural BMPs to date. This should include language addressing how you have historically and plan to address structural BMPs on private properties – i.e. obtaining calculations from developers, provisions in regulations to enable this, references to your stormwater permitting process, etc. Some example resources are included in the Resource Library in Appendix R.4

Structural BMPs historically have been incorporated into ##MUNICIPALITY## via stormwater compliance projects (for public and private development projects), using various sources of grant funding, or as part of our capital infrastructure program.

Our planning in support of LPCP development determined that a significant investment in structural BMPs will be required to achieve the required target phosphorus reductions. Structural BMP opportunities were evaluated to allow for adaptive management during the development and execution of the LPCP, that is presented below.

The following sections describe the assessment, performance and implementation of Planned Structural BMPs (those that were built, or designed and are planned for implementation prior to development of this LPCP) and Proposed Structural BMPs (those that were newly identified for LPCP compliance or will be implemented after this written LPCP is submitted).

#### 1.7.1 Current Structural BMPs

Instructions: In this section, summarize the implementation mechanisms (regulatory, capital improvements, grant funding, repaving programs, etc.) that have resulted in the implementation of existing structural BMPs, and quantify the phosphorus reductions with the associated current structural BMPs. This will report the results of the structural BMP accounting from Calculation Support Worksheet No. 2, Part (2c) in Appendix R.2, and it shall be updated with the Permit Year 5 deadline to report existing structural BMPs. Planned structural BMPs will be in the next subsection.

The ##CITY/TOWN## already employs a mix of regulatory, incentive programs and capital improvement programs to implement structural BMPs. Constructed structural BMPs have resulted in phosphorus reductions outlined in Table 1-6 and further detailed in Appendix D. The reductions in 9 are presented on a high-level for summary, and all of the calculations were performed following the equations and requirements in Attachment 3 to Appendix F of the Permit.

<u>Instructions:</u> Insert summary of existing structural BMP performance in table below on a macro-level by BMP type. Detailed reductions by individual BMP to be included in the Appendix referenced above. This can be outputs from tools such as EPA's BATT Tool, or a simplified accounting spreadsheet, so long as the calculations follow those in Attachment 3 to Appendix F of the Permit.



Fill in this table based on the results of Calculation Support Worksheet No. 2 Part (2c), specifically Table 2-4.

Table 1-6. Summary of Current Structural Controls

| Name of Lake/Pond<br>Watershed in which<br>BMP is Located | Current<br>Structural BMP<br>Type | Number of<br>BMPs  | Total Acres<br>Managed | Average Annual P-<br>Reduction (lbs/yr) |
|---|-----------------------------------|--------------------|------------------------|---|
|   |                                   |                    |                        |   |
|   |                                   |                    |                        |   |
|   |                                   |                    |                        |   |
|   |                                   |                    |                        |   |
|   |                                   |                    |                        |   |
|   |                                   |                    |                        |   |
|   | Total Phosphor                    | us Credit from Cui | rrent Structural BMPs  |   |

Existing structural BMPs have contributed to an annual load reduction of ##AMOUNT## lbs/yr.

#### 1.7.2 Planned Structural BMPs

References Use the guidance in the LPCP Guidance Tools in Appendix R.1 to begin building your LPCP approach. This will help to create a system for planning BMPs, including the structural BMPs reported in this section. Highly impervious publicly owned sites are often good sites to implement town-controlled projects and can be opportunities to receive a large amount of pollutant removal. Many of these sites are schools and municipal buildings and can therefore offer considerable public education opportunities.

<u>Tip:</u> Be cognizant of the threat of "green gentrification" when working in Environmental Justice neighborhoods. A recommended practice for avoiding unintended negative consequences is to engage residents in the planning process from the beginning. There are many resources available on effective community engagement.

#### *Instructions:*

First, identify areas (including municipal properties with significant impervious cover (including parking lots, buildings, and maintenance yards) and infrastructure (e.g., drainage systems, roadway projects, etc.) where BMP implementation may be easiest and provide the most pollution reduction benefits (a.k.a. "priority ranking").

The following <u>must</u> be used to identify and rank priority areas and infrastructure:

- Available screening and monitoring results collected during the permit term either by the municipality (e.g., IDDE dry and/or wet weather outfall screening) or another entity (watershed organization, public health agency, state agency, etc.). The intent of using these data is to help communities identify catchments with higher phosphorus loading and plan to address those areas with phosphorus BMPs through the LPCP as soon as possible.
- The MS4 mapping, including any of the recommended elements (e.g., sanitary sewer, septic systems, topo, private drainage, etc.) included in the mapping per Part 2.3.4.5 of the Permit. The intent of this is to support the suitability assessment, and ultimately site selection. Opportunity sites located at the downstream end of large drainage areas map provide considerable pollution reduction opportunities through the implementation of a single BMP.



- Site suitability based on soil types and other factors including access for maintenance purposes; subsurface geology; depth to water table; proximity to aquifers and subsurface infrastructure including sanitary sewers and septic systems; opportunities for public use and education (See Matrix in R.5 for some recommended considerations and accompanying GIS data available through MassGIS).
- Capital plans for facilities, utility including sewer and drainage work, roadway programs including paving.
- Current storm sewer level of service.
- Discharges to water quality limited waters, first or second order streams, public swimming beaches, drinking water supply sources, and shellfish growing areas may be appropriate to target first because of the additional public health benefits improved water quality can provide

The following <u>should</u> be used to identify and rank priority areas and infrastructure:

- Previously developed watershed management plans or results from watershed planning tool (Opti Tool).
- Development/redevelopment permits, as any site undergoing new or redevelopment poses an opportunity to install structural BMPs.
- Anticipated private projects.
- MVP, Open Space, Local Hazard Mitigation, Master and other local plans

The following also may be used to identify and rank priority areas and infrastructure:

- Green infrastructure co-benefits, community wants and needs, as well as political climate.
- Implementation mechanisms that suit the political and physical constraints and opportunities in your municipality, including enhanced regulations and incentive programs.

<u>Note:</u> EPA's OptiTool, and ArcGIS can be useful tools to perform the prioritization. This effort should ideally be combined with the assessment completed prior to end of Year 4 that identifies minimum of 5 permittee-owned properties that could potentially be modified or retrofitted with BMPs designed to reduce the frequency, volume, and pollutant loads of stormwater discharges to and from the MS4 through the reduction of impervious area (see Part 2.3.6.d of the Permit).

<u>Tip/Trick</u>: Consider keeping your "ranking" simple because conditions can change frequently: High = planned public or private projects which will incorporate BMPs, likely to be constructed before year 8

Medium = favorable site conditions on municipally controlled parcels and roadways and/or "pollutant hotspot" based on screening and monitoring, opportunity site based on community values such as equity, habitat restoration, climate adaptation, education, or other; likely to be constructed before year 15. This can also include private sites likely to be redeveloped.

Low = least favorable site conditions based on site suitability, sites unlikely to undergo redevelopment in the near term, sites not likely to be implemented.

For those interested in a more complex ranking system consider developing a rating system that considers a 1 through 5 scale reflecting screening/monitoring, site suitability, known/approved and planned projects, pollutant removal, cost, co-benefits, and other metrics important to your community.

##MUNICIPALITY## has developed a priority ranking of areas and infrastructure within the municipality for potential implementation of structural phosphorus controls. This priority ranking was prepared as follows:



Instructions: Describe ranking based on instructions above.

Implementation of structural BMPs is dependent on physical constraints and opportunities. Much of the phosphorus in ##MUNICIPALITY## is coming from the following land uses:

<u>Instructions:</u> Insert breakdown of phosphorus load by land use category here, such as a pie chart or table. Describe physical constraints and opportunities identified during analysis here, including any maps highlighting these factors and potential project areas. Note that the resources discovered through the LPCP Guidance Tools in Appendix R.1 (LPCP Toolbox and Strategies) can factor into your prioritization as well.

Additionally, a high-level BMP suitability assessment was conducted using ##SPREADHSEET /ARCGIS## to determine what structural BMPs could be implemented to mitigate phosphorus and to help to prioritize an implementation schedule.

Several other factors besides phosphorus reduction were used to determine structural BMP selection, siting, and prioritization such as:

Instructions: You must determine the approximate number of BMPs you will need to install to meet the Year 8, Year 10, Year 13, and Year 15 reductions. This can be accomplished with a simple estimation process or more advanced modeling and planning. Note that, for communities with more than one lake/pond, your milestones are based on aggregate values – i.e. 20% of all your loads across all your waterbodies. As such, you can prioritize BMP implementation across your multiple waterbodies based on your suitability factors determined above, and not need to make equivalent progress across each, so long as your aggregate milestones are met.

Resource: High-level accounting/planning spreadsheet in Appendix R.5.

<u>Instructions:</u> Third, you must prepare a list of BMPs locations and/or overall parcels on which BMPs may be constructed. This list should be ordered from highest to lowest priority and consider the overall approximate number of BMPs needed to achieve the reduction goals. It should be assumed BMPs are intended to be installed on High and Medium priority sites. Opt for infiltration BMPs on any site where soil and water table information demonstrate that infiltration may be possible as these are the most cost-effective structural solutions per pound of phosphorus removed annually.

<u>Tip/Trick:</u> List more BMPs than the minimum necessary, as conceptual planning progresses and projects evolve, BMPs may no longer be feasible.

The planned structural BMPs are listed in Appendix D and are summarized in Table 1-7.

Note: This table is optional. List may be solely maintained in appendix.

Table 1-7. Planned Structural Control Summary

|              | l                      |          | 1                 |                |
|--------------|------------------------|----------|-------------------|----------------|
| Name of      | Planned Structural BMP | BMP Type | Anticipated       | Potential/Esti |
| Lake/Pond    | (Address, Coordinates) |          | Acres Managed     | mated Annual   |
| Watershed in | or Site with Locations |          | (Total Impervious | P-Reduction    |
| which BMP is | for Structural BMPs    |          | and Pervious      | (lbs/yr)       |
| Located      | (Address)              |          | Area)             |                |



## 1.8 DESCRIPTION OF OPERATION AND MAINTENANCE (O&M) PROGRAM FOR ALL PLANNED AND EXISTING STRUCTURAL BMPS

**Permit Requirement:** The permittee shall establish an Operation and Maintenance Program for all structural BMPs being claimed for phosphorus reduction credit. This includes BMPs implemented to date as well as BMPs to be implemented. The Operation and Maintenance Program shall become part of the LPCP and include: (1) inspection and maintenance schedule for each BMP according to BMP design or manufacturer specification and (2) program or department responsible for BMP maintenance.

<u>Instructions:</u> To meet this requirement, your community needs to:

- 1. Detail existing maintenance plans, programs, and requirements. Note that maintenance programs may span many tools and departments, including conservation, planning, stormwater regulations/ ordinances /bylaws, other local code, good housekeeping practices, etc.
- 2. Clearly outline who will be conducting BMP maintenance work (i.e. private developers, municipal staff or contractors, or NGOs/private landowners) for each BMP being credited under the LPCP.
- 3. Identify anticipated increase in needs. Many of the watershed planning tools provide maintenance requirement guidelines to anticipate increased FTEs, equipment, and labor hours as BMPs increase over time.
- 4. Describe how maintenance guidance will be communicated to responsible parties to set a maintenance standard all BMP owners should work towards.

<u>Note</u>: If you have multiple lakes/ponds subject to the TMDL, you may have one single O&M Program for BMPs regardless of which watershed they are in.

<u>Note:</u> Consider self-certification programs (see Workshop #2 and EPA website for further information) as one means of meeting requirements for certifying maintenance of privately owned BMPs for which reductions are claimed on an annual basis.

<u>Note:</u> For municipally owned structural BMPs, the O&M program will be defined by and/or modify the written plan prepared under Part 2.3.7 and/or by O&M Plans prepared and approved under local permitting processes including Conservation, Planning, Stormwater, etc. Communities should create consistency as appropriate.

<u>Note:</u> In accordance with MS4 Permit Part 2.3.7.a. iii, at a minimum, "all permittee-owned stormwater treatment structures (excluding catch basins) shall be inspected annually at a minimum."



The ##CITY/TOWN##'s Operation and Maintenance Program is documented in Appendix E.

#### 1.9 LPCP IMPLEMENTATION SCHEDULE

**Permit Requirement:** An initial schedule for implementing the BMPs, including, as appropriate: funding, training, purchasing, construction, inspections, monitoring, O&M and other assessment and evaluation components of implementation. Implementation of planned BMPs must begin upon completion of the LPCP, and all non-structural BMPs shall be fully implemented within six years of the permit effective date. Where planned structural BMP retrofits or major drainage infrastructure projects are expected to take additional time to construct, the permittee shall within four years of the effective date of the permit have a schedule for completion of construction consistent with the reduction requirements in Table F-7. The permittee shall complete the implementation of its LPCP as soon as possible or at a minimum in accordance with the milestones set forth in Table F-7. The implementation schedule shall be updated 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.

<u>Instructions:</u> In this section, provide a reference to the implementation schedule(s) determined for each BMP type (structural, non-structural, non-traditional) as well as the development of O&M programs (e.g. by when will new staff need to be hired). Your schedule must lay out a plan to work towards the Year 8, Year 10, Year 13, and Year 15 phosphorus load milestones identified in Table 1-3.

<u>Support tools:</u> An implementation schedule is provided in the "Implementation" tab of the spreadsheet in Appendix R.5.

<u>Note:</u> Your community may use a computerized maintenance management system (CMMS), Microsoft Project, Asset Management Software, etc., to track the overall LPCP schedule instead, however, documentation must be provided in this template.

<u>Tip/Trick:</u> Your schedule should align with other planned projects (public and private), such as roadway, utility, and/or facility upgrades and improvements.

Note: In your schedule, you will need to consider how to **fully implement non-structural BMPs by end of Permit Year 6 (June 30, 2024).** Ensure in your schedule that your community has allocated adequate time to obtain additional funding, procure goods or services, and/or create new positions and hire additional staff, as appropriate, to successfully enhance street sweeping, catch basin cleaning, and/or leaf litter pickup. You will also need to consider how many structural BMPs you need (See Section 1.7.2) and the timing to complete design, permitting, bidding, and construction, as appropriate. It may be most effective to work backwards from Permit Year 15 in planning this effort.

<u>Tip/Trick:</u> In your schedule, include a plan to prepare an update to the written LPCP during Permit Year 9 (i.e. in advance of Permit Year 10).

##MUNICIPALITY## has prepared an implementation schedule of the LPCP. This schedule is included in Appendices C and D of the LPCP. Additional detail is available from ##MUNICIPAL STAFF OR OFFICE## as ##MUNICIPALITY## utilizes ##DESCRIBE SOFTWARE OR RECORD KEEPING##.



<u>Instructions:</u> [OPTIONAL] Use the following sections (one per lake/pond) to identify the planned reductions to be achieved

#### 1.9.1 ##LAKE/POND##

##LAKE/POND# is required to achieve ##PERCENT## reduction, which translates to ##LBS/YEAR## by Year 15. By Year 15:

- Non-Structural BMPs are anticipated to reduce a total of ##XX LBS/YR## of phosphorus, or ##XX%## of the target phosphorus reduction.
- Structural and semi-structural BMPs are anticipated to reduce a total of ##XX LBS/YEAR## of phosphorus of the LPCP, or ##XX%## of the target phosphorus reduction using the mechanisms described above.

The implementation schedule in Appendix F further details the schedule for BMP implementation.

<u>Instructions:</u> Insert chart showing total annual phosphorus reductions vs target phosphorus reduction for the lake/pond. [OPTIONAL]

#### 1.10 ESTIMATED COST FOR IMPLEMENTING THE LPCP

**Permit Requirement:** 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.

<u>Instructions:</u> This section should estimate your costs to implement the LPCP. This includes implementation of structural BMPs, non-structural BMPs, semi-structural BMPs, and supporting planning, staff, and other resources necessary. Costs must be documented in the written LPCP. Costs can be included in an appendix and summarized in this section of the PCP.

Developing accurate cost estimates is a community-specific task . Construction costs; including labor, materials, police detail, equipment rental, etc., vary across communities and will even vary within a community between projects. Additionally, construction costs are only one element of the life cycle cost of new infrastructure that the community should consider. Appendix R.7 Cost Benefit Resource Toolkit for Phosphorus Control BMPs compiles costs from BMP construction projects across the Charles River watershed and compares it to phosphorus reduction performance of the BMP. Sustainable Stormwater Funding Evaluation for the Upper Charles River Communities of Bellingham, Franklin, and Milford, MA (Horsley Witten Group prepared for USEPA-Region 1, 2011) also provides an estimate for the average cost of a pound of phosphorus removal. Although this reference is a few years old, this reference may be more relevant to Lake & Pond communities that are less densely developed than the lower Charles River watershed communities. Due to the variability and complexity of making cost estimates it is ideal for communities to use their own costs. There are also additional tools for exploring all the cost considerations and to help develop reasonable cost estimates referenced in Appendix R.4.

For communities that wish to perform the cost estimates on their own, the following resources included in this template will be useful:



1. The Calculation Support Worksheet in Appendix R.2 walks the user through a process of using past and current project costs to estimate local unit costs for pounds phosphorus removed for both structural and non-structural controls. The user could repeat this process for individual types of structural and non-structural controls to get a more precise unit cost for different BMPs.

2. Using the unit cost estimates determined in the Calculation Support Worksheet in Appendix R.2 and the identified BMPs and the phosphorus removal targets for each in the planning spreadsheet provides a rough cost estimate for LPCP implementation.

Resources: Some resources for estimating costs include:

- Planning level tools like OptiTool or the newly released EPA CLASIC Tool have cost estimating capabilities; see resource library in Appendix R.4 for additional tools.
- Historical implementation data from your municipality; see Calculation Support Worksheet 2.

<u>Reference:</u> Developing your cost analysis should reflect the results of your Funding Source Assessment including a Stormwater Program Management Cost Analysis. See also the Resource Library in Appendix R.4 for other tools to support cost estimating.

##MUNICIPALITY## has developed an estimated cost to implement the LPCP. This cost estimate is included in Appendix F. [Optional] Additional detail is available from ##MUNICIPAL STAFF OR OFFICE## as ##MUNICIPALITY## utilizes ##DESCRIBE SOFTWARE OR RECORD KEEPING##.

#### 1.11 PERFORMANCE EVALUATIONS

Permit Requirement: The permittee shall evaluate the effectiveness of the LPCP by tracking the phosphorus reductions achieved through implementation of structural and non-structural BMPs and tracking increases in phosphorus loading from the LPCP Area beginning six years after the effective date of the permit. Phosphorus reductions shall be calculated consistent with Attachment 2 (non-structural BMP performance), Attachment 3 (structural BMP performance) and Attachment 1 (reductions through land use change), to Appendix F [of the MS4 Permit] for all BMPs implemented to date. Phosphorus load increases resulting from development shall be calculated consistent with Attachment 1 to Appendix F. Phosphorus loading increases and reductions in units of mass/yr shall be added or subtracted from the calculated Baseline Phosphorus Load to estimate the yearly phosphorus export rate from the LPCP Area in mass/yr. The permittee shall also include all information required in part II.2 of [Appendix F of the MS4 Permit] in each performance evaluation.

<u>Instructions:</u> Each year starting in Year 6, you must complete a Performance Evaluation to track the effectiveness of the BMPs installed compared to your plan. This follows the guidance provided in the Calculation Support for Structural and Non-Structural BMP Tracking in Calculation Support Worksheet 2 (Appendix R.2). You will need to track the following items in each Performance Evaluation:

- (2) Changes to phosphorus loading due to development, land use changes, and changes in impervious cover;
- (3) Phosphorus credits due to structural and non-structural BMPs; and
- (4) The subsequent progress towards your Allowable Phosphorus Load.



All phosphorus loading increases and reductions must be calculated using the equations in Attachments 1-3 to Appendix F of the Permit, and can be performed using tools such as the BATT, or Excel. Sample text and a table is provided below, which may be replicated for each performance evaluation.

<u>Tip:</u> The Calculation Support for Structural and Non-Structural BMP Tracking provides information on where this information needing to be tracked can be located and how to estimate Land Development Impacts, an approach to Non-structural BMP reductions, and an approach to structural BMP accounting.

Note: Baseline Load, Allowable Load, and Milestones are from Table 1-3 above.



#### 1.11.1 Performance Evaluation for Year 6

##MUNICIPALITY## has completed the required Performance Evaluation that assesses our LPCP progress through Year 6. Documentation of the Land Development Impacts and Phosphorus Credits for this effort is included in ##LOCATION##.

A summary of ##MUNICIPALITY'S## performance through Year 6 is included in Table 1-8.

Table 1-8. Year 6 Performance Evaluation Summary

| Parameter                       | ##LAKE/POND<br>NAME## Value (lbs/yr) | ##LAKE/POND<br>NAME## Value (lbs/yr) | ##LAKE/POND<br>NAME## Value (lbs/yr) | ##LAKE/POND<br>NAME## Value (lbs/yr) |
|---------------------------------|--------------------------------------|--------------------------------------|--------------------------------------|--------------------------------------|
| Baseline Load                   |                                      |                                      |                                      |                                      |
| Allowable Load                  |                                      |                                      |                                      |                                      |
| Calculations to Update to       | <b>Current Conditions</b>            |                                      |                                      |                                      |
| Changes in P-Load Since         |                                      |                                      |                                      |                                      |
| Baseline                        |                                      |                                      |                                      |                                      |
| Current Phosphorus Load =       |                                      |                                      |                                      |                                      |
| Baseline +/- Impacts            |                                      |                                      |                                      |                                      |
| Updated Phosphorus              |                                      |                                      |                                      |                                      |
| Reduction Required to Meet      |                                      |                                      |                                      |                                      |
| Allowable Load (Allowable       |                                      |                                      |                                      |                                      |
| Load)                           |                                      |                                      |                                      |                                      |
| Year 8 Milestone (lbs/yr)       |                                      |                                      |                                      |                                      |
| Year 10 Milestone (lbs/yr)      |                                      |                                      |                                      |                                      |
| Year 13 Milestone (lbs/yr)      |                                      |                                      |                                      |                                      |
| Year 15 Milestone (lbs/yr)      |                                      |                                      |                                      |                                      |
| Phosphorus Credi                | ts for Year 6                        |                                      |                                      |                                      |
| Total Reduction from Non-       |                                      |                                      |                                      |                                      |
| Structural BMPs                 |                                      |                                      |                                      |                                      |
| Total Reduction from Structural |                                      |                                      |                                      |                                      |
| BMPs                            |                                      |                                      |                                      |                                      |
| Evaluation                      | on                                   |                                      |                                      |                                      |



| Parameter                   | ##LAKE/POND<br>NAME## Value (lbs/yr) | ##LAKE/POND<br>NAME## Value (lbs/yr) | ##LAKE/POND<br>NAME## Value (lbs/yr) | ##LAKE/POND<br>NAME## Value (lbs/yr) |
|-----------------------------|--------------------------------------|--------------------------------------|--------------------------------------|--------------------------------------|
| Remaining Phosphorus        |                                      |                                      |                                      |                                      |
| Reduction Requirement       |                                      |                                      |                                      |                                      |
| (Updated Phosphorus         |                                      |                                      |                                      |                                      |
| Reduction Requirement to    |                                      |                                      |                                      |                                      |
| Meet Allowable Load – Total |                                      |                                      |                                      |                                      |
| Reductions)                 |                                      |                                      |                                      |                                      |

<u>Instructions</u>: Divide the remaining requirement into the number of years until your first deadline to estimate an average yearly requirement for reductions. Compare this to your planned BMPs, and comment on whether this indicates that you are on track or not.

<u>Tip</u>: You can estimate if your community is on track by looking at how many lbs/yr you will have to remove each year over two additional years to achieve the Year 8 Milestone, and then comparing that to your planned nonstructural and structural BMPs. For Example, if you have 20 lbs/yr left to reach your Year 8 Milestone, but your planned BMPs only total 15 lbs/yr, you are not currently on track to meet your Year 8 Milestone.

<u>Note:</u> If your community is not on track to meet the Year 8 milestone of 20% progress toward reduction, the Performance Evaluation should include a plan for Year 7 and Year 8 to increase non-structural and/or structural BMP implementation, improve identification and maintenance of previously installed BMPs, changes to Legal Analysis, and increases/changes to funding.

Based on this year's evaluation, ##MUNICIPALITY## has successfully reduced phosphorus by ##AMOUNT## lbs/yr, and ##REMAINING## lbs/yr is required to meet the LPCP milestone reduction of ##LPCP MILESTONE##.

Based on this evaluation, the ##CITY/TOWN## ##IS OR IS NOT## on track to meet the Year 8 milestone of 20% progress toward meeting our required reduction. To meet this milestone, we have to continue to implement BMPs to achieve credits at a rate of ##LBS/YR##, and based on our ##UPDATED## implementation schedule outlined in Section 1.9, we are on track to meet this.

#### 1.11.2 Performance Evaluation for Year 7

##MUNICIPALITY## has completed the required Performance Evaluation that assesses our LPCP progress through Year 7. Documentation of the Land Development Impacts and Phosphorus Credits for this effort is included in ##LOCATION##.

A summary of ##MUNICIPALITY'S## performance through Year 7 is included in Table 1-9.



Table 1-9. Year 7 Performance Evaluation Summary

| Parameter                  | ##LAKE/POND NAME##<br>Value (lbs/yr) | ##LAKE/POND<br>NAME## Value (lbs/yr) | ##LAKE/POND<br>NAME## Value (lbs/yr) | ##LAKE/POND<br>NAME## Value (lbs/yr) |
|----------------------------|--------------------------------------|--------------------------------------|--------------------------------------|--------------------------------------|
| Baseline Load              |                                      |                                      |                                      |                                      |
| Allowable Load             |                                      |                                      |                                      |                                      |
| Calculations to Update     | to Current Conditions                |                                      |                                      |                                      |
| Changes in P-Load Since    |                                      |                                      |                                      |                                      |
| Baseline                   |                                      |                                      |                                      |                                      |
| Current Phosphorus Load =  |                                      |                                      |                                      |                                      |
| Baseline +/- Impacts       |                                      |                                      |                                      |                                      |
| Updated Phosphorus         |                                      |                                      |                                      |                                      |
| Reduction Required to Meet |                                      |                                      |                                      |                                      |
| Allowable Load (Allowable  |                                      |                                      |                                      |                                      |
| Load)                      |                                      |                                      |                                      |                                      |
| Year 8 Milestone (lbs/yr)  |                                      |                                      |                                      |                                      |
| Year 10 Milestone (lbs/yr) |                                      |                                      |                                      |                                      |
| Year 13 Milestone (lbs/yr) |                                      |                                      |                                      |                                      |
| Year 15 Milestone (lbs/yr) |                                      |                                      |                                      |                                      |
|                            | edits for Year 7                     |                                      |                                      |                                      |
| Total Reduction from Non-  |                                      |                                      |                                      |                                      |
| Structural BMPs            |                                      |                                      |                                      |                                      |
| Total Reduction from       |                                      |                                      |                                      |                                      |
| Structural BMPs            |                                      |                                      |                                      |                                      |
| Evalu                      | ation                                |                                      |                                      |                                      |
| Remaining Phosphorus       |                                      |                                      |                                      |                                      |
| Reduction Requirement      |                                      |                                      |                                      |                                      |
| (Updated Phosphorus        |                                      |                                      |                                      |                                      |
| Reduction Requirement to   |                                      |                                      |                                      |                                      |
| Meet Allowable Load –      |                                      |                                      |                                      |                                      |
| Total Reductions)          |                                      |                                      |                                      |                                      |



<u>Instructions</u>: Divide the remaining requirement into the number of years to your first deadline to estimate an average yearly requirement to build reductions. Compare this to your planned BMPs, and comment on if this indicates that you are on track or not.

<u>Tip/Trick</u>: You can estimate if your community is on track by looking at how many lbs/yr you will have to remove each year over two additional years to achieve the Year 8 Milestone, and then comparing that to your planned nonstructural and structural BMPs. For Example, if you have 20 lbs/yr left to reach your Year 8 Milestone, but your planned BMPs only total 15 lbs/yr, you are not currently on track to meet your Year 8 Milestone.

<u>Note:</u> If your community is not on track to meet the Year 8 milestone of 20% progress, the Performance Evaluation should include a plan for Year 8 to increase non-structural and/or structural BMP implementation, improve identification and maintenance of previously installed BMPs, changes to Legal Analysis, and increases/changes to Funding Source Assessment.

Based on this year's evaluation, ##MUNICIPALITY## has successfully reduced phosphorus by ##AMOUNT## lbs/yr, and ##REMAINING## lbs/yr is required to meet the LPCP milestone reduction of ##LPCP MILESTONE##.

Based on this evaluation, the ##CITY/TOWN## ##IS OR IS NOT## on track to meet the Year 8 milestone of 20% reduction. To meet this milestone, we have to continue to implement BMPs to achieve credits at a rate of ##LBS/YR##, and based on our ##UPDATED## implementation schedule outlined in Section 9, we are on track to meet this implementation rate.

#### 1.11.3 Performance Evaluation for Year 8

Note: Be sure to compare this evaluation to the Year 8 milestone of 20% reduction.

##MUNICIPALITY## has completed the required Performance Evaluation that assesses our LPCP progress through Year 8. Documentation of the Land Development Impacts and Phosphorus Credits for this effort is included in ##LOCATION##.

A summary of ##MUNICIPALITY'S## performance through Year 8 is included in Table 1-10.



#### Table 1-10. Year 8 Performance Evaluation Summary

| Parameter                  | ##LAKE/POND NAME##<br>Value (lbs/yr) | ##LAKE/POND<br>NAME## Value (lbs/yr) | ##LAKE/POND<br>NAME## Value (lbs/yr) | ##LAKE/POND<br>NAME## Value (Ibs/yr) |
|----------------------------|--------------------------------------|--------------------------------------|--------------------------------------|--------------------------------------|
| Baseline Load              |                                      |                                      |                                      |                                      |
| Allowable Load             |                                      |                                      |                                      |                                      |
| Calculations to Update     | to Current Conditions                |                                      |                                      |                                      |
| Changes in P-Load Since    |                                      |                                      |                                      |                                      |
| Baseline                   |                                      |                                      |                                      |                                      |
| Current Phosphorus Load =  |                                      |                                      |                                      |                                      |
| Baseline +/- Impacts       |                                      |                                      |                                      |                                      |
| Updated Phosphorus         |                                      |                                      |                                      |                                      |
| Reduction Required to Meet |                                      |                                      |                                      |                                      |
| Allowable Load (Allowable  |                                      |                                      |                                      |                                      |
| Load)                      |                                      |                                      |                                      |                                      |
| Year 8 Milestone (lbs/yr)  |                                      |                                      |                                      |                                      |
| Year 10 Milestone (lbs/yr) |                                      |                                      |                                      |                                      |
| Year 13 Milestone (lbs/yr) |                                      |                                      |                                      |                                      |
| Year 15 Milestone (lbs/yr) |                                      |                                      |                                      |                                      |
| Phosphorus Cr              | edits for Year 8                     |                                      |                                      |                                      |
| Total Reduction from Non-  |                                      |                                      |                                      |                                      |
| Structural BMPs            |                                      |                                      |                                      |                                      |
| Total Reduction from       |                                      |                                      |                                      |                                      |
| Structural BMPs            |                                      |                                      |                                      |                                      |
| Evalu                      | ation                                |                                      |                                      |                                      |
| Remaining Phosphorus       |                                      |                                      |                                      |                                      |
| Reduction Requirement      |                                      |                                      |                                      |                                      |
| (Updated Phosphorus        |                                      |                                      |                                      |                                      |
| Reduction Requirement to   |                                      |                                      |                                      |                                      |
| Meet Allowable Load –      |                                      |                                      |                                      |                                      |
| Total Reductions)          |                                      |                                      |                                      |                                      |

<u>Instructions</u>: Divide the remaining requirement into the number of years to your first deadline to estimate an average yearly requirement to build reductions. Compare this to your planned BMPs, and comment on if this indicates that you are on track or not.



<u>Tip/Trick</u>: You can estimate if your community is on track by looking at how many lbs/yr you will have to remove each year over two additional years to achieve the Year 10 Milestone, and then comparing that to your planned nonstructural and structural BMPs. For Example, if you have 20 lbs/yr left to reach your Year 10 Milestone, but your planned BMPs only total 15 lbs/yr, you are not currently on track to meet your Year 10 Milestone.

Based on this year's evaluation, ##MUNICIPALITY## has successfully reduced phosphorus by ##AMOUNT## lbs/yr, and ##HAS OR HAS NOT## met the LPCP milestone reduction of ##LPCP MILESTONE##.

#### 1.11.4 Performance Evaluation for Year 9

##MUNICIPALITY## has completed the required Performance Evaluation that assesses our LPCP progress through Year 9. Documentation of the Land Development Impacts and Phosphorus Credits for this effort is included in ##LOCATION##.

A summary of ##MUNICIPALITY'S## performance through Year 9 is included in Table 1-11.

Table 1-11. Year 9 Performance Evaluation Summary

| Parameter                  | ##LAKE/POND NAME##<br>Value (lbs/yr) | ##LAKE/POND<br>NAME## Value (lbs/yr) | ##LAKE/POND<br>NAME## Value (lbs/yr) | ##LAKE/POND<br>NAME## Value (lbs/yr) |
|----------------------------|--------------------------------------|--------------------------------------|--------------------------------------|--------------------------------------|
| Baseline Load              |                                      |                                      |                                      |                                      |
| Allowable Load             |                                      |                                      |                                      |                                      |
| Calculations to Update     | to Current Conditions                |                                      |                                      |                                      |
| Changes in P-Load Since    |                                      |                                      |                                      |                                      |
| Baseline                   |                                      |                                      |                                      |                                      |
| Current Phosphorus Load =  |                                      |                                      |                                      |                                      |
| Baseline +/- Impacts       |                                      |                                      |                                      |                                      |
| Updated Phosphorus         |                                      |                                      |                                      |                                      |
| Reduction Required to Meet |                                      |                                      |                                      |                                      |
| Allowable Load (Allowable  |                                      |                                      |                                      |                                      |
| Load)                      |                                      |                                      |                                      |                                      |
| Year 8 Milestone (lbs/yr)  |                                      |                                      |                                      |                                      |
| Year 10 Milestone (lbs/yr) |                                      |                                      |                                      |                                      |
| Year 13 Milestone (lbs/yr) |                                      |                                      |                                      |                                      |



| Parameter                  | ##LAKE/POND NAME##<br>Value (lbs/yr) | ##LAKE/POND<br>NAME## Value (lbs/yr) | ##LAKE/POND<br>NAME## Value (lbs/yr) | ##LAKE/POND<br>NAME## Value (lbs/yr) |
|----------------------------|--------------------------------------|--------------------------------------|--------------------------------------|--------------------------------------|
| Year 15 Milestone (lbs/yr) |                                      |                                      |                                      |                                      |
| Phosphorus Cr              | edits for Year 9                     |                                      |                                      |                                      |
| Total Reduction from Non-  |                                      |                                      |                                      |                                      |
| Structural BMPs            |                                      |                                      |                                      |                                      |
| Total Reduction from       |                                      |                                      |                                      |                                      |
| Structural BMPs            |                                      |                                      |                                      |                                      |
| Evalu                      | ation                                |                                      |                                      |                                      |
| Remaining Phosphorus       |                                      |                                      |                                      |                                      |
| Reduction Requirement      |                                      |                                      |                                      |                                      |
| (Updated Phosphorus        |                                      |                                      |                                      |                                      |
| Reduction Requirement to   |                                      |                                      |                                      |                                      |
| Meet Allowable Load –      |                                      |                                      |                                      |                                      |
| Total Reductions)          |                                      |                                      |                                      |                                      |

<u>Instructions</u>: Divide the remaining requirement into the number of years to your first deadline to estimate an average yearly requirement to build reductions. Compare this to your planned BMPs, and comment on if this indicates that you are on track or not.

<u>Tip/Trick</u>: You can estimate if your community is on track by looking at how many lbs/yr you will have to remove to achieve the Year 10 Milestone, and then comparing that to your planned nonstructural and structural BMPs. For Example, if you have 20 lbs/yr left to reach your Year 10 Milestone, but your planned BMPs only total 15 lbs/yr, you are not currently on track to meet your Year 10 Milestone.

<u>Note:</u> If your community is not on track to meet the Year 10 milestone of 40% reduction, the Performance Evaluation should include a plan for Year 10 to increase non-structural and/or structural BMP implementation, improve identification and maintenance of previously installed BMPs, changes to Legal Analysis, and increases/changes to Funding Source Assessment.

Based on this year's evaluation, ##MUNICIPALITY## has successfully reduced phosphorus by ##AMOUNT## lbs/yr, and ##REMAINING## lbs/yr is required to meet the reduction of ##LPCP MILESTONE##.

#### 1.11.5 Performance Evaluation for Year 10

Note: Be sure to compare this evaluation to the Year 10 milestone of 40% reduction.



##MUNICIPALITY## has completed the required Performance Evaluation that assesses our LPCP progress through Year 10. Documentation of the Land Development Impacts and Phosphorus Credits for this effort is included in ##LOCATION##.

A summary of ##MUNICIPALITY'S## performance through Year 10 is included in Table 1-12.

Table 1-12. Year 10 Performance Evaluation Summary

| Parameter                  | ##LAKE/POND NAME##<br>Value (lbs/yr) | ##LAKE/POND<br>NAME## Value (lbs/yr) | ##LAKE/POND<br>NAME## Value (lbs/yr) | ##LAKE/POND<br>NAME## Value (lbs/yr) |
|----------------------------|--------------------------------------|--------------------------------------|--------------------------------------|--------------------------------------|
| Baseline Load              |                                      |                                      |                                      |                                      |
| Allowable Load             |                                      |                                      |                                      |                                      |
| Calculations to Update     | to Current Conditions                |                                      |                                      |                                      |
| Changes in P-Load Since    |                                      |                                      |                                      |                                      |
| Baseline                   |                                      |                                      |                                      |                                      |
| Current Phosphorus Load =  |                                      |                                      |                                      |                                      |
| Baseline +/- Impacts       |                                      |                                      |                                      |                                      |
| Updated Phosphorus         |                                      |                                      |                                      |                                      |
| Reduction Required to Meet |                                      |                                      |                                      |                                      |
| Allowable Load (Allowable  |                                      |                                      |                                      |                                      |
| Load)                      |                                      |                                      |                                      |                                      |
| Year 8 Milestone (lbs/yr)  |                                      |                                      |                                      |                                      |
| Year 10 Milestone (lbs/yr) |                                      |                                      |                                      |                                      |
| Year 13 Milestone (lbs/yr) |                                      |                                      |                                      |                                      |
| Year 15 Milestone (lbs/yr) |                                      |                                      |                                      |                                      |
| Phosphorus Cre             | edits for Year 12                    |                                      |                                      |                                      |
| Total Reduction from Non-  |                                      |                                      |                                      |                                      |
| Structural BMPs            |                                      |                                      |                                      |                                      |
| Total Reduction from       |                                      |                                      |                                      |                                      |
| Structural BMPs            |                                      |                                      |                                      |                                      |
| Evalu                      | ıation                               |                                      |                                      |                                      |
| Remaining Phosphorus       |                                      |                                      |                                      |                                      |
| Reduction Requirement      |                                      |                                      |                                      |                                      |
| (Updated Phosphorus        |                                      |                                      |                                      |                                      |



| Parameter  | ##LAKE/POND NAME## | ##LAKE/POND           | ##LAKE/POND           | ##LAKE/POND           |
|--|--------------------|-----------------------|-----------------------|-----------------------|
|  | Value (lbs/yr)     | NAME## Value (lbs/yr) | NAME## Value (lbs/yr) | NAME## Value (lbs/yr) |
| Reduction Requirement to<br>Meet Allowable Load –<br>Total Reductions) |                    |                       |                       |                       |

<u>Instructions</u>: Divide the remaining requirement into the number of years to your first deadline to estimate an average yearly requirement to build reductions. Compare this to your planned BMPs, and comment on if this indicates that you are on track or not.

<u>Tip/Trick</u>: You can estimate if your community is on track by looking at how many lbs/yr you will have to remove each year over three additional years to achieve the Year 13 Milestone, and then comparing that to your planned nonstructural and structural BMPs. For Example, if you have 20 lbs/yr left to reach your Year 13 Milestone, but your planned BMPs only total 15 lbs/yr, you are not currently on track to meet your Year 13 Milestone.

Based on this year's evaluation, ##MUNICIPALITY## has successfully reduced phosphorus by ##AMOUNT## lbs/yr, and ##REMAINING## lbs/yr is required to meet the reduction of ##LPCP MILESTONE##.

#### 1.11.6 Performance Evaluation for Year 11

##MUNICIPALITY## has completed the required Performance Evaluation that assesses our LPCP progress through Year 11. Documentation of the Land Development Impacts and Phosphorus Credits for this effort is included in ##LOCATION##.

A summary of ##MUNICIPALITY'S## performance through Year 11 is included in Table 1-13.

Table 1-13. Year 11 Performance Evaluation Summary

| Parameter      | ##LAKE/POND NAME##<br>Value (lbs/yr) | ##LAKE/POND<br>NAME## Value (lbs/yr) | ##LAKE/POND<br>NAME## Value (lbs/yr) | ##LAKE/POND<br>NAME## Value (lbs/yr) |
|----------------|--------------------------------------|--------------------------------------|--------------------------------------|--------------------------------------|
| Baseline Load  |                                      |                                      |                                      |                                      |
| Allowable Load |                                      |                                      |                                      |                                      |



| Parameter                  | ##LAKE/POND NAME##<br>Value (lbs/yr) | ##LAKE/POND<br>NAME## Value (lbs/yr) | ##LAKE/POND<br>NAME## Value (lbs/yr) | ##LAKE/POND<br>NAME## Value (Ibs/yr) |
|----------------------------|--------------------------------------|--------------------------------------|--------------------------------------|--------------------------------------|
| Calculations to Update     | to Current Conditions                |                                      |                                      |                                      |
| Changes in P-Load Since    |                                      |                                      |                                      |                                      |
| Baseline                   |                                      |                                      |                                      |                                      |
| Current Phosphorus Load =  |                                      |                                      |                                      |                                      |
| Baseline +/- Impacts       |                                      |                                      |                                      |                                      |
| Updated Phosphorus         |                                      |                                      |                                      |                                      |
| Reduction Required to Meet |                                      |                                      |                                      |                                      |
| Allowable Load (Allowable  |                                      |                                      |                                      |                                      |
| Load)                      |                                      |                                      |                                      |                                      |
| Year 8 Milestone (lbs/yr)  |                                      |                                      |                                      |                                      |
| Year 10 Milestone (lbs/yr) |                                      |                                      |                                      |                                      |
| Year 13 Milestone (lbs/yr) |                                      |                                      |                                      |                                      |
| Year 15 Milestone (lbs/yr) |                                      |                                      |                                      |                                      |
| Phosphorus Cre             | edits for Year 11                    |                                      |                                      |                                      |
| Total Reduction from Non-  |                                      |                                      |                                      |                                      |
| Structural BMPs            |                                      |                                      |                                      |                                      |
| Total Reduction from       |                                      |                                      |                                      |                                      |
| Structural BMPs            |                                      |                                      |                                      |                                      |
| Evalu                      | ation                                |                                      |                                      |                                      |
| Remaining Phosphorus       |                                      |                                      |                                      |                                      |
| Reduction Requirement      |                                      |                                      |                                      |                                      |
| (Updated Phosphorus        |                                      |                                      |                                      |                                      |
| Reduction Requirement to   |                                      |                                      |                                      |                                      |
| Meet Allowable Load –      |                                      |                                      |                                      |                                      |
| Total Reductions)          |                                      |                                      |                                      |                                      |

<u>Instructions</u>: Divide the remaining requirement into the number of years to your first deadline to estimate an average yearly requirement to build reductions. Compare this to your planned BMPs, and comment on if this indicates that you are on track or not.

<u>Tip/Trick</u>: You can estimate if your community is on track by looking at how many lbs/yr you will have to remove each year over two additional years to achieve the Year 13 Milestone, and then comparing that to your planned nonstructural and structural BMPs. For Example, if you have 20 lbs/yr left to reach your Year 13 Milestone, but your planned BMPs only total 15 lbs/yr, you are not currently on track to meet your Year 13 Milestone.



<u>Note:</u> If your community is not on track to meet the Year 13 milestone of 70% reduction, the Performance Evaluation should include a plan for Year 11 and Year 12 to increase non-structural and/or structural BMP implementation, improve identification and maintenance of previously installed BMPs, changes to Legal Analysis, and increases/changes to Funding Source Assessment.

Based on this year's evaluation, ##MUNICIPALITY## has successfully reduced phosphorus by ##AMOUNT## lbs/yr, and ##REMAINING## lbs/yr is required to meet the milestone reduction of ##LPCP MILESTONE##.

Based on this evaluation, the ##CITY/TOWN## ##IS OR IS NOT## on track to meet the Year 13 milestone of 70% reduction. To meet this milestone, we have to continue to implement BMPs to achieve credits at a rate of ##LBS/YR##, and based on our implementation schedule outlined in Section 9, we ##ARE OR ARE NOT## on track to meet this implementation rate.

#### 1.11.7 Performance Evaluation for Year 12

##MUNICIPALITY## has completed the required Performance Evaluation that assesses our LPCP progress through Year 12. Documentation of the Land Development Impacts and Phosphorus Credits for this effort is included in ##LOCATION##.

A summary of ##MUNICIPALITY'S## performance through Year 12 is included in Table 1-14.

Table 1-14. Year 12 Performance Evaluation Summary

| Parameter                  | ##LAKE/POND NAME##<br>Value (lbs/yr) | ##LAKE/POND<br>NAME## Value (lbs/yr) | ##LAKE/POND<br>NAME## Value (lbs/yr) | ##LAKE/POND<br>NAME## Value (lbs/yr) |
|----------------------------|--------------------------------------|--------------------------------------|--------------------------------------|--------------------------------------|
| Baseline Load              |                                      |                                      |                                      |                                      |
| Allowable Load             |                                      |                                      |                                      |                                      |
| Calculations to Update     | to Current Conditions                |                                      |                                      |                                      |
| Changes in P-Load Since    |                                      |                                      |                                      |                                      |
| Baseline                   |                                      |                                      |                                      |                                      |
| Current Phosphorus Load =  |                                      |                                      |                                      |                                      |
| Baseline +/- Impacts       |                                      |                                      |                                      |                                      |
| Updated Phosphorus         |                                      |                                      |                                      |                                      |
| Reduction Required to Meet |                                      |                                      |                                      |                                      |



| Parameter                  | ##LAKE/POND NAME##<br>Value (lbs/yr) | ##LAKE/POND<br>NAME## Value (lbs/yr) | ##LAKE/POND<br>NAME## Value (lbs/yr) | ##LAKE/POND<br>NAME## Value (Ibs/yr) |
|----------------------------|--------------------------------------|--------------------------------------|--------------------------------------|--------------------------------------|
| Allowable Load (Allowable  |                                      |                                      |                                      |                                      |
| Load)                      |                                      |                                      |                                      |                                      |
| Year 8 Milestone (lbs/yr)  |                                      |                                      |                                      |                                      |
| Year 10 Milestone (lbs/yr) |                                      |                                      |                                      |                                      |
| Year 13 Milestone (lbs/yr) |                                      |                                      |                                      |                                      |
| Year 15 Milestone (lbs/yr) |                                      |                                      |                                      |                                      |
| Phosphorus Cre             | edits for Year 12                    |                                      |                                      |                                      |
| Total Reduction from Non-  |                                      |                                      |                                      |                                      |
| Structural BMPs            |                                      |                                      |                                      |                                      |
| Total Reduction from       |                                      |                                      |                                      |                                      |
| Structural BMPs            |                                      |                                      |                                      |                                      |
| Evalu                      | ation                                |                                      |                                      |                                      |
| Remaining Phosphorus       |                                      |                                      |                                      |                                      |
| Reduction Requirement      |                                      |                                      |                                      |                                      |
| (Updated Phosphorus        |                                      |                                      |                                      |                                      |
| Reduction Requirement to   |                                      |                                      |                                      |                                      |
| Meet Allowable Load –      |                                      |                                      |                                      |                                      |
| Total Reductions)          |                                      |                                      |                                      |                                      |

<u>Instructions</u>: Divide the remaining requirement into the number of years to your first deadline to estimate an average yearly requirement to build reductions. Compare this to your planned BMPs, and comment on if this indicates that you are on track or not.

<u>Tip/Trick</u>: You can estimate if your community is on track by looking at how many lbs/yr you will have to remove to achieve the Year 13 Milestone, and then comparing that to your planned nonstructural and structural BMPs. For Example, if you have 20 lbs/yr left to reach your Year 13 Milestone, but your planned BMPs only total 15 lbs/yr, you are not currently on track to meet your Year 13 Milestone.

<u>Note:</u> If your community is not on track to meet the Year 13 milestone of 70% reduction, the Performance Evaluation should include a plan for Year 12 to increase non-structural and/or structural BMP implementation, improve identification and maintenance of previously installed BMPs, changes to Legal Analysis, and increases/changes to Funding Source Assessment.

Based on this year's evaluation, ##MUNICIPALITY## has successfully reduced phosphorus by ##AMOUNT## lbs/yr, and ##REMAINING## lbs/yr is required to meet the LPCP reduction of ##LPCP MILESTONE##.



Based on this evaluation, the ##CITY/TOWN## ##IS OR IS NOT## on track to meet the Year 13 milestone of 70% reduction. To meet this milestone, we have to continue to implement BMPs to achieve credits at a rate of ##LBS/YR##, and based on our implementation schedule outlined in Section 9, we ##ARE OR ARE NOT## on track to meet this implementation rate.

#### 1.11.8 Performance Evaluation for Year 13

Note: Be sure to compare this evaluation to the Year 13 milestone of 70% reduction.

##MUNICIPALITY## has completed the required Performance Evaluation that assesses our LPCP progress through Year 13. Documentation of the Land Development Impacts and Phosphorus Credits for this effort is included in ##LOCATION##.

A summary of ##MUNICIPALITY'S## performance through Year 13 is included in Table 1-15.

Table 1-15. Year 13 Performance Evaluation Summary

| Parameter                  | ##LAKE/POND NAME##    | ##LAKE/POND           | ##LAKE/POND           | ##LAKE/POND           |
|----------------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| Parameter                  | Value (lbs/yr)        | NAME## Value (lbs/yr) | NAME## Value (lbs/yr) | NAME## Value (lbs/yr) |
| Baseline Load              |                       |                       |                       |                       |
| Allowable Load             |                       |                       |                       |                       |
| Calculations to Update     | to Current Conditions |                       |                       |                       |
| Changes in P-Load Since    |                       |                       |                       |                       |
| Baseline                   |                       |                       |                       |                       |
| Current Phosphorus Load =  |                       |                       |                       |                       |
| Baseline +/- Impacts       |                       |                       |                       |                       |
| Updated Phosphorus         |                       |                       |                       |                       |
| Reduction Required to Meet |                       |                       |                       |                       |
| Allowable Load (Allowable  |                       |                       |                       |                       |
| Load)                      |                       |                       |                       |                       |
| Year 8 Milestone (lbs/yr)  |                       |                       |                       |                       |
| Year 10 Milestone (lbs/yr) |                       |                       |                       |                       |
| Year 13 Milestone (lbs/yr) |                       |                       |                       |                       |



| Parameter                  | ##LAKE/POND NAME##<br>Value (lbs/yr) | ##LAKE/POND<br>NAME## Value (lbs/yr) | ##LAKE/POND<br>NAME## Value (lbs/yr) | ##LAKE/POND<br>NAME## Value (lbs/yr) |
|----------------------------|--------------------------------------|--------------------------------------|--------------------------------------|--------------------------------------|
| Year 15 Milestone (lbs/yr) |                                      |                                      |                                      |                                      |
| Phosphorus Cre             | Phosphorus Credits for Year 13       |                                      |                                      |                                      |
| Total Reduction from Non-  |                                      |                                      |                                      |                                      |
| Structural BMPs            |                                      |                                      |                                      |                                      |
| Total Reduction from       |                                      |                                      |                                      |                                      |
| Structural BMPs            |                                      |                                      |                                      |                                      |
| Evaluation                 |                                      |                                      |                                      |                                      |
| Remaining Phosphorus       |                                      |                                      |                                      |                                      |
| Reduction Requirement      |                                      |                                      |                                      |                                      |
| (Updated Phosphorus        |                                      |                                      |                                      |                                      |
| Reduction Requirement to   |                                      |                                      |                                      |                                      |
| Meet Allowable Load –      |                                      |                                      |                                      |                                      |
| Total Reductions)          |                                      |                                      |                                      |                                      |

Based on this year's evaluation, ##MUNICIPALITY## has successfully reduced phosphorus by ##AMOUNT## lbs/yr, and ##HAS OR HAS NOT## met the reduction of ##LPCP MILESTONE##.

#### 1.11.9 Performance Evaluation for Year 14

##MUNICIPALITY## has completed the required Performance Evaluation that assesses our LPCP progress through Year 14. Documentation of the Land Development Impacts and Phosphorus Credits for this effort is included in ##LOCATION##.

A summary of ##MUNICIPALITY'S## performance through Year 14 is included in Table 1-16.

Table 1-16. Year 14 Performance Evaluation Summary

| Parameter      | ##LAKE/POND NAME##<br>Value (lbs/yr) | ##LAKE/POND<br>NAME## Value (lbs/yr) | ##LAKE/POND<br>NAME## Value (lbs/yr) | ##LAKE/POND<br>NAME## Value (Ibs/yr) |
|----------------|--------------------------------------|--------------------------------------|--------------------------------------|--------------------------------------|
| Baseline Load  |                                      |                                      |                                      |                                      |
| Allowable Load |                                      |                                      |                                      |                                      |



| Parameter                  | ##LAKE/POND NAME##<br>Value (lbs/yr) | ##LAKE/POND<br>NAME## Value (lbs/yr) | ##LAKE/POND<br>NAME## Value (lbs/yr) | ##LAKE/POND<br>NAME## Value (Ibs/yr) |
|----------------------------|--------------------------------------|--------------------------------------|--------------------------------------|--------------------------------------|
| Calculations to Update     | to Current Conditions                |                                      |                                      |                                      |
| Changes in P-Load Since    |                                      |                                      |                                      |                                      |
| Baseline                   |                                      |                                      |                                      |                                      |
| Current Phosphorus Load =  |                                      |                                      |                                      |                                      |
| Baseline +/- Impacts       |                                      |                                      |                                      |                                      |
| Updated Phosphorus         |                                      |                                      |                                      |                                      |
| Reduction Required to Meet |                                      |                                      |                                      |                                      |
| Allowable Load (Allowable  |                                      |                                      |                                      |                                      |
| Load)                      |                                      |                                      |                                      |                                      |
| Year 8 Milestone (lbs/yr)  |                                      |                                      |                                      |                                      |
| Year 10 Milestone (lbs/yr) |                                      |                                      |                                      |                                      |
| Year 13 Milestone (lbs/yr) |                                      |                                      |                                      |                                      |
| Year 15 Milestone (lbs/yr) |                                      |                                      |                                      |                                      |
| Phosphorus Cre             | edits for Year 14                    |                                      |                                      |                                      |
| Total Reduction from Non-  |                                      |                                      |                                      |                                      |
| Structural BMPs            |                                      |                                      |                                      |                                      |
| Total Reduction from       |                                      |                                      |                                      |                                      |
| Structural BMPs            |                                      |                                      |                                      |                                      |
| Evaluation                 |                                      |                                      |                                      |                                      |
| Remaining Phosphorus       |                                      |                                      |                                      |                                      |
| Reduction Requirement      |                                      |                                      |                                      |                                      |
| (Updated Phosphorus        |                                      |                                      |                                      |                                      |
| Reduction Requirement to   |                                      |                                      |                                      |                                      |
| Meet Allowable Load –      |                                      |                                      |                                      |                                      |
| Total Reductions)          |                                      |                                      |                                      |                                      |

<u>Instructions</u>: Divide the remaining requirement into the number of years to your first deadline to estimate an average yearly requirement to build reductions. Compare this to your planned BMPs, and comment on if this indicates that you are on track or not.

<u>Tip/Trick</u>: You can estimate if your community is on track by looking at how many lbs/yr you will have to remove to achieve the Year 15 Milestone, and then comparing that to your planned nonstructural and structural BMPs. For Example, if you have 20 lbs/yr left to reach your Year 15 Milestone, but your planned BMPs only total 15 lbs/yr, you are not currently on track to meet your Year 15 Milestone.



<u>Note:</u> If your community is not on track to meet the Year 15 milestone, the Performance Evaluation should include a plan for Year 14 to increase non-structural and/or structural BMP implementation, improve identification and maintenance of previously installed BMPs, changes to Legal Analysis, and increases/changes to Funding Source Assessment.

Based on this year's evaluation, ##MUNICIPALITY## has successfully reduced phosphorus by ##AMOUNT## lbs/yr, and ##REMAINING## lbs/yr is required to meet the milestone reduction of ##LPCP MILESTONE##.

Based on this evaluation, the ##CITY/TOWN## ##IS OR IS NOT## on track to meet the Year 15 milestone of ##PERCENT## reduction. To meet this milestone, we have to continue to implement BMPs to achieve credits at a rate of ##LBS/YR##, and based on our implementation schedule outlined in Section 9, we ##ARE OR ARE NOT## on track to meet this implementation rate.

#### 1.11.10 Performance Evaluation for Year 15

##MUNICIPALITY## has completed the required Performance Evaluation that assesses our LPCP progress through Year 15. Documentation of the Land Development Impacts and Phosphorus Credits for this effort is included in ##LOCATION##.

A summary of ##MUNICIPALITY'S## performance through Year 15 is included in Table 1-17.

Table 1-17. Year 15 Performance Evaluation Summary

| Parameter                                    | ##LAKE/POND NAME##<br>Value (lbs/yr) | ##LAKE/POND<br>NAME## Value (lbs/yr) | ##LAKE/POND<br>NAME## Value (lbs/yr) | ##LAKE/POND<br>NAME## Value (lbs/yr) |
|--|--------------------------------------|--------------------------------------|--------------------------------------|--------------------------------------|
| Baseline Load                                |                                      |                                      |                                      |                                      |
| Allowable Load                               |                                      |                                      |                                      |                                      |
| Calculations to Update to Current Conditions |                                      |                                      |                                      |                                      |
| Changes in P-Load Since                      |                                      |                                      |                                      |                                      |
| Baseline                                     |                                      |                                      |                                      |                                      |
| Current Phosphorus Load =                    |                                      |                                      |                                      |                                      |
| Baseline +/- Impacts                         |                                      |                                      |                                      |                                      |
| Updated Phosphorus                           |                                      |                                      |                                      |                                      |
| Reduction Required to Meet                   |                                      |                                      |                                      |                                      |



| WILL AVE DOND NAME III WILL AVE DOND WILL AVE DOND |                    |                       |                       |                       |
|--|--------------------|-----------------------|-----------------------|-----------------------|
| Parameter  | ##LAKE/POND NAME## | ##LAKE/POND           | ##LAKE/POND           | ##LAKE/POND           |
|  | Value (lbs/yr)     | NAME## Value (lbs/yr) | NAME## Value (lbs/yr) | NAME## Value (lbs/yr) |
| Allowable Load (Allowable                          |                    |                       |                       |                       |
| Load)  |                    |                       |                       |                       |
| Year 8 Milestone (lbs/yr)                          |                    |                       |                       |                       |
| Year 10 Milestone (lbs/yr)                         |                    |                       |                       |                       |
| Year 13 Milestone (lbs/yr)                         |                    |                       |                       |                       |
| Year 15 Milestone (lbs/yr)                         |                    |                       |                       |                       |
| Phosphorus Cre                                     | edits for Year 15  |                       |                       |                       |
| Total Reduction from Non-                          |                    |                       |                       |                       |
| Structural BMPs                                    |                    |                       |                       |                       |
| Total Reduction from                               |                    |                       |                       |                       |
| Structural BMPs                                    |                    |                       |                       |                       |
| Evalu  | ation              |                       |                       |                       |
| Remaining Phosphorus                               |                    |                       |                       |                       |
| Reduction Requirement                              |                    |                       |                       |                       |
| (Updated Phosphorus                                |                    |                       |                       |                       |
| Reduction Requirement to                           |                    |                       |                       |                       |
| Meet Allowable Load –                              |                    |                       |                       |                       |
| Total Reductions)                                  |                    |                       |                       |                       |

Based on this year's evaluation, ##MUNICIPALITY## has successfully reduced phosphorus by ##AMOUNT## lbs/yr, and ##HAS OR HAS NOT## met the milestone reduction of ##LPCP MILESTONE##.



#### 1.12 PUBLIC COMMENT

**Permit Requirement:** The permittee shall make the LPCP available to the public for public comment during LPCP development. EPA encourages the permittee to post the LPCP online to facilitate public involvement.

<u>Instructions:</u> Any public engagement activities – including compliance with state public notice requirements per Part 2.3.3. of the MS4 Permit, public comments received, responses, copy of / link to website with LPCP posting, etc., should be included in the appendix noted above and updated as the LPCP evolves.

<u>Tip/Trick:</u> If your community has an Environmental Justice Population and or known Climate Vulnerable Population, this effort includes an opportunity to reach out directly to those groups for input on this process. You should provide information in predominant non-English languages.

In conformance with the Permit's requirements for the LPCP, ##MUNICIPALITY## made the draft written LPCP available for public comment. Appendix G provides documentation of public engagement, including:

- Public Meeting/Public Hearing at \_\_\_\_\_(Board/Commission/etc.) on \_\_\_\_\_ (date).
- Website
- Social media posts
- Etc.

Here is a summary of the comments received:

##INSERT SUMMARY OF COMMENTS RECEIVED IN BULLETED OR PARAGRAPH FORM##



#### 2 DOCUMENTATION AND REPORTING

Upon completion, the PCP is required to be added to the written Stormwater Management Plan (SWMP) as an attachment. This can be a separate document made by reference in the SWMP or added to the SWMP file itself. As the PCP is an attachment to the SWMP, the person listed as the program contact must retain a copy of the current SWMP. In addition, the SWMP must be available to the public during normal business hours and posted online if the community has a website on which to post the SWMP. As a reminder, the SWMP including any significant revisions, such as the PCP, are required to be signed in accordance with Appendix B, Subsection 11, including the date of signature.

The following information must be reported in the municipality's Annual Reports:

- Annual progress updates on the LPCP
- Performance Evaluations for Years 6-15

Annually, starting in Permit Year 5, the following must also be reported in each Annual Report:

- All non-structural controls implemented in the reporting year and associated phosphorus reduction
- All structural controls implemented during the reporting year, locations, associated phosphorus reduction, and date of latest maintenance and inspections
- Phosphorus load increases due to development
- Estimated yearly phosphorus export rate, subtracting reductions
- Certification that all structural BMPs are being inspected and maintained according to O&M program
- 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

#### 2.1 TRACKING AND ACCOUNTING

The most current information for annual updates to ##MUNICIPALITY'S## LPCP progress can be found in the following appendices:

- For non-structural controls: Appendix C
- For structural controls: Appendix D
- For the operations and maintenance program: Appendix E

This data is also tracked in each year's Annual Reports, which can be found at ##DIRECT LINK TO ANNUAL REPORTS##.